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Effects of Ammonium Perchlorate on Immunotoxicological, Hematological, and Thyroid Parameters in B6C3F1 Female Mice

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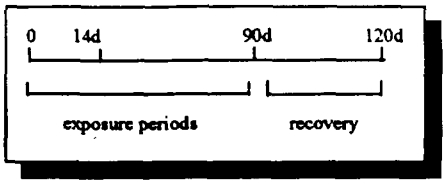
Ammonium Perchlorate
Results Summary and Status
(0.1, 1.0, 3.0, & 30 mg/kg/day)



Immune Parameters		Status: 14d	90d	120d
Thymus Weight		Complete	Complete	Complete
	Cell Count	Complete	Complete	*
	CD4/CD8 Flow analysis	Complete	Complete	**
Spleen				
	Weight	Complete	Complete	Complete
	Cell Count	Complete	Complete	Complete
	NK cell activity	Complete	Performed (2x)	Performed (1x)
	Delayed type hypersensitivity	Complete	To Be Done	
	Cytotoxic T cell activity	Complete	Performed (1x)	
Peritoneal Macrophages				
	Cell Count	Complete	Complete	Complete
	Phagocytosis	Complete	Complete	Complete
	Nitrite Production (optional)	Complete	Complete	Complete
Antibody Response				
	Specific IgM/IgG response to sRBC	Begun October, 1998 →		
Liver	Weight	Complete	Complete	Complete
Kidney	Weight	Complete	Complete	Complete

Thyroid Evaluation		Status: 14d	90d	120d
Thyroid Histology		Currently submitted to pathologist for interpretation. Results expected by end of November or beginning of December, 1998		
Serum	T_3	To be done as soon as kit arrives (approx. 1 week)		
	T_4	Complete	Complete	Complete
	TSH	To be done	Complete	Performed (1x)

Hematological Evaluation		Status: 14d	90d	120d
Peripheral Blood				
	Hemoglobin & Hematocrit	Complete	Complete	*
	WBC Cell Count and Differential	Complete	Complete	*
	RBC Cell Count and Indices	Complete	Complete	*
	Reticulocyte %	To be done	Performed (1x)	
	Platelet counts	Performed (1x)	To be done	
Bone Marrow				
	Cell Count	Complete	Complete	*
	Stem Cell Assay	14d and 90d repeats in process		

Host Resistance	Status: 90d
Listeria monocytogenes Challenge Model	Performed (1x) Additional assay currently in progress
B16F10 Tumor Resistance Model	Performed (1x)

*no indication of significant change evaluated at 90-days and not done at 120 days
** inconsistent changes in parameter, may be repeated for 120-day evaluation

Summary

Effects of Ammonium Perchlorate on Immunotoxicological, Hematological, and Thyroid Parameters in B6C3F1 Female Mice

September 30, 1998

The following report consists of graphs, data tables, and statistical analysis of hematological, immunotoxicological and thyroid hormone data obtained from 14 and 90-day exposures to ammonium perchlorate (0, 0.1, 1.0, 3.0, and 30 mg/kg/day) in B6C3F1 female mice. In addition, these parameters were also evaluated 30-days after a 90-day drinking water exposure to assess the reversibility of any observed effects (120-day). Table 1 indicates the status of the various parameters proposed in this study.

The status of thyroid data is such that pathological evaluation of thyroids should be available no earlier than the end of November. In addition, our laboratory will complete T_3 hormone levels in at least a 90 and 120-day study just as soon as the kit arrives from Diagnostics Products in California (end of this week or beginning of next). To minimize freeze-thawing and loss of serum during these assays, TSH levels will be measured at the time of T_3 analysis to maximize the use of the serum. A few hundred uL of serum is usually obtained when bleeding a mouse and it is important to minimize the loss of serum for these assays.

New results have been submitted in this report and are included in the front sections. Results submitted in previous reports has also been included in the rear of this report and updated accordingly.

Summary of New Data (collected after Aug. 1, 1998):

Reticulocyte Counts.

Method. Whole blood was collected in EDTA microtainers via retroorbital bleed. On the same day of collection, the blood was sent to a reference laboratory, Antech Diagnostics (Farmington, New York), and evaluated for the percentage of reticulocytes in peripheral blood. The results are expressed in percent.

Results. There is an increasing trend in the percentage of reticulocytes in the peripheral blood in each of the AP treatment groups exposed for 90 days. Only 3.0 mg/kg/day of AP for 90-days significantly increased reticulocyte percentages. These results have not been replicated at this time. Due to minimal availability of blood obtained from each mouse, reticulocyte percentages have not been determined after 14-day AP exposure, nor after the 30-day recovery period post-exposure to 90 days of AP.

Platelet Counts.

Method. Whole blood was collected in EDTA microtainers via retroorbital bleed. On the same day of collection, the blood was sent to a reference laboratory, Antech Diagnostics, and platelet counts were determined in peripheral blood. The results are expressed numbers of platelet/μL.

Results. To date, platelet counts have only been evaluated one time in whole blood collected after a 14-day exposure to AP. In the 0, 0.1, 1.0, and 30 mg/kg/day AP treatment groups, five whole blood samples were submitted for platelet count determination. However, in the 3.0 mg/kg/day AP treatment group, only four samples were submitted, one of which was clotted. This resulted in only three specimens for the 3.0 mg/kg/day AP treatment group and a large within group variability as indicated by the standard deviation. Using this preliminary data, no significant differences were observed in any of the AP treatment groups as compared to controls.

Nitrite Production by Peritoneal Macrophages.

Method. Peritoneal macrophages were aseptically isolated by peritoneal lavage and incubated 24 hours with 10 μg/mL of lipopolysaccharide (LPS) (Sigma, St. Louis, MO), 500 Units/mL of interferon-gamma (IFN-γ) (Sigma, St. Louis, MO) or both LPS and IFN-y (Keil, D., et al., Inter. J. Immunopharmacol. 17:157, 1995). Control cells contained macrophages only without any stimulant and background was always less than 0.4 μM. Nitrite was spectrophotometrically measured after the addition of Griess reagent to supernatants from each well. A standard nitrite curve was established for each experiment and data is expressed in μM.

Results. Nitrite production by peritoneal macrophages after 90-day exposure to AP was repeated. Statistically, stimulation with IFN-γ only resulted in a significant increase in nitrite at 3.0 mg/kg/day as compared to controls. A similar observation was noted in another 90-day assay (Experiment "D") in which peritoneal macrophages obtained from both 3.0 and 30 mg/kg/day AP treatment animals were significantly increased in the presence of IFN-γ only. However, it is important to note that in this experiment ("N") the average control levels for macrophages exposed to LPS only (3.1 μM) or IFN-γ only (2.6 μM) are substantially lower than any previous experiment performed. This may indicate a problem with the delivery or the integrity of the LPS and/or IFN-γ used in this experiment. The average control level for macrophages exposed to both LPS and IFN-γ (15.8 μM) is similar to levels obtained the 120-day studies (experiment "B" and "E") but are lower than those obtained in the previous 14 and 90-day studies. Due to the variability in control levels as compared to previous experiments, additional studies are needed to confirm observations.

Thymus Weight and Cellularity.

Method. Thymus weight and cellularity was determined in a 90-day AP exposure study (Experiment "N"). Thymocyte cell suspensions were prepared in sterile RPMI and cells were counted using a Coulter particle counter (Model ZM). Sample cell suspensions were counted using a hemacytometer and subsequently used to calibrate the machine.

Results. No significant changes in thymus weight, thymus cellularity, and thymus to body weight ratio were determined for any of the 90-day AP treatment groups as compared to controls. These results are consistent with two additional 90-day experiments (Experiment "A" and "D").

Spleen Weight and Cellularity.

Method. Spleen weight and cellularity was determined in a 90-day AP exposure study (Experiment "N"). Splenocyte cell suspensions were prepared in sterile RPMI and cells were counted using a Coulter particle counter (Model ZM). Sample cell suspensions were counted using a hemacytometer and subsequently used to calibrate the machine.

Results. No significant changes in spleen weight or spleen to body weight ratio were determined in the 90-day AP study (Experiment "N"). However, splenocyte cellularity was decreased significantly at exposure to 30 mg/kg/day of AP. Cell counts were repeated several times during the counting process to verify results. It is not known why significant changes in spleen cellularity was observed in this 90-day experiment (Experiment "N") and not in any of the two other 90-day experiments (Experiment "A" and "D").

CD4/CD8 Thymic and Splenic Subpopulations.

Method. Spleen or thymus cells were labeled with fluorescent rat IgG_2 monoclonal antibodies specific for murine CD4/CD8 (Caltag, Burlingame, CA), fixed with paraformaldehyde, and analysis was performed on a flow cytometer available at the MUSC medical laboratory. Cells only and isotypic antibody controls were used to establish CD4/CD8 subpopulations in thymic and splenic cells.

Results. In the 90-day AP study (Experiment "N"), no significant changes in thymic and splenic CD4/CD8 subpopulations were observed. Splenic CD4/CD8 subpopulations were not significantly affected in any of the 14 or 90-day AP studies. However, there were some inconsistent changes in thymic CD4/CD8 subpopulations in a previous 14-day and 90-day AP study. In the 14-day study (C), these changes consisted of increases in CD4-CD8+ thymocytes in 0.1, 1.0, and 30 mg/kg/day AP and a decrease in CD4+CD8- thymocytes in 0.1 mg/kg/day. In the 90-day study (D), the changes consisted of an increase in CD4+CD8+ thymocytes and a decrease in CD4+CD8- thymocytes in the 30 mg/kg/day treatment group.

Bone Marrow Cellularity.

Method. Bone marrow cellularity was determined for a 90-day AP exposure study (Experiment "N"). Cells were obtained by flushing a mouse femur with sterile RPMI and counted using a Coulter particle counter (Model ZM). Sample cell suspensions were counted using a hemacytometer and subsequently used to calibrate the machine.

Results. No significant changes in bone marrow cellularity were determined in this 90-day AP study. This is consistent with two other 90-day AP studies (Experiment "A" and "D").

Peritoneal Macrophage Cellularity.

Method. Peritoneal macrophage cellularity was determined for a 90-day AP exposure study (Experiment "N"). Cells were obtained by sterile lavage of the mouse peritoneum and counted using a Coulter particle counter (Model ZM). Sample cell suspensions were counted using a hemacytometer and subsequently used to calibrate the machine.

Results. No significant changes in peritoneal macrophage cellularity were determined in the 90-day AP study (Experiment "N"). However, in two previous 90-day experiments, macrophage cellularity was significantly increased at 3.0 mg/kg/day of AP (Experiment "A") and significantly decreased at 3.0 mg/kg/day (Experiment "D").

Natural Killer Cell (NK) Activity.

Method. Spleens were removed on the assay day for each experiment and cytotoxicity testing was performed using a standard 4-hour ^{51}Cr release assay with labeled Yac-1 target cells (Duke, S., et. al., J. Leukocyte Biol., 37:383-394, 1985). Splenocyte cell densities were adjusted in complete media (RPMI, 10% fetal calf serum, 50IU penicillin and 50ug streptomycin). Three replicates were prepared of the following splenocyte to Yac-1 ratios, 100:1, 50:1 and 25:1. After the 4-hour incubation at 37C and 5% CO_2, 25 μL of supernatant was transferred to a 96-well plate containing solid scintillate (Luma Plate by Packard, Meriden, CT). The plate air dried overnight and was counted on the Packard Top Count. Maximum release was determined by adding ^{51}Cr-labeled Yac-1 cells to 0.1N sodium hydroxide to lyse tumor cells. Spontaneous release was determined by incubating Yac-1 tumor cells only in complete media. The results were expressed in lytic units per 10^7 splenocytes using 10% lysis as the reference point (Bryant, J., et al., J. Immunol. Methods, 146:91-103, 1992).

Results. In the 90-day AP study (Experiment "N"), a significant increase in NK activity was observed in the 30 mg/kg/day. In addition, an increasing trend in NK

activity is observed in the treatment groups as compared to controls. In one other 90-day study (Experiment "D"), NK activity was not significantly affected, however, calculated lytic units for the control values were approximately half of the control values in this study. In experiment "N", analysis of variance with Tukey's multiple comparison test ($p<0.05$) was done on calculated percent lysis data as well as calculated lytic units. The significant increase in the 30 mg/kg/day AP treatment group was consistent in both evaluations.

Cytotoxic T Cell (CTL) Activity.

Method. Generation of cytotoxic T cells was determined using a standard 4-hour ^{51}Cr-release assay using P815 target cells (Murray, et al., Int. J. Immunopharmacol., 7:491-500, 1985). Mice were immunized via intraperitoneal injection with P815 cells (freshly passaged in DBA-2 mice) on day 3 in the 14-day AP study or day 79 in the 90-day AP study. Eleven days later, the mice were sacrificed and their splenocytes were incubated at 37C for 4 hours with ^{51}Cr-labeled P815 tumor cells at effector to target ratios of 30:1, 10:1, 3:1, and 1:1. The supernatant (25 μL) was transferred to a 96-well plate containing solid scintillate (Luma Plate by Packard, Meriden, CT). The plate air dried overnight and was counted on the Packard Top Count. Maximum release was determined by adding ^{51}Cr-labeled P815 cells to 0.1N sodium hydroxide to lyse tumor cells. Spontaneous release was determined by incubating P815 tumor cells only in complete media. The results were expressed in percent lysis for each effector ratio.

Results. No significant change in CTL activity was observed in mice treated with 0.1, 1.0, 3.0, or 30 mg/kg/day for 90 days. A second 90-day CTL experiment is currently in progress in the laboratory, however, the results will not be available before submission of this report.

Delayed Type Hypersensitivity.

Method. In the 14-day study, mice were injected intravenously on day 7 with a sublethal challenge of *Listeria monocytogenes*. In experiments "U" and "V", sublethal *Listeria* challenges were 2300 and 2700 CFU, respectively. One week after this challenge, mice were euthanized and the spleens were aseptically removed. Splenocyte cell suspensions were prepared and incubated at 37C and 5% CO_2 with various titers of soluble *Listeria* antigen (SLA) (0.1-8 μg/ml) for two days. On the third day, cells were pulsed with ^{3}H-thymidine (1 μCi/well). Eight hours later, cells were harvested and ^{3}H-thymidine uptake was measured using the Packard Top Count. SLA was prepared by sonicating *L. monocytogenes* in saline, collecting the supernatant from microcentrifuged samples, and performing a protein assay on the supernatant to quantify the amount of soluble *Listeria* antigen.

Results. In the 14-day "U" and "V" studies, delayed type hypersensitivity to SLA was evaluated. Significant increases in splenocyte proliferation were observed in the splenocytes from the 30 mg/kg/day treatment group incubated with 0.1 μg/ml of

SLA and the 3.0 mg/kg/day treatment group with 8 μg/ml of SLA. These changes were inconsistent between experiments and occurred at the extremes of the SLA titer range.

B16F10 Tumor Resistance Model.

Method. B16F10 melanoma cells were grown in culture for 3-5 days until a confluent monolayer of cells was obtained. Using a cell scraper, cell were gently lifted from the bottom of the flask and washed two times with Hank's Balanced Salt Solution (HBSS) (Mediatech, Herndon, VA). A cell count and viability was determined on cells prior to injection. Mice were intravenously injected with 1.0 x 10^5 B16F10 tumor cells on day 76 of the 90-day AP study. Two weeks following the challenge, mice were euthanized and lungs were removed and preserved in Bouin's fixative. Using a magnifying light, melanoma tumor nodules were counted on the entire surface of the both lungs.

Results. In the first 90-day B16F10 tumor challenge experiment ("Q"), no significant differences were observed in number of tumors present on the lungs in the AP treatment groups as compared to controls. However, tumor numbers in control animals were higher than expected. To achieve more accuracy in this experiment it would be important to repeat challenge titers for B16F10 tumors and repeat assay possibly using a challenge with fewer tumor cells. Besides these issues, lung tumors were counted independently by two persons and the results were in agreement. No significant differences in B16F10 tumor burden was observed in any of the treatment groups.

Listeria monocytogenes Challenge Model.

Method. Mice were challenged on day 86 with 5360 CFU of *Listeria monocytogenes* by intravenous injection and euthanized four days post challenge on day 90. Liver and spleen were aseptically removed and weighed. Pre-measured portions of each organ were diluted in saline, 1:10, 1:100, 1:1000, 1:10 000, and 1:100 000. One ml of each dilution was added to brain heart infusion agar and poured into a sterile petri dish. These plates were incubated overnight at 37C. Preliminary range finding studies for this assay indicated that liver and spleen could be cultured at these dilutions. However, spleen counts were often too numerous to count (TNTC) on several plates in this assay. The next Listeria host resistance assay will be performed in mid-October and CFU/liver and spleen will be determined.

Results. Livers, but not spleens, were successfully cultured in this assay. However, there is large variability in the control (CFU/ 1 gram of liver). With the removal of two apparent outliers in the control group, the results are improved. There appears to be a trend towards increased resistance to *Listeria monocytogenes* infection. The 3.0 mg/kg/day treatment group indicates that infection in mice is significantly decreased as compared to controls. In this lab, this is the first assay done using the

Listeria challenge model and it will be repeated in October. At this time, *in vitro* experiments testing the direct bactericidal activity of AP on *Listeria monocytogenes* has not been tested. This would be important to test to verify that AP does not have a direct inhibitory action on *Listeria monocytogenes in vivo*.

Phagocytosis.

Method. Peritoneal macrophages ($2x10^5$/well) aseptically isolated by peritoneal lavage were incubated 4 hours with *Listeria monocytogenes* at an approximate ratio of 1:10. After incubation, the macrophages were aseptically washed, fixed, and stained. The number of bacteria associated per macrophage was determined using a light microscope.

Results. In the 90-day N experiment, phagocytosis was significantly decreased in all AP treatment groups (0.1, 1.0, 3.0, and 30 mg/kg/day). In two previous 90-day experiments, significant decreases were observed in the 3.0 and 30 mg/kg/day or no change was indicated in any of the treatment groups. In the 14-day studies, significant decreases in phagocytosis were observed at 3.0 and 30 mg/kg/day, whereas, another 14-day experiment indicated there was no significant change. In addition, a table indicating the percentage of macrophages that phagocytize as compared to the percentage that do not phagocytize was prepared for previous experiments.

Additional Methods

Ammonium Perchlorate. Ammonium perchlorate was obtained from Dr. Dave Mattie of AFRL/HEST (Operational Toxicology Branch) at Wright Patterson Air Force Base. The ammonium perchlorate used in this study is from the same lot used in all previous studies.

Preparation of Ammonium Perchlorate. A primary stock solution of AP was prepared approximately every 1-2 months and a working solution was prepared weekly. Solutions and random water samples were sent to Wright-Patterson Air Force Base c/o of Dr. Dave Mattie for verification of ammonium perchlorate dose levels. All levels of AP have been verified. There was only one conflict with a water sample from a low dose exposure (0.1 mg/kg/day) and the corresponding reported level. Calculations have been reexamined and appear to correspond with the appropriate dose level. Additional water samples from the low dose group were resubmitted for verification at WPAFB and results were reported to be consistent with our calculated values.

Animals. B6C3F1 female mice were purchased from Charles River and permitted to rest 1 week upon arrival and prior to ammonium perchlorate exposure. Mice used in the all experiments were 8-10 weeks of age and housed individually in an AAALAC approved facility. Water and mouse chow (Tek Lab Sterilizable Rodent

Diet, formula no. 8656) were provided ad libidum and the mice were maintained at ambient temperatures (70-75F) on a 12 hour light/dark cycle. Each animal was housed individually and bedding was changed weekly. Sentinel mice were maintained in each animal room and tested quarterly for SEN, PVM, MHV, MVM, GD-VII, REO-3, MPUL, MPV, LCMV, MAD, ECTRO, K, POLY, MTLV, EDIM MCMV, HANT, ECUN, HELICO h., and CARB.

Experimental Descriptions for Ammonium Perchlorate Experiments.

A. *Experiments "C, G, I, J, T, & K".* Experiments designated by these letters indicate the following. B6C3F1 female mice aged 8-9 weeks of age were exposed to 0, 0.1, 1.0, 3.0 or 30 mg/kg/day of ammonium perchlorate for 14 days via drinking water. On day 14, mice were euthanized and a variety of immunotoxicology, hematology, and thyroid endpoints were measured. Body weight was measured on a weekly basis. Exposure levels to ammonium perchlorate in drinking water were established based on mean body weight for each treatment group per week. Each treatment group consisted of 6 animals for a total of 30 animals per experiment.

B. *Experiments "A, D, & N".* Experiments designated by these letters indicate the following. B6C3F1 female mice aged 8-9 weeks of age were exposed to 0, 0.1, 1.0, 3.0 or 30 mg/kg/day of ammonium perchlorate for 90 days via drinking water. On day 90, mice were euthanized and a variety of immunotoxicology, hematology, and thyroid endpoints were measured. Body weight was measured on a weekly basis. Exposure levels to ammonium perchlorate in drinking water were established based on mean body weight for each treatment group per week. Each treatment group consisted of 6 animals for a total of 30 animals per experiment.

C. *Experiments "B & E".* Experiments designated by these letters indicate the following. B6C3F1 female mice aged 8-9 weeks of age were exposed to 0, 0.1, 1.0, 3.0 or 30 mg/kg/day of ammonium perchlorate for 90 days via drinking water. On day 120 (30 days post exposure to AP), mice were euthanized and a variety of immunotoxicology, hematology, and thyroid endpoints were measured. Body weight was measured on a weekly basis. Exposure levels to ammonium perchlorate in drinking water were established based on mean body weight for each treatment group per week. Each treatment group consisted of 6 animals for a total of 30 animals per experiment.

D. *Experiments "U & V".* Experiments designated by these letters indicate the following. B6C3F1 female mice aged 8-9 weeks of age were exposed to 0, 0.1, 1.0, 3.0 or 30 mg/kg/day of ammonium perchlorate for 14 days via drinking water. On day 7, mice were challenged with a sublethal amount of *Listeria monocytogenes* by intravenous injection. One week after this, mice were euthanized and the spleens were removed for the DTH assay. Exposure levels to ammonium perchlorate in drinking water were established based on mean body weight for each treatment

group per week. Each treatment group consisted of 6 animals for a total of 30 animals per experiment.

E. *Experiments "L".* Experiments designated by these letters indicate the following. B6C3F1 female mice aged 8-9 weeks of age were exposed to 0, 0.1, 1.0, 3.0 or 30 mg/kg/day of ammonium perchlorate for 90 days via drinking water. On day 86, mice were challenged with *Listeria monocytogenes* by intravenous injection. Four days after this, mice were euthanized and the spleens and livers were removed and cultured for *Listeria moncytogenes* growth. Exposure levels to ammonium perchlorate in drinking water were established based on mean body weight for each treatment group per week. Each treatment group consisted of 6 animals for a total of 30 animals per experiment.

F. *Experiments "Q and O".* Experiments designated by these letters indicate the following. B6C3F1 female mice aged 8-9 weeks of age were exposed to 0, 0.1, 1.0, 3.0 or 30 mg/kg/day of ammonium perchlorate for 90 days via drinking water. On day 76, mice were challenged with B16F10 tumor cells by intravenous injection. Two weeks after this, mice were euthanized and the lungs were removed and enumerated for the number of tumor nodules on both lungs. Exposure levels to ammonium perchlorate in drinking water were established based on mean body weight for each treatment group per week. Each treatment group consisted of 6 animals for a total of 30 animals per experiment.

G. *Experiments "P".* Experiments designated by these letters indicate the following. B6C3F1 female mice aged 8-9 weeks of age were exposed to 0, 0.1, 1.0, 3.0 or 30 mg/kg/day of ammonium perchlorate for 90 days via drinking water. On day 79, mice were challenged with P815 tumor cells by intraperitoneal injection. Eleven days after this, mice were euthanized and the spleens were removed for the CTL assay. Exposure levels to ammonium perchlorate in drinking water were established based on mean body weight for each treatment group per week. Each treatment group consisted of 6 animals for a total of 30 animals per experiment.

H. *Experiments "H, F & M".* Experiments designated by these letters indicate the following. B6C3F1 female mice aged 8-9 weeks of age were exposed to 0, 0.1, 1.0, 3.0 or 30 mg/kg/day of ammonium perchlorate for 14 days via drinking water. On day 3, mice were challenged with P815 tumor cells by intraperitoneal injection. Eleven days after this, mice were euthanized and the spleens were removed for the CTL assay. Exposure levels to ammonium perchlorate in drinking water were established based on mean body weight for each treatment group per week. Each treatment group consisted of 6 animals for a total of 30 animals per experiment.

Exposure to Ammonium Perchlorate. Exposure to AP was via drinking water. Initial experiments were performed to determine the amount of water consumed by individual mice and control bottles were prepared weekly to determine water loss due to evaporation or random dripping. Typical daily consumption of water for

individual mice varied from 3-5 mL. This information was used to calculate the level of ammonium perchlorate in drinking water to achieve the following exposures: 0, 0.1, 1.0, 3.0, & 30 mg/kg/day. Water bottles were prepared weekly and adjusted to weekly changes in the average body weight of mice in each exposure group. There was an indication of a trend that mice exposed to 30 mg/kg/day consumed slightly less water on a weekly basis (≈3mL/week less than control animals). Consequently, differences were noted in the actual exposure for the high dose group in the 14-day studies. However, this difference was not as marked in the 90-day studies as the actual exposure in the high dose group was on an average, closer to an exposure level of 30 mg/kg/day of AP (see water consumption tables).

Hematology. Blood was collected into EDTA coated microtainers and mixed immediately to avoid clots. The blood was stored in the refrigerator and sent the same day to Antech Diagnostics for CBC analysis. Differential smears were prepared in-house and stained with Wright's stain. Interpretation of the differential smears included scanning and identifying 100 white blood cells and expressing each type of white blood cell as a percent of the total. Absolute numbers were not reported for the differential white blood cell types because the total white blood cell counts per treatment were not significantly different.

Stem Cell Assay. Bone marrow cells are aseptically collected from the one femur from each mouse. Cells counts were adjusted and $1x10^5$ total cells were added to agarose medium containing heat inactivated fetal calf serum, horse serum and granulocyte/macrophage colony stimulating factor (GM-CSF) (1ng/mL). Gels were incubated at 37C and 5% CO_2 for 10 days and colonies were counted using a dissection scope. Colonies were verified using an inverted microscope and colonies with greater than 50 cells were counted. One experiment is available for each of the 90- and 14-day exposures to ammonium perchlorate.

Statistical analysis. Graphs depict individual experimental means and standard deviation. To identify significant differences between control and treatment groups, analysis of variance was performed using Tukey's multicomparison ($p<0.05$). Significant changes are marked on graphs with an asterisk symbol. Fisher's multicomparison test was not used as shown in the former 90-day report. This test was incorrect in that it demonstrated significant differences in the multicomparisons of treatment groups at probability levels greater than 0.05. This is the reason that more parameters appeared to by significant with Fisher's, yet were not significant using Tukey's test.

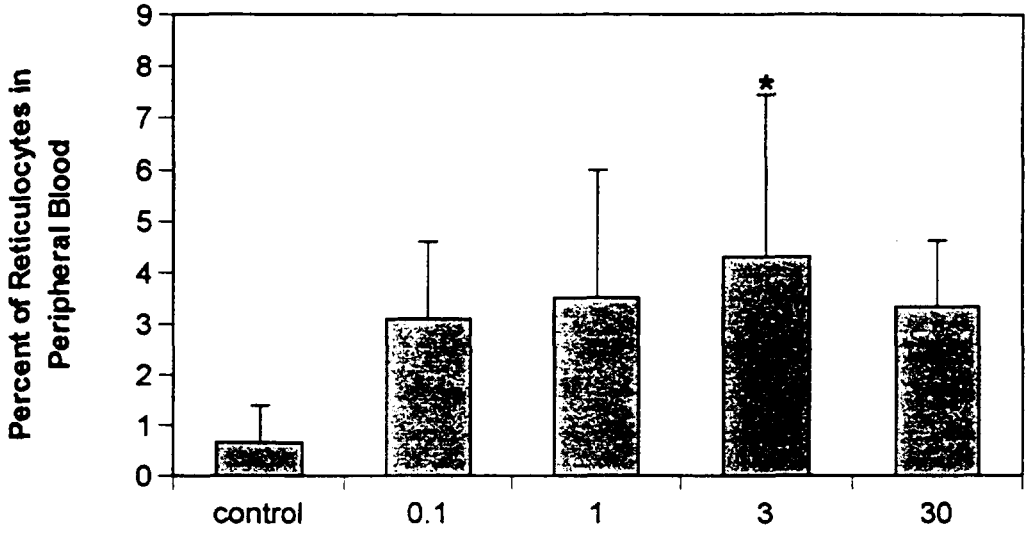
Compliance Statement. The analyses in the report entitled "Evaluation of Immunotoxicological, Hematological and Thyroid Parameters after Exposure to Ammonium Perchlorate for 90 Days in Mice" were conducted to be in compliance with the Environmental Protection Agency's Good Laboratory Practices Standards, 40 CFR 792. An audit was conducted by Dr Dave Mattie of AFRL/HEST on 15-16 July 98. No discrepancies were noted.

Results Obtained after August 1, 1998

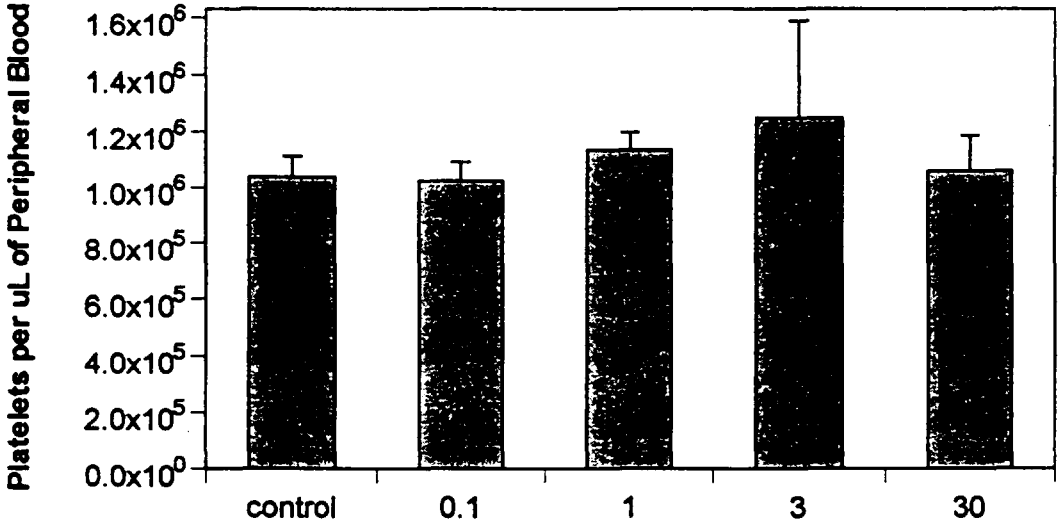
Graphs and Tables

Reticulocyte and Platelet Counts

Reticulocytes: 90-day AP Exposure Exp. "N"



Platelet Count: 14-day AP Exposure Exp. "T"



Ammonium Perchlorate (mg/kg/day)

Whole blood collected in EDTA coated microtainers was submitted to Antech Reference Laboratory for platelet and reticulocyte evaluation. Note that the reticulocyte counts was performed on blood obtained from a 90-day exposure to AP and platelet counts were performed on blood obtained from a 14-day study. At this time, this is the only data available regarding reticulocyte and platelet counts due to minimal availability of blood collected from mice. Analysis of variance using Tukey's multiple comparison (* = $p<0.05$) was used to compare treatment groups to control values. Standard deviation is shown.

14-Day Experiment "T" Platelet Counts

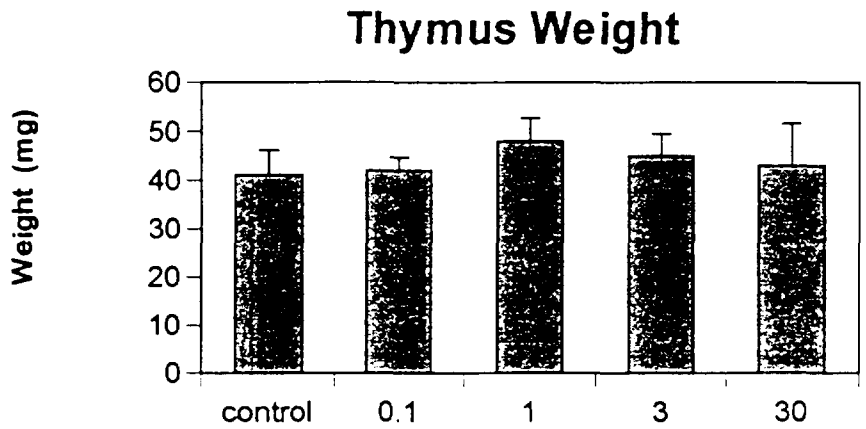
Animal	Platelet
Control	units = x 10^3/uL
1T	75*
2T	1126
3T	1027
4T	1050
5T	945
6T	no sample
Average	1037.00
SD	74.51
0.1 mg/kg/day	
7T	1056
8T	1124
9T	952
10T	982
11T	1005
12T	no sample
Average	1023.80
SD	67.70
1.0 mg/kg/day	
13T	1124
14T	1200
15T	1149
16T	1031
17T	1167
18T	no sample
Average	1134.20
SD	63.99
3.0 mg/kg/day	
19T	1622
20T	92*
21T	1166
22T	958
23T	no sample
24T	no sample
Average	1248.67
SD	339.63
30.0 mg/kg/day	
25T	933
26T	1201
27T	1189
28T	no sample
29T	1017
30T	960
Average	1060.00
SD	126.98

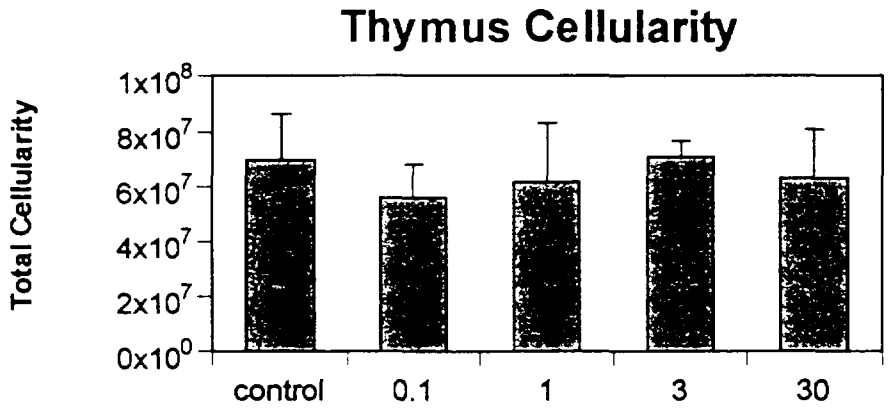
*Apparent clumping may have effected counts. Counts not figured in Average.

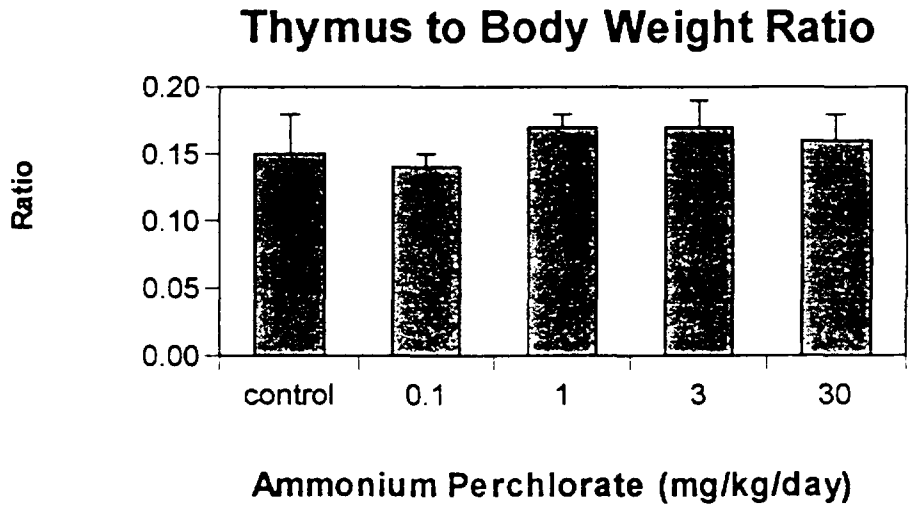
90-Day "N" Reticulocyte Data

Animal	Reticulocyte
Control	%
1N	0.6
2N	0.6
3N	0.1
4N	0.2
5N	0.4
6N	2.1
Average	0.67
SD	0.73
0.1 mg/kg/day	
7N	0.0
8N	3.2
9N	2.8
10N	3
11N	3.9
12N	5.4
Average	3.18
SD	1.50
1.0 mg/kg/day	
13N	0.4
14N	1.3
15N	6.9
16N	2.7
17N	5.3
18N	4.8
Average	3.57
SD	2.51
3.0 mg/kg/day	
19N	3.9
20N	9.9
21N	3.7
22N	4.4
23N	0.1
24N	4.3
Average	4.38
SD	3.15
30.0 mg/kg/day	
25N	4.4
26N	3
27N	0.9
28N	4
29N	3.2
30N	4.5
Average	3.33
SD	1.34

Experiment 90-day "N"



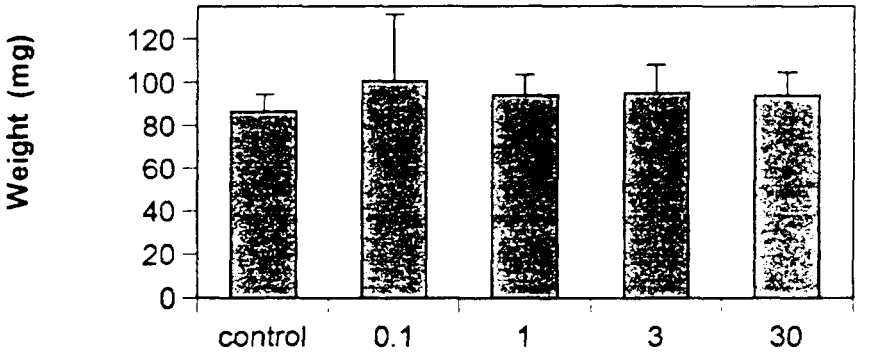




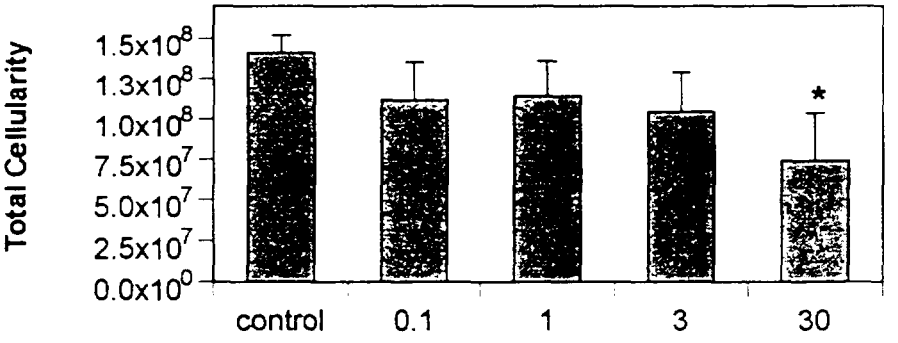
Analysis of variance using Tukey's multiple comparison (* = $p<0.05$) was used to compare treatment groups to control values. Standard deviation is shown.

Experiment 90-day "N"

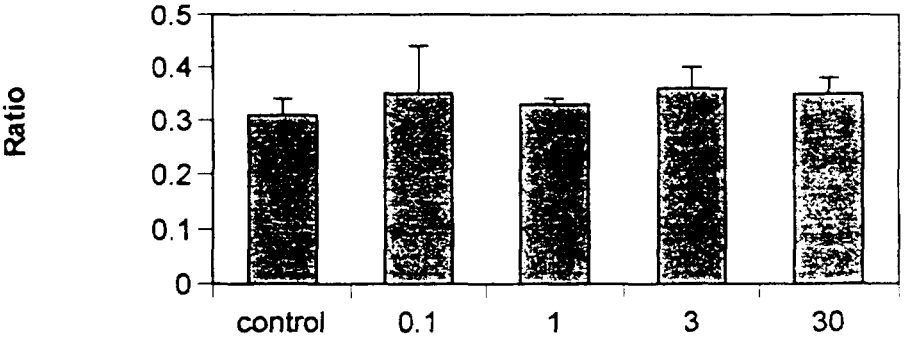
Spleen Weight



Spleen Cellularity



Spleen to Body Weight Ratio



Ammonium Perchlorate (mg/kg/day)

Analysis of variance using Tukey's multiple comparison (* = $p<0.05$) was used to compare treatment groups to control values. Standard deviation is shown.

90-Day Immune Parameters
"N"
Organ Weights

Animal	Body Weight gr	Thymus Wt. mg	Spleen Wt. mg
Control			
1N	25.6	40.5	86.4
2N	24.3	38.3	82.7
3N	25.9	44.8	86.8
4N	35.8	32.6	100.9
5N	29.5	47	77.4
6N	25.8	43.4	85.5
Average	[illegible]	[illegible]	85.62
SD	[illegible]	[illegible]	7.82
0.1 mg/kg/day			
7N	28.6	44.1	76.8
8N	28.1	42.8	93.3
9N	26.1	47	84.2
10N	29.4	40	162
11N	29.8	40.7	92.6
12N	29	40.3	95.8
Average	28.50	42.48	100.78
SD	[illegible]	[illegible]	30.81
1.0 mg/kg/day			
13N	26.5	47.4	90.2
14N	28.3	55.1	100.3
15N	28.9	53.5	97.5
16N	28.3	46.9	84.6
17N	31	43.8	108.2
18N	25.4	43.5	84.1
Average	28.90	48.53	94.15
SD	[illegible]	[illegible]	9.53
3.0 mg/kg/day			
19N	22.1	41.1	72.6
20N	25.4	52.7	110.4
21N	26.9	46.1	90.6
22N	28.5	42.7	96.4
23N	27.3	49	103.9
24N	29	41.6	98.6
Average	[illegible]	[illegible]	95.42
SD	[illegible]	[illegible]	13.05
30.0 mg/kg/day			
25N	26.7	31.8	83.2
26N	26.6	45.9	97.1
27N	27.1	50.1	107.8
28N	24	34.1	81.1
29N	27.7	51.2	91.9
30N	26.1	50.1	104
Average	26.37	43.87	94.18
SD	1.28	8.68	10.84

90-Day IP Parameters
"A"
Organ/BW Ratio (%)

Animal	Body Weight g	Spleen Wt. mg	SW/BW (mg)%
Control			
1N	25.6	86.4	0.338
2N	24.3	82.7	0.340
3N	25.9	86.8	0.335
4N	35.8	100.9	0.282
5N	29.5	77.4	0.262
6N	25.8	85.5	0.331
Average	27.32	86.62	0.31
SD	4.28	7.82	0.03
0.1 mg/kg/day			
7N	28.6	76.8	0.269
8N	28.1	93.3	0.332
9N	26.1	84.2	0.323
10N	29.4	162	0.551
11N	29.8	92.6	0.311
12N	29	95.8	0.330
Average	28.50	100.78	0.35
SD	1.32	30.81	0.10
1.0 mg/kg/day			
13N	26.5	90.2	0.340
14N	28.3	100.3	0.354
15N	28.9	97.5	0.337
16N	28.3	84.6	0.299
17N	31	108.2	0.349
18N	25.4	84.1	0.331
Average	28.07	94.15	0.34
SD	1.95	9.53	0.02
3.0 mg/kg/day			
19N	22.1	72.6	0.329
20N	25.4	110.4	0.435
21N	26.9	90.6	0.337
22N	28.5	96.4	0.338
23N	27.3	103.9	0.381
24N	29	98.6	0.340
Average	26.53	95.42	0.36
SD	2.51	13.05	0.04
30.0 mg/kg/day			
25N	26.7	83.2	0.312
26N	26.6	97.1	0.365
27N	27.1	107.8	0.398
28N	24	81.1	0.338
29N	27.7	91.9	0.332
30N	26.1	104	0.398
Average	26.37	94.18	0.36
SD	1.28	10.84	0.04

90-Day IP Parameters
"A"
Organ/BW Ratio (%)

Animal	Body Weight g	Thymus Wt. m	TW/BW (mg)%
Control			
1N	25.6	40.5	0.158
2N	24.3	38.3	0.158
3N	25.9	44.8	0.173
4N	35.8	32.6	0.091
5N	29.5	47	0.159
6N	25.8	43.4	0.168
Average	[illegible]	43.10	0.15
SD	[illegible]	5.18	0.03
0.1 mg/kg/day			
7N	28.6	44.1	0.154
8N	28.1	42.8	0.152
9N	26.1	47	0.180
10N	29.4	40	0.136
11N	29.8	40.7	0.137
12N	29	40.3	0.139
Average	28.50	42.16	0.15
SD	[illegible]	[illegible]	0.02
1.0 mg/kg/day			
13N	26.5	47.4	0.179
14N	28.3	55.1	0.195
15N	28.9	53.5	0.185
16N	28.3	46.9	0.166
17N	31	43.8	0.141
18N	25.4	43.5	0.171
Average	[illegible]	[illegible]	0.17
SD	[illegible]	[illegible]	0.02
3.0 mg/kg/day			
19N	22.1	41.1	0.186
20N	25.4	52.7	0.207
21N	26.9	46.1	0.171
22N	28.5	42.7	0.150
23N	27.3	49	0.179
24N	29	41.6	0.143
Average	26.53	45.53	0.17
SD	[illegible]	4.62	0.02
30.0 mg/kg/day			
25N	26.7	31.8	0.119
26N	26.6	45.9	0.173
27N	27.1	50.1	0.185
28N	24	34.1	0.142
29N	27.7	51.2	0.185
30N	26.1	50.1	0.192
Average	26.37	43.87	0.17
SD	1.28	8.68	0.03

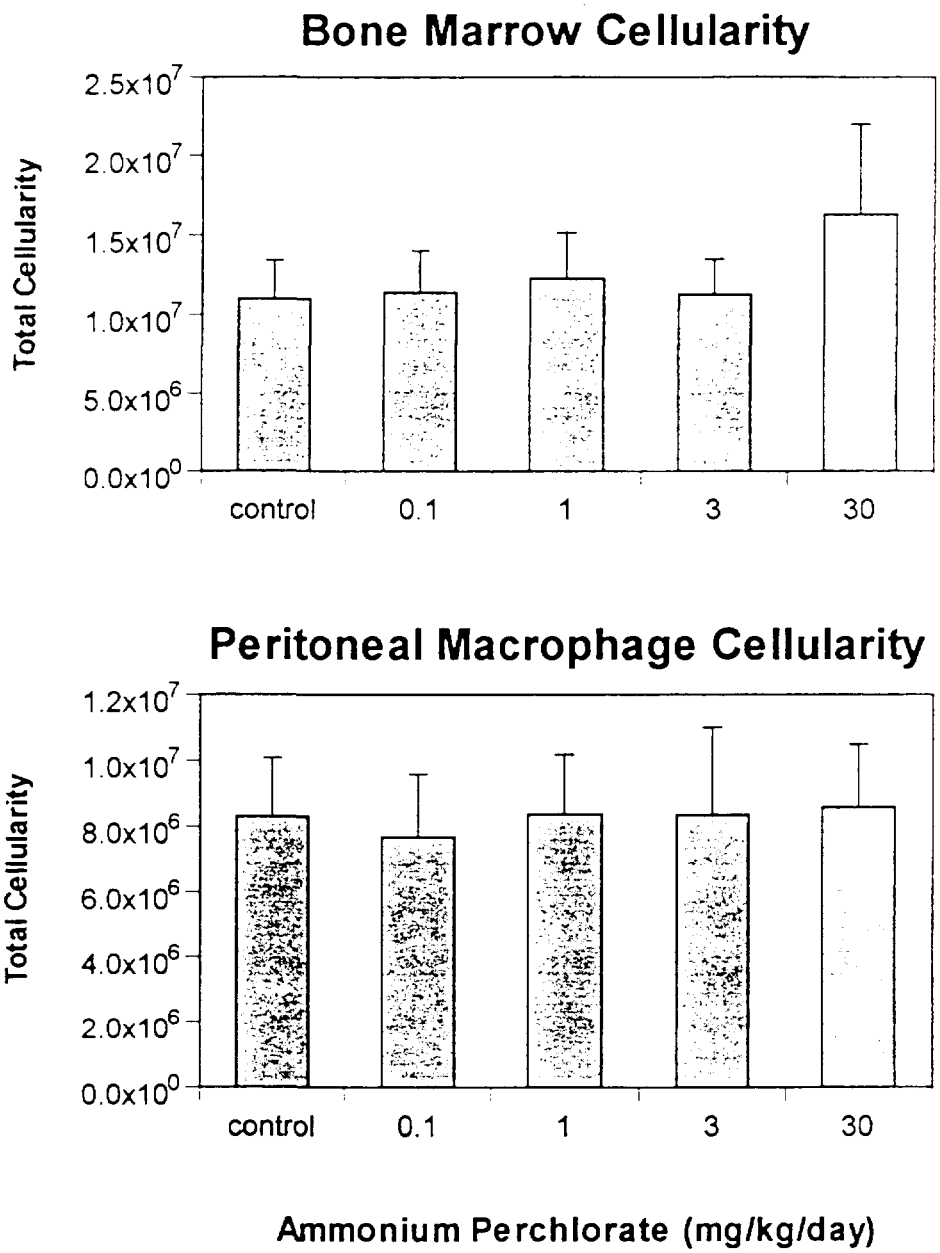
90-Day Immune Parameters
"N"
Thymus Cell Counts

Animal	Coulter Counter	Total Cellularity
Control		
1N	2696	4.04E+07
2N	4802	7.20E+07
3N	5863	8.79E+07
4N	4856	7.28E+07
5N	4215	6.32E+07
6N	5443	8.16E+07
Average	4646	6.97E+07
SD	1116	1.67E+07
0.1 mg/kg/day		
7N	2520	3.78E+07
8N	3047	4.57E+07
9N	4044	6.07E+07
10N	3802	5.70E+07
11N	4705	7.06E+07
12N	4273	6.41E+07
Average	3732	5.60E+07
SD	810	1.21E+07
1.0 mg/kg/day		
13N	4962	7.44E+07
14N	5362	8.04E+07
15N	4929	7.39E+07
16N	2024	3.04E+07
17N	2654	3.98E+07
18N	4813	7.22E+07
Average	4124	6.19E+07
SD	1409	2.11E+07
3.0 mg/kg/day		
19N	4289	6.43E+07
20N	4660	6.99E+07
21N	5268	7.90E+07
22N	4719	7.08E+07
23N	5062	7.59E+07
24N	4336	6.50E+07
Average	4722	7.08E+07
SD	388	5.83E+06
30.0 mg/kg/day		
25N	2268	3.40E+07
26N	4362	6.54E+07
27N	4080	6.12E+07
28N	3936	5.90E+07
29N	4773	7.16E+07
30N	5856	8.78E+07
Average	4213	6.32E+07
SD	1176	1.76E+07

90-Day Immune Parameters
"N"
Spleen Cell Counts

Animal	Coulter Counter	Total Cellularity
Control		
1N	9551	1.43E+08
2N	9491	1.42E+08
3N	9969	1.50E+08
4N	8562	1.28E+08
5N	8624	1.29E+08
6N	10383	1.56E+08
Average	9430	1.41E+08
SD	724	1.09E+07
0.1 mg/kg/day		
7N	4374	6.56E+07
8N	6941	1.04E+08
9N	8554	1.28E+08
10N	7928	1.19E+08
11N	8067	1.21E+08
12N	8571	1.29E+08
Average	7406	1.11E+08
SD	1600	2.40E+07
1.0 mg/kg/day		
13N	6693	1.00E+08
14N	8797	1.32E+08
15N	7149	1.07E+08
16N	9904	1.49E+08
17N	7208	1.08E+08
18N	5977	8.97E+07
Average	7621	1.14E+08
SD	1453	2.18E+07
3.0 mg/kg/day		
19N	7113	1.07E+08
20N	5133	7.70E+07
21N	7368	1.11E+08
22N	5133	7.70E+07
23N	7302	1.10E+08
24N	9532	1.43E+08
Average	6930	1.04E+08
SD	1649	2.47E+07
30.0 mg/kg/day		
25N	4012	6.02E+07
26N	4131	6.20E+07
27N	8908	1.34E+08
28N	4374	6.56E+07
29N	3799	5.70E+07
30N	4287	6.43E+07
Average	4919	7.38E+07
SD	1965	2.95E+07

Experiment 90-day "N"



Analysis of variance using Tukey's multiple comparison (* = $p<0.05$) was used to compare treatment groups to control values. Standard deviation is shown.

90-Day Immune Parameters
"N"
Bone Marrow Cell Counts

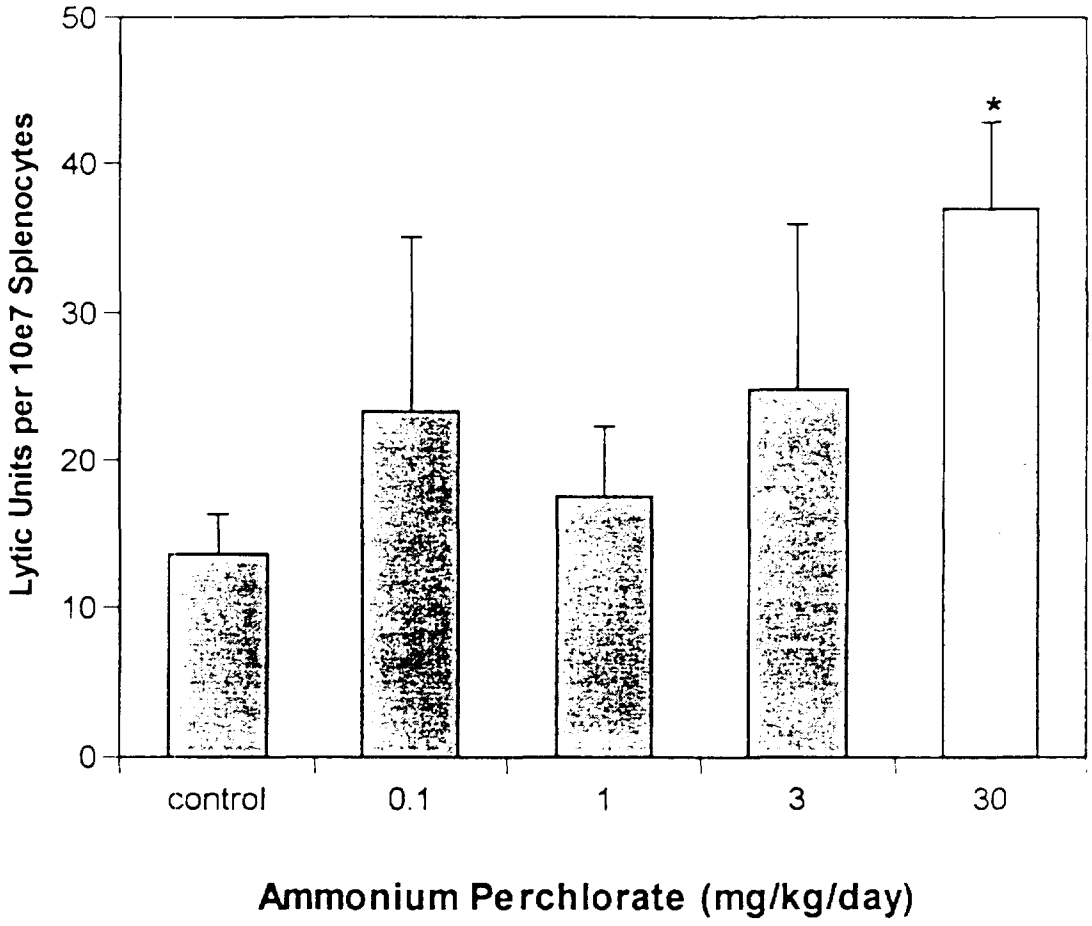
Animal	Coulter Counter	Total Cellularity
Control		
1N	2104	1.05E+07
2N	3104	1.55E+07
3N	1865	9.33E+06
4N	2352	1.18E+07
5N	1830	9.15E+06
6N	1904	9.52E+06
Average	2193	1.10E+07
SD	587	2.94E+06
0.1 mg/kg/day		
7N	1702	8.51E+06
8N	2846	1.42E+07
9N	2257	1.13E+07
10N	1573	7.87E+06
11N	2612	1.31E+07
12N	2668	1.33E+07
Average	2276	1.14E+07
SD	532	2.66E+06
1.0 mg/kg/day		
13N	2643	1.32E+07
14N	3548	1.77E+07
15N	2156	1.08E+07
16N	2119	1.06E+07
17N	2024	1.01E+07
18N	2321	1.16E+07
Average	2469	1.23E+07
SD	572	2.86E+06
3.0 mg/kg/day		
19N	2055	1.03E+07
20N	2584	1.29E+07
21N	2977	1.49E+07
22N	2157	1.08E+07
23N	1762	8.81E+06
24N	2032	1.02E+07
Average	2261	1.13E+07
SD	441	2.20E+06
30.0 mg/kg/day		
25N	5419	2.71E+07
26N	2153	1.08E+07
27N	2853	1.43E+07
28N	3461	1.73E+07
29N	2769	1.38E+07
30N	2846	1.42E+07
Average	3250	1.63E+07
SD	1141	5.70E+06

90-Day Immune Parameters
"N"
Macrophage Cell Counts

Animal	Coulter Counter	Total Cellularity
Control		
1N	1270	6.35E+06
2N	1738	8.69E+06
3N	1158	5.79E+06
4N	1964	9.82E+06
5N	1885	9.43E+06
6N	1947	9.74E+06
Average	1660	8.30E+06
SD	357	1.78E+06
0.1 mg/kg/day		
7N	926	4.63E+06
8N	1382	6.91E+06
9N	1448	7.24E+06
10N	2047	1.02E+07
11N	1746	8.73E+06
12N	1670	8.35E+06
Average	1537	7.68E+06
SD	385	1.91E+06
1.0 mg/kg/day		
13N	1908	9.54E+06
14N	1720	8.60E+06
15N	1875	9.38E+06
16N	1582	7.91E+06
17N	1003	5.02E+06
18N	1977	9.89E+06
Average	1678	8.39E+06
SD	360	1.80E+06
3.0 mg/kg/day		
19N	1102	5.51E+06
20N	1925	9.63E+06
21N	1924	9.62E+06
22N	1597	7.99E+06
23N	2429	1.21E+07
24N	1061	5.31E+06
Average	1673	8.37E+06
SD	530	2.65E+06
30.0 mg/kg/day		
25N	1477	7.39E+06
26N	2384	1.19E+07
27N	1747	8.74E+06
28N	1262	6.31E+06
29N	1698	8.49E+06
30N	1749	8.75E+06
Average	1720	8.60E+06
SD	377	1.89E+06

Natural Killer Activity

90-Day Experiment "N"



Natural Killer (NK) activity was performed using a standard ^{51}Cr, 4-hour release assay with Yac-1 target cells. Analysis of variance using Tukey's multiplecomparison (* = $p<0.05$) was used to compare treatment groups to control values. Standard deviation is shown.

90d AP exposure, Exp. "N", NK assay

animal	E:T ratio (X)	% Spec. Lysis (Y)	Y* = ln(Y/(100-Y))	mean Y*	exp	LU per 10^7 cells	LU/10^7/group
1	100	12.12	-1.981	-2.842	0.525	**10.9**	control 13.[illegible]
	50	5.93	-2.764				std dev [illegible]
	25	2.23	-3.781				
2	100	11.50	-2.041	-2.967	0.463	**9.6**	
	50	5.09	-2.926				
	25	1.92	-3.933				
3	100	16.91	-1.592	-2.428	0.794	**16.5**	
	50	7.26	-2.547				
	25	4.13	-3.145				
4	100	15.55	-1.692	-2.571	0.688	**14.3**	
	50	6.27	-2.705				
	25	3.5	-3.317				
5	100	16.45	-1.625	-2.464	0.765	**15.9**	
	50	7.15	-2.564				
	25	3.9	-3.204				
6	100	13.5	-1.857	-2.565	0.692	**14.4**	
	50	6.29	-2.701				
	25	4.16	-3.137				
7	100	31.55	-0.775	-1.411	2.195	**45.7**	0.1 mg/kg 23.[illegible]
	50	20.11	-1.379				std dev [illegible]
	25	11.12	-2.079				
8	100	21.45	-1.298	-1.920	1.319	**27.4**	
	50	12.41	-1.954				
	25	7.53	-2.508				
9	100	17.44	-1.555	-2.328	0.877	**18.2**	
	50	7.62	-2.495				
	25	5.05	-2.934				
10	100	15.7	-1.681	-2.524	0.721	**15.0**	
	50	6.89	-2.604				
	25	3.6	-3.288				
11	100	14.85	-1.746	-2.427	0.795	**16.5**	
	50	7.48	-2.515				
	25	4.66	-3.018				
12	100	14.07	-1.809	-2.383	0.830	**17.3**	
	50	8.25	-2.409				
	25	5.06	-2.932				
13	100	16.92	-1.591	-2.208	0.989	**20.6**	1.0 mg/kg 17.[illegible]
	50	9.22	-2.287				std dev [illegible]
	25	6.03	-2.746				
14	100	9.97	-2.201	-2.835	0.528	**11.0**	
	50	5.07	-2.930				
	25	3.31	-3.375				
15	100	14.32	-1.789	-2.509	0.732	**15.2**	
	50	6	-2.752				

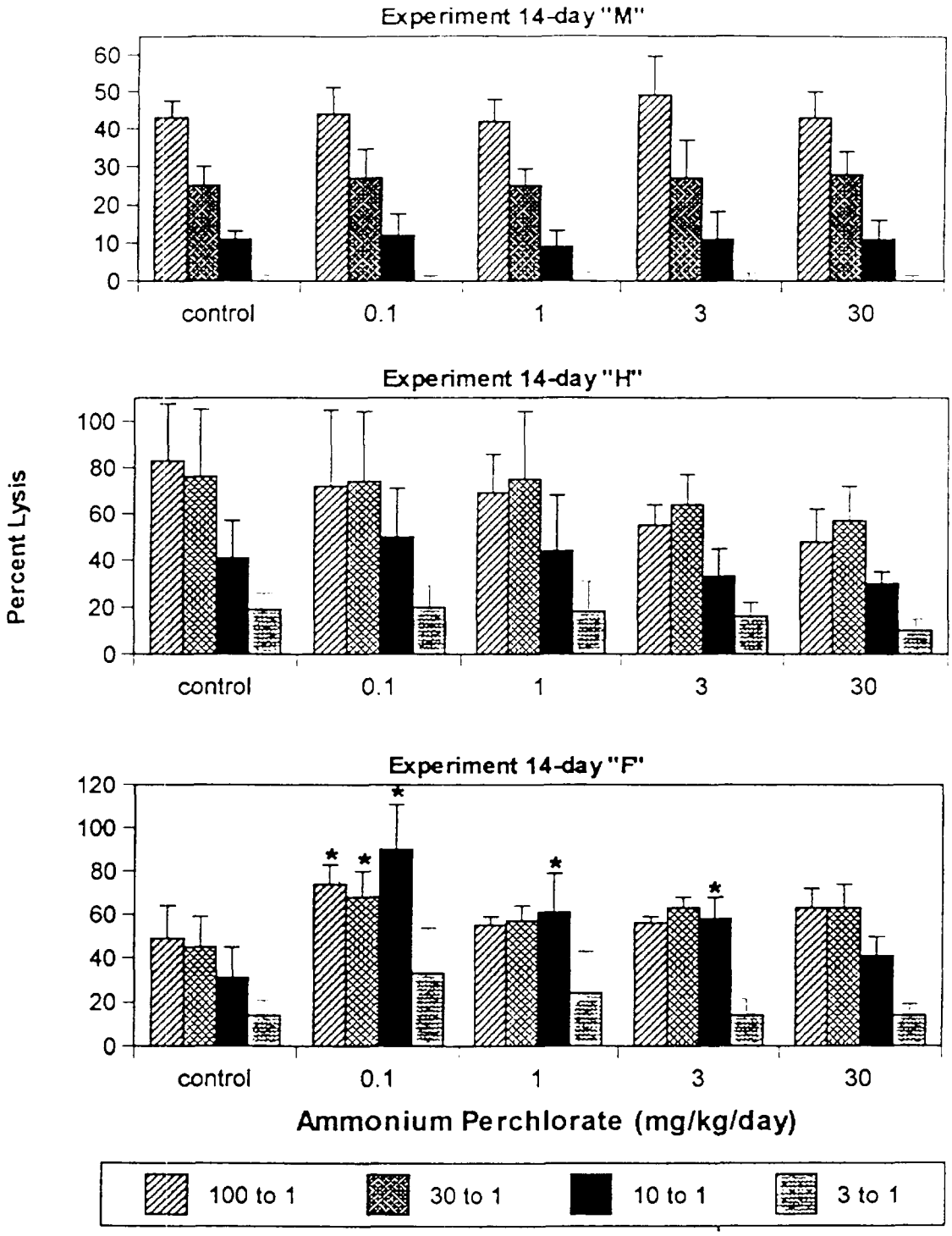
	25	4.8	-2.987				
16	100	10.46	-2.147	-2.601	0.668	**13.9**	
	50	6.19	-2.718				
	25	5.03	-2.938				
17	100	20.14	-1.378	-2.077	1.128	**23.5**	
	50	10.92	-2.099				
	25	5.99	-2.753				
18	100	18.13	-1.508	-2.188	1.009	**21.0**	
	50	10.06	-2.191				
	25	5.39	-2.865				
19	100	13.56	-1.852	-2.681	0.616	**12.8**	3.0 mg/kg 24.2
	50	6.07	-2.739				std dev 11.1
	25	3.07	-3.452				
20	100	24.24	-1.140	-1.715	1.620	**33.7**	
	50	16.68	-1.608				
	25	8.34	-2.397				
21	100	17.78	-1.531	-2.206	0.991	**20.6**	
	50	10.01	-2.196				
	25	5.26	-2.891				
22	100	29.67	-0.863	-1.478	2.052	**42.7**	
	50	18.52	-1.482				
	25	11	-2.091				
23	100	17.33	-1.562	-2.298	0.904	**18.8**	
	50	8.78	-2.341				
	25	4.78	-2.992				
24	100	16.14	-1.648	-2.223	0.974	**20.3**	
	50	8.6	-2.363				
	25	6.55	-2.658				
25	100	26.38	-1.026	-1.493	2.022	**42.0**	30 mg/kg 37.0
	50	15.22	-1.717				std dev 6.6
	25	14.98	-1.736				
26	100	26.7	-1.010	-1.461	2.087	**43.4**	
	50	21.45	-1.298				
	25	11.14	-2.077				
27	100	20.1	-1.380	-1.732	1.592	**33.1**	
	50	15.37	-1.706				
	25	10.81	-2.110				
28	100	25.48	-1.073	-1.750	1.564	**32.5**	
	50	14.29	-1.791				
	25	8.43	-2.385				
29	100	28.44	-0.923	-1.510	1.987	**41.3**	
	50	17.67	-1.539				
	25	11.21	-2.069				
30	100	20.69	-1.344	-1.852	1.412	**29.4**	
	50	13.51	-1.857				
	25	8.66	-2.356				

Natural Killer Cell Assay for 90-day, Experiment "N"

Animal		100 to 1					50 to 1					25 to 1			
Control				Average	SD				Average	SD				Average	SD
1N	6039	6290	5944	6091.00	178.77	4883	4833	5236	4984.00	219.67	4402	4356	4211	4323.00	99.68
2N	5557	6189	6197	5981.00	367.22	4759	4932	4811	4834.00	88.76	4434	4121	4249	4268.00	157.36
3N	6404	7318	7121	6947.67	481.02	5238	5095	5336	5223.00	121.20	4754	4240	4991	4661.67	383.92
4N	6369	6889	6857	6705.00	291.42	4880	4934	5321	5045.00	240.54	4634	4491	4527	4550.67	74.38
5N	6703	6938	6954	6865.00	140.52	5117	5074	5418	5203.00	187.43	4679	4616	4571	4622.00	54.25
6N	5934	6465	6615	6338.00	357.82	4837	5046	5264	5049.00	213.52	4768	4685	4549	4667.33	110.56
	avg/std for group			[redacted]	[redacted]	avg/std for group			[redacted]	[redacted]	avg/std for group			[redacted]	[redacted]
	percent lysis			[redacted]		percent lysis			[redacted]		percent lysis			[redacted]	
0.1 mg/kg/day				Average	SD				Average	SD				Average	SD
7N	9908	9646	9146	9566.67	387.15	7388	7566	7608	7520.67	116.80	5964	5862	5912	5912.67	51.00
8N	7896	7862	7521	7759.67	207.39	6050	5925	6453	6142.67	275.93	5136	5437	5236	5269.67	153.30
9N	7274	6807	7047	7042.67	233.53	5354	5471	5033	5286.00	226.78	4798	5030	4655	4827.67	189.25
10N	6906	6385	6901	6730.67	299.37	5355	5220	4892	5155.67	238.11	4460	4713	4530	4567.67	130.64
11N	6383	6554	6800	6579.00	209.62	5351	5252	5180	5261.00	85.85	4763	4780	4728	4757.00	26.51
12N	6470	6289	6559	6439.33	137.59	5557	5393	5247	5399.00	155.09	4831	4887	4769	4829.00	59.03
	avg/std for group			[redacted]	[redacted]	avg/std for group			[redacted]	[redacted]	avg/std for group			[redacted]	[redacted]
	percent lysis			[redacted]		percent lysis			[redacted]		percent lysis			[redacted]	
1.0 mg/kg/day				Average	SD				Average	SD				Average	SD
13N	6975	6815	7057	6949.00	123.08	5617	5557	5546	5573.33	38.21	5110	4935	4960	5001.67	94.65
14N	5722	5658	5742	5707.33	43.88	4868	4853	4772	4831.00	51.64	4474	4555	4518	4515.67	40.55
15N	6743	6595	6115	6484.33	328.30	4825	4915	5251	4997.00	224.53	4755	4697	4895	4782.33	101.79
16N	6057	5616	5709	5794.00	232.46	4950	5032	5110	5030.67	80.01	4574	4916	4982	4824.00	219.01
17N	7577	7472	7527	7525.33	52.52	5944	6335	5353	5877.33	494.38	4960	5123	4900	4994.33	115.40
18N	6848	7305	7343	7165.33	275.47	5518	6378	5271	5722.33	581.10	4805	5012	4844	4887.00	110.00
	avg/std for group			[redacted]	[redacted]	avg/std for group			[redacted]	[redacted]	avg/std for group			[redacted]	[redacted]
	percent lysis			[redacted]		percent lysis			[redacted]		percent lysis			[redacted]	
3.0 mg/kg/day				Average	SD				Average	SD				Average	SD
19N	6473	6285	6286	6348.00	108.25	4896	5348	4782	5008.67	299.35	4535	4391	4491	4472.33	73.79
20N	8091	8322	8361	8258.00	145.93	6706	7475	6539	6906.67	499.22	5485	5672	5087	5414.67	298.77
21N	7198	7169	6941	7102.67	140.76	5648	6103	5393	5714.67	359.66	4791	4908	4895	4864.67	64.13
22N	9249	9217	9225	9230.33	16.65	7448	7403	6857	7236.00	328.99	6111	5862	5702	5891.67	206.11
23N	6959	7055	7055	7023.00	55.43	5540	5745	5197	5494.00	276.88	4868	4819	4649	4778.67	114.94
24N	7264	6712	6456	6810.67	412.94	5533	5469	5384	5462.00	74.75	5107	5155	5024	5095.33	66.27
	avg/std for group			[redacted]	[redacted]	avg/std for group			[redacted]	[redacted]	avg/std for group			[redacted]	[redacted]
	percent lysis			[redacted]		percent lysis			[redacted]		percent lysis			[redacted]	
30.0 mg/kg/day				Average	SD				Average	SD				Average	SD
25N	8609	8729	8585	8641.00	77.15	6698	6404	6836	6646.00	220.64	6900	7415	5494	6603.00	994.34
26N	8383	8939	8776	8699.33	285.82	7383	7731	8165	7759.67	391.79	5978	6255	5518	5917.00	372.27
27N	7193	7629	7732	7518.00	286.13	6230	6952	6834	6672.00	387.30	6739	5740	5093	5857.33	829.25
28N	8311	8510	8621	8480.67	157.07	6458	6464	6518	6480.00	33.05	6048	4866	5381	5431.67	592.63
29N	8965	9053	9011	9009.67	44.02	6981	7412	6860	7084.33	290.15	5972	5691	6121	5928.00	218.35
30N	7655	7640	7578	7624.33	40.82	6126	6490	6404	6340.00	190.25	5431	5475	5511	5472.33	40.07
	avg/std for group			8328.83	595.12	avg/std for group			6830.33	642.24	avg/std for group			5868.22	646.74
	percent lysis			24.63		percent lysis			16.25		percent lysis			10.87	

							Average	SD
SR	4038	4169	3692	3925	3926	3794	3924.00	169.56
MR	22409	21698	20605	20025	20798	25304	21806.50	1910.06

Cytotoxic T Cell Activity



Cytotoxic T cell activity was performed using a standard 4-hour ^{51}Cr release assay with P815 target cells. Analysis of variance using Tukey's multiple comparison (*=p<0.05) was used to compare treatment groups to control values. Standard devation is shown.

Cytotoxic T Cell Assay: Experiment "M"
units are Percent lysis = (CPM - SR)/(MR - SR)*100
max release = 10,332 ; spontaneous release = 3893

Animal	100	30	10	3
Control				
1H	40	22	10	-4
2H	42	18	8	-3
3H	37	23	11	-2
4H	49	32	15	-2
5H	43	28	10	-6
6H	46	25	11	-4
[illegible]	43	25	11	-4
[illegible]	4.4	5.1	2.1	1.5
Animal	100	30	10	3
0.1 mg/kg				
7H	40	20	7	-3
8H	58	42	23	-1
9H	46	30	13	-2
10H	40	23	10	-5
11H	42	25	11	-3
12H	39	25	11	-1
[illegible]	44	27	12	-3
[illegible]	7.2	7.7	5.7	1.4
Animal	100	30	10	3
1.0 mg/kg				
13H	38	22	8	-3
14H	37	27	8	0
15H	49	28	10	-6
16H	43	27	11	0
17H	35	16	2	-5
18H	48	27	15	-2
[illegible]	42	25	9	-3
[illegible]	5.9	4.5	4.3	2.4
Animal	100	30	10	3
3.0 mg/kg				
19H	53	36	16	-2
20H	46	13	-3	-4
21H	67	41	16	-1
22H	44	25	11	-2
23H	36	22	11	1
24H	46	26	15	2
[illegible]	49	27	11	-1
[illegible]	10.6	10.0	7.2	2.1
Animal	100	30	10	3
30 mg/kg				
25H	52	34	2	-1
26H	40	17	13	-3
27H	45	28	12	2
28H	45	33	16	0
29H	42	29	13	0
30H	31	24	7	0
[illegible]	43	28	11	0
[illegible]	7.0	6.2	5.1	1.4

Cytotoxic T Cell Experiment "M"
(units are counts per minute)

Animal		100					30					10					3			
Control	Rep 1	Rep 2	Rep 3	Average	SD	Rep 1	Rep 2	Rep 3	Average	SD	Rep 1	Rep 2	Rep 3	Average	SD	Rep 1	Rep 2	Rep 3	Average	SD
1H	6793	6227	6411	6477	289	5526	5287	5040	5284	243	4479	4699	4484	4554	126	3591	3741	3517	3616	114
2H	6774	6476	6453	6568	179	5076	5101	4936	5038	89	4323	4536	4398	4419	108	3619	3789	3646	3685	91
3H	6874	6580	5320	6258	826	5397	5322	5375	5365	39	4553	4645	4591	4596	46	3737	3766	3799	3767	31
4H	7204	7165	6804	7058	221	6100	5986	5824	5970	139	4862	4630	5016	4836	194	3764	3717	3729	3737	24
5H	7077	6721	6271	6690	404	5982	5649	5496	5709	248	4500	4679	4497	4559	104	3597	3448	3462	3502	82
6H	7086	6812	6614	6837	237	5115	5892	5499	5502	389	4721	4384	4687	4597	186	3589	3691	3598	3626	56
0.1 mg/kg/day																				
7H	6699	6561	6087	6449	321	5473	5068	5018	5186	250	4345	4338	4291	4325	29	3859	3652	3533	3681	165
8H	7621	7725	7544	7630	91	6741	6461	6499	6567	152	5493	5454	5242	5396	135	3854	3893	3647	3798	132
9H	7088	6923	6631	6881	231	5907	5898	5761	5855	82	4681	4717	4863	4754	96	3680	3883	3698	3754	112
10H	6617	6510	6309	6479	156	5479	5590	5048	5372	286	4650	4405	4548	4534	123	3448	3754	3557	3586	155
11H	6560	6729	6440	6576	145	5624	5529	5348	5500	140	4567	4667	4538	4591	68	3639	3800	3656	3698	88
12H	6643	6787	5875	6435	490	5640	5513	5297	5483	173	4502	4642	4614	4586	74	3811	3961	3744	3839	111
1 mg/kg/day																				
13H	6608	6267	6217	6364	213	5588	5244	5143	5325	233	4430	4383	4481	4431	49	3768	3782	3599	3716	102
14H	6642	6314	5809	6255	420	5638	5833	5424	5632	205	4412	4355	4427	4398	38	3999	3846	3781	3875	112
15H	7338	7051	6714	7034	312	5692	5697	5674	5688	12	4529	4466	4579	4525	57	3036	3801	3600	3479	397
16H	6821	6742	6465	6676	187	5629	5739	5498	5622	121	4641	4671	4578	4630	47	3773	3956	3875	3868	92
17H	6307	6074	6033	6138	148	5007	4896	4916	4940	59	4260	4151	3726	4046	282	3545	3661	3587	3598	59
18H	7036	6967	6963	6989	41	5702	5628	5530	5620	86	4589	4948	5087	4875	257	3675	3910	3715	3767	126
3 mg/kg/day																				
19H	7135	7327	7473	7312	170	6583	6278	5770	6210	411	4872	4872	5001	4915	74	3692	3862	3684	3746	101
20H	5687	7324	7462	6824	987	4905	4976	4302	4728	370	3826	3647	3642	3705	105	3676	3659	3637	3657	20
21H	8866	7789	8051	8235	562	6236	6427	6920	6528	353	5194	4639	4901	4911	278	3831	3783	3856	3823	37
22H	6993	6624	6606	6741	218	5782	5394	5388	5521	226	4660	4541	4521	4574	75	3896	3828	3649	3791	128
23H	6348	6138	6217	6234	106	5335	5325	5248	5303	48	4610	4460	4681	4584	113	3993	3924	3998	3972	41
24H	6954	6800	6770	6841	99	5553	5588	5528	5556	30	4753	4942	4893	4863	98	3985	4106	3976	4022	73
30 mg/kg/day																				
25H	7395	6983	7349	7242	226	6400	5933	5938	6090	268	4927	3587	3622	4045	764	3810	3936	3807	3851	74
26H	6759	6397	6270	6476	254	5293	4942	4798	5011	255	4139	5020	5024	4728	510	3610	3801	3770	3727	103
27H	7056	6858	6513	6809	275	6046	5663	5466	5725	295	4689	4683	4683	4685	3	3947	4107	3922	3992	100
28H	6951	6665	6849	6822	145	6011	6097	5911	6006	93	4925	4944	4991	4953	34	3956	3903	3855	3906	51
29H	6794	6538	6513	6615	156	6189	5223	5863	5758	491	4504	4763	4840	4702	176	3857	4008	3876	3914	82
30H	6186	5630	5859	5892	279	5616	5439	5166	5407	227	4211	4183	4591	4328	228	3916	4008	3797	3907	106

Cytotoxic T Cell Assay: Experiment "F"
Units are Percent lysis = (CPM - SR)/(MR - SR)*100

Animal	100	30	10	3
Control				
1F	59	41	35	19
2F	63	55	27	13
3F	39	42	16	7
4F	66	61	51	25
5F	45	52	41	16
6F	25	22	16	5
average	49	45	31	14
stdev	15.8	14.0	14.1	7.3
0.1 mg/kg/day				
7F	technical error			
8F	technical error			
9F	70	75	62	27
10F	67	64	88	17
11F	88	81	111	65
12F	69	51	98	22
average	74	68	90	33
stdev	9.7	12.8	21.0	21.9
1.0 mg/kg/day				
13F	52	68	94	59
14F	52	52	62	27
15F	57	46	65	28
16F	61	62	53	18
17F	52	57	47	11
18F	57	55	43	3
average	55	57	61	24
stdev	4.0	7.5	18.4	19.4
3.0 mg/kg/day				
19F	59	64	63	13
20F	56	64	66	16
21F	57	69	58	15
22F	53	54	51	4
23F	59	66	67	26
24F	52	59	41	8
average	56	63	58	14
stdev	3.0	5.4	10.2	7.4
30.0 mg/kg/day				
25F	50	48	25	7
26F	65	66	38	13
27F	73	76	49	12
28F	65	69	48	20
29F	72	68	48	13
30F	53	50	39	19
average	63	63	41	14
stdev	9.5	11.2	9.3	5.1

Cytotoxic T Cell Assay: Experiment "F"
Units are counts per minute

Animal		100				30				10				3		
Control	Rep 1	Rep 2	Rep 3	Average	Rep 1	Rep 2	Rep 3	Average	Rep 1	Rep 2	Rep 3	Average	Rep 1	Rep 2	Rep 3	Average
1F	1739	2217	1883	1946	1573	1742	1090	1468	1334	1375	1254	1321	1005	915	807	909
2F	1952	2079	2111	2047	1991	1728	1820	1846	1175	1105	1039	1106	905	679	679	754
3F	1337	1278	1688	1434	1339	1278	1937	1518	911	792	799	834	607	659	529	598
4F	2111	2084	2175	2123	1822	1919	2276	2006	1925	1623	1694	1747	1072	1103	978	1051
5F	1518	1588	1656	1587	1590	1614	2112	1772	1602	1647	1166	1472	972	839	678	830
6F	1039	1034	1128	1067	942	871	1113	975	1025	686	741	817	553	526	523	534
0.1 mg/kg/day																
7F	528	484	512	508	506	493	635	545	597	467	464	509	425	440	435	433
8F	830	713	724	756	714	767	649	710	1026	514	565	702	495	525	495	505
9F	2131	2446	2106	2228	1688	2444	2932	2355	2403	1943	1711	2019	1212	1201	920	1111
10F	2263	2276	1946	2162	1414	2503	2319	2079	3829	2764	1534	2709	1080	783	686	850
11F	3079	2647	2390	2705	2457	2707	2370	2511	3406	3721	2798	3308	3239	1772	1298	2103
12F	2477	2285	1905	2222	1681	2131	1449	1754	3199	3597	2114	2970	1042	1137	778	986
1 mg/kg/day																
13F	1801	1831	1689	1774	2271	2354	1915	2180	3195	3251	2119	2855	2209	2224	1415	1949
14F	1947	1722	1599	1756	1832	1782	1694	1769	2218	2207	1680	2035	1185	1235	927	1116
15F	2084	1900	1732	1905	1815	1679	1368	1621	2302	2540	1487	2110	1065	1420	902	1129
16F	2077	2042	1924	2014	2145	1936	1971	2017	1692	1945	1712	1783	792	986	847	875
17F	1590	1717	1965	1757	2148	1920	1596	1888	2575	1181	1143	1633	795	594	682	690
18F	2368	1678	1626	1891	2105	1530	1890	1842	1998	1471	1108	1526	564	426	511	500
3 mg/kg/day																
19F	2184	1895	1799	1959	2188	2098	1917	2068	2944	1914	1342	2067	815	700	774	763
20F	2148	1693	1806	1882	2234	2131	1913	2093	3076	1959	1341	2125	863	736	858	819
21F	2181	1759	1741	1894	2797	2151	1684	2211	2748	1598	1391	1912	952	634	857	814
22F	1811	1808	1764	1794	1899	1924	1604	1809	2210	1490	1552	1751	377	389	787	518
23F	1918	1935	2008	1954	2352	2359	1650	2120	2608	1423	2474	2168	1373	937	947	1086
24F	1754	1811	1748	1771	2122	2021	1719	1954	1350	1229	1848	1476	685	531	680	632
30 mg/kg/day																
25F	1840	1658	1675	1724	1851	1549	1558	1653	1137	1143	920	1067	491	470	789	583
26F	2179	2124	2049	2117	2600	1923	1908	2144	1340	1467	1378	1395	963	864	405	744
27F	2398	2433	2123	2318	2550	2268	2363	2394	1849	1557	1646	1684	442	1255	471	723
28F	2025	2156	2111	2097	2472	1983	2150	2202	1925	1335	1721	1660	974	859	999	944
29F	2298	2204	2351	2284	2648	1988	1889	2175	1882	1465	1674	1674	910	367	972	750
30F	1807	1908	1654	1790	1992	1589	1603	1728	1566	1314	1369	1416	840	984	898	907

Cytotoxic T Cell Assay: Experiment "H"
units are Percent lysis = (CPM - SR)/(MR - SR)*100

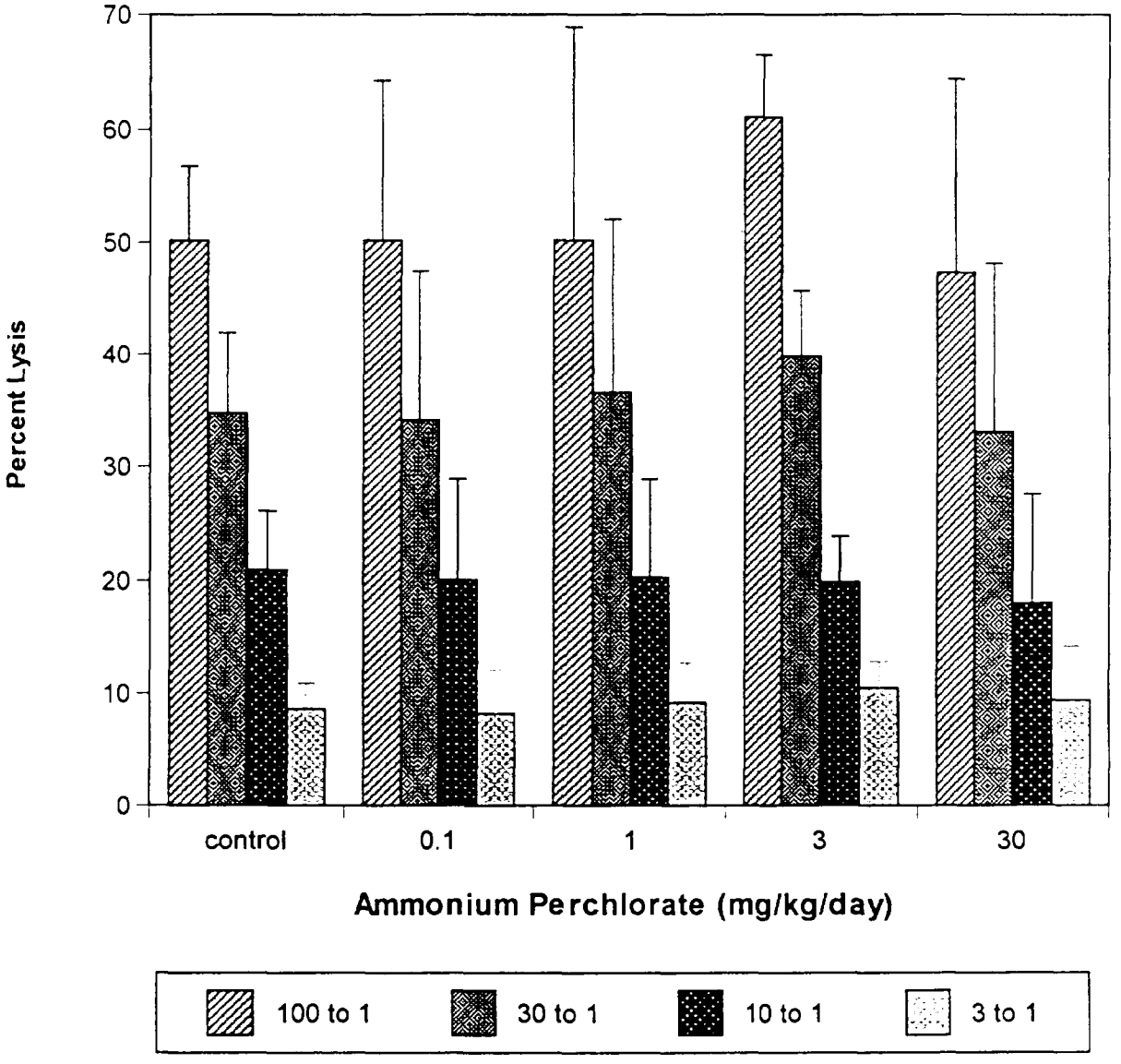
Animal	100	30	10	3
Control				
1H	87	97	48	22
2H	94	95	47	19
3H	36	23	11	7
4H	78	60	33	17
5H	95	86	48	26
6H	105	97	59	25
average	83	76	41	19
stdev	24.4	29.5	16.7	7.1
Animal	100	30	10	3
0.1 mg/kg				
7H	14	17	13	4
8H	108	96	61	18
9H	82	85	51	22
10H	65	66	38	16
11H	96	97	72	29
12H	70	85	63	31
average	72	74	50	20
stdev	32.7	30.4	21.1	9.7
Animal	100	30	10	3
1.0 mg/kg				
13H	54	58	31	11
14H	90	109	77	37
15H	72	83	55	26
16H	83	104	58	24
17H	70	63	35	12
18H	46	34	6	0
average	69	75	44	18
stdev	16.6	29.0	24.8	13.2
Animal	100	30	10	3
3.0 mg/kg				
19H	47	58	27	11
20H	44	47	15	8
21H	55	53	31	11
22H	67	78	52	20
23H	53	68	37	23
24H	63	80	37	22
average	55	64	33	16
stdev	8.9	13.3	12.1	6.6
Animal	100	30	10	3
30 mg/kg				
25H	66	76	34	10
26H	61	69	33	14
27H	48	56	30	12
28H	48	62	33	14
29H	28	42	27	8
30H	38	37	20	1
average	48	57	30	10
stdev	14.2	15.3	5.3	4.9

Cytotoxic T Cell Experiment "H"
(units are counts per minute)

Animal		100					30					10					3			
Control	Rep 1	Rep 2	Rep 3	Average	SD	Rep 1	Rep 2	Rep 3	Average	SD	Rep 1	Rep 2	Rep 3	Average	SD	Rep 1	Rep 2	Rep 3	Average	SD
1H	3428	3326	3479	3411	78	3835	3526	3732	3698	157	2224	2316	2304	2281	50	1506	1599	1482	1529	62
2H	3586	3631	3650	3622	33	3862	3582	3454	3633	209	2149	2374	2211	2245	116	1429	1420	1528	1459	60
3H	1892	1889	2058	1946	97	1611	1701	1422	1578	142	1222	1294	1155	1224	70	1011	1163	1118	1097	78
4H	3211	3160	3114	3162	49	2796	2716	2380	2631	221	1900	1916	1778	1865	75	1342	1416	1373	1377	37
5H	3821	3613	3508	3647	159	3047	3541	3522	3370	280	2340	2217	2264	2274	62	1569	1668	1746	1661	89
6H	4218	3696	3850	3921	268	4203	3648	3294	3715	458	2985	2466	2362	2604	334	1609	1607	1670	1629	36
0.1 mg/kg/day																				
7H	1344	1277	1302	1308	34	1551	1226	1367	1381	163	1735	1085	1045	1288	387	1061	1009	994	1021	35
8H	4220	3942	3878	4013	182	3944	3455	3622	3674	249	3171	2403	2372	2649	453	1469	1466	1367	1434	58
9H	3038	3478	3294	3270	221	3176	3387	3502	3355	165	2294	2403	2445	2381	78	1619	1481	1496	1532	76
10H	2490	2829	2982	2767	252	2818	2687	2947	2817	130	2122	1935	1938	1998	107	1425	1315	1358	1366	55
11H	3404	3868	3723	3665	237	3788	3670	3678	3712	66	2729	2715	3452	2965	422	1830	1664	1744	1746	83
12H	2686	2995	3052	2911	197	3363	3336	3343	3347	14	2729	2772	2632	2711	72	1844	1721	1799	1788	62
1 mg/kg/day																				
13H	2609	2351	2452	2471	130	2651	2581	2499	2577	76	1781	1822	1805	1803	21	1275	1247	1155	1226	63
14H	3604	3195	3658	3486	253	3780	4048	4342	4057	281	2798	2872	3729	3133	517	2017	1894	1968	1960	62
15H	2980	2998	2940	2973	30	3443	3076	3390	3303	198	2363	2479	2579	2474	108	1731	1601	1606	1646	74
16H	3232	3161	3532	3308	197	3832	3933	3936	3900	59	2288	2546	2866	2567	290	1607	1560	1645	1604	43
17H	2800	2918	3070	2929	135	2547	2855	2764	2722	158	1984	1867	1839	1897	77	1205	1324	1180	1236	77
18H	2205	2097	2392	2231	149	1854	1902	1888	1881	25	1068	1020	1163	1084	73	926	813	931	890	67
3 mg/kg/day																				
19H	2296	2305	2135	2245	96	2768	2466	2501	2578	165	1709	1644	1648	1667	36	1259	1203	1188	1217	37
20H	2312	2141	2092	2182	116	2430	2188	2150	2256	152	1290	1344	1404	1346	57	1141	1150	1103	1131	25
21H	2721	2423	2319	2488	209	2627	2327	2366	2440	163	1776	1818	1784	1793	22	1257	1230	1171	1219	44
22H	2854	2716	2945	2838	115	3283	3061	3079	3141	123	2499	2364	2326	2396	91	1529	1505	1441	1492	45
23H	2480	2465	2351	2432	71	2999	2752	2858	2870	124	1827	2061	2008	1965	123	1804	1535	1321	1553	242
24H	2739	2692	2700	2710	25	3327	2953	3329	3203	217	2245	1814	1833	1964	244	1789	1472	1361	1541	222
30 mg/kg/day																				
25H	2904	2744	2794	2814	82	3026	3114	3163	3101	69	1884	1903	1871	1886	16	1308	1268	984	1187	177
26H	2714	2527	2771	2671	128	2708	2917	3071	2899	182	1893	1689	1981	1854	150	1522	1135	1265	1307	197
27H	2391	2172	2253	2272	111	2508	2352	2652	2504	150	1709	1715	1856	1760	83	1303	1232	1206	1247	50
28H	2352	2256	2212	2273	72	2740	2661	2646	2682	51	1793	1729	2054	1859	172	1356	1166	1401	1308	125
29H	1916	1614	1609	1713	176	2150	2091	2131	2124	30	1578	1561	1907	1682	195	1241	965	1159	1122	142
30H	2132	1767	2095	1998	201	1865	1921	2090	1959	117	1422	1406	1631	1486	126	952	802	1044	933	122

Cytotoxic T Cell Activity

Experiment 90-day "P"



Cytotoxic T cell activity was performed using a standard 4-hour ^{51}Cr release assay with P815 target cells. Analysis of variance using Tukey's multiple comparison ($p<0.05$) was used to compare treatment groups to control values. No significant differences were determined for any of the treatment groups as compared to controls. Standard devation is shown.

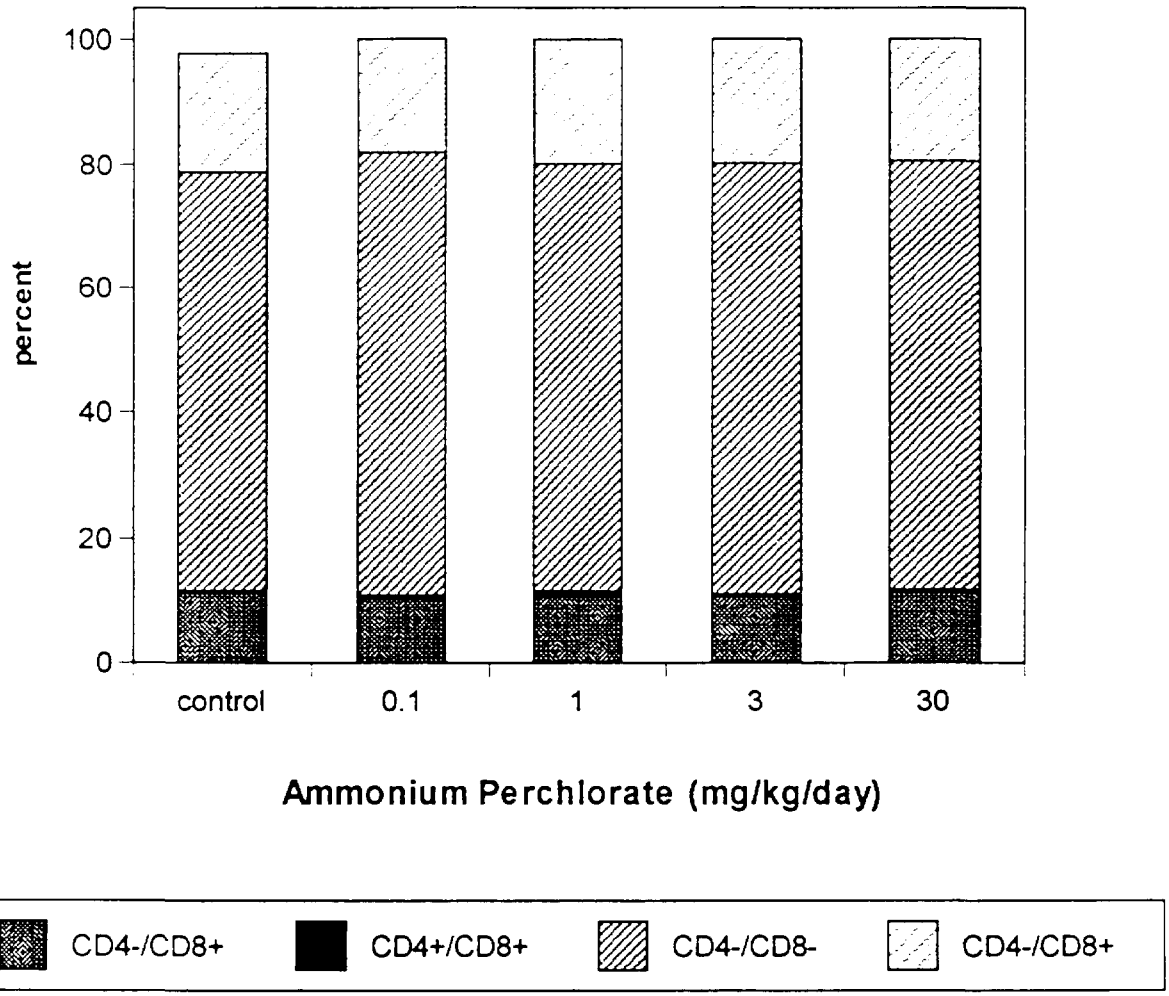
Cytotoxic T Cell Assay, 90-day AP Exposure, Experiment "P"

Animal		100 to 1					30 to 1					10 to 1					3 to 1			
Control				Average	SD				Average	SD				Average	SD				Average	SD
1P	16237	14495	15049	15260.33	890.02	11765	11644	11527	11645.33	119.01	9370	9665	9807	9614.00	222.92	7801	7570	7074	7481.67	371.46
2P	15024	15042	15459	15175.00	246.12	11780	12583	11758	12040.33	470.09	9430	9613	9395	9479.33	117.07	7523	7640	7164	7449.00	236.84
3P	16481	15837	16414	16244.00	354.06	12645	13279	12868	12930.67	321.61	10228	10467	10278	10324.33	126.06	7587	8109	7268	7654.67	424.56
4P	17374	17760	17411	17515.00	212.98	14507	15158	14233	14632.67	475.13	10918	11204	11158	11093.33	153.58	8778	8261	8117	8385.33	347.60
5P	16480	16562	16926	16656.00	237.39	13280	13343	13287	13303.33	34.53	9922	10064	9929	9971.67	80.04	8060	7784	7451	7765.00	304.94
6P	18248	18612	19328	18729.33	549.48	15702	15394	15629	15575.00	160.94	11822	12809	12584	12405.00	517.27	8802	8810	8318	8643.33	281.78
	avg/std for group			[redacted]	[redacted]	avg/std for group			[redacted]	[redacted]	avg/std for group			[redacted]	[redacted]	avg/std for group			[redacted]	[redacted]
	percent lysis			[redacted]		percent lysis			[redacted]		percent lysis			[redacted]		percent lysis			[redacted]	
0.1 mg/kg/day				Average	SD				Average	SD				Average	SD				Average	SD
7P	15632	15705	15911	15749.33	144.69	12172	12081	11606	11953.00	303.94	9688	9525	9542	9585.00	89.60	7623	7703	7112	7479.33	320.62
8P	17798	18094	18502	18131.33	353.48	15380	14836	14765	14993.67	336.45	11478	12366	10971	11605.00	706.12	9137	8494	8709	8780.00	327.33
9P	18143	19016	18110	18423.00	513.82	15116	15752	15112	15326.67	368.35	11489	11600	11396	11495.00	102.13	8542	8063	8401	8335.33	246.16
10P	18807	19126	19445	19126.00	319.00	15999	15740	15647	15795.33	182.41	12263	12173	12213	12216.33	45.09	8342	8333	8048	8241.00	167.20
11P	16951	17137	17112	17066.67	100.95	12448	13144	12966	12852.67	361.58	9291	10040	9638	9656.33	374.84	7395	7747	7474	7538.67	184.70
12P	11312	10592	11334	11079.33	422.19	8415	8535	8304	8418.00	115.53	7054	7175	7388	7205.67	169.10	6432	6266	6731	6476.33	235.65
	avg/std for group			[redacted]	[redacted]	avg/std for group			[redacted]	[redacted]	avg/std for group			[redacted]	[redacted]	avg/std for group			[redacted]	[redacted]
	percent lysis			[redacted]		percent lysis			[redacted]		percent lysis			[redacted]		percent lysis			[redacted]	
1.0 mg/kg/day				Average	SD				Average	SD				Average	SD				Average	SD
13P	18496	18228	18265	18329.67	145.23	15100	15019	14868	14995.67	117.75	11208	11300	10829	11112.33	249.65	7789	7977	8122	7962.67	166.96
14P	18454	18224	19118	18598.67	464.23	16178	16032	15783	15997.67	199.73	11847	11567	11037	11483.67	411.38	8307	8400	8413	8373.33	57.81
15P	18706	18848	18300	18618.00	284.40	15070	15236	15221	15175.67	91.82	10994	10930	10521	10815.00	256.61	7947	8483	8371	8267.00	282.73
16P	18004	18329	18408	18247.00	214.12	15127	14893	14321	14780.33	414.64	10904	10888	10930	10907.33	21.20	8083	8222	7588	7964.33	333.24
17P	17275	17350	16594	17073.00	416.52	13948	14577	14282	14269.00	314.70	10350	11126	11601	11025.67	631.51	8467	9460	8767	8898.00	509.30
18P	8393	9071	8554	8672.67	354.23	7453	7152	7060	7221.67	205.55	6746	6665	6553	6654.67	96.91	6286	6997	6757	6680.00	361.70
	avg/std for group			[redacted]	[redacted]	avg/std for group			[redacted]	[redacted]	avg/std for group			[redacted]	[redacted]	avg/std for group			[redacted]	[redacted]
	percent lysis			[redacted]		percent lysis			[redacted]		percent lysis			[redacted]		percent lysis			[redacted]	
3.0 mg/kg/day				Average	SD				Average	SD				Average	SD				Average	SD
19P	19642	22306	19447	20465.00	1597.33	14738	14855	14021	14538.00	451.54	10768	11444	10531	10914.33	473.76	7645	9135	9133	8637.67	859.68
20P	19622	20327	19905	19951.33	354.78	16953	16877	16664	16831.33	149.81	11192	11401	12199	11597.33	531.43	8385	9208	9282	8958.33	497.90
21P	18594	19739	18213	18848.67	794.24	13810	14007	13008	13608.33	529.15	9814	9626	10229	9889.67	308.54	7696	8616	7498	7936.67	596.59
22P	18437	18206	18403	18348.67	124.72	13721	14073	13781	13858.33	188.31	8885	10899	10396	10060.00	1048.20	8409	8217	8042	8222.67	183.57
23P	17334	18068	17359	17587.00	416.75	13456	14386	12922	13588.00	740.87	8939	9362	9224	9175.00	215.72	7662	7459	7643	7588.00	112.12
24P	18345	18126	17761	18077.33	295.03	14303	14103	14039	14148.33	137.71	9503	10290	9996	9929.67	397.67	7828	7186	10221	8411.67	1599.47
	avg/std for group			[redacted]	[redacted]	avg/std for group			[redacted]	[redacted]	avg/std for group			[redacted]	[redacted]	avg/std for group			[redacted]	[redacted]
	percent lysis			[redacted]		percent lysis			[redacted]		percent lysis			[redacted]		percent lysis			[redacted]	
30.0 mg/kg/day				Average	SD				Average	SD				Average	SD				Average	SD
25P	16222	16027	16213	16154.00	110.08	13541	12257	12594	12797.33	665.71	9546	9581	8892	9339.67	388.09	7689	7742	7432	7621.00	165.81
26P	19077	18578	18472	18709.00	323.07	15789	15113	15367	15423.00	341.46	11263	11255	10750	11089.33	293.90	8320	8724	8477	8507.00	203.66
27P	18430	17876	17623	17976.33	412.75	15650	14974	14840	15154.67	434.17	10411	11389	11162	10987.33	511.86	8682	8935	8051	8556.00	455.27
28P	12397	12095	11582	12024.67	412.03	9835	9630	9837	9767.33	118.94	7568	8100	7603	7757.00	297.56	6934	7390	6748	7024.00	330.33
29P	11779	11185	10778	11247.33	503.40	9191	8379	8522	8697.33	433.47	7399	7216	7742	7452.33	267.02	7216	7342	6685	7081.00	348.66
30P	20059	19992	19399	19816.67	363.26	16638	15743	16251	16210.67	448.86	12632	12265	12753	12550.00	254.12	9639	9700	9472	9603.67	118.04
	avg/std for group			[redacted]	[redacted]	avg/std for group			[redacted]	[redacted]	avg/std for group			[redacted]	[redacted]	avg/std for group			[redacted]	[redacted]
	percent lysis			[redacted]		percent lysis			[redacted]		percent lysis			[redacted]		percent lysis			[redacted]	

							Average	SD
SR	5967	5879	6031	5818	5920	6086	6086.00	98.70
MR	26728	26646	26973	27045	26619	27022	27022.00	195.88

Spleen CD4/CD8 Subpopulations

Experiment "N" 90-day AP Exposure



Spleen cells were labeled with fluorescent rat IgG_2 monoclonal antibodies specific for murine CD4/CD8 (Caltag Laboratories, Burlingame, CA) and analysis was performed on a flow cytometer available at the MUSC medical laboratory. Cells only and isotypic antibody controls were used to establish CD4/CD8 subpopulations in splenic cells. Data were analyzed using analysis of variance with Tukey's multicomparison ($p<0.05$) and no significant differences were observed in any of the treatment groups as compared to controls. It is important to note that the CD4+CD8+ subpopulation was less than 1% in all experiments and not visually detectable in the graphs.

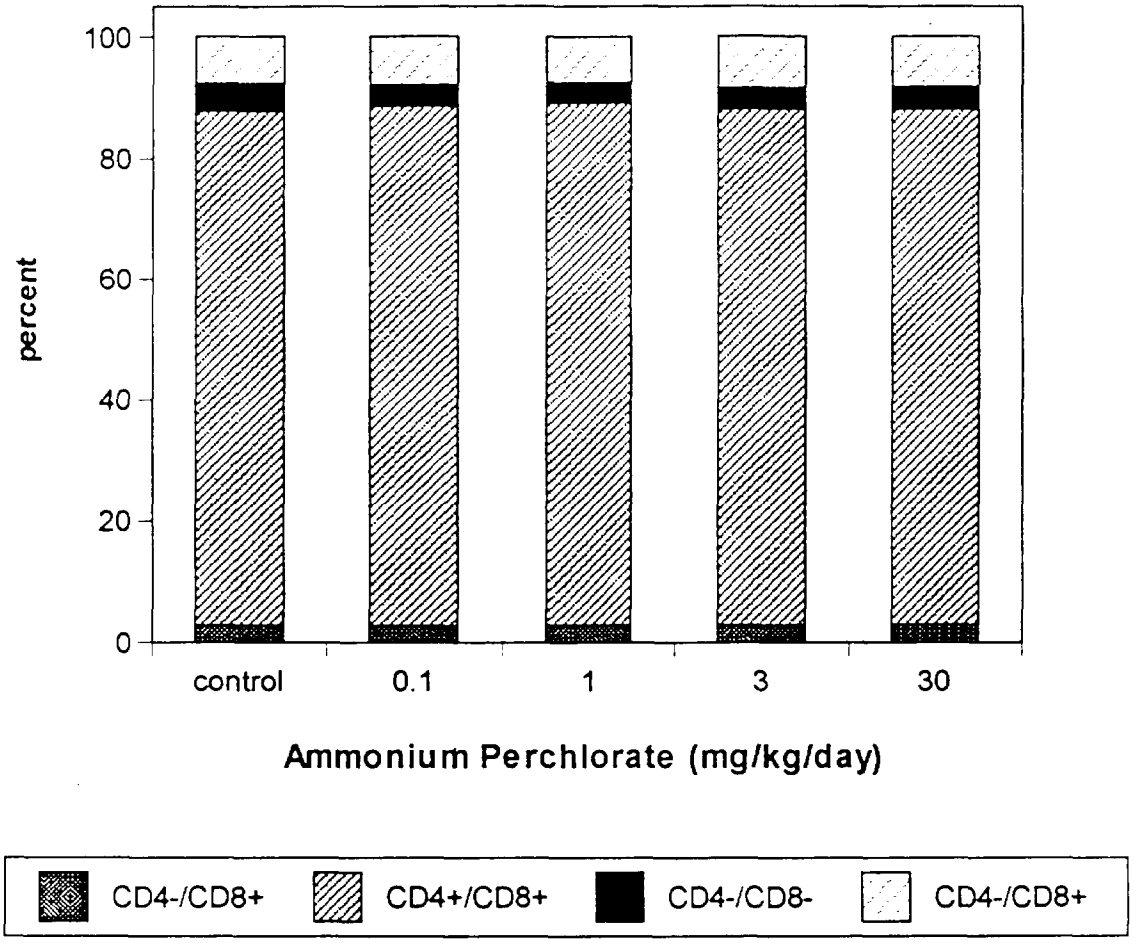
Spleen CD4/CD8 Subpopulations

Trt. Group	CD4-/CD8+	CD4+/CD8+	CD4-/CD8-	CD4+/CD8-
Control				
1N	9.3	0.4	72.4	17.8
2N	11.3	0.2	69.4	19.0
3N	13.7	0.3	64.3	21.7
4N	10.6	0.4	69.8	19.3
5N	11.4	0.4	68.4	19.8
6N	11.6	12.7*	58.7	17.0
Average	11.3	0.3	67.2	19.1
SD	1.44	0.09	4.91	1.64
0.1 mg/kg/day				
7N	10.2	0.3	72.5	17.0
8N	10.8	0.4	70.3	18.6
9N	10.3	0.4	70.7	18.6
10N	8.7	0.2	74.3	16.8
11N	10.8	0.2	69.5	19.5
12N	11.3	1.4	69.2	18.1
Average	10.4	0.5	71.1	18.1
SD	0.90	0.46	1.96	1.04
1.0 mg/kg/day				
13N	10.4	3.0	67.8	18.8
14N	12.0	0.6	66.6	20.8
15N	10.8	0.5	66.1	22.6
16N	10.7	0.4	67.2	21.6
17N	10.9	0.3	75.3	13.5
18N	9.1	0.7	68.0	22.3
Average	10.7	0.9	68.5	19.9
SD	0.94	1.03	3.41	3.43
3.0 mg/kg/day				
19N	11.5	0.4	64.6	23.6
20N	8.8	0.3	73.9	17.0
21N	10.5	0.3	70.3	18.8
22N	10.2	0.2	71.1	18.5
23N	11.2	0.4	67.6	20.9
24N	12.1	0.7	66.8	20.3
Average	10.7	0.4	69.1	19.9
SD	1.16	0.17	3.35	2.30
30.0 mg/kg/day				
25N	13.3	0.2	64.5	22.1
26N	10.0	0.2	73.1	16.7
27N	11.5	0.5	67.8	20.3
28N	11.1	0.2	68.2	20.6
29N	9.4	0.3	73.9	16.4
30N	12.8	1.1	65.5	20.6
Average	11.4	0.4	68.8	19.5
SD	1.52	0.35	3.88	2.33

* indicates that this value may be due to cell clumping in this specimen. This value is not included in the calculation of the mean and standard d

Thymus CD4/CD8 Subpopulations

Experiment "N" 90-day AP Exposure

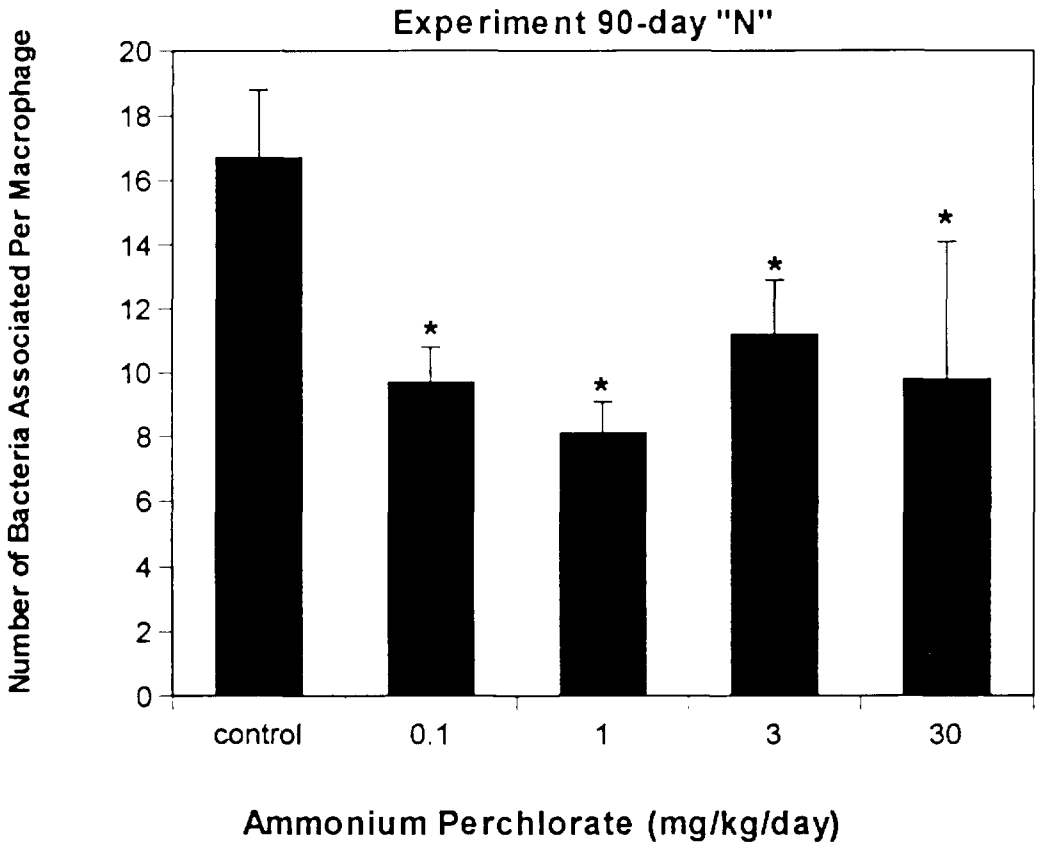


Thymus cells were labeled with fluorescent rat IgG_2 monoclonal antibodies specific for murine CD4/CD8 (Caltag Laboratories, Burlingame, CA) and analysis was performed on a flow cytometer available at the MUSC medical laboratory. Cells only and isotypic antibody controls were used to establish CD4/CD8 subpopulations in thymocytes. Data were analyzed using analysis of variance with Tukey's multicomparison ($p<0.05$) and no significant differences were observed in any of the treatment groups as compared to controls.

Thymus CD4/CD8 Subpopulations

Trt. Group	CD8+/CD4-	CD8+/CD4+	CD8-/CD4-	CD8-/CD4+
Control				
1N	3.1	85.8	3.8	7.3
2N	2.5	88.0	2.5	7.0
3N	2.7	87.5	2.5	7.3
4N	3.3	84.9	4.7	7.1
5N	3.6	83.5	5.0	7.9
6N	2.4	80.6	8.3	8.7
Average	2.9	85.1	4.5	7.8
SD	0.48	2.74	2.15	0.87
0.1 mg/kg/day				
7N	3.0	84.9	3.4	8.7
8N	2.4	87.7	2.7	7.2
9N	2.7	85.9	3.3	8.1
10N	3.1	85.0	4.5	7.4
11N	2.8	86.2	3.1	7.8
12N	2.6	86.0	3.8	7.6
Average	2.8	86.0	3.5	7.8
SD	0.26	1.01	0.62	0.59
1.0 mg/kg/day				
13N	2.1	87.9	2.6	7.4
14N	2.3	89.4	2.2	6.1
15N	2.3	87.0	2.4	8.2
16N	3.8	83.0	4.4	8.8
17N	3.2	86.7	4.4	5.7
18N	3.4	84.2	3.9	8.4
Average	2.9	86.7	3.3	7.8
SD	0.74	2.37	1.03	1.28
3.0 mg/kg/day				
19N	3.2	86.9	2.8	7.1
20N	2.3	87.0	3.0	7.7
21N	3.0	85.4	3.7	7.9
22N	2.4	85.8	3.1	8.7
23N	3.2	83.0	4.3	9.5
24N	3.1	84.3	3.8	8.8
Average	2.9	85.4	3.5	8.3
SD	0.61	1.55	0.58	0.83
30.0 mg/kg/day				
25N	3.2	84.7	4.8	7.3
26N	2.6	86.5	2.9	8.0
27N	3.1	84.9	4.0	8.0
28N	2.8	86.4	3.1	7.7
29N	2.8	85.3	3.3	8.5
30N	3.6	83.7	3.9	8.9
Average	3.0	85.3	3.7	8.1
SD	0.36	1.07	0.71	0.57

Peritoneal Macrophage Phagocytosis



Peritoneal macrophages ($2x10^5$/well) were aseptically isolated by peritoneal lavage and incubated 4 hours with *Listeria monocytogenes* at an approximate ratio of 1 macrophage per 10 bacteria. After incubation, the macrophages were aseptically washed, fixed, and stained with Wright's stain. The number of bacteria associated per macrophage was determined using a light microscope and approximately 100 cells were counted per well. Analysis of variance using Tukey's multicomparisons was performed (* =$p<0.05$).

Phagocytosis: this is a calculation of the number of macrophages counted that phagocytized as compared to those that did not phagocytize.
Experiment 90d N has not been included in this analysis.
However, only 1 macrophage was noted in the data to not phagocytize any bacteria.

Animal		14-Day C			14-Day G	
Control	# counted	% phagocytizing	% not phagocytizing	# counted	% phagocytizing	% not phagocytizing
1	92	100	0	49	1	0
2	29	100	0	49	1	0
3	90	100	0	48	97.9	2.1
4	98	100	0	20	1	0
5	101	98.0	2.0	30	1	0
6	106	98.1	1.8	59	1	0
Average	**86.00**	**99.36**	**0.63**	**42.50**	**17.16**	**0.36**
SD	**28.53**	**1.00**	**0.98**	**14.49**	**39.56**	**0.86**
0.1 mg/kg/day						
7	97	96.9	3.1	54	90.7	9.2
8	92	98.9	1.1	51	96.1	3.9
9	54	100	0	55	94.5	5.4
10	46	100	0	55	1	0
11	32	100	0	53	1	0
12	42	97.6	2.3	51	96.1	3.9
Average	**60.50**	**98.90**	**1.08**	**53.17**	**63.23**	**3.73**
SD	**27.32**	**1.37**	**1.35**	**1.83**	**48.25**	**3.48**
1.0 mg/kg/day						
13	51	96.1	3.9	55	96.4	3.6
14	52	94.2	5.7	51	88.2	11.7
15	62	95.2	4.8	54	98.3	1.8
16	59	100	0	59	94.9	5.1
17	58	100	0	60	1	0
18	59	88.1	1.2	60	1	0
Average	**56.83**	**95.60**	**2.60**	**56.50**	**63.30**	**3.70**
SD	**4.36**	**4.41**	**2.51**	**3.73**	**48.38**	**4.40**
3.0 mg/kg/day						
19	74	97.3	2.7	60	1	0
20	56	100	0	60	1	0
21	29	100	0	60	1	0
22	62	98.4	1.6	60	98.3	1.7
23	49	98.0	2.0	61	98.3	1.6
24	68	98.5	1.4	59	98.3	1.7
Average	**56.33**	**98.70**	**1.28**	**60.00**	**49.65**	**0.83**
SD	**16.01**	**1.09**	**1.09**	**0.63**	**53.29**	**0.91**
30.0 mg/kg/day						
25	71	92.9	7	57	98.2	1.8
26	64	96.8	3.1	54	1	0
27	60	96.7	3.3	56	1	0
28	60	93.3	6.6	57	1	0
29	63	82.5	17.4	53	1	0
30	55	98.2	1.8	54	1	0
Average	**62.17**	**93.40**	**6.53**	**55.17**	**17.20**	**0.30**
SD	**5.34**	**5.74**	**5.71**	**1.72**	**39.68**	**0.73**

	90-Day A			90-Day D	
# counted	% phagocytizing	t phagocyt	# counted	% phagocytizing	% not phagocytizing
52	94.2	5.7	34	97.1	2.9
56	96.4	3.5	0	n/a	n/a
56	94.6	5.3	0	n/a	n/a
50	96	4	50	86	14
51	96.1	3.9	58	89.6	10.3
52	100	0	53	86.7	13.2
52.83	**96.22**	**3.73**	**32.50**	**89.86**	**10.10**
2.56	**2.06**	**2.02**	**26.43**	**5.08**	**5.06**
49	95.9	4.1	28	75	25
52	90.3	9.6	50	92	8
51	94.1	5.9	56	83.9	16.1
50	98	2	56	85.7	14.2
51	98	1.9	56	92.8	7.1
52	96.1	3.8	56	87.5	12.5
50.83	**95.40**	**4.56**	**50.33**	**86.16**	**13.82**
1.17	**2.90**	**2.88**	**11.20**	**6.48**	**6.50**
54	100	0	0	n/a	n/a
50	96	4	52	92.3	7.7
50	92	8	8	100	0
51	98	1.9	51	94.1	5.9
61	96.7	3.2	52	98.1	1.9
61	98.4	1.6	59	96.6	3.3
54.50	**96.85**	**3.12**	**37.00**	**96.22**	**3.76**
5.24	**2.75**	**2.76**	**25.85**	**3.08**	**3.08**
59	93.2	6.7	49	93.9	6.1
59	96.6	3.3	51	98	1.9
58	91.3	8.6	51	94.1	5.8
59	93.2	6.7	49	93.8	6.1
52	94.2	5.7	52	96.1	3.8
53	96.2	3.7	51	96.1	3.9
56.67	**94.12**	**5.78**	**50.50**	**95.33**	**4.60**
3.27	**2.01**	**2.01**	**1.22**	**1.69**	**1.69**
57	96.5	3.5	52	90.4	9.6
52	92.3	7.6	52	96.1	3.8
50	96	4	52	94.2	5.7
53	92.4	7.5	23	9.3	8.6
51	92.1	7.8	53	98.1	1.9
51	90.1	9.8	50	94	6
52.33	**93.23**	**6.70**	**47.00**	**80.35**	**5.93**
2.50	**2.49**	**2.44**	**11.80**	**34.90**	**2.88**

	120-Day B			120-Day E	
# counted	% phagocytizing	% not phagocytizing	# counted	% phagocytizing	% not phagocytizing
57	100	0	42	92.8	7.1
55	96.3	3.6	52	88.4	11.5
57	94.7	5.2	55	89	10.9
60	93.3	6.6	55	0.1	7.3
60	91.6	8.3	55	92.7	5.4
55	98.1	1.8	56	94.5	7.1
57.33	**95.67**	**4.26**	**52.50**	**92.80**	**8.22**
2.26	**3.10**	**3.08**	**5.32**	**37.38**	**2.42**
55	100	0	51	88.2	11.7
55	92.7	7.3	52	92.3	7.6
37	97.3	2.7	52	90.3	9.6
59	96.6	3.3	51	96.1	3.9
9	100	0	14	100	0
59	96.6	3.3	5	60	40
45.67	**97.20**	**2.77**	**37.50**	**87.82**	**12.13**
19.75	**2.71**	**2.70**	**21.88**	**14.26**	**14.27**
59	98.3	1.7	0	n/a	n/a
6	100	0	52	96.1	3.8
0	n/a	n/a	54	96.2	3.7
57	98.2	1.8	51	98	1.9
54	100	0	53	98.11	1.9
53	100	0	52	100	0
38.17	**99.30**	**0.70**	**43.67**	**97.68**	**2.26**
27.39	**0.96**	**0.96**	**21.42**	**1.61**	**1.57**
55	100	0	51	100	0
54	8.1	1.8	51	100	0
55	98.1	1.8	50	100	0
53	98.1	1.8	50	100	0
60	100	0	52	100	0
51	100	0	52	100	0
54.67	**84.05**	**0.90**	**51.00**	**100.00**	**0.00**
3.01	**37.22**	**0.99**	**0.89**	**0.00**	**0.00**
53	100	0	52	100	0
50	94	6	53	100	0
2	100	0	52	98.1	1.9
56	98.2	1.7	52	100	0
57	100	0	54	100	0
56	100	0	52	100	0
45.67	**98.70**	**1.28**	**52.50**	**99.68**	**0.32**
21.55	**2.41**	**2.41**	**0.84**	**0.78**	**0.78**

Phagocytosis 90-day AP Experiment "N"

control group average: 16.8
std dev: 2.2

0.1 mg/kg group aver 9.8
std dev: 1.2

1.0 mg/kg group aver 8.2
std dev: 1.1

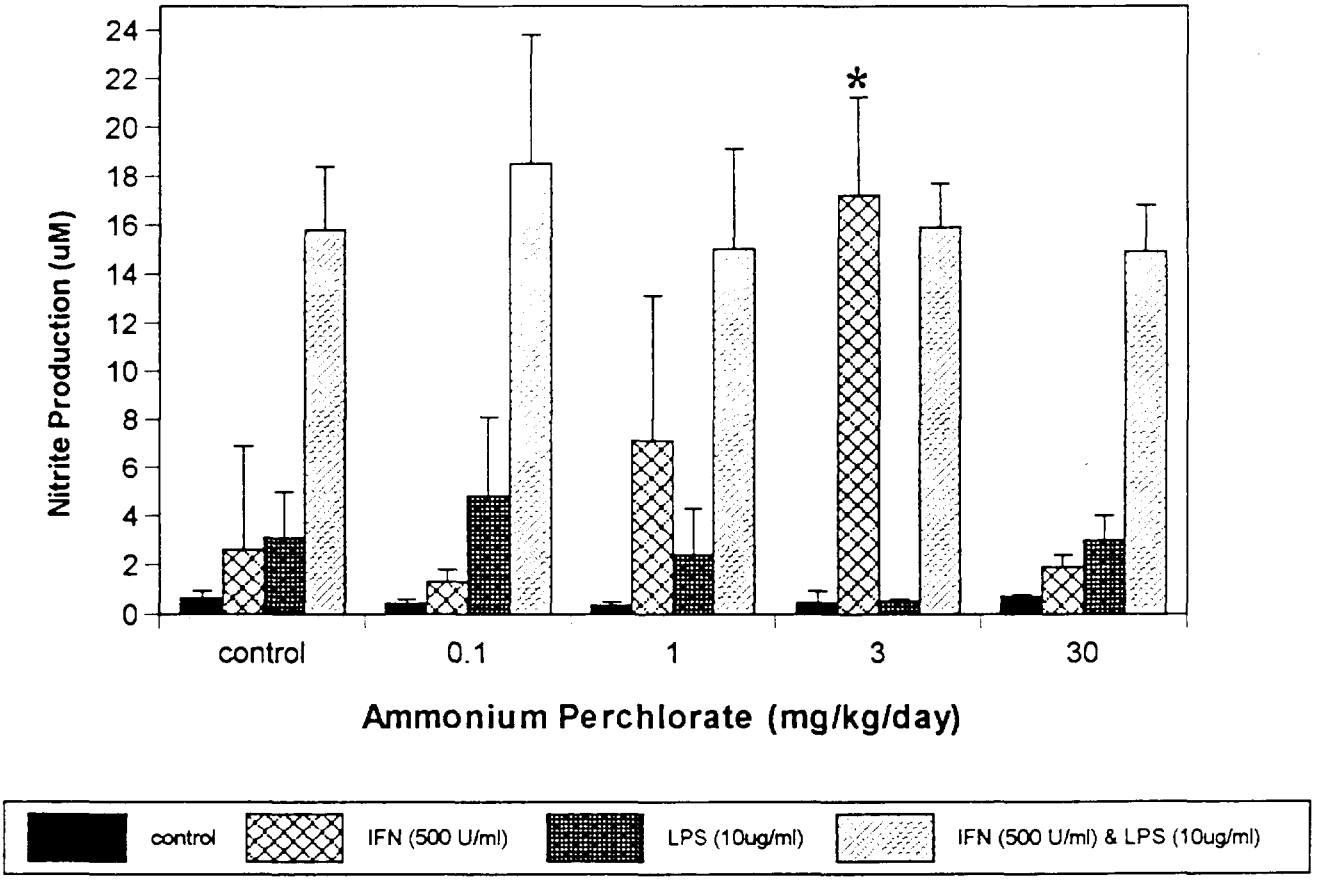
3.0 mg/kg group aver
std dev:

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20
avg per well	16.1	16.8	18.2	19.1	14.7	13.6	9.8			11.7	8.7	8.7	8.0	8.1	7.3	8.7	9.0	8.7	11.2	8.2
	14	12	18	16	13	12	7	problem		9	8	7	11	23	8	8	problem	6	11	28	8
	10	13	17	10	14	10	10	stain		8	7	10	13	18	6	9	stain	8	9	17	4
	16	14	28	8	16	12	8			3	13	9	6	10	6	4		9	2	22	6
	17	10	20	12	15	11	8			14	9	7	5	9	9	4		4	6	18	6
	16	10	25	22	12	10	10			13	10	8	10	11	6	8		12	7	16	4
	12	6	18	11	12	3	8			13	9	8	8	6	3	6		6	16	17	3
	8	12	16	15	9	7	8			15	9	7	7	6	4	9		7	22	12	2
	14	14	15	12	17	8	6			5	9	5	9	7	5	4		5	0	28	14
	10	7	15	11	11	13	7			5	5	8	11	7	6	4		7	6	10	3
	13	13	14	8	16	13	6			8	4	8	10	12	7	5		15	7	11	14
	18	12	20	5	20	13	12			12	8	7	8	8	8	6		9	10	14	3
	8	8	16	34	18	14	14			15	12	7	12	7	3	4		6	7	25	6
	10	14	25	17	15	20	15			7	7	6	9	8	9	3		12	18	9	8
	12	10	18	23	12	13	8			7	8	5	8	7	4	3		7	6	13	5
	10	8	44	15	12	14	12			8	8	8	9	4	6	7		6	8	10	6
	17	14	52	20	10	34	5			10	7	12	11	10	7	2		8	4	11	4
	16	14	18	21	8	16	8			4	5	7	15	8	8	6		18	12	8	5
	16	11	28	18	13	12	12			11	8	8	12	7	7	5		7	15	7	7
	8	8	42	28	15	24	12			5	9	6	7	11	5	10		13	14	22	13
	12	25	48	41	18	11	9			8	6	17	6	12	12	6		8	9	14	9
	10	18	41	14	17	5	5			13	10	13	8	16	14	8		14	6	16	7
	10	28	20	19	14	15	9			14	9	5	8	9	7	3		10	12	9	8
	13	23	40	25	17	20	7			10	7	18	8	7	4	4		8	8	8	8
	11	36	22	41	11	17	2			7	9	8	14	3	4	8		7	19	10	5
	13	28	25	25	8	12	13			11	10	16	8	5	6	8		7	6	6	3
	10	22	20	18	13	10	16			14	6	15	14	7	8	7		13	7	8	5
	15	18	25	28	8	8	16			14	8	13	13	11	6	4		8	6	9	14
	17	14	25	12	17	13	10			5	5	15	4	8	8	10		10	4	6	12
	10	18	18	25	18	13	13			4	5	10	8	1	9	15		8	8	5	10
	8	21	18	17	12	18	12			12	4	12	7	8	7	23		7	12	6	11
	14	22	11	28	14	14	10			15	6	7	8	6	5	6		10	8	15	11
	10	28	18	31	15	13	13			10	10	20	7	6	8	16		6	6	7	6
	13	37	16	14	10	13	6			16	8	11	13	10	8	8		12	7	20	8
	8	32	18	12	30	15	5			13	7	8	6	7	8	3		11	6	8	10
	8	31	28	28	28	31	18			22	11	23	12	7	10	8		8	8	13	3
	7	20	15	7	34	15	10			22	12	8	9	8	6	4		8	7	10	9
	8	17	12	13	23	5	10			15	4	16	7	6	6	6		8	5	5	8
	11	25	15	32	30	14	9			17	6	9	4	8	12	4		18	4	15	4
	12	18	18	13	17	15	13			12	8	9	6	5	10	9		22	20	13	9
	11	18	28	18	10	6	10			9	6	15	7	10	18	10		15	13	4	6
	10	15	8	28	16	15	8			13	7	8	14	7	8	4		10	8	6	10
	12	18	16	21	14	14	8			15	8	11	15	5	5	10		8	7	7	8
	18	14	8	23	18	13	11			10	3	6	11	6	8	12		8	6	9	11
	21	15	13	28	10	27	7			10	6	9	4	8	5	3		2	10	8	6
	16	18	11	23	7	20	10			8	9	10	6	5	4	5		7	6	11	22
	28	17	11	32	6	16	7			16	12	16	5	22	7	8		6	7	5	11
	21	17	11	20	23	18	7			11	20	8	7	26	6	6		8	4	7	13
	27	25	25	40	17	13	6			14	7	11	7	8	4	8		11	3	12	14
	34	32	12	37	5	17	3			18	4	12	12	4	8	12		7	2	12	5
	18	28	14	21	8	11	8			10	5	18	6	7	10	7		2	6	8	6
	23	28	13	32	20	18	10			15	5	11	7	2	7	3		8	2	9	12
	16	15	17	30	18	13	16			15	8	11	14	8	6	7		7	3	18	11
	34	21	17	17	18	18	14			18	6	9	10	7	6	8		13	4	12	8
	12	18	15	23	15	10	10			11	6	14	7	8	6	8		6	5	14	4
	28	16	14	27	16	12	13			14	4	6	4	5	8	4		4	8	11	8
	28	14	24	60	8	10	14			13	6	9	9	7	3	2		8	4	7	6
	32	17	12	20	17	10	10			6	9	9	8	7	4	5		6	2	5	8
	40	18	14	30	16	14	8			7	7	6	5	6	8	3		13	3	4	11
	37	14	7	18	18	13	7			8	8	7	13	4	9	7		8	12	8	13
	18	14	18	18	12	6	7			9	7	10	2	13	2	5		10	7	13	6
	23	15	8	18	22	16	8			14	8	7	4	10	11	4		8	8	5	11
	28	14	14	25	11	15	8			11	7	6	11	24	7	3		8	6	4	8
	32	15	30	23	8	17	7			4	8	11	4	8	5	3		5	18	16	13
	21	13	28	21	10	17	10			10	8	6	7	15	15	11		4	8	20	7
	22	13	16	12	30	16	8			5	22	14	15	26	7	10		13	6	16	7
	24	17	16	24	15	14	12			12	15	8	13	28	15	7		17	5	23	12
	22	12	20	25	10	10	14			12	8	8	12	17	11	5		16	4	7	10
	21	16	11	18	18	16	13			32	10	11	4	12	8	7		7	5	18	8
	24	14	13	18	15	10	8			18	8	10	5	8	15	4		8	7	15	8
	25	10	6	17	22	8	8			5	9	10	7	13	11	4		10	15	12	8
	27	8	18	18	17	6	10			10	6	14	9	9	8	10		6	28	14	10
	34	10	10	15	18	5	8			15	7	7	17	15	9	6		8	8	12	11
	23	16	15	6	18	10	10			12	10	8	3	12	3	7		7	21	8	8
	25	14	13	24	15	14	15			10	8	7	12	14	6	6		15	12	13	6
	38	11	7	15	15	11	7			11	13	7	13	14	11	8		23	5	12	5
	21	10	8	12	8	11	10			10	6	8	6	9	6	4		10	11	13	6
	28	16	15	12	12	13	6			17	8	4	7	12	5	5		8	7	18	5
	28	23	17	6	16	18	6			15	6	15	5	11	4	7		11	9	8	7
	17	12	11	13	16	12	6			3	5	8	7	8	2	4		8	4	6	8
	28	14	17	8	6	8	8			12	7	7	11	16	3	11		6	4	7	20
	21	14	16	10	16	16	12			8	6	10	8	12	10	9		4	8	14	12
	17	19	15	13	6	12	7			13	8	9	9	13	4	8		6	18	6	7
	22	18	14	14	10	11	22			16	17	8	8	6	6	5		10	10	3	8
	16	17	30	14	14	14	14			15	7	6	6	7	8	6		7	8	3	7
	20	21	16	12	15	11	11			16	8	13	7	7	6	4		6	4	13	11
	23	18	24	6	18	28	16			10	10	7	6	8	12	10		8	5	7	8
	23	14	18	6	18	28	8			21	12	6	12	7	6	7		6	5	6	5
	14	14	12	8	16	12	8			13	6	17	13	18	6	8		12	6	12	9
	18	12	13	13	13	18	13			14	10	6	8	5	8	12		5	11	12	6
	12	17	8	13	18	14	12			8	8	4	8	5	3	3		6	7	7	7
	14	20	14	12	17	18	12			16	14	8	12	8	4	6		15	8	22	7
	16	18	12	10	15	15	6			11	10	8	18	2	6	8		8	13	7	5
	28	15	15	10	15	20	8			14	5	8	10	4	7	5		8	27	5	5
	28	17	11	14	8	15	13			18	12	6	9	8	4	7		3	11	4	18
	12	13	15	8	14	11	8			12	8	8	12	4	6						
	14	18	8	13	18	18	11			9	16	13	18	8	7						
		17	12	13	18	8				5	23	5	6	4	11						
										14	12	6	7	17							
											13	12	13	8							
											11	8		3							
											7										

11.2				30 mo/kg group aver		11.2			
1.8				std dev.		1.3			
11.7	10.8	11.7	13.7	9.8	12.8	10.4	12.5	10.4	12.2
#21	#22	#23	#24	#25	#26	#27	#28	#29	#30
17	20	10	10	10	7	5	8	18	5
14	9	7	8	16	8	17	14	8	10
10	14	5	11	8	10	24	10	18	8
11	8	6	12	10	10	12	24	16	10
16	6	15	11	9	6	10	16	2	15
5	8	13	14	6	5	13	15	6	14
10	6	12	16	15	20	15	10	4	12
12	10	31	15	18	14	9	28	9	11
11	11	14	20	14	10	8	24	7	13
9	12	12	20	6	7	12	16	8	10
6	8	6	10	4	5	14	28	10	17
11	6	4	24	12	6	16	16	10	15
10	5	8	8	8	6	12	28	8	10
9	10	16	8	11	17	10	12	10	8
8	9	8	6	10	24	12	12	8	6
17	14	16	6	12	16	15	15	4	10
15	3	12	12	10	9	10	4	6	13
12	12	18	17	7	13	12	16	4	14
11	7	18	15	6	12	10	12	10	16
8	8	23	9	12	24	9	1	6	14
12	8	8	8	12	18	12	10	20	15
5	11	7	11	7	12	8	12	22	12
6	32	6	12	6	12	22	11	34	16
9	5	13	9	10	6	14	22	10	12
7	8	15	13	13	18	8	12	12	9
15	9	14	6	16	14	14	6	14	8
12	7	6	14	14	32	16	11	26	7
13	10	8	16	13	24	12	9	7	8
12	4	17	13	14	16	6	11	17	12
6	6	12	24	24	20	10	20	12	6
5	11	14	14	16	34	6	8	11	6
8	7	9	10	15	14	7	16	12	18
13	9	10	14	8	10	12	18	12	9
12	9	4	15	8	8	8	20	8	14
21	12	3	12	10	10	18	14	7	10
24	14	13	20	6	36	8	6	6	12
18	7	12	14	15	30	6	8	16	8
9	6	24	14	9	18	9	10	12	9
6	9	18	17	8	24	7	9	10	10
24	6	6	18	8	12	6	18	14	10
27	6	14	10	12	10	8	16	6	17
9	18	19	2	10	5	9	22	8	12
8	12	5	14	4	16	14	14	10	22
32	8	15	16	12	8	10	18	5	17
12	25	20	14	12	9	2	22	7	12
10	9	19	13	5	16	20	14	4	15
12	11	5	9		4	16	10	6	12
5	6	10	12	12	6	12	12	10	14
16	22	12	8	10	20	7	14	2	28
12	9	13	4	6	16	9	21	10	8
7	15	11	12	8	14	12	10	6	22
13	8	19	10	4	12	4	4	6	12
9	7	15	14	9	14	5	8	9	8
6	9	14	16	6	8	8	10	17	10
9	6	16	15	3	12	14	13	18	16
9	9	9	8	12	16	6	10	8	10
4	22	9	10	14	10	7	14	14	13
7	16	14	8	6	14	10	12	7	12
24	10	16	17	8	18	8	16	8	8
5	9	10	16	14	8	5	12	10	14
14	11	12	19	6	9	12	16	6	6
12	5	9	19	9	12	28	9	8	18
4	11	14	20	7	14	16	7	8	24
20	14	12	28	8	5	13	8	12	12
6	6	11	12	14	6	15	7	16	16
15	5	8	6	16	12	10	14	10	10
5	15	16	22	8	18	9	10	6	8
17	7	7	12	12	15	10	9	5	18
8	17	18	6	6	11	18	24	19	8
7	9	8	18	18	9	8	7	16	14
5	8	14	5	10	12	11	12	13	8
6	14	18	18	8	7	8	6	16	15
11	8	9	14	4	13	15	3	10	14
6	11	15	28	12	4	10	8	9	15
18	18	9	12	8	18	8	19	12	8
9	17	12	4	14	13	6	18	4	16
11	24	14	6	13	6	15	20	8	20
8	15	16	7	12	5	12	8	16	8
25	10	9	6	8	23	9	10	8	22
11	8	7	15	7	6	6	6	5	12
9	11	6	24	23	12	8	10	10	6
17	6	6	28	6	8	14	9	5	8
9	24	10	32	8	8	7	10	8	5
12	8	6	40	14	12	8	12	4	4
3	4	16	12	7	15	12	14	6	8
11	12	14	5	15	17	10	6	22	6
16	14	6	16	8	10	12	6	10	9
22	7	12	20	11	6	4	11	8	8
9	5	7	12	12	8	9	14	16	12
7	8	8	14	8	15	6	8	8	8
26	21	7	9	6	5	8	6	10	7
8	18	8	14	4	11	7	10	11	7
24	21	22	16	1	11	8	2	6	10
16	16	4	20	6	6	6	7	5	15
		16	16	5	14	7	14	4	12
		8		12	12	8		10	18
				8	8	4		18	12
									14
									12
									24
									28

Nitrite Production by Peritoneal Macrophages Stimulated with Lipopolysaccharide and/or Interferon-gamma

Experiment 90-day "N"



Peritoneal macrophages were aseptically isolated by peritoneal lavage and 2 x 10e5 cells were incubated 24 hours with 10 ug/mL of lipopolysaccharide (LPS), 500 Units/mL of interferon-gamma (IFN-γ) or both LPS and IFN-γ. Control cells contained macrophages only. Background was always less than 0.4 uM. Nitrite was spectrophotometrically measured after the addition of Griess reagent to supernatants from each well. A standard nitrite curve was established for each experiment and data are expressed in uM. Data were analyzed using analysis of variance with Tukey's *multicomparison test* (*=$p<0.05$). Standard deviation is shown.

NO2 Prod. By Peritoneal Macrophages after Stimulation by IFN-y &/or LPS: 90Day "N"

Animal	Control	NO2 (uM)	INF-y	NO2 (uM)	LPS	NO2 (uM)	IFN-y/LPS	NO2 (uM)
Control								
1N	0.058	1.234	0.175	11.504	0.122	6.851	0.278	20.544
2N	0.051	0.619	0.054	0.883	0.057	1.146	0.204	14.049
3N	0.050	0.532	0.056	1.058	0.068	2.111	0.235	16.770
4N	0.050	0.532	0.052	0.707	0.086	3.691	0.203	13.961
5N	0.050	0.532	0.054	0.883	0.074	2.638	0.198	13.522
6N	0.049	0.444	0.055	0.970	0.075	2.726	0.227	16.068
Average	0.051	[illegible]	[illegible]	2.667	[illegible]	[illegible]	0.224	15.819
SD	0.003	[illegible]	[illegible]	4.330	[illegible]	[illegible]	0.030	2.652
0.1 mg/kg/day								
7N	0.050	0.532	0.053	0.795	0.065	1.848	0.235	16.770
8N	0.051	0.619	0.054	0.883	0.076	2.814	0.269	19.754
9N	0.050	0.532	0.054	0.883	0.063	1.673	0.150	9.309
10N	0.049	0.444	0.062	1.585	0.134	7.905	0.270	19.842
11N	0.047	0.268	0.065	1.848	0.155	9.748	0.277	20.457
12N	0.047	0.268	0.067	2.024	0.104	5.271	0.332	25.284
Average	0.049	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.256	18.570
SD	0.002	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.060	5.304
1.0 mg/kg/day								
13N	0.050	0.532	0.059	1.322	0.096	4.569	0.279	20.632
14N	0.047	0.268	0.200	13.698	0.089	3.955	0.213	14.839
15N	0.046	0.180	0.084	3.516	0.088	3.867	0.246	17.736
16N	0.049	0.444	0.053	0.795	0.056	1.058	0.154	9.660
17N	0.049	0.444	0.198	13.522	0.049	0.444	0.229	16.243
18N	0.047	0.268	0.160	10.187	0.051	0.619	0.168	10.889
Average	0.048	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.215	15.000
SD	0.002	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.047	4.152
3.0 mg/kg/day								
19N	0.047	0.268	0.231	16.419	0.052	0.707	0.220	15.453
20N	0.047	0.268	0.229	16.243	0.050	0.532	0.229	16.243
21N	0.048	0.356	0.206	14.225	0.049	0.444	0.200	13.698
22N	0.047	0.303	0.330	25.109	0.049	0.444	0.258	18.789
23N	0.047	0.268	0.206	14.225	0.050	0.532	0.208	14.400
24N	0.060	1.409	0.242	17.385	0.050	0.532	0.241	17.297
Average	0.049	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.226	15.980
SD	0.005	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.021	1.880
30.0 mg/kg/day								
25N	0.053	0.795	0.063	1.673	0.067	2.024	0.225	15.892
26N	0.052	0.707	0.064	1.760	0.069	2.199	0.184	12.294
27N	0.051	0.619	0.068	2.111	0.091	4.130	0.204	14.049
28N	0.051	0.619	0.079	3.077	0.094	4.394	0.249	17.999
29N	0.051	0.619	0.063	1.673	0.077	2.901	0.220	15.453
30N	0.053	0.795	0.061	1.497	0.071	2.375	0.201	13.786
Average	0.052	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.214	14.912
SD	0.001	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.023	1.983

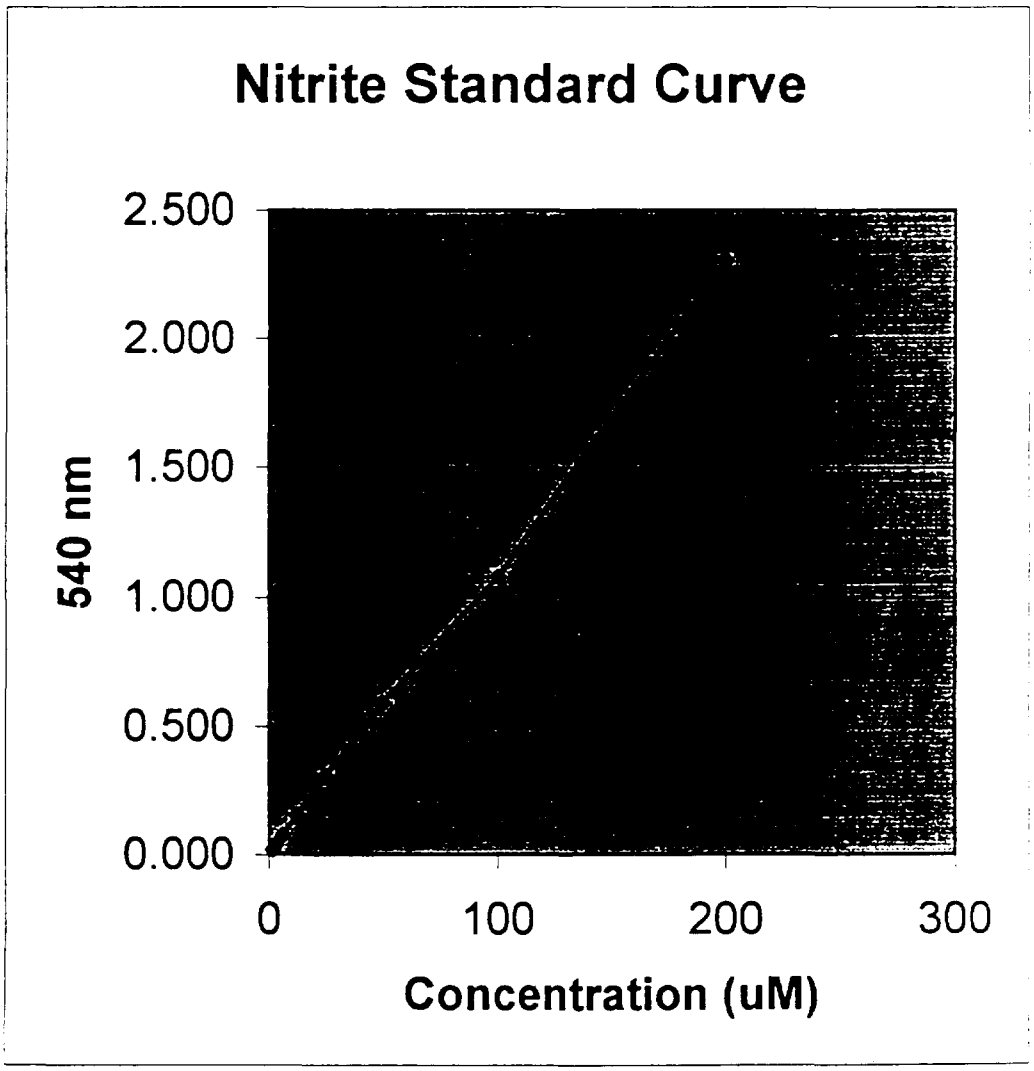
NO2 Production by Peritoneal Macrophages: Standard Curve 90 Day #1

Conc.	Standard			
*u*M	Rep 1	Rep 2	Rep 3	Average
200	2.308	2.344	2.395	2.305
100	1.042	1.14	1.195	1.082
50	0.619	0.642	0.641	0.590
25	0.341	0.354	0.351	0.305
12.5	0.194	0.2	0.201	0.154
6.25	0.12	0.121	0.122	0.077
3.125	0.083	0.084	0.085	0.040
1.56	0.064	0.064	0.065	0.020

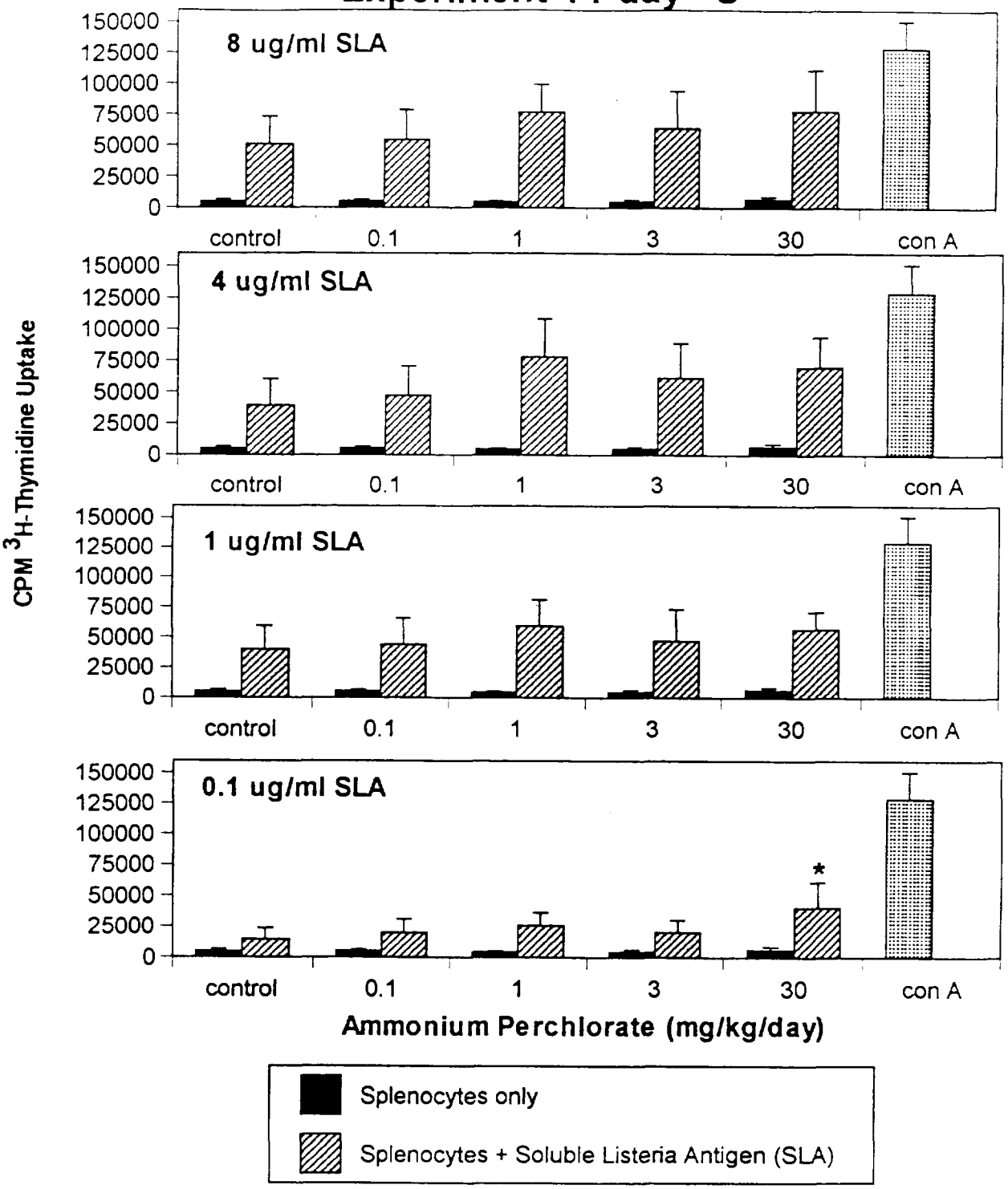
Slope	Intercept
87.77615	0.004861

Greiss Blank
0.044

Formula to calculate nitrite concentration (uM):
=(Slope * (Spec-Greiss Blank))+intercept



Delayed Type Hypersensitivity: Experiment 14-day "U"



In this experiment, animals were intravenously injected with a sublethal challenge of *Listeria monocytogenes* (2300 CFU) one week prior to incubation of splenocytes with SLA. Analysis of variance using Tukey's multiple comparison test (*$p<0.05$) was used to compare treatment groups to control values. Standard devation is shown. Representative titers of SLA are shown in the graphs. Refer to the data tables for additional SLA titer information.

Delayed Type Hypersensitivity Assay Experiment "U", 14-day AP exposure
values are cpm (measuring ^{3}H-thymidine uptake)

Control	1	2	3	4	5	6	avg control	std dev
Cont	3346	4548	5208	4483	8195	4556	5088	1790
Cont	3964	2987	6570	4262	8615	4322		
SLA 8ug/ml	80353	22637	38262	51778	74234	38048	50885	22523
SLA 4 ug/ml	58191	14821	15884	62638	51934	33415	39481	21181
SLA 2 ug/ml	52093	20757	32590	39707	58925	29786	38976	14337
SLA 1 ug/ml	58470	21119	25543	50356	63220	21979	40115	19379
SLA 0.5 ug/ml	56648	12812	13625	31168	39456	25394	29851	16647
SLA 0.1 ug/ml	15846	7203	16762	12195	30537	5792	14723	8924

0.1 AP	7	8	9	10	11	12	avg 0.1 AP	std dev
Cont	5452	8409	4304	5533	5673	3057	5527	1238
Cont	5991	6068	4971	5605	5840	5418		
SLA 8ug/ml	38983	45628	80946	21261	58507	81932	54543	24051
SLA 4 ug/ml	25652	47978	76482	16869	48015	69024	47337	23320
SLA 2 ug/ml	35403	49434	75999	12717	51068	53692	46386	21051
SLA 1 ug/ml	30829	39964	70507	11404	53903	59734	44390	21446
SLA 0.5 ug/ml	31399	29647	63089	10063	37743	49275	36869	18126
SLA 0.1 ug/ml	8497	20560	33754	5258	27010	25873	20159	11159

1.0 AP	13	14	15	16	17	18	avg 1.0 AP	std dev
Cont	5192	3909	5444	6243	3874	3145	4644	980
Cont	6219	3894	4916	4243	4653	3998		
SLA 8ug/ml	75757	91505	103721	85215	68166	38035	77067	22758
SLA 4 ug/ml	58662	95090	109500	107397	63462	34794	78151	30333
SLA 2 ug/ml	50660	86507	81715	99368	56886	31308	67741	25631
SLA 1 ug/ml	39989	70898	75140	88127	49177	34735	59678	21421
SLA 0.5 ug/ml	28316	57318	55929	82851	35599	27599	47935	21549
SLA 0.1 ug/ml	22299	19820	33176	42591	24577	11862	25721	10771

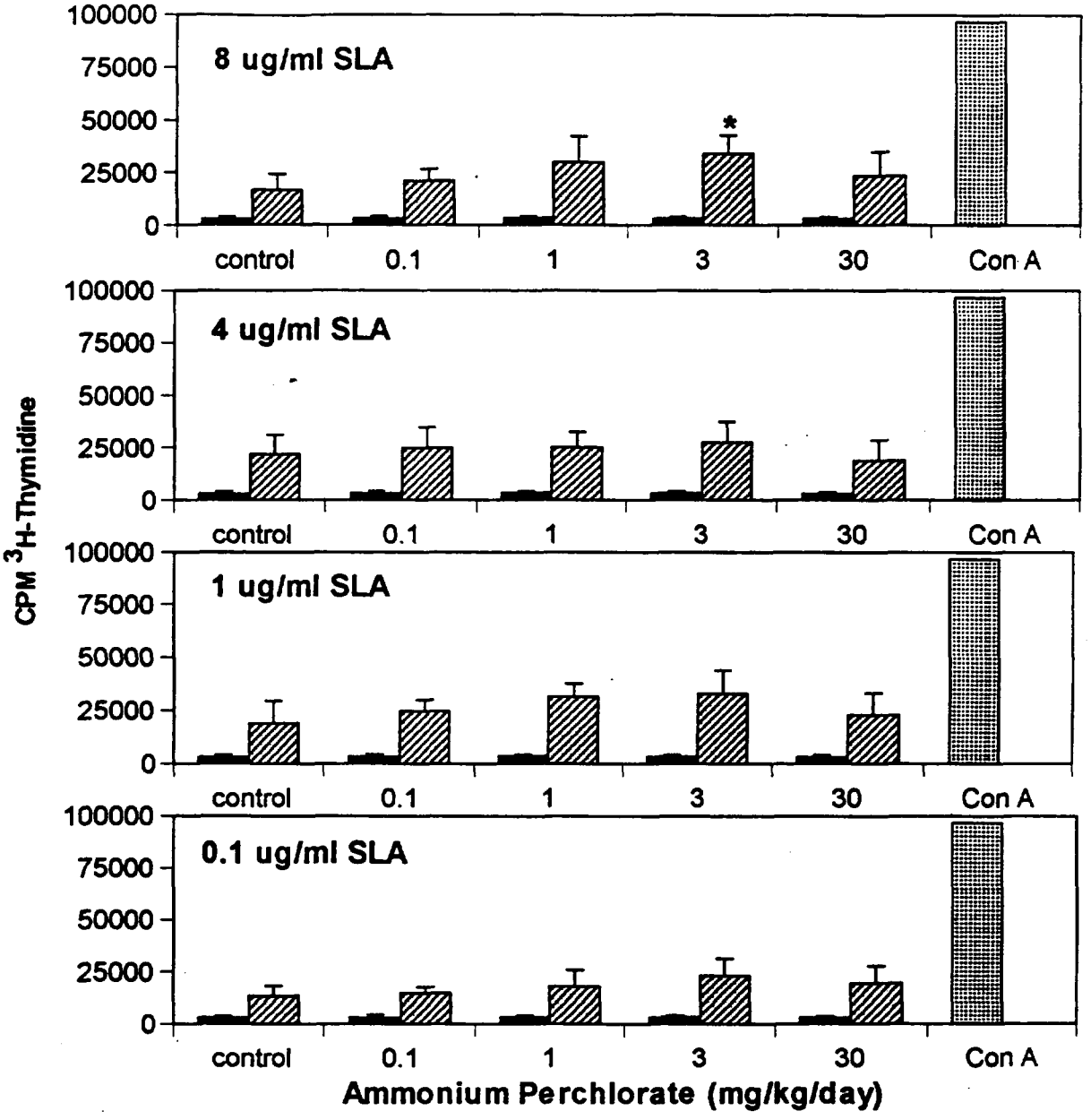
3.0 AP	19	20	21	22	23	24	avg 3.0 AP	std dev
Cont		3320	8428	5876	4292	3335	4631	1577
Cont		3867	5326	3844	4479	3540		
SLA 8ug/ml		71200	25148	45097	73140	104875	63892	30302
SLA 4 ug/ml		76462	28497	37736	70712	94246	61531	27545
SLA 2 ug/ml		60561	28514	31891	56899	97518	55077	27739
SLA 1 ug/ml		52400	13485	30535	56781	82472	47135	26350
SLA 0.5 ug/ml		45138	5296	28971	51561	63650	38923	22581
SLA 0.1 ug/ml		29591	7108	12247	25349	26767	20212	9906

	25	26	27	28	29	30	avg 30 AP	std dev
Cont	4183	7813	6084	9213	7450	3523	6487	2172
Cont	3752	6517	7240	9786	8188	4099		
SLA 8ug/ml	113634	116483	82093	37355	42979	75929	78079	33616
SLA 4 ug/ml	98429	98525	62735	45488	44885	69922	69997	24109
SLA 2 ug/ml	95980	89889	63983	42093	37799	56602	64391	24138
SLA 1 ug/ml	74076	72703	61849	44295	40547	48260	56955	14630
SLA 0.5 ug/ml	83188	78535	37495	35205	31794	39955	51029	23311
SLA 0.1 ug/ml	69555	63348	34875	22008	21023	32768	40596	20875

Con A control	Con A	Con A	Con A	Con A			con A	std dev
	162349	86301	119407	130297			128988	22097
	122388	146999	133094	131072				

SLA = soluble listeria antigen
Con A = concanavalin A (1ug/ml)

Delayed Type Hypersensitivity: Experiment 14-day "V"



In this experiment, animals were intravenously injected with a sublethal challenge of *Listeria monocytogenes* (2700 CFU) one week prior to incubation of splenocytes with SLA. Analysis of variance using Tukey's multiple comparison test (*$p<0.05$) was used to compare treatment groups to control values. Standard devation is shown. Representative titers of SLA are shown in the graphs. Refer to the data tables for additional SLA titer information.

Delayed Type Hypersensitivity Assay Experiment "V", 14-day AP exposure
values are cpm (measuring ^{3}H-thymidine uptake)

Control	1	2	3	4	5	6	avg control	std dev
Cont	2376	5112	1885	2650	4200	2597	3109	998
Cont	3823	2874	1664	3555	2874	3692		
SLA 8ug/ml	24132	23279	3127	17326	15523	17646	16839	7554
SLA 4 ug/ml	30460	22446	7814	22539	14003	32968	21705	9561
SLA 2 ug/ml	38072	23915	11856	5724	9128	27352	19341	12504
SLA 1 ug/ml	32051	14762	5532	12244	17930	30848	18895	10552
SLA 0.5 ug/ml	27308	22350	8999	19270	16666	25316	19985	6631
SLA 0.1 ug/ml	18756	14147	7354	8181	11825	19217	13247	5084

0.1 AP	7	8	9	10	11	12	avg 0.1 AP	std dev
Cont	2700	1410	4003	2786	3708	5598	3281	1215
Cont	3663	1847	3465	3727	1879	4581		
SLA 8ug/ml	15380	31345	20270	21892	16290	21111	21048	5694
SLA 4 ug/ml	34840	30141	17987	15260	15005	35948	24864	9869
SLA 2 ug/ml	26941	31443	25680	21068	15624	31291	25341	6132
SLA 1 ug/ml	25936	29529	26450	22861	14359	28356	24582	5505
SLA 0.5 ug/ml	23920	22922	22555	17023	14785	28823	21671	5051
SLA 0.1 ug/ml	17057	16396	12603	12295	11589	18456	14733	2912

1.0 AP	13	14	15	16	17	18	avg 1.0 AP	std dev
Cont	2418	3941	4526	2057	3952	3074	3504	825
Cont	2719	3471	4204	4691	3691	3308		
SLA 8ug/ml	36222	12755	27003	22845	30920	49332	29846	12415
SLA 4 ug/ml	21794	14591	25014	24715	27369	37795	25213	7586
SLA 2 ug/ml	34301	23196	9400	34621	30447	42886	29142	11596
SLA 1 ug/ml	34247	21993	29024	29830	32910	40915	31487	6285
SLA 0.5 ug/ml	26770	15544	27535	31981	29290	36236	27893	6959
SLA 0.1 ug/ml	16046	8565	13523	23475	14682	30778	17845	7962

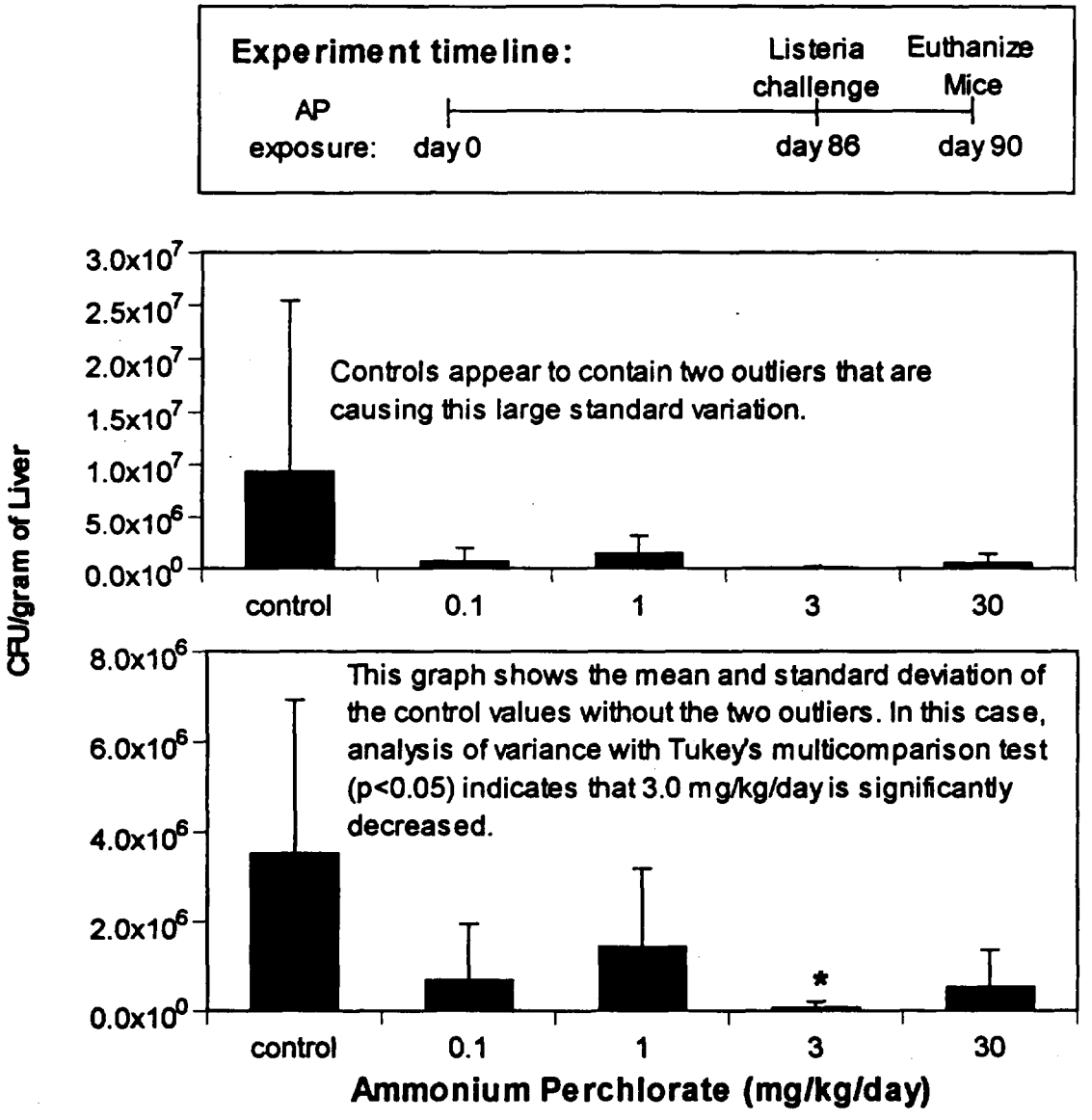
3.0 AP	19	20	21	22	23	24	avg 3.0 AP	std dev
Cont	4209	3200	4315	2230	1912	3949	3325	919
Cont	4640	2751	3235	3936	2105	3414		
SLA 8ug/ml	50609	27437	34178	27033	34836	29977	34012	8768
SLA 4 ug/ml	30031	23304	44779	14440	24751	28437	27624	10015
SLA 2 ug/ml	42949	27798	41474	25526	35760	27231	33456	7660
SLA 1 ug/ml	46317	17593	44406	29719	33477	26083	32933	10987
SLA 0.5 ug/ml	42506	25518	44829	24203	30396	24885	32056	9284
SLA 0.1 ug/ml	32722	18394	33190	15776	23909	14577	23095	8288

30 AP	25	26	27	28	29	30	avg 30 AP	std dev
Cont	2976	3070	3304	3593	1887	1761	3181	824
Cont	3360	2844	3363	4926	3695	3398		
SLA 8ug/ml	26379	18898	14631	9027	39897	31748	23430	11441
SLA 4 ug/ml	20146	6859	13876	16384	19527	36024	18803	9713
SLA 2 ug/ml	25953	26645	22503	26375	33421	56545	31907	12582
SLA 1 ug/ml	27992	16142	20710	7264	29691	35781	22930	10324
SLA 0.5 ug/ml	25538	18134	22068	19109	9296	51488	24276	14392
SLA 0.1 ug/ml	18713	14078	16298	18284	13614	35952	19490	8331

Pos Control	Con A	Con A	Con A	Con A			avg	std dev
	114130	127729	85043	91256			96672	37532
	13171	39238	75701	90968				
	120543	97858	117329	138075				
	144499	70010	80966	92486				
	111724	79320	117269	126122				

SLA = soluble listeria antigen
Con A = 1ug/ml concanavalin A

Listeria monocytogenes Host Resistance Challenge: Experiment 90-day "L"



This is the first experiment performed by our laboratory to demonstrate resistance to infection after Listeria monocytogenes challenge (5360 CFU). Animals were euthanized 4 days post-challenge (Day 90 of AP exposure), and liver or spleen from each mouse was weighed, aseptically prepared into a single cell suspensions, diluted in sterile saline, and plated on brain heart infusion agar. Plates were incubated at 37C and enumerated the following day. Analysis of variance using Tukey's multiple comparison (* = $p<0.05$) was used to compare treatment groups to control values. Standard deviation is shown. Refer to data table for identification of outliers. Bacterial counts for the spleen are not shown in a graph because many of these counts were too numerous to count (TNTC) for the dilutions used. A replicate of this assay will be completed in mid October and will include CFU per spleen and liver.

Listeria monocytogenes Host Resistance Challenge for 90-Day "L"
CFU per Gram of Liver Tissue

Trt. Group	CFU Count	CFU Count	Average	Dilution	CFU per	
Control	*Rep 1*	*Rep 2*			**gr Tissue**	
1L	84	n/a	84	5	8.40E+06	
2L	15	16	15.5	4	1.55E+05	* outlier ?
3L	116	134	125	4	1.25E+06	
4L	126	109	117.5	4	1.18E+06	
5L	33	n/a	33	5	3.30E+06	
6L	416	n/a	416	5	4.16E+07	* outlier ?
Average					1.31E+06	
SD					1.61E+07	
0.1 mg/kg/day						
7L	72	59	65.5	4	6.55E+05	
8L	42	64	53	2	5.30E+03	
9L	96	102	99	3	9.90E+04	
10L	15	18	16.5	3	1.65E+04	
11L	32	n/a	32	5	3.20E+06	
12L	113	90	101.5	3	1.02E+05	
Average					6.80E+05	
SD					1.26E+06	
1.0 mg/kg/day						
13L	41	34	37.5	4	3.75E+05	
14L	49	n/a	49	5	4.90E+06	
15L	47	50	48.5	4	4.86E+05	
16L	121	136	128.5	4	1.29E+06	
17L	110	132	121	4	1.21E+06	
18L	33	33	33	4	3.30E+05	
Average					1.43E+06	
SD					1.73E+06	
3.0 mg/kg/day						
19L	48	39	43.5	2	4.35E+03	
20L	30	37	33.5	4	3.35E+05	
21L	22	22	22	2	2.20E+03	
22L	48	52	50	2	5.00E+03	
23L	50	56	53	2	5.30E+03	
24L	51	62	56.5	2	5.65E+03	
Average					5.96E+04	
SD					1.35E+05	
30.0 mg/kg/day						
25L	77	61	69	2	6.90E+03	
26L	180	213	196.5	4	1.97E+06	
27L	33	37	35	3	3.50E+04	
28L	36	25	30.5	3	3.05E+04	
29L	109	118	113.5	4	1.14E+06	
30L	103	125	114	2	1.14E+04	
Average					3.41E+05	
SD					6.32E+05	

n/a - indicates there was not a plate and/or dilution available for this specimen
TNTC - indicates colonies on plate were too numerous to count
dilution: 2 = a dilution of 1:100; 3 = dilution of 1:1000;
4 = dilution of 1:10 000; 5 = a dilution of 1:100 000

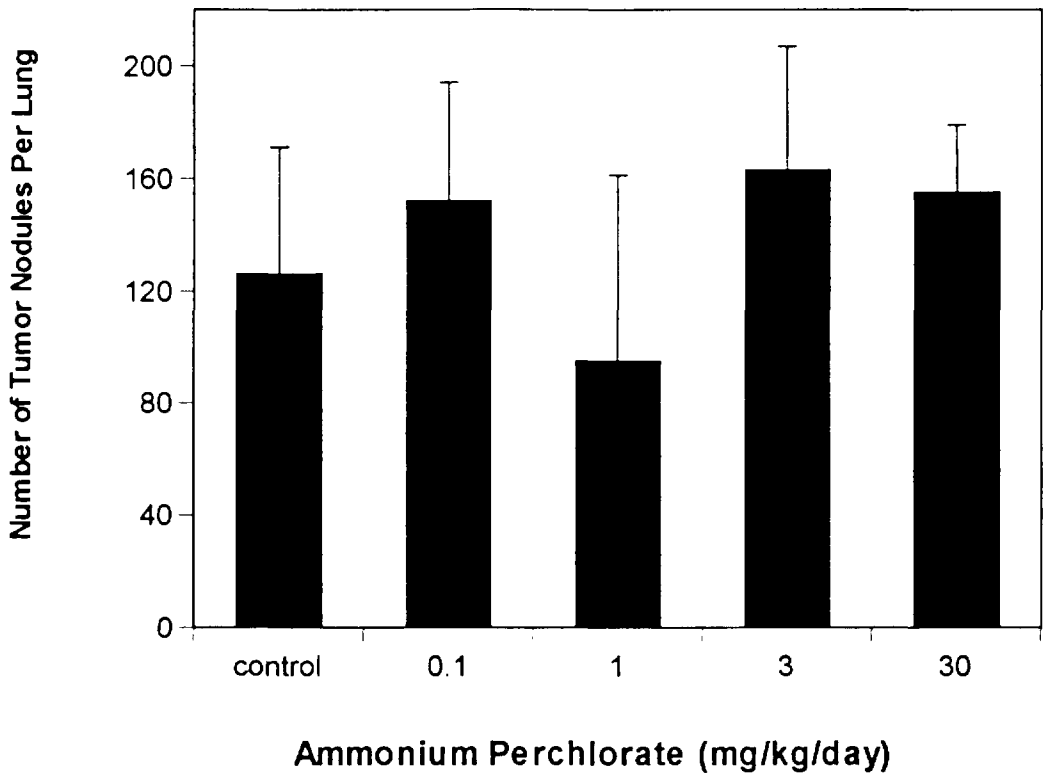
Listeria monocytogenes Host Resistance Challenge for 90-Day "L"
CFU per Gram of Spleen Tissue

Trt. Group	CFU Count	CFU Count	Average	Dilution	CFU per
Control	*Rep 1*	*Rep 2*			gr Tissue
1L	tntc	tntc	tntc	4	n/a
2L	240	248	244	4	2.44E+06
3L	tntc	tntc	tntc	4	n/a
4L*	400	400	400	4	4.00E+06
5L	tntc	tntc	tntc	4	n/a
6L	tntc	tntc	tntc	4	n/a
Average					3.22E+06
SD					1.10E+06
0.1 mg/kg/day					
7L	tntc	tntc	tntc	4	n/a
8L	66	64	65	4	6.50E+05
9L*	600	600	600	4	6.00E+06
10L	140	139	139.5	4	1.40E+06
11L	tntc	tntc	tntc	4	n/a
12L*	700	700	700	4	7.00E+06
Average					3.76E+06
SD					3.20E+06
1.0 mg/kg/day					
13L*	900	900	900	4	9.00E+06
14L	tntc	tntc	tntc	4	n/a
15L*	700	700	700	4	7.00E+06
16L	tntc	tntc	tntc	4	n/a
17L	tntc	tntc	tntc	4	n/a
18L*	600	600	600	4	6.00E+06
Average					7.33E+06
SD					1.53E+06
3.0 mg/kg/day					
19L	42	42	42	4	4.20E+05
20L	tntc	tntc	tntc	4	n/a
21L	40	38	39	4	3.90E+05
22L	115	121	118	3	1.18E+05
23L	122	116	119	4	1.19E+06
24L	28	22	25	4	2.50E+05
Average					3.74E+05
SD					3.18E+05
30.0 mg/kg/day					
25L	145	132	138.5	4	1.39E+06
26L*	1200	1200	1200	4	1.20E+07
27L	254	270	262	4	2.62E+06
28L	150	132	141	4	1.41E+06
29L*	600	600	600	4	6.00E+06
30L	148	174	161	4	1.61E+06
Average					4.75E+06
SD					4.22E+06

*Counts are an approximation
n/a - indicates there was not a plate and/or dilution available for this specimen
TNTC - indicates colonies on plate were too numerous to count
dilution: 2 = a dilution of 1:100; 3 = dilution of 1:1000;
4 = dilution of 1:10 000; 5 = a dilution of 1:100 000

B16F10 Tumor Challenge Model

Experiment 90-day "Q"



Mice were challenged with $1x10^5$ tumor cells by intravenous injection. Two weeks after challenge, mice were euthanized and lungs were removed in preserved in Bouin's fixative. The number of tumor nodules on the entire surface of both lungs were enumerated by two individuals. Data shown are the average of both counts. Analysis of variance with Tukey's multicomparison (*=p<0.05) was used to analyze the data. Standard deviation is shown.

B16F10 Tumor Challenge
90-Day "Q"

Animal	# of tumors/lung	# of tumors/lung	avg
Control	counts by MJ	counts by DK	
1Q	110	94	102
2Q	179	178	178.5
3Q	75	88	81.5
4Q	106	91	98.5
5Q	180	163	171.5
6Q	*n/a	3 (outlier)	
		Average	[illegible]
		SD	[illegible]
0.1 mg/kg/day			
7Q	116	93	104.5
8Q	*n/a	3 (outlier)	
9Q	136	139	137.5
10Q	155	129	142
11Q	161	156	158.5
12Q	229	213	221
		Average	152.70
		SD	12.92
1.0 mg/kg/day			
13Q	78	81	79.5
14Q	235	215	225
15Q	77	65	71
16Q	70	65	67.5
17Q	96	94	95
18Q	36	32	34
		Average	[illegible]
		SD	[illegible]
3.0 mg/kg/day			
19Q	173	184	178.5
20Q	123	122	122.5
21Q	87	103	95
22Q	207	202	204.5
23Q	201	172	186.5
24Q	211	182	196.5
		Average	[illegible]
		SD	[illegible]
30.0 mg/kg/day			
25Q	164	143	153.5
26Q	200	173	186.5
27Q	138	121	129.5
28Q	174	144	159
29Q	141	113	127
30Q	200	160	180
		Average	155.92
		SD	24.76

*outlier eliminated

Results Obtained after August 1, 1998

Statistics

Worksheet size: 100000 cells

Descriptive Statistics Platelet Counts for 14 day AP exposure Exp. T

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	4	1037.0	1038.5	1037.0	74.5	37.3
0.1	5	1023.8	1005.0	1023.8	67.7	30.3
1.0	5	1134.2	1149.0	1134.2	64.0	28.6
3.0	3	1249	1166	1249	340	196
30.0	5	1060.0	1017.0	1060.0	127.0	56.8

Variable	Minimum	Maximum	Q1	Q3
0.0	945.0	1126.0	965.5	1107.0
0.1	952.0	1124.0	967.0	1090.0
1.0	1031.0	1200.0	1077.5	1183.5
3.0	958	1622	958	1622
30.0	933.0	1201.0	946.5	1195.0

One-way Analysis of Variance Platelet Counts for 14 day AP exposure Exp. T

units = $X/10^3/\mu l$.

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	122941	30735	1.51	0.244
Error	17	346564	20386		
Total	21	469505			

Level	N	Mean	StDev	Individual 95% CIs For Mean Based on Pooled StDev
0.0	4	1037.0	74.5	(---------*---------)
0.1	5	1023.8	67.7	(--------*--------)
1.0	5	1134.2	64.0	(--------*--------)
3.0	3	1248.7	339.6	(----------*----------)
30.0	5	1060.0	127.0	(--------*--------)

Pooled StDev = 142.8

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-+---------+---------+---------+-----
900       1050      1200      1350
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00739

Critical value = 4.30

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-278 304			
1.0	-388 194	-385 164		
3.0	-543 120	-542 92	-432 203	
30.0	-314 268	-311 238	-200 349	-128 506

Worksheet size: 100000 cells

Descriptive Statistics Reticulocytes (%) in peripheral blood - 90d AP exposure Expt. N

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0	6	0.667	0.500	0.667	0.731	0.299
0.1	6	3.183	3.100	3.183	1.503	0.613
1.0	6	3.57	3.75	3.57	2.51	1.03
3.0	6	4.38	4.10	4.38	3.15	1.28
30.0	6	3.333	3.600	3.333	1.341	0.548

Variable	Minimum	Maximum	Q1	Q3
0	0.100	2.100	0.175	0.975
0.1	0.800	5.400	2.300	4.275
1.0	0.40	6.90	1.08	5.70
3.0	0.10	9.90	2.80	5.78
30.0	0.900	4.500	2.475	4.425

One-way Analysis of Variance Reticulocytes (%) in peripheral blood - 90d AP exposure Expt. N

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	46.92	11.73	2.82	0.046
Error	25	104.00	4.16		
Total	29	150.92			

Level	N	Mean	StDev
0.0	6	0.667	0.731
0.1	6	3.183	1.503
1.0	6	3.567	2.512
3.0	6	4.383	3.146
30.0	6	3.333	1.341

Pooled StDev = 2.040

```
Individual 95% CIs For Mean
Based on Pooled StDev
------+---------+---------+---------+
 (-------*--------)
             (--------*-------)
               (--------*-------)
                   (--------*-------)
               (--------*-------)
------+---------+---------+---------+
    0.0       2.0       4.0       6.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-5.972 0.939			
1.0	-6.356 0.556	-3.839 3.072		
3.0	-7.172 -0.261	-4.656 2.256	-4.272 2.639	
30.0	-6.122 0.789	-3.606 3.306	-3.222 3.689	-2.406 4.506

Worksheet size: 100000 cells

One-way Analysis of Variance Expt "N" 90d AP, Final Body Weight

Analysis of Variance for final body weight

Source	DF	SS	MS	F	P
group	4	21.79	5.45	0.86	0.503
Error	25	159.01	6.36		
Total	29	180.79			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ---------+---------+---------+-------
 0.0        6    27.817     4.280         (----------*----------)
 0.1        6    28.500     1.318             (---------*----------)
 1.0        6    28.067     1.948           (---------*----------)
 3.0        6    26.533     2.514   (----------*---------)
30.0        6    26.367     1.277  (----------*---------)
                                   ---------+---------+---------+-------
Pooled StDev =    2.522                  26.0      28.0      30.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-4.956 3.589			
1.0	-4.523 4.023	-3.839 4.706		
3.0	-2.989 5.556	-2.306 6.239	-2.739 5.806	
30.0	-2.823 5.723	-2.139 6.406	-2.573 5.973	-4.106 4.439

One-way Analysis of Variance Expt "N" 90d AP, thymus weight

Analysis of Variance for thymus weight

Source	DF	SS	MS	F	P
group	4	190.7	47.7	1.54	0.221
Error	25	774.2	31.0		
Total	29	964.9			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  --------+---------+---------+--------
 0.0        6    41.100     5.182   (--------*---------)
 0.1        6    42.483     2.729      (--------*--------)
 1.0        6    48.367     4.885                (---------*--------)
 3.0        6    45.533     4.623            (--------*--------)
30.0        6    43.867     8.679        (---------*--------)
                                   --------+---------+---------+--------
Pooled StDev =    5.565                 40.0      45.0      50.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-10.812 8.045			
1.0	-16.695 2.162	-15.312 3.545		
3.0	-13.862 4.995	-12.479 6.379	-6.595 12.262	
30.0	-12.195 6.662	-10.812 8.045	-4.929 13.929	-7.762 11.095

One-way Analysis of Variance Expt "N" 90d AP, spleen weight

Analysis of Variance for spleen weight

Source	DF	SS	MS	F	P
group	4	614	153	0.55	0.699
Error	25	6944	278		
Total	29	7558			

Level	N	Mean	StDev	Individual 95% CIs For Mean Based on Pooled StDev
0.0	6	86.62	7.82	(----------*----------)
0.1	6	100.78	30.81	(----------*----------)
1.0	6	94.15	9.53	(----------*----------)
3.0	6	95.42	13.05	(----------*----------)
30.0	6	94.18	10.84	(----------*----------)
Pooled StDev =		16.67		84 96 108

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-42.40 14.07			
1.0	-35.77 20.70	-21.60 34.87		
3.0	-37.04 19.44	-22.87 33.60	-29.50 26.97	

30.0	-35.80	-21.64	-28.27	-27.00
	20.67	34.84	28.20	29.47

One-way Analysis of Variance Expt "N" 90d AP, thymus/Body weight ratio

Analysis of Variance for Thy/BW %

Source	DF	SS	MS	F	P
group	4	0.003093	0.000773	1.31	0.292
Error	25	0.014706	0.000588		
Total	29	0.017799			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ------+---------+---------+---------+
 0.0        6   0.15117   0.03012   (----------*---------)
 0.1        6   0.14967   0.01677   (---------*---------)
 1.0        6   0.17283   0.01866             (---------*----------)
 3.0        6   0.17267   0.02364             (---------*----------)
30.0        6   0.16600   0.02909          (---------*---------)
                                   ------+---------+---------+---------+
Pooled StDev =  0.02425                  0.140     0.160     0.180     0.200
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-0.03959 0.04259			
1.0	-0.06276 0.01943	-0.06426 0.01793		
3.0	-0.06259 0.01959	-0.06409 0.01809	-0.04093 0.04126	
30.0	-0.05593 0.02626	-0.05743 0.02476	-0.03426 0.04793	-0.03443 0.04776

One-way Analysis of Variance Expt "N" 90d AP, spleen/Body weight ratio

Analysis of Variance for spl/BW %

Source	DF	SS	MS	F	P
group	4	0.00868	0.00217	0.75	0.568
Error	25	0.07238	0.00290		
Total	29	0.08105			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ---+---------+---------+---------+---
 0.0        6   0.31467   0.03379  (-----------*----------)
 0.1        6   0.35267   0.09989            (----------*----------)
 1.0        6   0.33500   0.01948       (-----------*----------)
 3.0        6   0.36000   0.04109              (----------*----------)
30.0        6   0.35717   0.03588             (----------*-----------)
```

```
                                        ---+---------+---------+---------+---
Pooled StDev =  0.05381                  0.280     0.320     0.360     0.400
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-0.12916 0.05316			
1.0	-0.11149 0.07083	-0.07349 0.10883		
3.0	-0.13649 0.04583	-0.09849 0.08383	-0.11616 0.06616	
30.0	-0.13366 0.04866	-0.09566 0.08666	-0.11333 0.06899	-0.08833 0.09399

One-way Analysis of Variance Expt "N" 90d AP, thymus cellularity

Analysis of Variance for thym cellularity

Source	DF	SS	MS	F	P
group	4	8.891E+14	2.223E+14	0.91	0.472
Error	25	6.086E+15	2.434E+14		
Total	29	6.975E+15			

```
                                        Individual 95% CIs For Mean
                                        Based on Pooled StDev
Level       N      Mean     StDev      -----+---------+---------+---------+-
 0.0        6  69687500  16666876                  (----------*----------)
 0.1        6  55977500  12148746     (----------*----------)
 1.0        6  61860000  21137266          (----------*---------)
 3.0        6  70835000   5825152                  (----------*----------)
30.0        6  63187500  17637208            (----------*----------)
                                        -----+---------+---------+---------+-
Pooled StDev = 15602335               47999991  59999989  71999987  83999984
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-12723951 40143951			
1.0	-18606451 34261451	-32316451 20551451		

3.0	-27581451	-41291451	-35408951	
	25286451	11576451	17458951	
30.0	-19933951	-33643951	-27761451	-18786451
	32933951	19223951	25106451	34081451

One-way Analysis of Variance Expt "N" 90d AP, spleen cellularity

```
Analysis of Variance for spleen cellularity
Source     DF        SS        MS        F        P
group       4 1.411E+16 3.528E+15     6.66    0.001
Error      25 1.324E+16 5.298E+14
Total      29 2.736E+16
                                  Individual 95% CIs For Mean
                                  Based on Pooled StDev
Level       N      Mean     StDev --+---------+---------+---------+----
 0.0        6  1.41E+08  10858492                        (-----*------)
 0.1        6  1.11E+08  23994171            (-----*-----)
 1.0        6  1.14E+08  21791172             (-----*------)
 3.0        6  1.04E+08  24731847          (------*-----)
30.0        6  73777500  29475333  (------*-----)
                                  --+---------+---------+---------+----
Pooled StDev = 23017132       59999987  89999980  1.20E+08  1.50E+08
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-8633824			
	69358824			
1.0	-11866324	-42228824		
	66126324	35763824		
3.0	-1498824	-31861324	-28628824	
	76493824	46131324	49363824	
30.0	28676176	-1686324	1546176	-8821324
	106668824	76306324	79538824	69171324

One-way Analysis of Variance Expt "N" 90d AP, peritoneal macrophage cellularity

```
Analysis of Variance for mac cell
Source     DF        SS        MS        F        P
group       4 2.857E+12 7.143E+11     0.17    0.950
Error      25 1.032E+14 4.126E+12
Total      29 1.060E+14
                                  Individual 95% CIs For Mean
                                  Based on Pooled StDev
Level       N      Mean     StDev -+---------+---------+---------+-----
 0.0        6   8301667   1782691        (-------------*-------------)
 0.1        6   7682500   1906221   (-------------*-------------)
 1.0        6   8387500   1799602         (-------------*-------------)
```

```
 3.0        6   8365000   2649908        (--------------*-------------)
30.0        6   8597500   1886480          (--------------*-------------)
                                       -+---------+---------+---------+-----
Pooled StDev =  2031307        5999999   7199999   8399999   9599999
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-2822336 4060669			
1.0	-3527336 3355669	-4146503 2736503		
3.0	-3504836 3378169	-4124003 2759003	-3419003 3464003	
30.0	-3737336 3145669	-4356503 2526503	-3651503 3231503	-3674003 3209003

One-way Analysis of Variance Expt "N" 90d AP, bone marrow cellularity

Analysis of Variance for bone mar

Source	DF	SS	MS	F	P
group	4	1.147E+14	2.867E+13	2.45	0.073
Error	25	2.928E+14	1.171E+13		
Total	29	4.075E+14			

```
                                       Individual 95% CIs For Mean
                                       Based on Pooled StDev
Level       N      Mean     StDev    ----+---------+---------+---------+--
 0.0        6  10965833   2435156     (---------*--------)
 0.1        6  11381667   2660362      (---------*---------)
 1.0        6  12342500   2859120          (--------*---------)
 3.0        6  11305833   2204177      (---------*--------)
30.0        6  16250833   5702928                        (--------*---------)
                                       ----+---------+---------+---------+--
Pooled StDev =  3422393          8999999  11999998  14999998  17999997
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-6214155 5382488			
1.0	-7174988 4421655	-6759155 4837488		

3.0	-6138322	-5722488	-4761655	
	5458322	5874155	6834988	
30.0	-11083322	-10667488	-9706655	-10743322
	513322	929155	1889988	853322

Saving file as: C:\C Drive Files\AP working documents\AP Study 90-day IP N\organ wt.cell.exp N. 90d
* NOTE * Existing file replaced.

Worksheet size: 100000 cells

One-way Analysis of Variance NK "N" 90d AP exposure - lytic units stats

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	1895.7	473.9	7.19	0.001
Error	25	1647.3	65.9		
Total	29	3543.1			

Level	N	Mean	StDev
0.0	6	13.600	2.761
0.1	6	23.350	11.796
1.0	6	17.533	4.865
3.0	6	24.817	11.113
30.0	6	36.950	5.961

Pooled StDev = 8.117

```
                    Individual 95% CIs For Mean
                    Based on Pooled StDev
----+---------+---------+---------+--
 (------*-----)
            (-----*------)
      (------*-----)
             (------*------)
                         (------*------)
----+---------+---------+---------+--
   10        20        30        40
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-23.50 4.00			
1.0	-17.69 9.82	-7.94 19.57		
3.0	-24.97 2.54	-15.22 12.29	-21.04 6.47	
30.0	-37.10 -9.60	-27.35 0.15	-33.17 -5.66	-25.89 1.62

One-way Analysis of Variance NK assay for 90day AP exposure, Exp. "N"

```
Analysis of Variance for 100:1 ratio (% lysis)
Source      DF        SS        MS        F        P
treatmen     4     415.9     104.0     4.57    0.007
Error       25     568.9      22.8
Total       29     984.8
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level        N      Mean     StDev  ----------+---------+---------+------
 0.0         6    14.338     2.290   (-------*-------)
 0.1         6    19.177     6.606           (-------*-------)
 1.0         6    14.990     4.154    (-------*-------)
 3.0         6    19.787     5.994             (-------*-------)
30.0         6    24.632     3.424                      (-------*-------)
                                   ----------+---------+---------+------
Pooled StDev =    4.770                   15.0      20.0      25.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-12.921 3.244			
1.0	-8.734 7.431	-3.896 12.269		
3.0	-13.531 2.634	-8.692 7.472	-12.879 3.286	
30.0	-18.376 -2.211 *	-13.537 2.627	-17.724 -1.559	-12.927 3.237

One-way Analysis of Variance NK exp. "N", 90d

```
Analysis of Variance for 50:1 ratio (% lysis)
Source      DF        SS        MS        F        P
treatmen     4     348.3      87.1     6.58    0.001
Error       25     330.7      13.2
Total       29     679.0
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level        N      Mean     StDev  ----+---------+---------+---------+--
 0.0         6     6.332     0.805   (-----*-----)
 0.1         6    10.460     5.128          (-----*-----)
 1.0         6     7.910     2.452     (-----*-----)
 3.0         6    11.443     4.972            (-----*-----)
30.0         6    16.252     2.907                     (------*-----)
                                   ----+---------+---------+---------+--
Pooled StDev =    3.637               5.0      10.0      15.0      20.0
```

Tukey's pairwise comparisons

```
    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

                0.0         0.1         1.0         3.0

     0.1      -10.290
               2.033

     1.0       -7.740      -3.612
               4.583       8.712

     3.0      -11.273      -7.145      -9.695
               1.050       5.178       2.628

    30.0      -16.082 *   -11.953     -14.503     -10.970
               -3.758      0.370      -2.180       1.353
```

One-way Analysis of Variance NK, exp. "N", 90d

```
Analysis of Variance for 25:1 ratio (% lysis)
Source     DF        SS        MS        F        P
treatmen    4    188.03     47.01    10.18    0.000
Error      25    115.46      4.62
Total      29    303.49
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ------+---------+---------+---------+
 0.0        6     3.307     0.988  (----*-----)
 0.1        6     6.170     2.747          (-----*----)
 1.0        6     5.092     1.004       (-----*----)
 3.0        6     6.500     2.825           (-----*----)
30.0        6    10.872     2.363                        (----*----)
                                   ------+---------+---------+---------+
Pooled StDev =    2.149                 3.5       7.0      10.5      14.0
```

Tukey's pairwise comparisons

```
    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

                0.0         0.1         1.0         3.0

     0.1       -6.504
               0.778

     1.0       -5.426      -2.563
               1.856       4.719

     3.0       -6.834      -3.971      -5.049
               0.448       3.311       2.233

    30.0      -11.206 *    -8.343      -9.421      -8.013
```

-3.924	-1.061	-2.139	-0.731

Cytotoxic T Cell Assay Experiment "H"
14 day exposure to ammonium perchlorate
(units are percent lysis)

Worksheet size: 100000 cells

Descriptive Statistics

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0-ratio	6	82.5	90.5	82.5	24.5	10.0
0-ratio	6	76.3	90.5	76.3	29.7	12.1
0-ratio	6	41.00	47.50	41.00	16.86	6.88
0-ratio	6	19.33	20.50	19.33	6.95	2.84
0.1- rat	6	72.5	76.0	72.5	32.8	13.4
0.1- rat	6	74.3	85.0	74.3	30.2	12.3
0.1-rati	6	49.67	56.00	49.67	21.39	8.73
0.1-rati	6	20.00	20.00	20.00	9.82	4.01
1-ratio	6	69.17	71.00	69.17	16.74	6.83
1-ratio	6	75.2	73.0	75.2	28.9	11.8
1-ratio	6	43.7	45.0	43.7	24.9	10.2
1-ratio	6	18.33	18.00	18.33	13.19	5.38
3-ratio	6	54.83	54.00	54.83	8.91	3.64
3-ratio	6	64.00	63.00	64.00	13.52	5.52
3-ratio	6	33.17	34.00	33.17	12.30	5.02
3-ratio	6	15.83	15.50	15.83	6.55	2.68

Variable	Minimum	Maximum	Q1	Q3
0-ratio	36.0	105.0	67.5	97.5
0-ratio	23.0	97.0	50.8	97.0
0-ratio	11.00	59.00	27.50	50.75
0-ratio	7.00	26.00	14.50	25.25
0.1- rat	14.0	108.0	52.3	99.0
0.1- rat	17.0	97.0	53.7	96.2
0.1-rati	13.00	72.00	31.75	65.25
0.1-rati	4.00	31.00	13.00	29.50
1-ratio	46.00	90.00	52.00	84.75
1-ratio	34.0	109.0	52.0	105.2
1-ratio	6.0	77.0	24.7	62.7
1-ratio	0.00	37.00	8.25	28.75
3-ratio	44.00	67.00	46.25	64.00
3-ratio	47.00	80.00	51.50	78.50
3-ratio	15.00	52.00	24.00	40.75
3-ratio	8.00	23.00	10.25	22.25

One-way Analysis of Variance

Analysis of Variance for 100:1 ratio

Source	DF	SS	MS	F	P
treatmen	4	4594	1148	2.57	0.063
Error	25	11175	447		
Total	29	15769			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level      N     Mean     StDev   -----+---------+---------+---------+-
 0.0       6    82.50     24.48                    (--------*--------)
```

```
 0.1        6     72.50     32.83              (--------*--------)
 1.0        6     69.17     16.74             (--------*-------)
 3.0        6     54.83      8.91      (--------*--------)
30.0        6     48.17     14.09  (--------*--------)
                                    -----+---------+---------+---------+-
Pooled StDev =    21.14                 40        60        80       100
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-25.82 45.82			
1.0	-22.49 49.15	-32.49 39.15		
3.0	-8.15 63.49	-18.15 53.49	-21.49 50.15	
30.0	-1.49 70.15	-11.49 60.15	-14.82 56.82	-29.15 42.49

One-way Analysis of Variance

Analysis of Variance for 30:1 ratio

Source	DF	SS	MS	F	P
treatmen	4	1731	433	0.71	0.592
Error	25	15220	609		
Total	29	16951			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  --+---------+---------+---------+----
 0.0        6     76.33     29.69            (---------*----------)
 0.1        6     74.33     30.22           (---------*----------)
 1.0        6     75.17     28.90           (----------*---------)
 3.0        6     64.00     13.52      (---------*---------)
30.0        6     57.00     15.21  (----------*---------)
                                   --+---------+---------+---------+----
Pooled StDev =    24.67             40        60        80       100
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-39.8 43.8			
1.0	-40.6 43.0	-42.6 41.0		
3.0	-29.5 54.1	-31.5 52.1	-30.6 53.0	
30.0	-22.5 61.1	-24.5 59.1	-23.6 60.0	-34.8 48.8

One-way Analysis of Variance

Analysis of Variance for 10:1 ratio

Source	DF	SS	MS	F	P
treatmen	4	1578	395	1.28	0.304
Error	25	7707	308		
Total	29	9285			

Level	N	Mean	StDev	Individual 95% CIs For Mean Based on Pooled StDev
0.0	6	41.00	16.86	(---------*---------)
0.1	6	49.67	21.39	(---------*---------)
1.0	6	43.67	24.90	(---------*---------)
3.0	6	33.17	12.30	(---------*---------)
30.0	6	29.50	5.32	(---------*---------)
Pooled StDev =		17.56		-+---------+---------+---------+----- 15 30 45 60

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-38.41 21.08			
1.0	-32.41 27.08	-23.75 35.75		
3.0	-21.91 37.58	-13.25 46.25	-19.25 40.25	
30.0	-18.25	-9.58	-15.58	-26.08

41.25	49.91	43.91	33.41

One-way Analysis of Variance

Analysis of Variance for 3:1 ratio

Source	DF	SS	MS	F	P
treatmen	4	410.3	102.6	1.33	0.286
Error	25	1928.3	77.1		
Total	29	2338.7			

Level	N	Mean	StDev
0.0	6	19.333	6.947
0.1	6	20.000	9.818
1.0	6	18.333	13.186
3.0	6	15.833	6.555
30.0	6	9.833	4.916

Pooled StDev = 8.783

```
                    Individual 95% CIs For Mean
                    Based on Pooled StDev
-------+---------+---------+---------
             (----------*---------)
              (----------*---------)
            (---------*----------)
        (----------*---------)
(----------*----------)
-------+---------+---------+---------
     7.0       14.0      21.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-15.55 14.21			
1.0	-13.88 15.88	-13.21 16.55		
3.0	-11.38 18.38	-10.71 19.05	-12.38 17.38	
30.0	-5.38 24.38	-4.71 25.05	-6.38 23.38	-8.88 20.88

Cytotoxic T Cell Activity Experiment "F"

Worksheet size: 100000 cells

Descriptive Statistics

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0-ratio	6	49.50	52.00	49.50	15.97	6.52
0-ratio	6	45.50	47.00	45.50	13.84	5.65
0-ratio	6	31.00	31.00	31.00	14.01	5.72
0-ratio	6	14.17	14.50	14.17	7.49	3.06
0.1- rat	4	73.50	69.50	73.50	9.75	4.87
0.1- rat	4	67.75	69.50	67.75	13.20	6.60
0.1-rati	4	89.8	93.0	89.8	20.8	10.4
0.1-rati	4	32.7	24.5	32.7	21.9	10.9
1-ratio	6	55.17	54.50	55.17	3.76	1.54
1-ratio	6	56.67	56.00	56.67	7.69	3.14
1-ratio	6	60.67	57.50	60.67	18.38	7.50
1-ratio	6	24.33	22.50	24.33	19.47	7.95
3-ratio	6	56.00	56.50	56.00	2.97	1.21
3-ratio	6	62.67	64.00	62.67	5.35	2.19
3-ratio	6	57.67	60.50	57.67	10.07	4.11
3-ratio	6	13.67	14.00	13.67	7.55	3.08
30-ratio	6	63.00	65.00	63.00	9.57	3.91
30-ratio	6	62.83	67.00	62.83	11.25	4.59
30-ratio	6	41.17	43.50	41.17	9.28	3.79
30-ratio	6	14.00	13.00	14.00	4.82	1.97

Variable	Minimum	Maximum	Q1	Q3
0-ratio	25.00	66.00	35.50	63.75
0-ratio	22.00	61.00	36.25	56.50
0-ratio	16.00	51.00	16.00	43.50
0-ratio	5.00	25.00	6.50	20.50
0.1- rat	67.00	88.00	67.50	83.50
0.1- rat	51.00	81.00	54.25	79.50
0.1-rati	62.0	111.0	68.5	107.7
0.1-rati	17.0	65.0	18.3	55.5
1-ratio	52.00	61.00	52.00	58.00
1-ratio	46.00	68.00	50.50	63.50
1-ratio	43.00	94.00	46.00	72.25
1-ratio	3.00	59.00	9.00	35.75
3-ratio	52.00	59.00	52.75	59.00
3-ratio	54.00	69.00	57.75	66.75
3-ratio	41.00	67.00	48.50	66.25
3-ratio	4.00	26.00	7.00	18.50
30-ratio	50.00	73.00	52.25	72.25
30-ratio	48.00	76.00	49.50	70.75
30-ratio	25.00	49.00	34.75	48.25
30-ratio	7.00	20.00	10.75	19.25

One-way Analysis of Variance

Analysis of Variance for 100:1 ratio of splenocytes to P815 tumor cells

Source	DF	SS	MS	F	P

dose	4	1611.5	402.9	4.34	0.009
Error	23	2133.3	92.8		
Total	27	3744.9			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level        N      Mean     StDev ------+---------+---------+---------+
 0.0         6    49.500    15.972 (------*------)
 0.1         4    73.500     9.747                    (-------*--------)
 1.0         6    55.167     3.764       (------*------)
 3.0         6    56.000     2.966        (------*-----)
30.0         6    63.000     9.571              (-----*------)
                                   ------+---------+---------+---------+
Pooled StDev =    9.631                 48        60        72        84
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00709

Critical value = 4.18

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-42.37 -5.63 *			
1.0	-22.10 10.77	-0.04 36.71		
3.0	-22.93 9.93	-0.87 35.87	-17.27 15.60	
30.0	-29.93 2.93	-7.87 28.87	-24.27 8.60	-23.43 9.43

One-way Analysis of Variance

Analysis of Variance for 30:1 ratio of splenocytes to P815 tumor cell

Source	DF	SS	MS	F	P
dose	4	1593	398	3.59	0.020
Error	23	2552	111		
Total	27	4145			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level        N      Mean     StDev ----------+---------+---------+------
 0.0         6    45.50     13.84  (------*------)
 0.1         4    67.75     13.20                  (--------*---------)
 1.0         6    56.67      7.69            (------*-------)
 3.0         6    62.67      5.35                 (------*-------)
30.0         6    62.83     11.25                 (------*-------)
                                   ----------+---------+---------+------
Pooled StDev =    10.53                     48        60        72
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00709

Critical value = 4.18

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-42.35 -2.15 *			
1.0	-29.14 6.81	-9.01 31.18		
3.0	-35.14 0.81	-15.01 25.18	-23.97 11.97	
30.0	-35.31 0.64	-15.18 25.01	-24.14 11.81	-18.14 17.81

One-way Analysis of Variance

Analysis of Variance for 10:1 ratio of splenocytes to P815 tumor cell

Source	DF	SS	MS	F	P
dose	4	9618	2405	11.28	0.000
Error	23	4902	213		
Total	27	14520			

Level	N	Mean	StDev	Individual 95% CIs For Mean Based on Pooled StDev
0.0	6	31.00	14.01	(----*----)
0.1	4	89.75	20.76	(-----*-----)
1.0	6	60.67	18.38	(----*----)
3.0	6	57.67	10.07	(----*----)
30.0	6	41.17	9.28	(---*----)

Pooled StDev = 14.60

```
---+---------+---------+---------+---
  25        50        75       100
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00709

Critical value = 4.18

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-86.60 -30.90 *			

1.0	-54.58 *	1.23		
	-4.75	56.94		
3.0	-51.58 *	4.23	-21.91	
	-1.75	59.94	27.91	
30.0	-35.08	20.73	-5.41	-8.41
	14.75	76.44	44.41	41.41

One-way Analysis of Variance

Analysis of Variance for 3:1 ratio of splenocytes to P815 tumor cell

Source	DF	SS	MS	F	P
dose	4	1387	347	1.99	0.130
Error	23	4014	175		
Total	27	5401			

Level	N	Mean	StDev	Individual 95% CIs For Mean Based on Pooled StDev
0.0	6	14.17	7.49	(--------*--------)
0.1	4	32.75	21.88	(----------*----------)
1.0	6	24.33	19.47	(--------*---------)
3.0	6	13.67	7.55	(--------*---------)
30.0	6	14.00	4.82	(---------*--------)

Pooled StDev = 13.21

```
--------+---------+---------+--------
        12        24        36
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00709

Critical value = 4.18

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-43.79			
	6.62			
1.0	-32.71	-16.79		
	12.38	33.62		
3.0	-22.04	-6.12	-11.88	
	23.04	44.29	33.21	
30.0	-22.38	-6.46	-12.21	-22.88
	22.71	43.96	32.88	22.21

One-way Analysis of Variance CTL "M" 14d

Analysis of Variance for 100:1 ratio

Source	DF	SS	MS	F	P

```
Cl          4     185.1      46.3     0.88    0.492
Error      25    1319.8      52.8
Total      29    1505.0
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  -+---------+---------+---------+-----
0.1         6    44.167     7.223      (----------*---------)
1           6    41.667     5.922  (---------*----------)
3           6    48.667    10.501              (---------*---------)
30          6    42.500     6.950    (---------*---------)
control     6    42.833     4.262    (---------*----------)
                                   -+---------+---------+---------+-----
Pooled StDev =    7.266          36.0      42.0      48.0      54.0

Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

           0.1          1           3           30

 1          -9.810
            14.810

 3         -16.810     -19.310
             7.810       5.310

 30        -10.643     -13.143      -6.143
            13.977      11.477      18.477

 control   -10.977     -13.477      -6.477     -12.643
            13.643      11.143      18.143      11.977
```

One-way Analysis of Variance

```
Analysis of Variance for 30:1 ratio
Source     DF        SS        MS        F        P
Cl          4      57.2      14.3     0.29    0.882
Error      25    1234.7      49.4
Total      29    1291.9
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ---+---------+---------+---------+---
0.1         6    27.500     7.817        (-----------*-----------)
1           6    24.500     4.680  (-----------*-----------)
3           6    27.167    10.028        (----------*-----------)
30          6    27.500     6.285        (-----------*-----------)
control     6    24.667     4.885   (----------*-----------)
                                   ---+---------+---------+---------+---
Pooled StDev =    7.028           20.0      25.0      30.0      35.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.1	1	3	30
1	-8.906 14.906			
3	-11.573 12.240	-14.573 9.240		
30	-11.906 11.906	-14.906 8.906	-12.240 11.573	
control	-9.073 14.740	-12.073 11.740	-9.406 14.406	-9.073 14.740

One-way Analysis of Variance

Analysis of Variance for 10:1 ratio

Source	DF	SS	MS	F	P
C1	4	37.5	9.4	0.35	0.838
Error	25	661.8	26.5		
Total	29	699.4			

Level	N	Mean	StDev	Individual 95% CIs For Mean Based on Pooled StDev
0.1	6	12.500	5.505	(----------*----------)
1	6	9.000	4.290	(----------*----------)
3	6	11.000	7.239	(----------*----------)
30	6	10.500	5.089	(----------*----------)
control	6	10.833	2.317	(----------*----------)
Pooled StDev =		5.145		7.0 10.5 14.0

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.1	1	3	30
1	-5.217 12.217			

3	-7.217	-10.717		
	10.217	6.717		
30	-6.717	-10.217	-8.217	
	10.717	7.217	9.217	
control	-7.051	-10.551	-8.551	-9.051
	10.384	6.884	8.884	8.384

One-way Analysis of Variance

Analysis of Variance for 3:1 ratio

Source	DF	SS	MS	F	P
C1	4	40.33	10.08	2.75	0.051
Error	25	91.67	3.67		
Total	29	132.00			

```
                                  Individual 95% CIs For Mean
                                  Based on Pooled StDev
Level        N      Mean     StDev ------+---------+---------+---------+
0.1          6    -2.500     1.517      (-------*--------)
1            6    -2.667     2.503      (-------*-------)
3            6    -1.000     2.191              (-------*-------)
30           6    -0.333     1.633                 (-------*-------)
control      6    -3.500     1.517 (-------*--------)
                                    ------+---------+---------+---------+
Pooled StDev =    1.915                -4.0      -2.0       0.0       2.0
```

Tukey's pairwise comparisons

Worksheet size: 100000 cells

One-way Analysis of Variance CTL 90-day AP, Experiment "P"

Analysis of Variance for 100:1 ratio (% lysis)

Source	DF	SS	MS	F	P
treatmen	4	688	172	0.94	0.456
Error	25	4565	183		
Total	29	5253			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  -----+---------+---------+---------+-
 0.0        6     50.20      6.52      (----------*----------)
 0.1        6     50.20     14.08      (----------*----------)
 1.0        6     50.17     18.72      (----------*----------)
 3.0        6     61.11      5.35                 (----------*----------)
30.0        6     47.30     17.12   (----------*----------)
                                   -----+---------+---------+---------+-
Pooled StDev =    13.51                 40        50        60        70
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-22.89 22.90			
1.0	-22.86 22.92	-22.87 22.92		
3.0	-33.80 11.99	-33.80 11.99	-33.83 11.96	
30.0	-19.99 25.80	-19.99 25.80	-20.02 25.77	-9.08 36.71

One-way Analysis of Variance

Analysis of Variance for 30:1 ratio (% lysis)

Source	DF	SS	MS	F	P
treatmen	4	171	43	0.29	0.881
Error	25	3660	146		
Total	29	3831			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  --+---------+---------+---------+----
 0.0        6     34.72      7.21     (-----------*-----------)
 0.1        6     34.09     13.34    (-----------*-----------)
 1.0        6     36.56     15.49      (-----------*-----------)
 3.0        6     39.85      5.88            (-----------*-----------)
30.0        6     33.06     15.08   (-----------*-----------)
                                   --+---------+---------+---------+----
Pooled StDev =    12.10           24.0      32.0      40.0      48.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-19.88 21.12			
1.0	-22.34 18.65	-22.97 18.03		
3.0	-25.63 15.37	-26.25 14.74	-23.79 17.21	
30.0	-18.85 22.15	-19.47 21.53	-17.00 23.99	-13.72 27.28

One-way Analysis of Variance

Analysis of Variance for 10:1 ratio (% lysis)

Source	DF	SS	MS	F	P
treatmen	4	29.0	7.3	0.12	0.972
Error	25	1462.5	58.5		
Total	29	1491.6			

Level	N	Mean	StDev	Individual 95% CIs For Mean Based on Pooled StDev
0.0	6	20.993	5.282	(----------*----------)
0.1	6	20.098	8.886	(----------*----------)
1.0	6	20.287	8.676	(----------*----------)
3.0	6	19.940	4.097	(----------*----------)
30.0	6	18.040	9.674	(----------*----------)

Pooled StDev = 7.649

```
-------+---------+---------+---------
      15.0      20.0      25.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-12.06 13.85			
1.0	-12.25 13.67	-13.15 12.77		
3.0	-11.91 14.01	-12.80 13.12	-12.61 13.31	

30.0	-10.01	-10.90	-10.71	-11.06
	15.91	15.02	15.21	14.86

One-way Analysis of Variance

Analysis of Variance for 3:1 ratio (% lysis)

Source	DF	SS	MS	F	P
treatmen	4	18.7	4.7	0.38	0.824
Error	25	310.9	12.4		
Total	29	329.6			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev ---------+---------+---------+-------
 0.0        6     8.648     2.384   (-----------*----------)
 0.1        6     8.227     3.919  (-----------*-----------)
 1.0        6     9.258     3.547      (-----------*-----------)
 3.0        6    10.540     2.346           (-----------*-----------)
30.0        6     9.453     4.802       (-----------*-----------)
                                   ---------+---------+---------+-------
Pooled StDev =    3.527                     7.5       10.0      12.5
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-5.553 6.396			
1.0	-6.585 5.365	-7.006 4.943		
3.0	-7.866 4.083	-8.288 3.661	-7.256 4.693	
30.0	-6.780 5.170	-7.201 4.748	-6.170 5.780	-4.888 7.061

One-way Analysis of Variance 90d expt "N" thymus CD4-CD8+ flow cytometry

```
Analysis of Variance for thy CD4-
Source      DF        SS        MS        F        P
C1           4     0.211     0.053     0.24    0.911
Error       25     5.443     0.218
Total       29     5.655
                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level        N      Mean     StDev   -+---------+---------+---------+-----
 0.0         6    2.9333    0.4761         (------------*------------)
 0.1         6    2.7667    0.2582   (------------*------------)
 1.0         6    2.8500    0.7064      (------------*------------)
 3.0         6    2.8667    0.4082      (-------------*------------)
30.0         6    3.0167    0.3601           (-------------*------------)
                                      -+---------+---------+---------+-----
Pooled StDev =   0.4666             2.40      2.70      3.00      3.30

Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

                 0.0         0.1         1.0         3.0

     0.1      -0.6239
               0.9572

     1.0      -0.7072     -0.8739
               0.8739      0.7072

     3.0      -0.7239     -0.8906     -0.8072
               0.8572      0.6906      0.7739

    30.0      -0.8739     -1.0406     -0.9572     -0.9406
               0.7072      0.5406      0.6239      0.6406
```

One-way Analysis of Variance 90d expt "N" thymus CD4+CD8+ flow cytometry

```
Analysis of Variance for thy CD4+
Source      DF        SS        MS        F        P
C1           4      7.05      1.76     0.50    0.737
Error       25     88.38      3.54
Total       29     95.43
                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level        N      Mean     StDev   ----+---------+---------+---------+--
 0.0         6    85.050     2.738   (----------*----------)
 0.1         6    85.950     1.013        (----------*----------)
 1.0         6    86.367     2.370           (----------*---------)
 3.0         6    85.400     1.545     (---------*----------)
30.0         6    85.250     1.069    (---------*----------)
                                      ----+---------+---------+---------+--
Pooled StDev =    1.880              84.0      85.5      87.0      88.5

Tukey's pairwise comparisons
```

```
    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

                0.0         0.1         1.0         3.0

     0.1       -4.085
                2.285

     1.0       -4.502      -3.602
                1.869       2.769

     3.0       -3.535      -2.635      -2.219
                2.835       3.735       4.152

    30.0       -3.385      -2.485      -2.069      -3.035
                2.985       3.885       4.302       3.335
```

One-way Analysis of Variance 90d expt "N" thymus CD4-CD8- flow cytometry

```
Analysis of Variance for thy CD4-
Source      DF        SS        MS         F        P
Cl           4      5.10      1.27      0.92    0.467
Error       25     34.58      1.38
Total       29     39.68
                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level        N      Mean     StDev   -------+---------+---------+---------
 0.0         6     4.467     2.155                (---------*---------)
 0.1         6     3.467     0.622     (---------*---------)
 1.0         6     3.317     1.028   (---------*---------)
 3.0         6     3.450     0.575     (---------*--------)
30.0         6     3.667     0.706       (---------*---------)
                                      -------+---------+---------+---------
Pooled StDev =    1.176                   3.0       4.0       5.0

Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

                0.0         0.1         1.0         3.0

     0.1       -0.993
                2.993

     1.0       -0.843      -1.843
                3.143       2.143

     3.0       -0.976      -1.976      -2.126
                3.009       2.009       1.859

    30.0       -1.193      -2.193      -2.343      -2.209
                2.793       1.793       1.643       1.776
```

One-way Analysis of Variance 90d expt "N" thymus CD4+CD8- flow cytometry

```
Analysis of Variance for thy CD4+
Source      DF        SS        MS        F      P
C1           4     2.989     0.747     1.09  0.383
Error       25    17.130     0.685
Total       29    20.119
                                     Individual 95% CIs For Mean
                                     Based on Pooled StDev
Level        N      Mean     StDev   ----+---------+---------+---------+--
 0.0         6    7.5500    0.6442     (---------*---------)
 0.1         6    7.8000    0.5404        (---------*---------)
 1.0         6    7.4333    1.2785   (---------*---------)
 3.0         6    8.2833    0.8727               (---------*---------)
30.0         6    8.0667    0.5680            (---------*---------)
                                     ----+---------+---------+---------+--
Pooled StDev =   0.8278                7.00      7.70      8.40      9.10

Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

               0.0         0.1         1.0         3.0

     0.1     -1.6524
              1.1524

     1.0     -1.2858     -1.0358
              1.5191      1.7691

     3.0     -2.1358     -1.8858     -2.2524
              0.6691      0.9191      0.5524

    30.0     -1.9191     -1.6691     -2.0358     -1.1858
              0.8858      1.1358      0.7691      1.6191
```

One-way Analysis of Variance 90d expt "N" spleen CD4-CD8+ flow cytometry

```
Analysis of Variance for spl CD4-
Source      DF        SS        MS        F      P
C1           4      4.63      1.16     0.78  0.549
Error       25     37.14      1.49
Total       29     41.77
                                     Individual 95% CIs For Mean
                                     Based on Pooled StDev
Level        N      Mean     StDev   -------+---------+---------+---------
 0.0         6    11.317     1.439            (---------*---------)
 0.1         6    10.350     0.901   (---------*----------)
 1.0         6    10.650     0.935      (----------*---------)
 3.0         6    10.717     1.162       (---------*---------)
30.0         6    11.350     1.524            (---------*----------)
                                     -------+---------+---------+---------
Pooled StDev =    1.219                 10.0      11.0      12.0

Tukey's pairwise comparisons
```

```
    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

                0.0         0.1         1.0         3.0

     0.1       -1.098
                3.032

     1.0       -1.398      -2.365
                2.732       1.765

     3.0       -1.465      -2.432      -2.132
                2.665       1.698       1.998

    30.0       -2.098      -3.065      -2.765      -2.698
                2.032       1.065       1.365       1.432
```

One-way Analysis of Variance 90d expt "N" spleen CD4+CD8+ flow cytometry

```
Analysis of Variance for spl CD4+
Source      DF        SS        MS         F        P
C1           4     17.53      4.38      0.81    0.528
Error       25    134.47      5.38
Total       29    152.01
                                     Individual 95% CIs For Mean
                                     Based on Pooled StDev
Level        N      Mean     StDev   ----------+---------+---------+------
 0.0         6     2.400     5.047                  (-----------*-----------)
 0.1         6     0.483     0.458    (-----------*-----------)
 1.0         6     0.917     1.030       (-----------*-----------)
 3.0         6     0.383     0.172   (-----------*-----------)
30.0         6     0.417     0.354   (-----------*-----------)
                                     ----------+---------+---------+------
Pooled StDev =     2.319                      0.0       1.6       3.2

Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

                0.0         0.1         1.0         3.0

     0.1       -2.013
                5.846

     1.0       -2.446      -4.363
                5.413       3.496

     3.0       -1.913      -3.829      -3.396
                5.946       4.029       4.463

    30.0       -1.946      -3.863      -3.429      -3.963
                5.913       3.996       4.429       3.896
```

One-way Analysis of Variance 90d expt "N" spleen CD4-CD8- flow cytometry

```
Analysis of Variance for spl CD4-
Source      DF        SS        MS        F        P
Cl           4      47.7      11.9     0.91    0.476
Error       25     329.4      13.2
Total       29     377.2
                                        Individual 95% CIs For Mean
                                        Based on Pooled StDev
Level        N      Mean     StDev     -------+---------+---------+---------
 0.0         6    67.167     4.914      (---------*---------)
 0.1         6    71.083     1.958                  (---------*---------)
 1.0         6    68.500     3.407          (---------*----------)
 3.0         6    69.050     3.354            (---------*---------)
30.0         6    68.833     3.879           (---------*----------)
                                        -------+---------+---------+---------
Pooled StDev =    3.630                     66.0      69.0      72.0

Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

                 0.0         0.1         1.0         3.0

     0.1      -10.067
               2.233

     1.0       -7.483      -3.567
               4.817       8.733

     3.0       -8.033      -4.117      -6.700
               4.267       8.183       5.600

    30.0       -7.817      -3.900      -6.483      -5.933
               4.483       8.400       5.817       6.367
```

One-way Analysis of Variance 90d expt "N" spleen CD4+CD8- flow cytometry

```
Analysis of Variance for spl CD4+
Source      DF        SS        MS        F        P
Cl           4     13.23      3.31     0.63    0.646
Error       25    131.34      5.25
Total       29    144.57
                                        Individual 95% CIs For Mean
                                        Based on Pooled StDev
Level        N      Mean     StDev     ---------+---------+---------+-------
 0.0         6    19.100     1.637          (-----------*-----------)
 0.1         6    18.100     1.035    (-----------*-----------)
 1.0         6    19.933     3.433                (-----------*-----------)
 3.0         6    19.850     2.298              (-----------*-----------)
30.0         6    19.450     2.335            (-----------*-----------)
                                        ---------+---------+---------+-------
Pooled StDev =    2.292                      17.6      19.2      20.8
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-2.883 4.883			
1.0	-4.717 3.050	-5.717 2.050		
3.0	-4.633 3.133	-5.633 2.133	-3.800 3.967	
30.0	-4.233 3.533	-5.233 2.533	-3.400 4.367	-3.483 4.283

Saving file as: C:\C Drive Files\AP working documents\AP STATS\flow expt N spl & thy .MPJ

Worksheet size: 100000 cells

One-way Analysis of Variance Peritoneal Mac Nitrite Production- Controls

Analysis of Variance for control

Source	DF	SS	MS	F	P
group	4	0.4838	0.1209	1.77	0.167
Error	25	1.7092	0.0684		
Total	29	2.1930			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  -----+---------+---------+---------+-
 0.0        6    0.6488    0.2920              (--------*--------)
 0.1        6    0.4438    0.1470      (--------*--------)
 1.0        6    0.3560    0.1363  (--------*--------)
 3.0        6    0.4787    0.4571       (--------*--------)
30.0        6    0.6923    0.0865                (--------*-------)
                                   -----+---------+---------+---------+-
Pooled StDev =   0.2615               0.25      0.50      0.75      1.00
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-0.2380 0.6480			
1.0	-0.1502 0.7358	-0.3552 0.5308		
3.0	-0.2728 0.6132	-0.4778 0.4082	-0.5657 0.3203	
30.0	-0.4865 0.3995	-0.6915 0.1945	-0.7793 0.1067	-0.6567 0.2293

One-way Analysis of Variance Peritoneal Mac Nitrite Production- Interferon only

Analysis of Variance for Interfer

Source	DF	SS	MS	F	P
group	4	1064.6	266.2	18.53	0.000
Error	25	359.0	14.4		
Total	29	1423.6			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ---+---------+---------+---------+---
 0.0        6     2.668     4.331    (----*---)
 0.1        6     1.336     0.548  (----*---)
 1.0        6     7.173     6.004           (---*----)
 3.0        6    17.268     4.044                          (----*---)
30.0        6     1.965     0.581   (----*---)
                                   ---+---------+---------+---------+---
Pooled StDev =    3.789              0.0       7.0      14.0      21.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-5.089 7.751			
1.0	-10.926 1.914	-12.257 0.583		
3.0	-21.020 -8.180	-22.352 -9.511	-16.515 -3.674	
30.0	-5.718 7.123	-7.049 5.791	-1.212 11.628	8.882 21.723

One-way Analysis of Variance Peritoneal Mac Nitrite Production- LPS only

Analysis of Variance for LPS

Source	DF	SS	MS	F	P
group	4	58.79	14.70	3.69	0.017
Error	25	99.60	3.98		
Total	29	158.39			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  -----+---------+---------+---------+-
 0.0        6     3.194     1.976            (------*-----)
 0.1        6     4.876     3.369                   (------*-----)
 1.0        6     2.419     1.901         (------*-----)
 3.0        6     0.532     0.096  (------*------)
30.0        6     3.004     1.021           (------*------)
                                   -----+---------+---------+---------+-
Pooled StDev =    1.996               0.0       2.5       5.0       7.5
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-5.064 1.699			
1.0	-2.606 4.157	-0.924 5.839		
3.0	-0.720 6.044	0.963 7.726	-1.495 5.268	

30.0	-3.192	-1.509	-3.967	-5.854
	3.572	5.254	2.796	0.910

One-way Analysis of Variance Peritoneal Mac Nitrite Production- Interferon + LPS

Analysis of Variance for IFN + LP

Source	DF	SS	MS	F	P
group	4	52.8	13.2	1.10	0.377
Error	25	299.3	12.0		
Total	29	352.2			

Level	N	Mean	StDev
0.0	6	15.819	2.652
0.1	6	18.569	5.304
1.0	6	15.000	4.152
3.0	6	15.980	1.880
30.0	6	14.912	1.982

Pooled StDev = 3.460

```
                    Individual 95% CIs For Mean
                    Based on Pooled StDev
----------+---------+---------+------
   (---------*--------)
             (---------*---------)
(---------*---------)
    (--------*---------)
(---------*--------)
----------+---------+---------+------
       15.0      18.0      21.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-8.613 3.112			
1.0	-5.043 6.682	-2.293 9.432		
3.0	-6.023 5.701	-3.273 8.452	-6.843 4.882	
30.0	-4.956 6.769	-2.205 9.520	-5.775 5.950	-4.795 6.930

Worksheet size: 100000 cells

Delayed type hypersensitivity Experiment "U" 14 day AP exposure

One-way Analysis of Variance for controls of DTH U, 14d AP

Analysis of Variance for Control

Source	DF	SS	MS	F	P
treatmen	4	19440837	4860209	2.10	0.112
Error	24	55588426	2316184		
Total	28	75029263			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  --+---------+---------+---------+----
 0.0        6      5120      2077          (-------*--------)
 0.1        6      5649       411             (--------*-------)
 1.0        6      4654       860       (--------*--------)
 3.0        5      4211       710    (--------*--------)
30.0        6      6597      2343                     (--------*--------)
                                   --+---------+---------+---------+----
Pooled StDev =     1522            3000      4500      6000      7500
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00701

Critical value = 4.17

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-3120 2062			
1.0	-2125 3057	-1596 3586		
3.0	-1809 3626	-1280 4155	-2275 3160	
30.0	-4068 1114	-3539 1643	-4534 648	-5103 332

One-way Analysis of Variance 8 ug/ml SLA, DTH U, 14d AP

Analysis of Variance for 8 SLA

Source	DF	SS	MS	F	P
treatmen	4	3.757E+09	939345279	1.30	0.298
Error	24	1.734E+10	722562940		
Total	28	2.110E+10			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ------+---------+---------+---------+
 0.0        6     50885     22523  (----------*----------)
 0.1        6     54543     24051    (----------*----------)
 1.0        6     77066     22758                (----------*----------)
 3.0        5     63892     30302        (----------*----------)
30.0        6     78079     33616                 (----------*----------)
```

```
                                        ------+---------+---------+---------+
Pooled StDev =    26881                   40000     60000     80000    100000

Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00701

Critical value = 4.17

Intervals for (column level mean) - (row level mean)

              0.0         0.1         1.0         3.0

     0.1     -49419
              42104

     1.0     -71942      -68285
              19580       23238

     3.0     -61002      -57344      -34820
              34988       38646       61169

    30.0     -72955      -69297      -46774      -62182
              18568       22225       44749       33808
```

One-way Analysis of Variance 4 ug/ml SLA, DTH U, 14d AP

```
Analysis of Variance for 4 SLA
Source     DF        SS        MS        F        P
treatmen    4 6.059E+09 1.515E+09     2.34    0.083
Error      24 1.550E+10 645997279
Total      28 2.156E+10
                                    Individual 95% CIs For Mean
                                    Based on Pooled StDev
Level       N      Mean     StDev  ---+---------+---------+---------+---
 0.0        6     39481     21181  (--------*-------)
 0.1        6     47337     23320     (--------*--------)
 1.0        6     78151     30333                  (-------*--------)
 3.0        5     61531     27545            (---------*--------)
30.0        6     69997     24109                (--------*--------)
                                    ---+---------+---------+---------+---
Pooled StDev =    25416            25000     50000     75000    100000

Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00701

Critical value = 4.17

Intervals for (column level mean) - (row level mean)

              0.0         0.1         1.0         3.0

     0.1     -51125
              35413

     1.0     -81939      -74083
               4599       12455
```

3.0	-67431	-59575	-28761	
	23331	31187	62001	
30.0	-73786	-65930	-35115	-53848
	12752	20608	51422	36914

One-way Analysis of Variance 2 ug/ml SLA, DTH U, 14d AP

```
Analysis of Variance for 2 SLA
Source     DF        SS        MS        F        P
treatmen    4 3.482E+09 870380082     1.67    0.190
Error      24 1.252E+10 521630216
Total      28 1.600E+10
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev -+---------+---------+---------+-----
 0.0        6     38976     14337  (--------*---------)
 0.1        6     46385     21051      (--------*---------)
 1.0        6     67741     25631                (---------*--------)
 3.0        5     55077     27739         (----------*---------)
30.0        6     64391     24138               (--------*---------)
                                  -+---------+---------+---------+-----
Pooled StDev =    22839          20000     40000     60000     80000

Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00701

Critical value = 4.17

Intervals for (column level mean) - (row level mean)

               0.0         0.1         1.0         3.0

    0.1      -46291
              31472

    1.0      -67646      -60237
              10117       17526

    3.0      -56879      -49470      -28115
              24679       32088       53443

   30.0      -64296      -56887      -35532      -50094
              13467       20876       42231       31465
```

One-way Analysis of Variance 1 ug/ml SLA, DTH U, 14d AP

```
Analysis of Variance for 1 SLA
Source     DF        SS        MS        F        P
treatmen    4 1.666E+09 416611741     0.97    0.443
Error      24 1.032E+10 429968788
Total      28 1.199E+10
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev -----+---------+---------+---------+-
 0.0        6     40115     19379 (-----------*----------)
 0.1        6     44390     21446    (-----------*----------)
```

```
 1.0        6     59678     21421                (-----------*----------)
 3.0        5     47135     26350       (-----------*------------)
30.0        6     56955     14630               (-----------*-----------)
                                        -----+---------+---------+---------+-
Pooled StDev =    20736                 30000     45000     60000     75000
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00701

Critical value = 4.17

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-39576 31025			
1.0	-54864 15737	-50588 20013		
3.0	-44043 30003	-39768 34279	-24480 49566	
30.0	-52141 18460	-47865 22736	-32578 38023	-46844 27203

One-way Analysis of Variance 0.5 ug/ml SLA, DTH U, 14d AP

Analysis of Variance for 0.5 SLA

Source	DF	SS	MS	F	P
treatmen	4	1.762E+09	440460833	1.05	0.404
Error	24	1.011E+10	421108676		
Total	28	1.187E+10			

```
                                        Individual 95% CIs For Mean
                                        Based on Pooled StDev
Level        N      Mean     StDev     ---+---------+---------+---------+---
 0.0         6     29851     16647      (----------*---------)
 0.1         6     36869     18126          (----------*----------)
 1.0         6     47935     21549                 (----------*----------)
 3.0         5     38923     22581          (-----------*-----------)
30.0         6     51029     23311                    (----------*----------)
                                        ---+---------+---------+---------+---
Pooled StDev =    20521               16000     32000     48000     64000
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00701

Critical value = 4.17

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-41954 27916			

1.0	-53020	-46001		
	16850	23869		
3.0	-45713	-38694	-27628	
	27567	34586	45652	
30.0	-56113	-49094	-38028	-48745
	13757	20775	31841	24534

One-way Analysis of Variance 0.1 ug/ml SLA, DTH U, 14d AP

Analysis of Variance for 0.1 SLA

Source	DF	SS	MS	F	P
treatmen	4	2.342E+09	585471334	3.37	0.025
Error	24	4.172E+09	173845152		
Total	28	6.514E+09			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  --------+---------+---------+--------
 0.0        6     14722      8924  (-------*------)
 0.1        6     20159     11159      (------*-------)
 1.0        6     25721     10771          (------*-------)
 3.0        5     20212      9906     (-------*--------)
30.0        6     40596     20875                    (------*------)
                                   --------+---------+---------+--------
Pooled StDev =    13185                 15000     30000     45000
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00701

Critical value = 4.17

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-27882			
	17010			
1.0	-33444	-28008		
	11448	16884		
3.0	-29032	-23595	-18033	
	18052	23488	29050	
30.0	-48320 *	-42884	-37321	-43925
	-3428	2009	7571	3158

Delayed type hypersensitivity experiment "V" 14d AP

One-way Analysis of Variance for control values for DTH, 14d AP

Analysis of Variance for Cont

Source	DF	SS	MS	F	P
treatmen	4	1580396	395099	0.55	0.704
Error	25	18116400	724656		
Total	29	19696796			

```
                                   Individual 95% CIs For Mean
```

```
                                        Based on Pooled StDev
Level        N      Mean     StDev  -+---------+---------+---------+-----
 0.0         6    3080.3     805.3  (-----------*-----------)
 0.1         6    3193.7    1099.5    (-----------*-----------)
 1.0         6    3680.7     693.2            (-----------*-----------)
 3.0         6    3346.8     887.0       (-----------*-----------)
30.0         6    3597.7     706.2           (-----------*-----------)
                                     -+---------+---------+---------+-----
Pooled StDev =    851.3          2400      3000      3600      4200
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-1556 1329			
1.0	-2043 842	-1929 955		
3.0	-1709 1176	-1595 1289	-1108 1776	
30.0	-1960 925	-1846 1038	-1359 1525	-1693 1191

One-way Analysis of Variance 8 ug/ml SLA, DTH, 14d AP

Analysis of Variance for 8 SLA

Source	DF	SS	MS	F	P
treatmen	4	1.136E+09	284065817	3.15	0.032
Error	25	2.257E+09	90278644		
Total	29	3.393E+09			

```
                                        Individual 95% CIs For Mean
                                        Based on Pooled StDev
Level        N      Mean     StDev  --+---------+---------+---------+----
 0.0         6     16839      7554   (-------*-------)
 0.1         6     21048      5694       (-------*-------)
 1.0         6     29846     12415                (-------*-------)
 3.0         6     34012      8768                    (-------*-------)
30.0         6     23430     11441         (-------*-------)
                                     --+---------+---------+---------+----
Pooled StDev =     9502          10000     20000     30000     40000
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

0.0 0.1 1.0 3.0

0.1	-20307 11889			
1.0	-29105 3090	-24896 7300		
3.0	-33271 -1075	-29061 3134	-20263 11932	
30.0	-22689 9507	-18480 13716	-9682 22514	-5516 26679

One-way Analysis of Variance 4 ug/ml SLA, DTH, 14d AP

Analysis of Variance for 4 SLA

Source	DF	SS	MS	F	P
treatmen	4	281909327	70477332	0.80	0.537
Error	25	2.205E+09	88196061		
Total	29	2.487E+09			

Level	N	Mean	StDev
0.0	6	21705	9561
0.1	6	24864	9869
1.0	6	25213	7586
3.0	6	27624	10015
30.0	6	18803	9713

Pooled StDev = 9391

```
                    Individual 95% CIs For Mean
                    Based on Pooled StDev
-----+---------+---------+---------+-
     (----------*----------)
          (-----------*----------)
           (----------*----------)
              (----------*-----------)
 (----------*----------)
-----+---------+---------+---------+-
14000     21000     28000     35000
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-19069 12752			
1.0	-19419 12403	-16260 15561		
3.0	-21830 9992	-18671 13151	-18322 13500	
30.0	-13009 18813	-9850 21972	-9501 22321	-7090 24732

One-way Analysis of Variance 2 ug/ml SLA, DTH, 14d AP

Analysis of Variance for 2 SLA

Source	DF	SS	MS	F	P
treatmen	4	769516584	192379146	1.76	0.168

```
Error       25 2.727E+09 109075639
Total       29 3.496E+09
                                     Individual 95% CIs For Mean
                                     Based on Pooled StDev
Level        N      Mean     StDev  ----------+---------+---------+------
 0.0         6     19341     12504   (-------*--------)
 0.1         6     25341      6132         (-------*--------)
 1.0         6     29142     11596            (--------*--------)
 3.0         6     33456      7660                 (-------*--------)
30.0         6     31907     12582              (--------*--------)
                                     ----------+---------+---------+------
Pooled StDev =    10444                    20000     30000     40000
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-23694 11694			
1.0	-27495 7894	-21495 13894		
3.0	-31810 3579	-25810 9579	-22009 13380	
30.0	-30260 5129	-24260 11129	-20460 14929	-16145 19244

One-way Analysis of Variance 1 ug/ml SLA, DTH, 14d AP

Analysis of Variance for 1 SLA

Source	DF	SS	MS	F	P
treatmen	4	839695383	209923846	2.57	0.063
Error	25	2.042E+09	81691923		
Total	29	2.882E+09			

```
                                     Individual 95% CIs For Mean
                                     Based on Pooled StDev
Level        N      Mean     StDev  ------+---------+---------+---------+
 0.0         6     18894     10552  (---------*--------)
 0.1         6     24582      5505        (---------*--------)
 1.0         6     31486      6285                 (--------*---------)
 3.0         6     32932     10987                   (--------*---------)
30.0         6     22930     10324      (---------*--------)
                                     ------+---------+---------+---------+
Pooled StDev =     9038                 16000     24000     32000     40000
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-21000 9626			
1.0	-27905 2721	-22218 8408		
3.0	-29351 1275	-23664 6962	-16759 13867	
30.0	-19349 11278	-13661 16965	-6757 23870	-5311 25316

One-way Analysis of Variance 0.5 ug/ml SLA, DTH, 14d AP

Analysis of Variance for 0.5 SLA

Source	DF	SS	MS	F	P
treatmen	4	568552627	142138157	1.73	0.175
Error	25	2.056E+09	82249286		
Total	29	2.625E+09			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  -----+---------+---------+---------+-
 0.0        6     19985      6631  (---------*---------)
 0.1        6     21671      5051     (--------*---------)
 1.0        6     27893      6959            (---------*--------)
 3.0        6     32056      9284                   (--------*---------)
30.0        6     24275     14392        (--------*---------)
                                   -----+---------+---------+---------+-
Pooled StDev =     9069              16000     24000     32000     40000
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-17052 13679			
1.0	-23273 7457	-21587 9144		
3.0	-27437 3294	-25750 4980	-19529 11202	
30.0	-19656 11075	-17969 12761	-11748 18982	-7585 23146

One-way Analysis of Variance 0.1 ug/ml SLA, DTH, 14d AP

Analysis of Variance for 0.1 SLA

Source	DF	SS	MS	F	P
treatmen	4	365774910	91443728	1.94	0.135
Error	25	1.179E+09	47165636		
Total	29	1.545E+09			

Level	N	Mean	StDev
0.0	6	13247	5084
0.1	6	14733	2912
1.0	6	17845	7962
3.0	6	23095	8288
30.0	6	19490	8331

Pooled StDev = 6868

```
Individual 95% CIs For Mean
Based on Pooled StDev
--------+---------+---------+--------
(---------*---------)
   (---------*--------)
        (---------*--------)
                 (--------*---------)
           (--------*---------)
--------+---------+---------+--------
    12000     18000     24000
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-13122 10150			
1.0	-16234 7037	-14748 8523		
3.0	-21484 1788	-19998 3274	-16885 6386	
30.0	-17879 5392	-16393 6878	-13281 9991	-8031 15240

```
Worksheet size: 100000 cells
```

One-way Analysis of Variance Listeria Host Resistance Expt. "L"

CFU/gram of liver

```
Analysis of Variance for CFU/g Li
Source     DF        SS        MS        F        P
treatmen    4 3.640E+14 9.100E+13     1.72    0.177
Error      25 1.321E+15 5.285E+13
Total      29 1.685E+15
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  -+---------+---------+---------+-----
 0.0        6   9313333  16090669                  (----------*---------)
 0.1        6    679550   1258467    (---------*---------)
 1.0        6   1431000   1750684     (---------*----------)
 3.0        6     59583    134932   (---------*---------)
30.0        6    530633    832148    (---------*---------)
                                   -+---------+---------+---------+-----
Pooled StDev =  7270061      -5999999         0   5999999  11999998

Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

               0.0         0.1         1.0         3.0

     0.1    -3683375
            20950942

     1.0    -4434825   -13068608
            20199492    11565708

     3.0    -3063408   -11697192   -10945742
            21570908    12937125    13688575

    30.0    -3534458   -12168242   -11416792   -12788208
            21099858    12466075    13217525    11846108
```

Saving file as: C:\C Drive Files\AP working documents\AP STATS\Listeria HR expt L.MPJ

One-way Analysis of Variance Listeria HR expt "L" - without two outliers in control group

CFU/gram of liver

```
Analysis of Variance for CFU/g Li
Source     DF        SS        MS        F        P
treatmen    4 3.379E+13 8.448E+12     3.17    0.033
Error      23 6.131E+13 2.666E+12
Total      27 9.510E+13
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  -------+---------+---------+---------
 0.0        4   3531250   3391864                  (--------*-------)
 0.1        6    679550   1258467      (-----*------)
 1.0        6   1431000   1750684         (------*------)
 3.0        6     59583    134932   (------*------)
30.0        6    530633    832148     (------*------)
```

```
                                        -------+---------+---------+---------
Pooled StDev =  1632693                       0   2000000   3999999

Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00709

Critical value = 4.18

Intervals for (column level mean) - (row level mean)

               0.0         0.1         1.0         3.0

     0.1     -263315
             5966715

     1.0    -1014765    -3537604
             5215265     2034704

     3.0      356651*   -2166188    -1414738
             6586682*    3406121     4157571

    30.0     -114399    -2637238    -1885788    -3257204
             6115632     2935071     3686521     2315104
```

Worksheet size: 100000 cells

One-way Analysis of Variance for B16F10 Tumor model Expt. "Q" 90d AP

```
Analysis of Variance for tumor co
Source      DF        SS        MS        F        P
C1           4     18626      4657     2.12    0.111
Error       23     50607      2200
Total       27     69234
                                     Individual 95% CIs For Mean
                                     Based on Pooled StDev
Level        N      Mean     StDev   -------+---------+---------+---------
 0.0         5    126.30     44.96           (----------*---------)
 0.1         5    152.70     42.92                 (----------*----------)
 1.0         6     95.33     66.62    (---------*---------)
 3.0         6    163.92     44.49                     (---------*---------)
30.0         6    155.92     24.76                   (---------*---------)
                                     -------+---------+---------+---------
Pooled StDev =    46.91                    80       120       160
```

Tukey's pairwise comparisons

```
    Family error rate = 0.0500
Individual error rate = 0.00709

Critical value = 4.18

Intervals for (column level mean) - (row level mean)

               0.0         0.1         1.0         3.0

     0.1     -114.1
               61.3

     1.0      -53.0       -26.6
              114.9       141.3

     3.0     -121.6       -95.2      -148.6
               46.3        72.7        11.5

    30.0     -113.6       -87.2      -140.6       -72.0
               54.3        80.7        19.5        88.0
```

One-way Analysis of Variance Peritoneal Macrophage Phagocytosis 90d "N"

```
Analysis of Variance for phag 90d
Source      DF        SS        MS        F        P
treatmen     4    252.81     63.20    10.18    0.000
Error       23    142.76      6.21
Total       27    395.57
                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level        N      Mean     StDev   ------+---------+---------+---------+
 0.0         6    16.767     2.172                          (----*----)
 0.1         5     9.760     1.187        (----*-----)
 1.0         5     8.160     1.090    (----*-----)
 3.0         6    11.233     1.780             (----*----)
30.0         6     9.867     4.312        (-----*----)
                                      ------+---------+---------+---------+
Pooled StDev =    2.491                   8.0       12.0      16.0      20.0

Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00709

Critical value = 4.18

Intervals for (column level mean) - (row level mean)

               0.0         0.1         1.0         3.0

     0.1       2.548
              11.466

     1.0       4.148      -3.057
              13.066       6.257

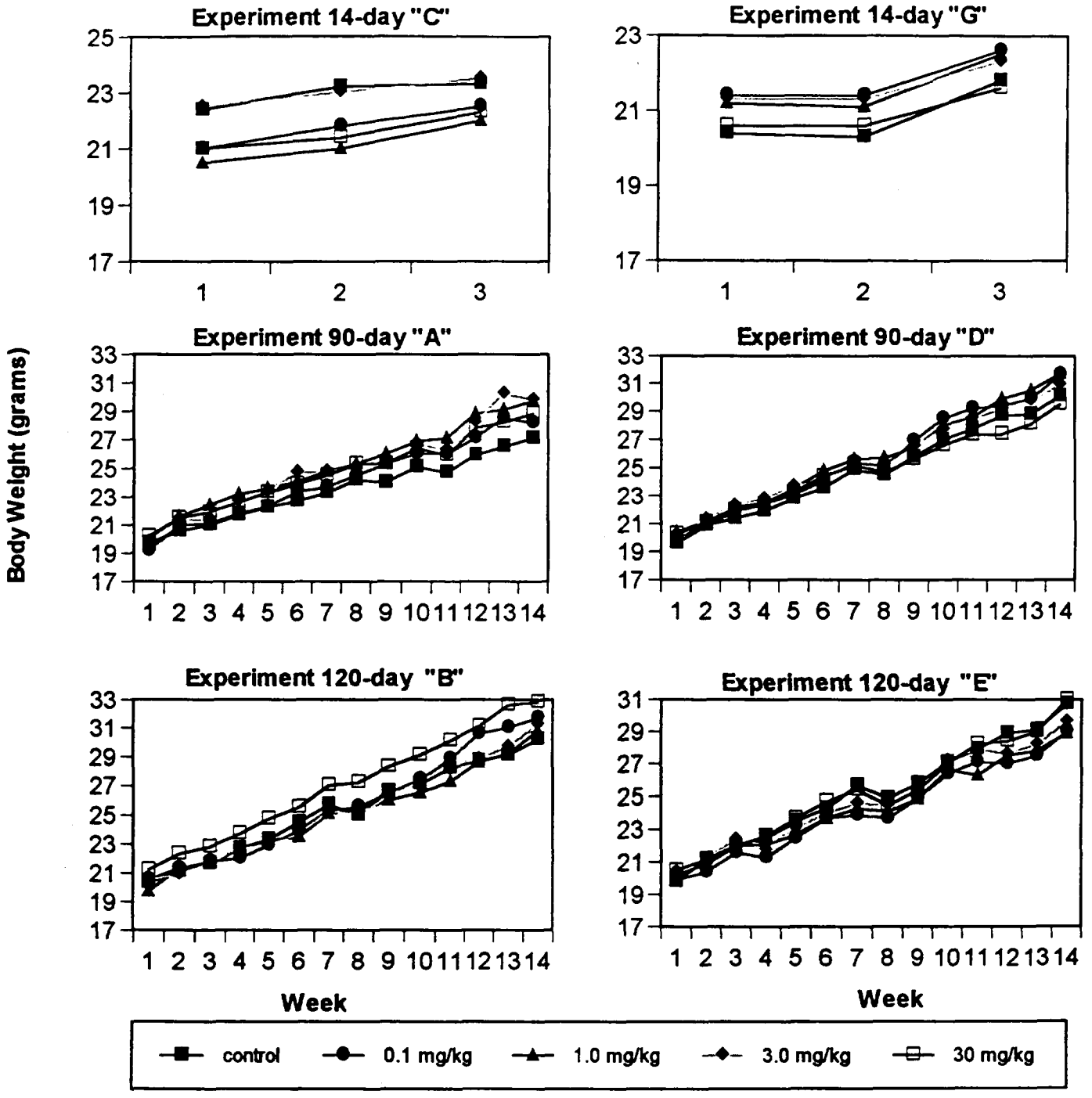
     3.0       1.282      -5.932      -7.532
               9.785       2.986       1.386

    30.0       2.648      -4.566      -6.166      -2.885
              11.152       4.352       2.752       5.618
```

Results Obtained Prior to August 1, 1998

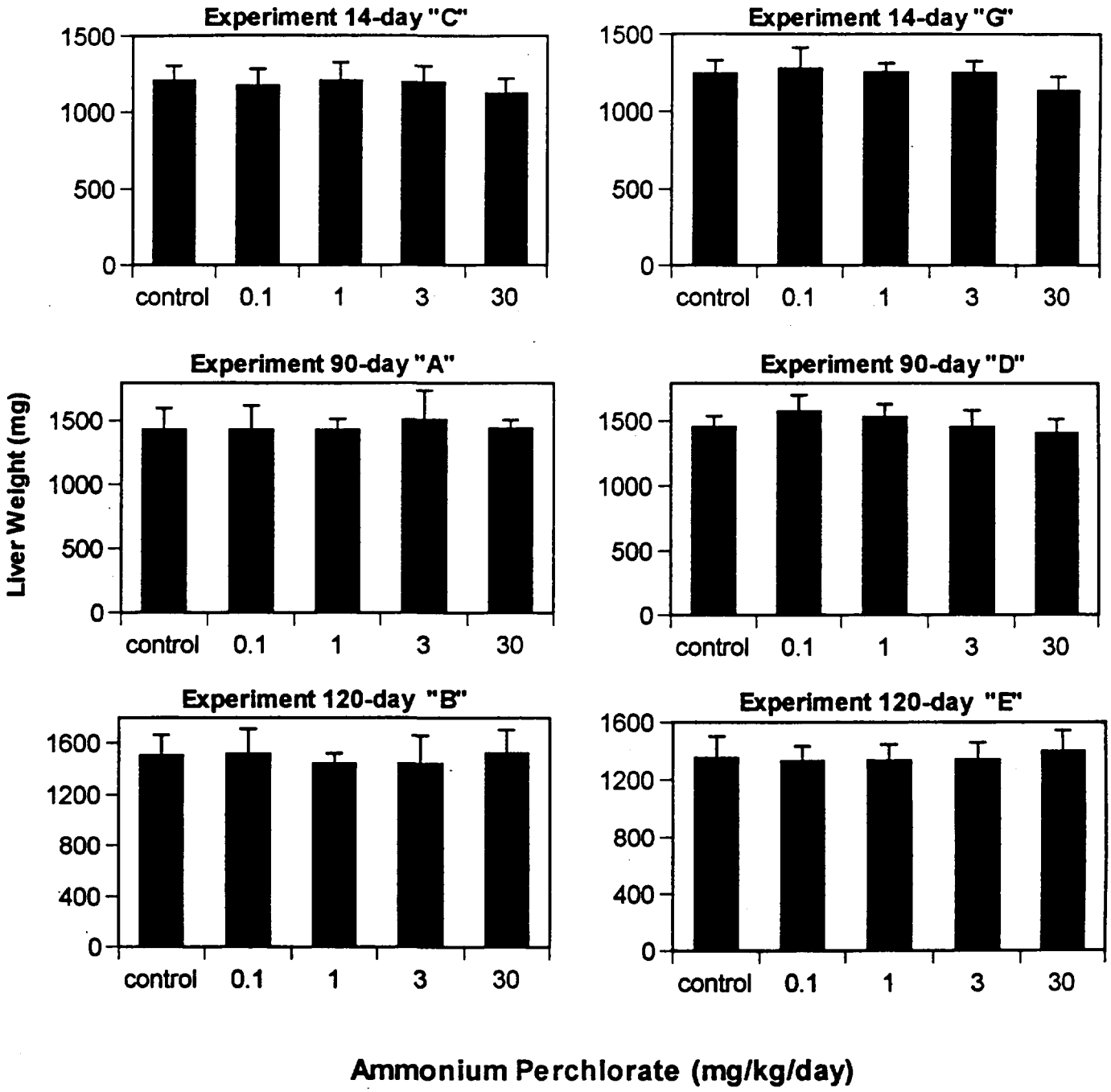
14, 90, and 120-Day AP Studies
Graphs

Body Weight



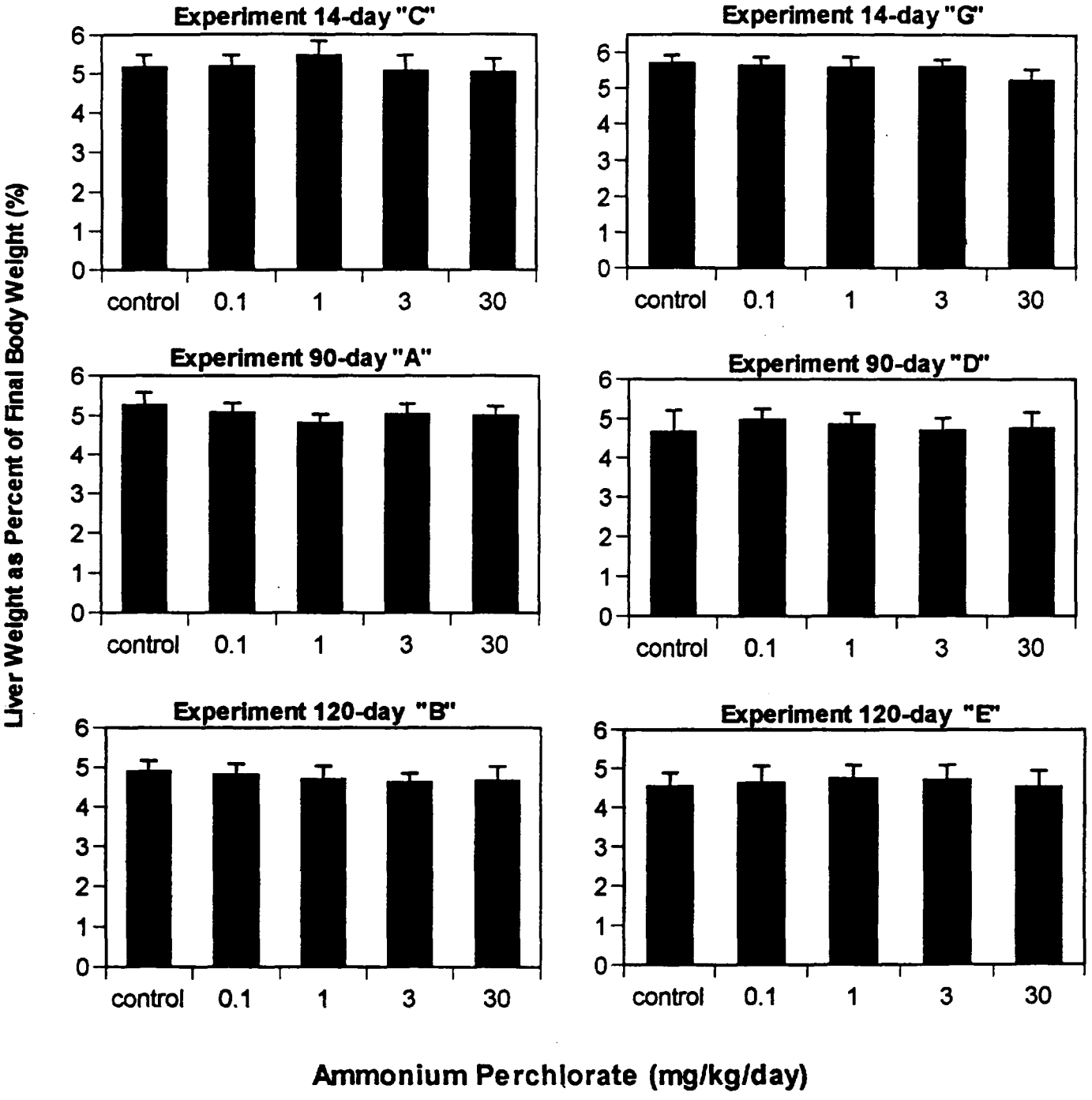
Body weight was measured weekly and these data were used to calculate ammonium perchlorate drinking water exposures. Analysis of variance using Tukey's multicomparison ($p<0.05$) indicated that there were no significant differences in body weight between any treatments at weekly time points in the 14, 90, and 120-day studies. This data is representative of 14, 90, and 120 day AP exposures.

Liver Weight



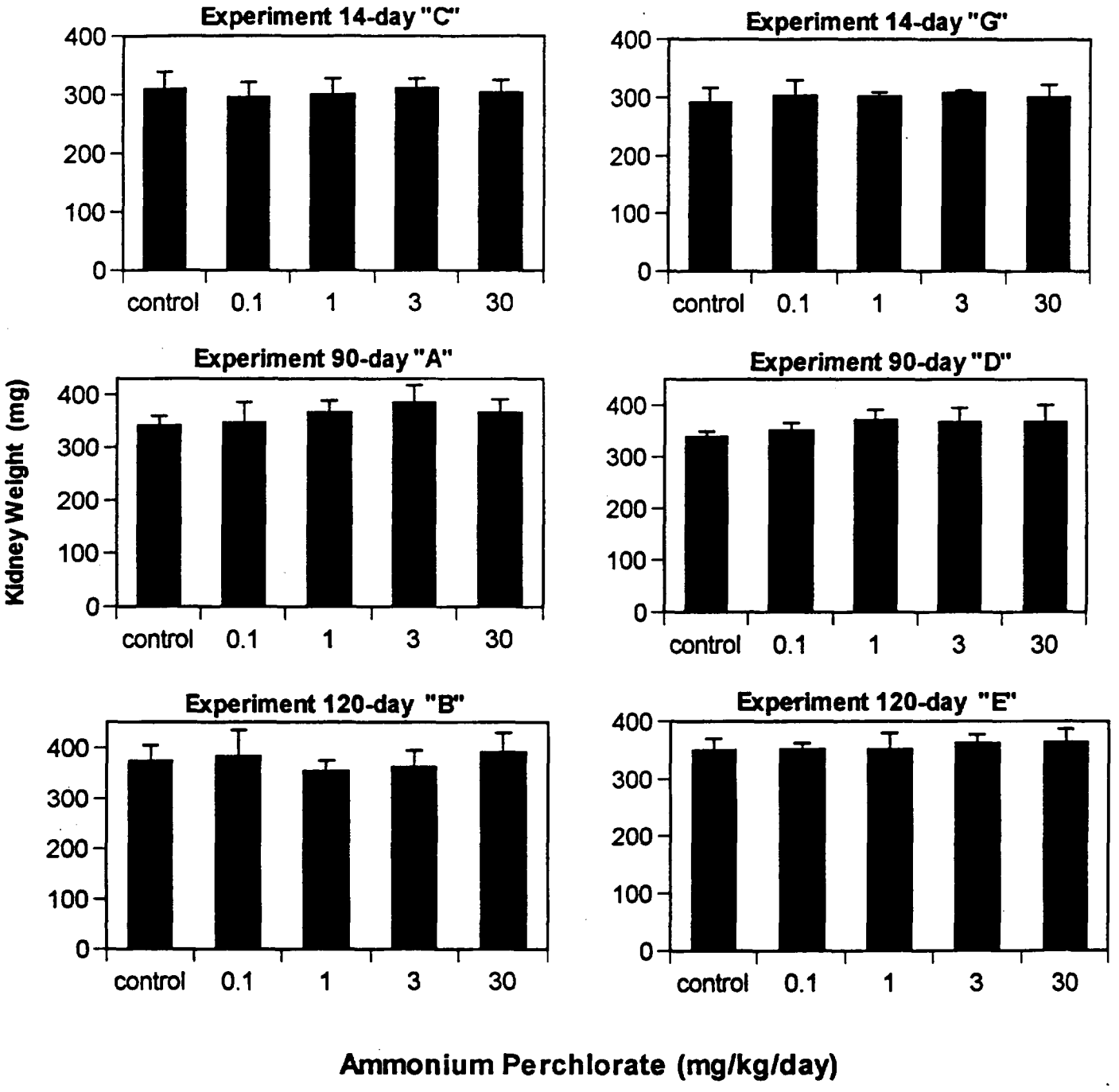
Liver weight was measured at the end of each experiment. Analysis of variance using Tukey's multiple comparison (* = $p<0.05$) was used to compare treatment groups to control values. Standard deviation is shown. No significant changes in liver weight was observed in any of the treatment groups as compared to controls.

Liver Weight (% of Body Weight)



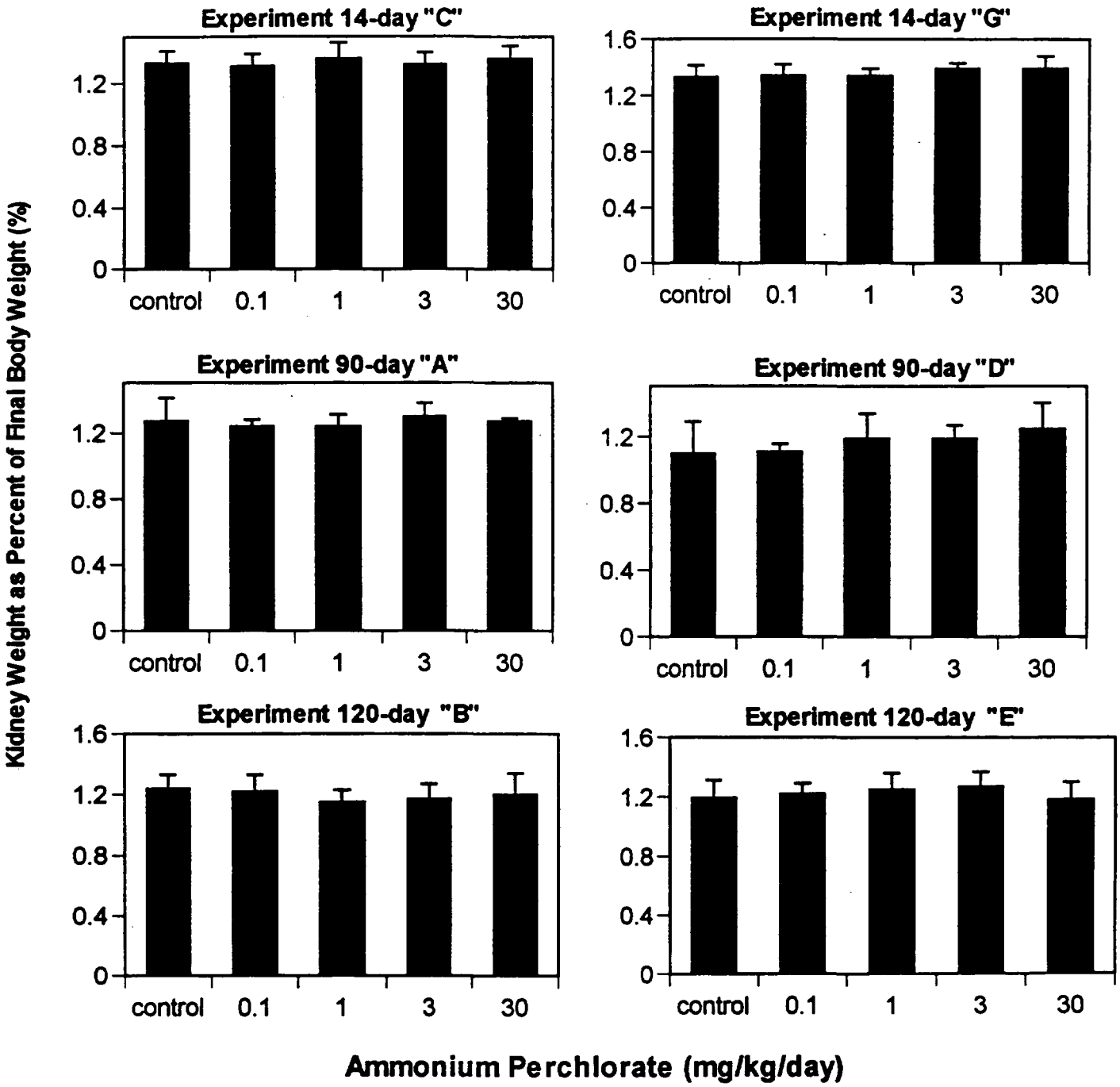
Liver weight was measured at the end of each experiment and expressed as percent of final body weight. Analysis of variance using Tukey's multiple comparison (* = $p<0.05$) was used to compare treatment groups to control values. Standard deviation is shown. No significant changes in liver weight expressed as a ratio to body weight was observed in any of the treatment groups as compared to controls.

Kidney Weight



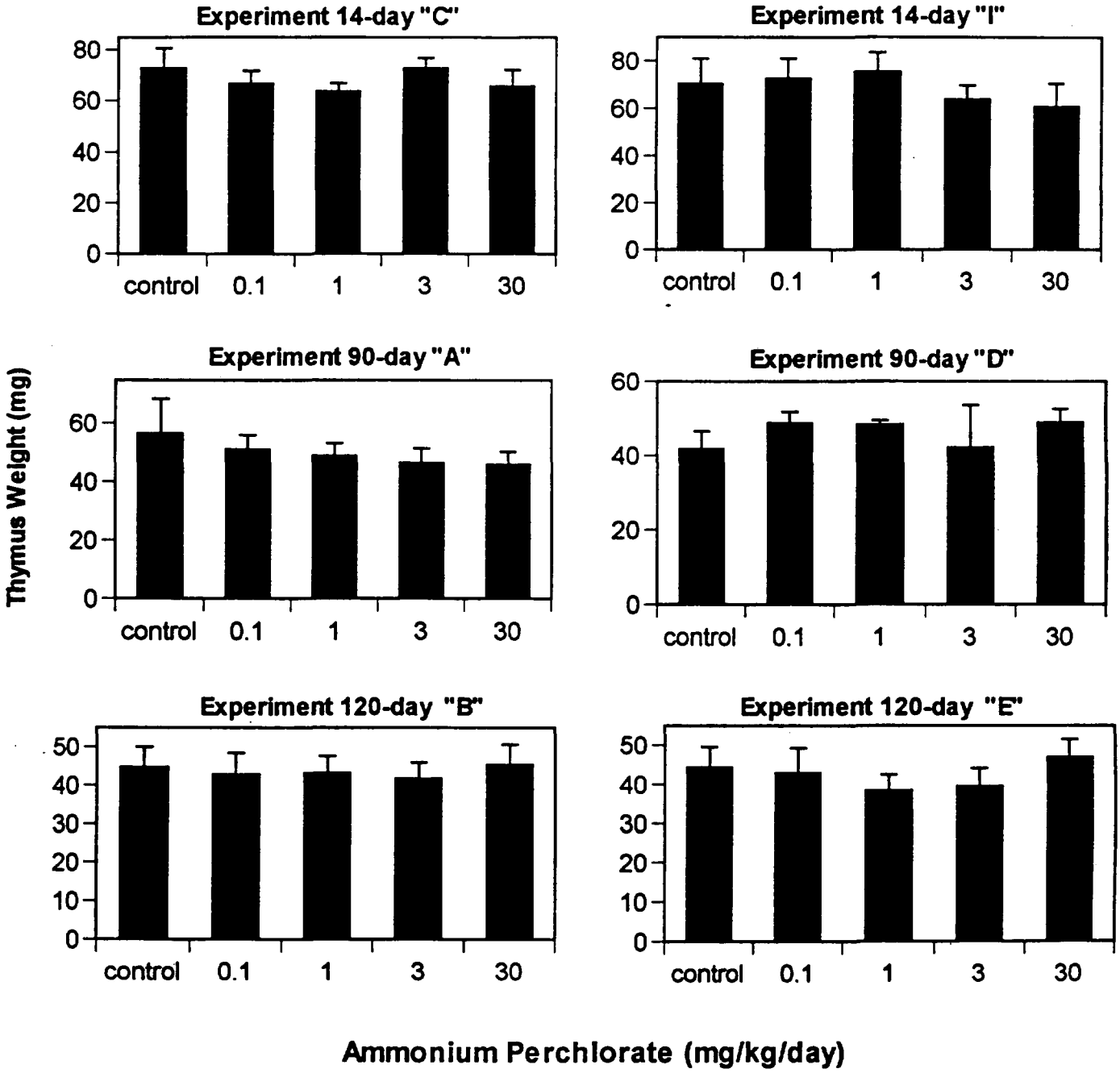
Kidney weight was measured at the end of each experiment. Analysis of variance using Tukey's multiple comparison (* = $p<0.05$) was used to compare treatment groups to control values. Standard deviation is shown. No significant changes in kidney weight was observed in any of the treatment groups as compared to controls in the 14, 90, and 120-day experiments.

Kidney Weight (% of Body Weight)



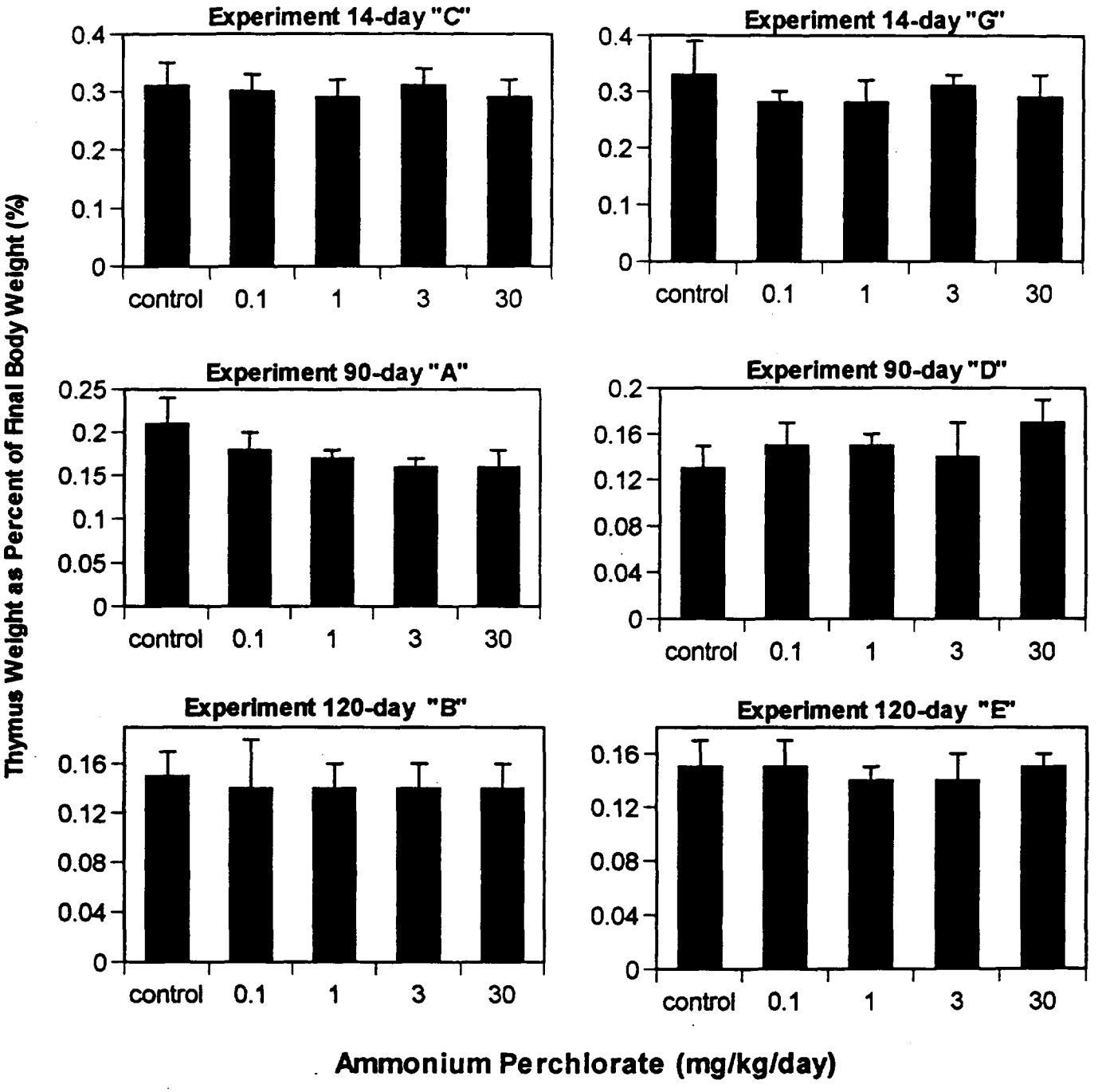
Kidney weight was measured at the end of each experiment and expressed as percent of final body weight. Analysis of variance using Tukey's multiple comparison (* = $p<0.05$) was used to compare treatment groups to control values. Standard deviation is shown. No significant changes in kidney weight expressed as a ratio to body weight was observed in any of the treatment groups as compared to controls.

Thymus Weight



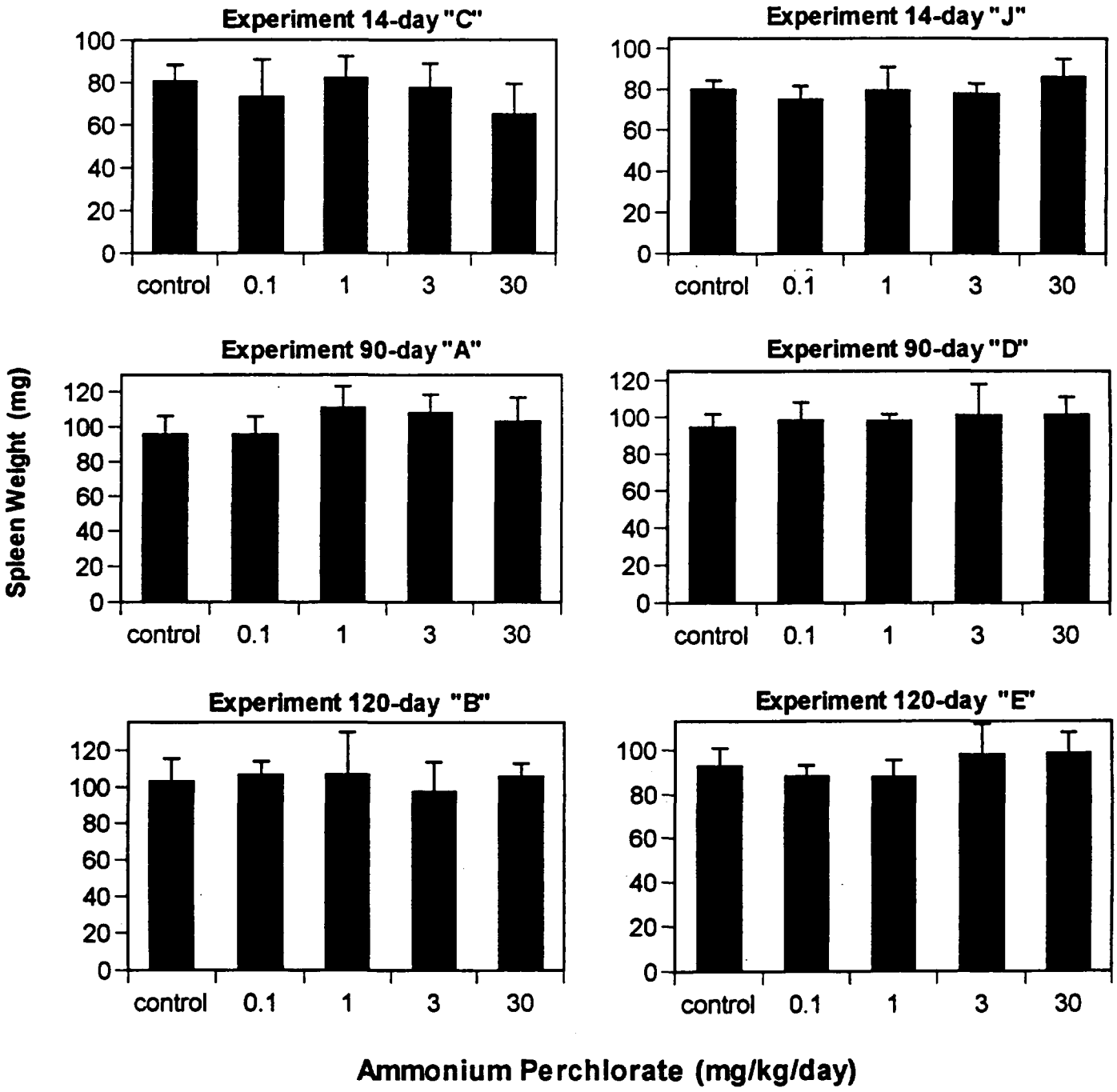
Thymus weight was measured at the end of each experiment. Analysis of variance using Tukey's multiple comparison (* = $p<0.05$) was used to compare treatment groups to control values. Standard deviation is shown. No significant changes in thymus weight was observed in any of the treatment groups as compared to controls.

Thymus Weight (% of Body Weight)



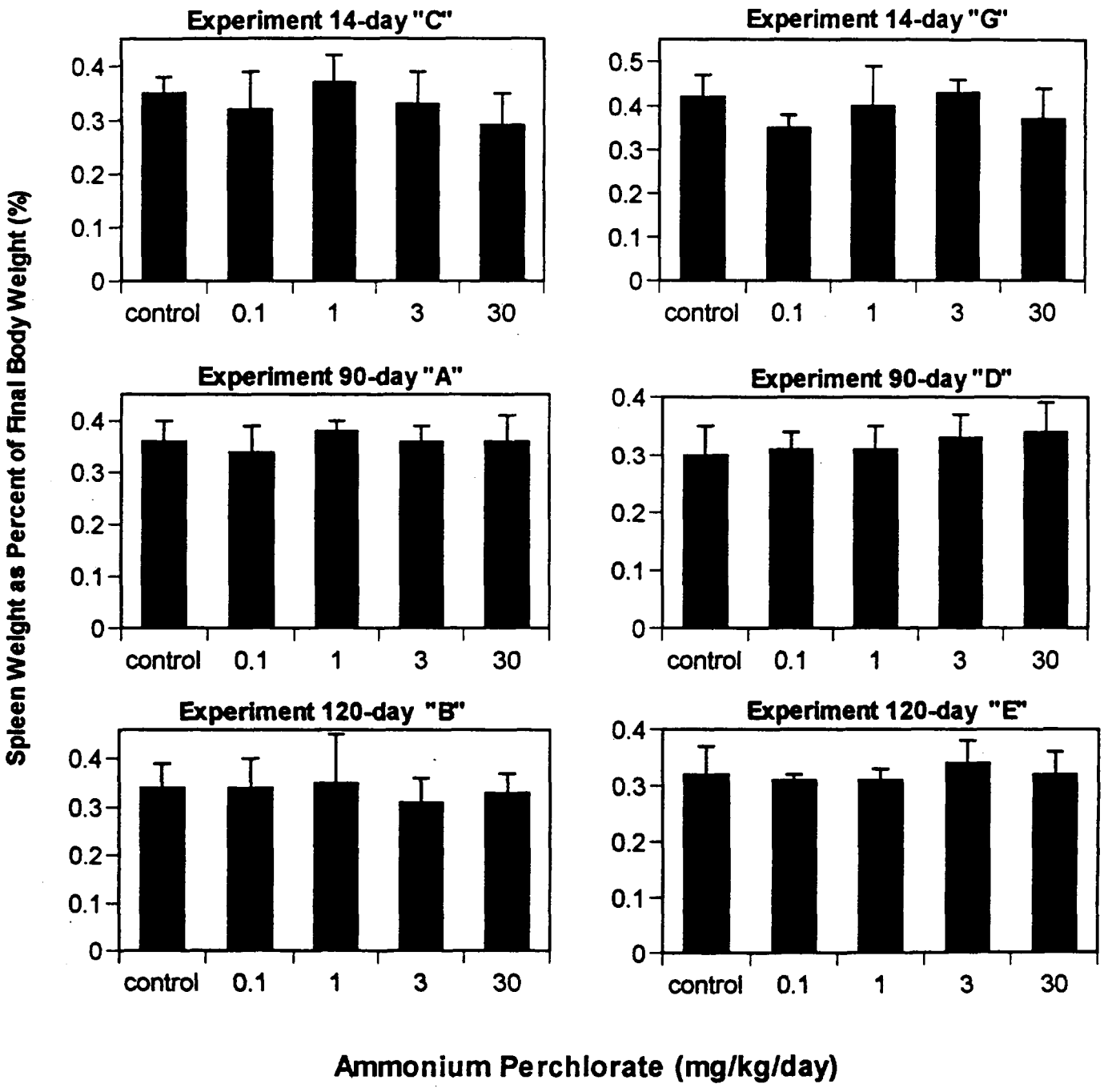
Thymus weight was measured at the end of each experiment and expressed as percent of final body weight. Analysis of variance using Tukey's multiple comparison (* = $p<0.05$) was used to compare treatment groups to control values. Standard deviation is shown. No significant changes in thymus weight expressed as a ratio to body weight was observed in any of the treatment groups as compared to controls.

Spleen Weight



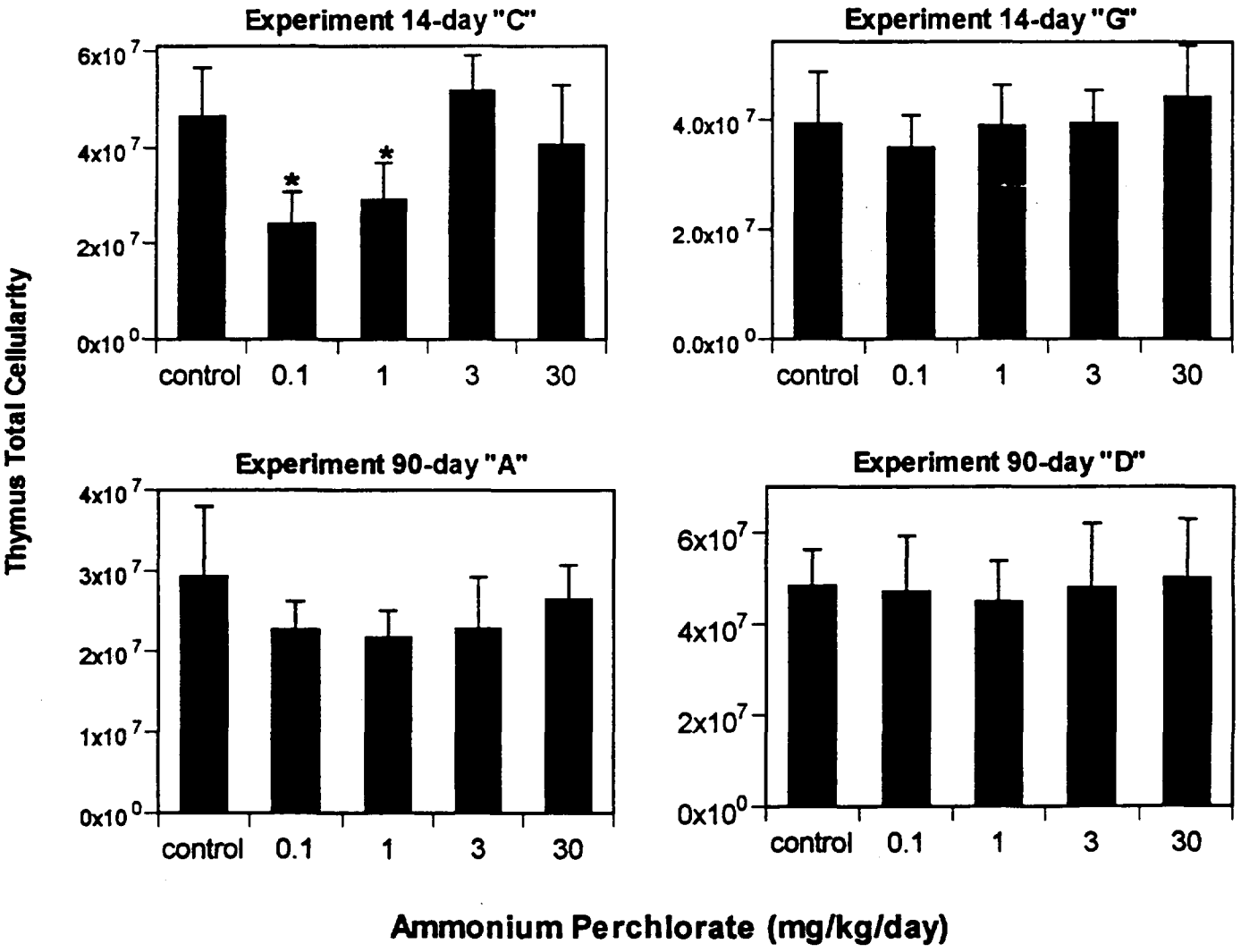
Spleen weight was measured at the end of each experiment. Analysis of variance using Tukey's multiple comparison (* = $p<0.05$) was used to compare treatment groups to control values. Standard deviation is shown. In these studies, no significant change in spleen weight was observed.

Spleen Weight (% of Body Weight)



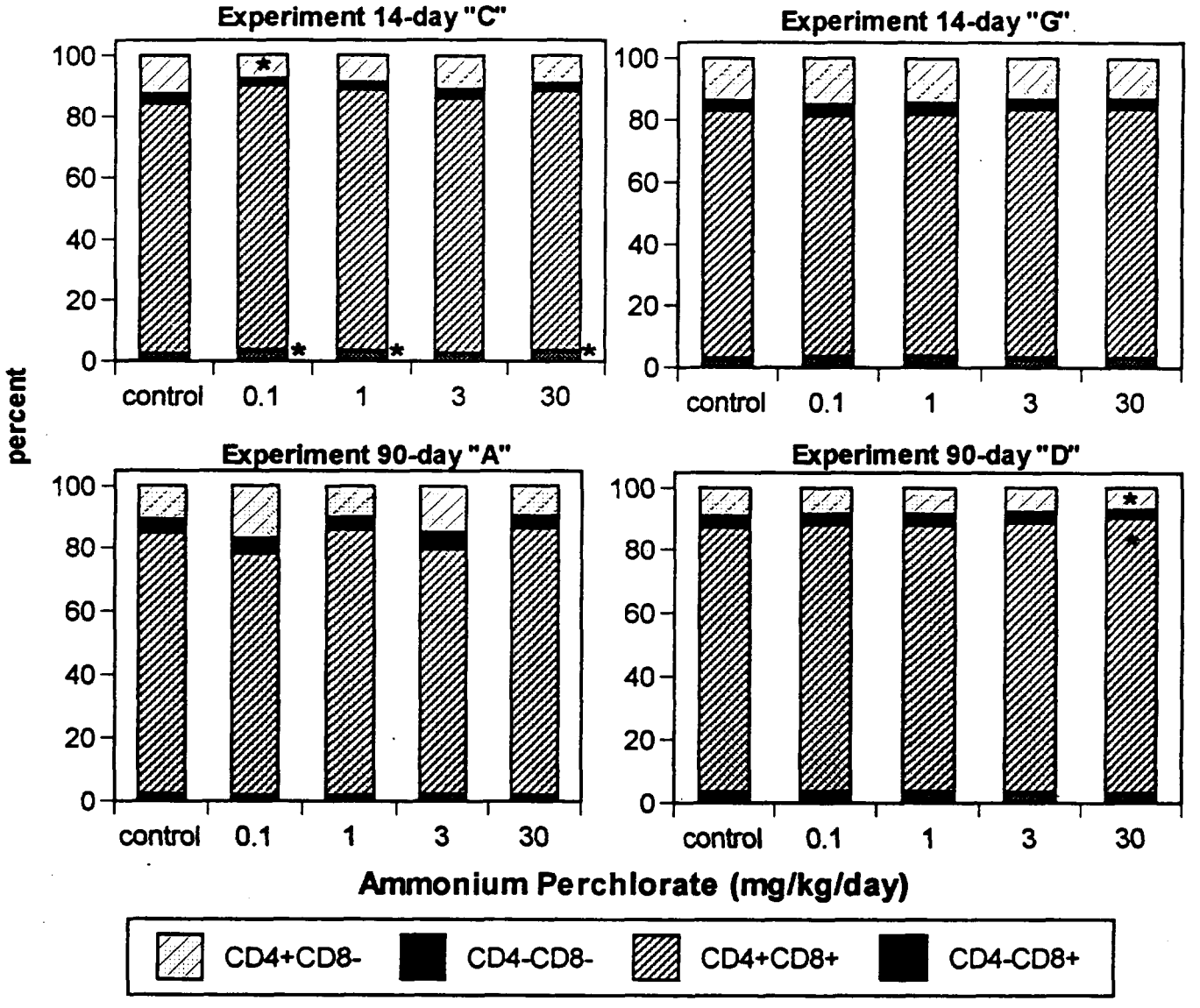
Spleen weight was measured at the end of each experiment and expressed as percent of final body weight. Analysis of variance using Tukey's multiple comparison (* = $p<0.05$) was used to compare treatment groups to control values. Standard deviation is shown. No significant change in spleen weight expressed as a ratio to body weight was observed in any of the AP treatment groups.

Thymus Total Cellularity



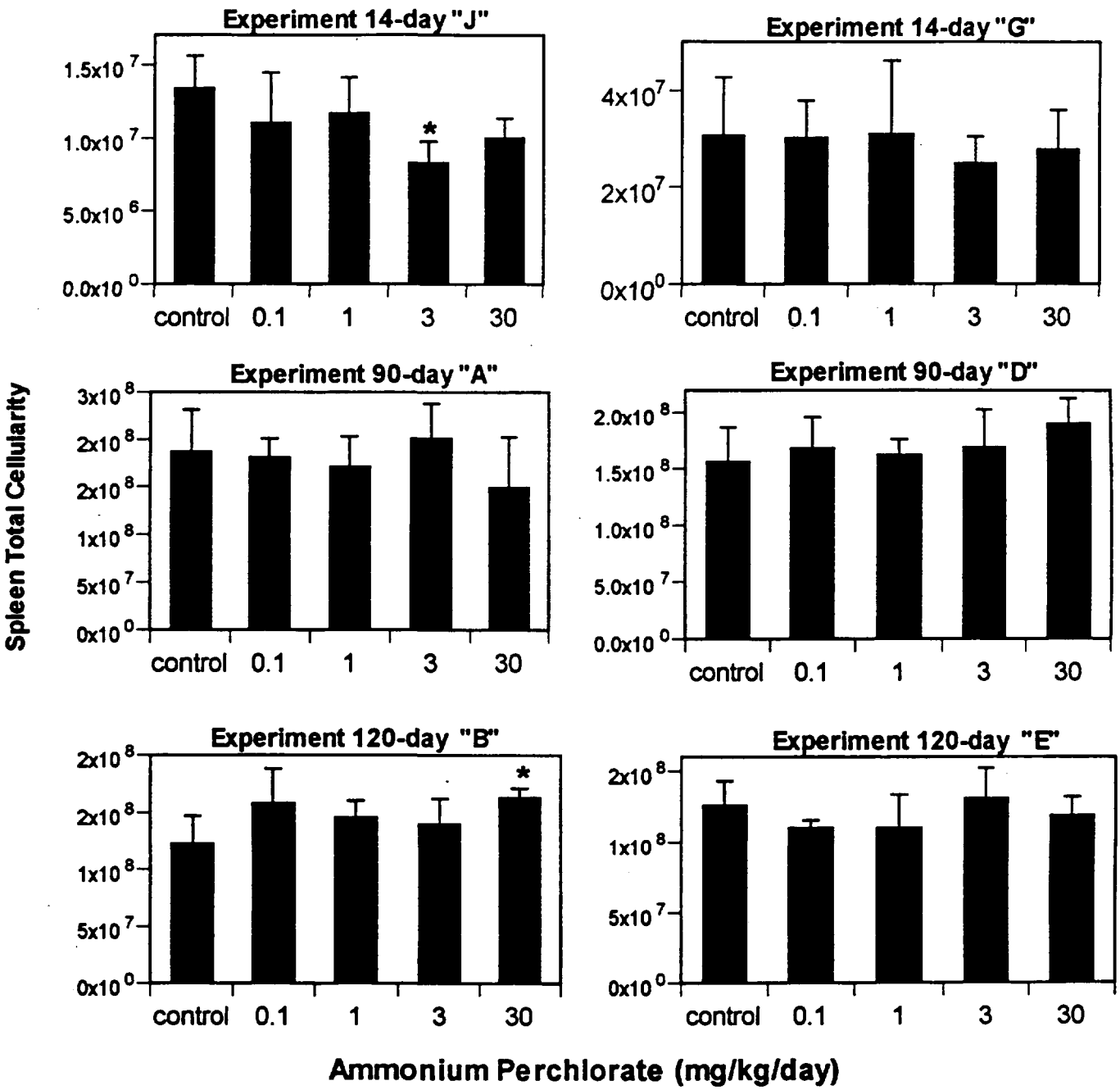
Total thymus cellularity was measured using a Coulter Model Zm. The coulter counter is calibrated using comparison counts obtained from a hemacytometer prior to use. Analysis of variance using Tukey's multiple comparison (* = $p<0.05$) was used to compare treatment groups to control values. Standard deviation is shown. Variation in Experiment "C " thymus counts is likely due to technical difficulties with the calibration of the coulter counter since there was no corresponding change in thymus weight. Note that thymus counts were updated in experiment 90-day "A" and that no significant differences in thymus cellularity were observed after 90-day exposure to AP.

Thymocyte CD4/CD8 Subpopulations



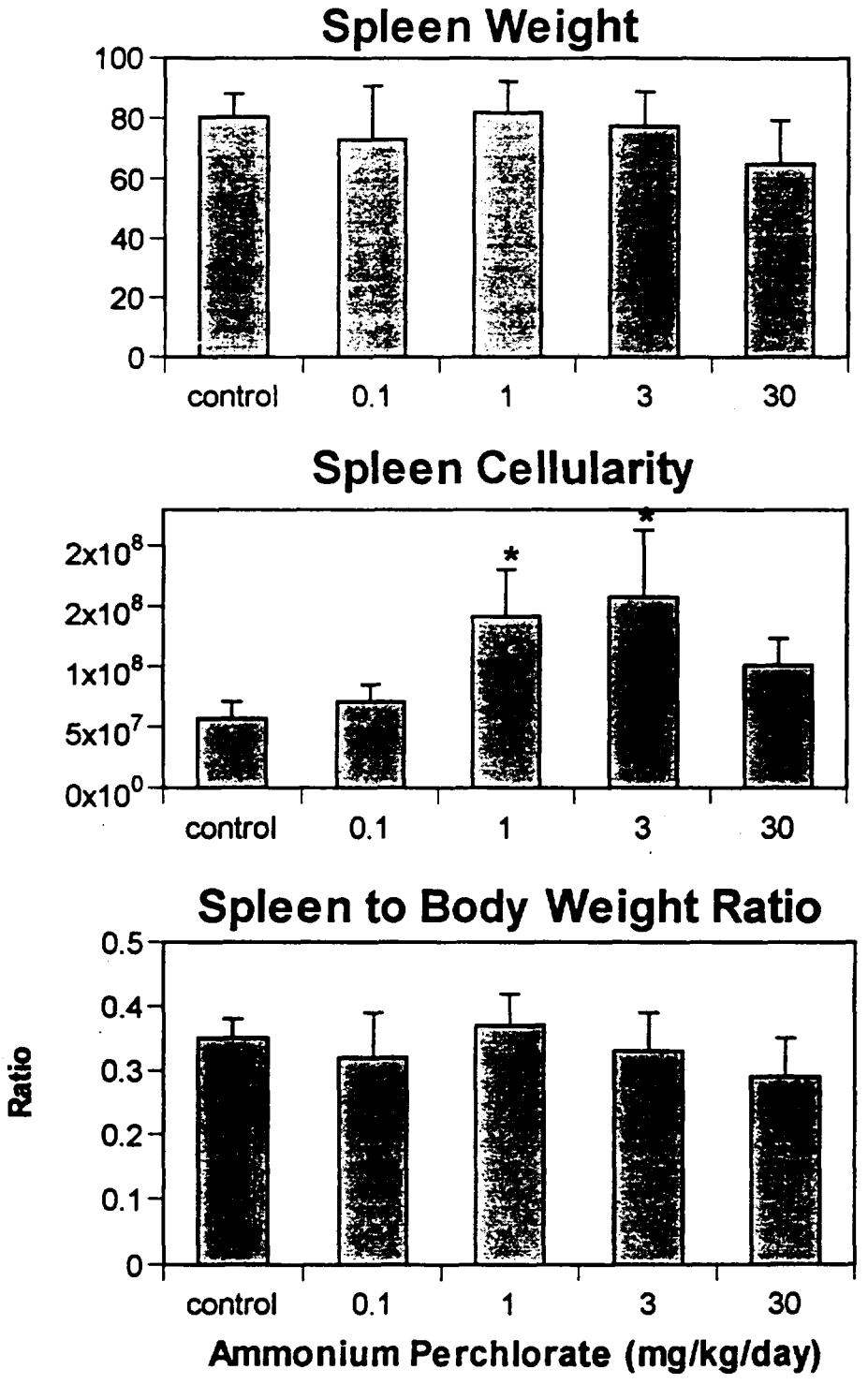
Thymus cells were labeled with fluorescent rat IgG_2 monoclonal antibodies specific for murine CD4/CD8 (Caltag, Burlingame, CA) and analysis was performed on a flow cytometer at the MUSC medical laboratory. Cells only and isotypic antibody controls were used to establish CD4/CD8 subpopulations in thymocytes. Data were analyzed using analysis of variance with Tukey's multicomparison was used (* = $p<0.05$). In the 14-day study ("C"), there are significant increases in CD4-/CD8+ cells at 0.1, 1, and 30 mg/kg/day and a decrease in CD4+/CD8- cells in the 0.1 mg/kg/day group. These changes where not observed in the other 14-day study ("G"). In the 90-day study ("D"), a significant increase was observed in the CD4+/CD8+ subpopulations and a decrease in CD4+/CD8- subpopulations. In contrast, two 90-day studies ("A" and "N") ("N" is shown in new data section) indicate no changes in CD4/CD8 thymocyte subpopulations.

Spleen Total Cellularity



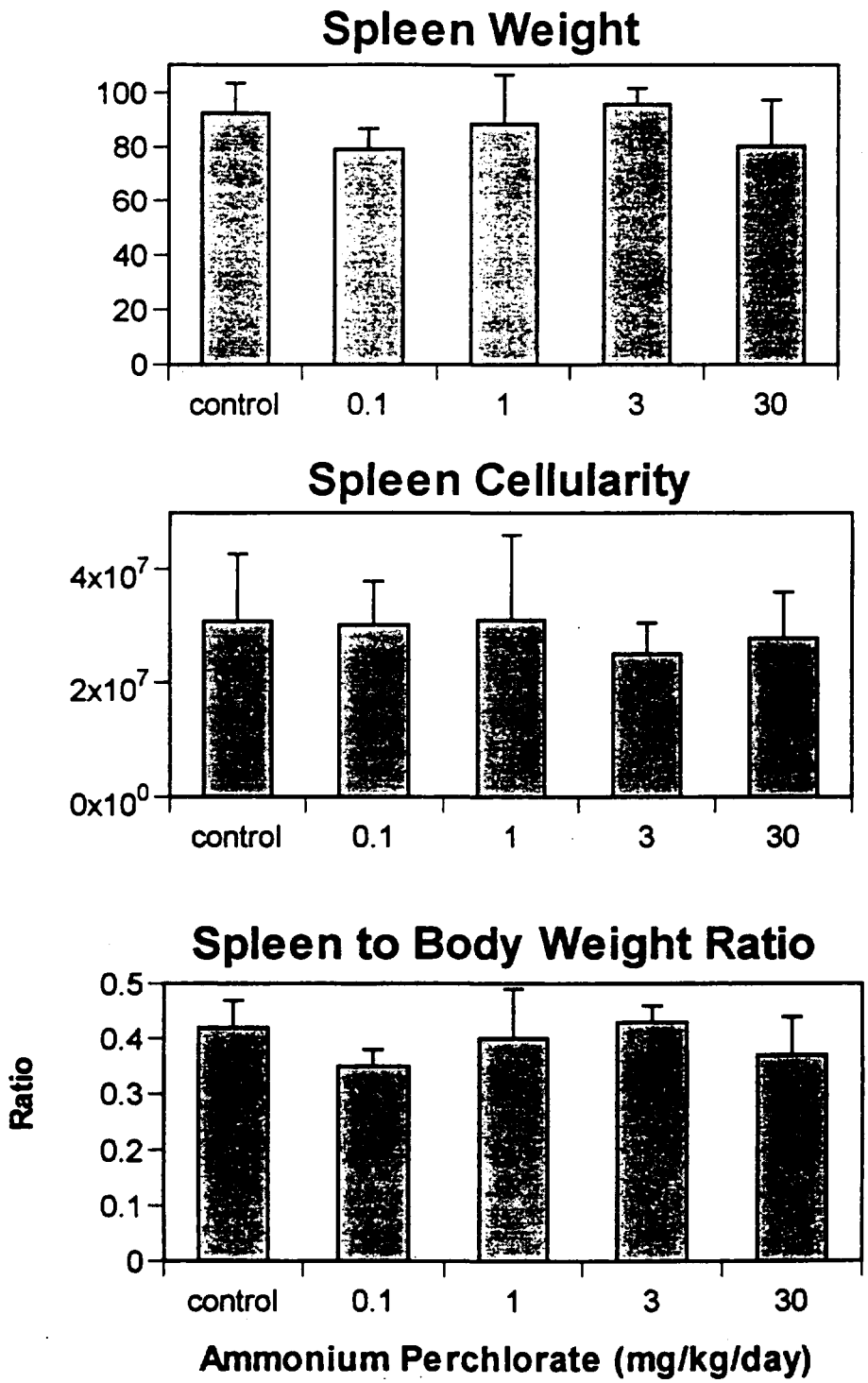
Total spleen cellularity was measured using a Coulter Model Zm. The coulter counter is calibrated using comparison counts obtained from a hemacytometer prior to use. Analysis of variance using Tukey's multiple comparison (* = $p<0.05$) was used to compare treatment groups to control values. Standard deviation is shown. The decrease in splenocyte cellularity at 3.0 mg/kg/day AP in experiment "C" may be due to technical error because there was not a significant decrease in corresponding spleen weight as compared to controls.

Experiment 14-day "C"



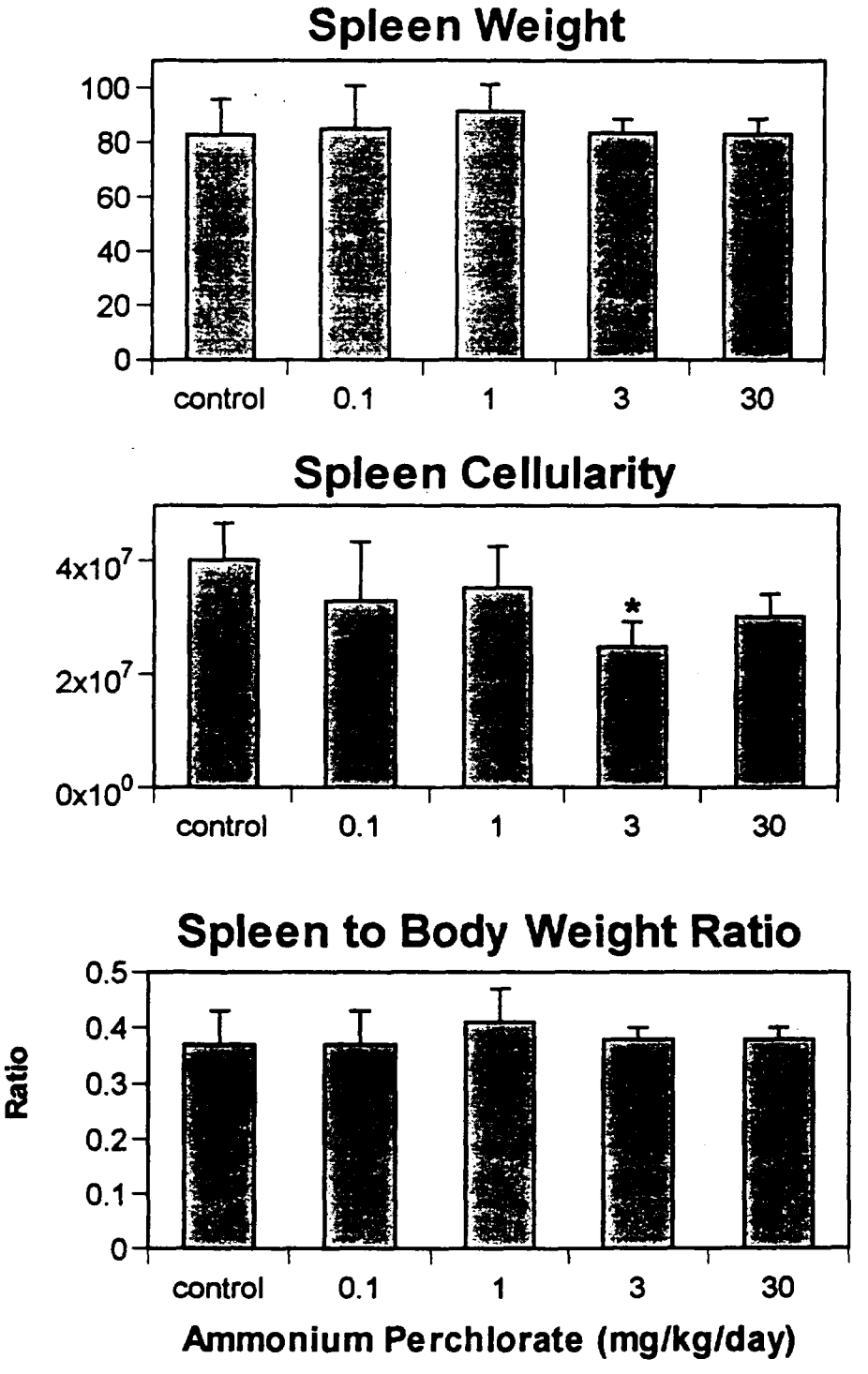
Analysis of variance using Tukey's multiple comparison (* = $p<0.05$) was used to compare treatment groups to control values. Standard deviation is shown. This was one of the first assays done using the Coulter Counter and variation in the spleen cellularity may be attributed to technical error rather than an effect of AP.

Experiment 14-day "G"



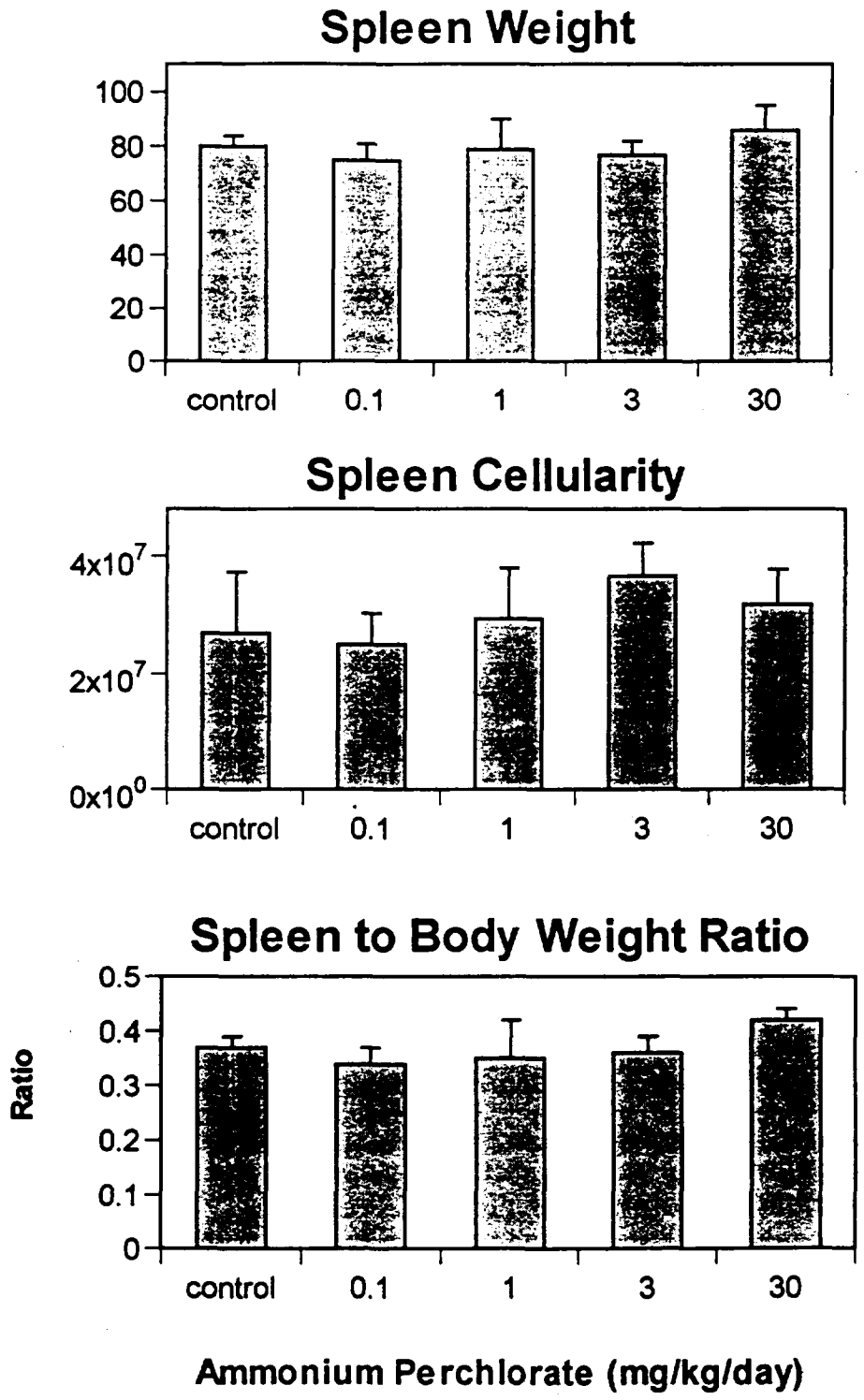
Analysis of variance using Tukey's multiple comparison (* = $p<0.05$) was used to compare treatment groups to control values. Standard deviation is shown. No significant differences in spleen weight and cellularity were observed in this 14-day study

Experiment 14-day "J"



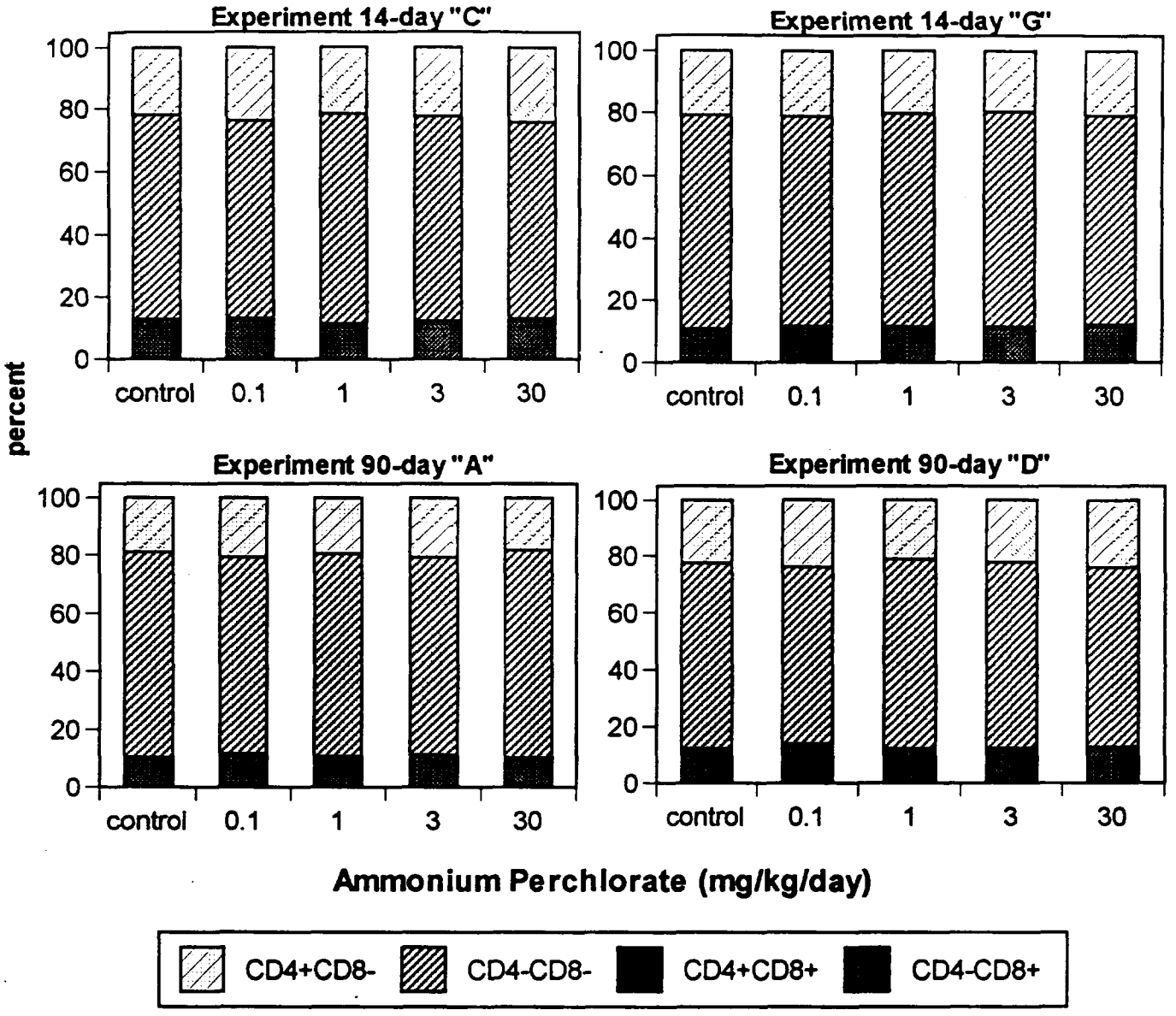
Analysis of variance using Tukey's multiple comparison (* = $p<0.05$) was used to compare treatment groups to control values. Standard deviation is shown. A significant dccrease in spleen cellularity was observed in the 3.0 mg/kg/day AP treatment group.

Experiment 14-day "I"



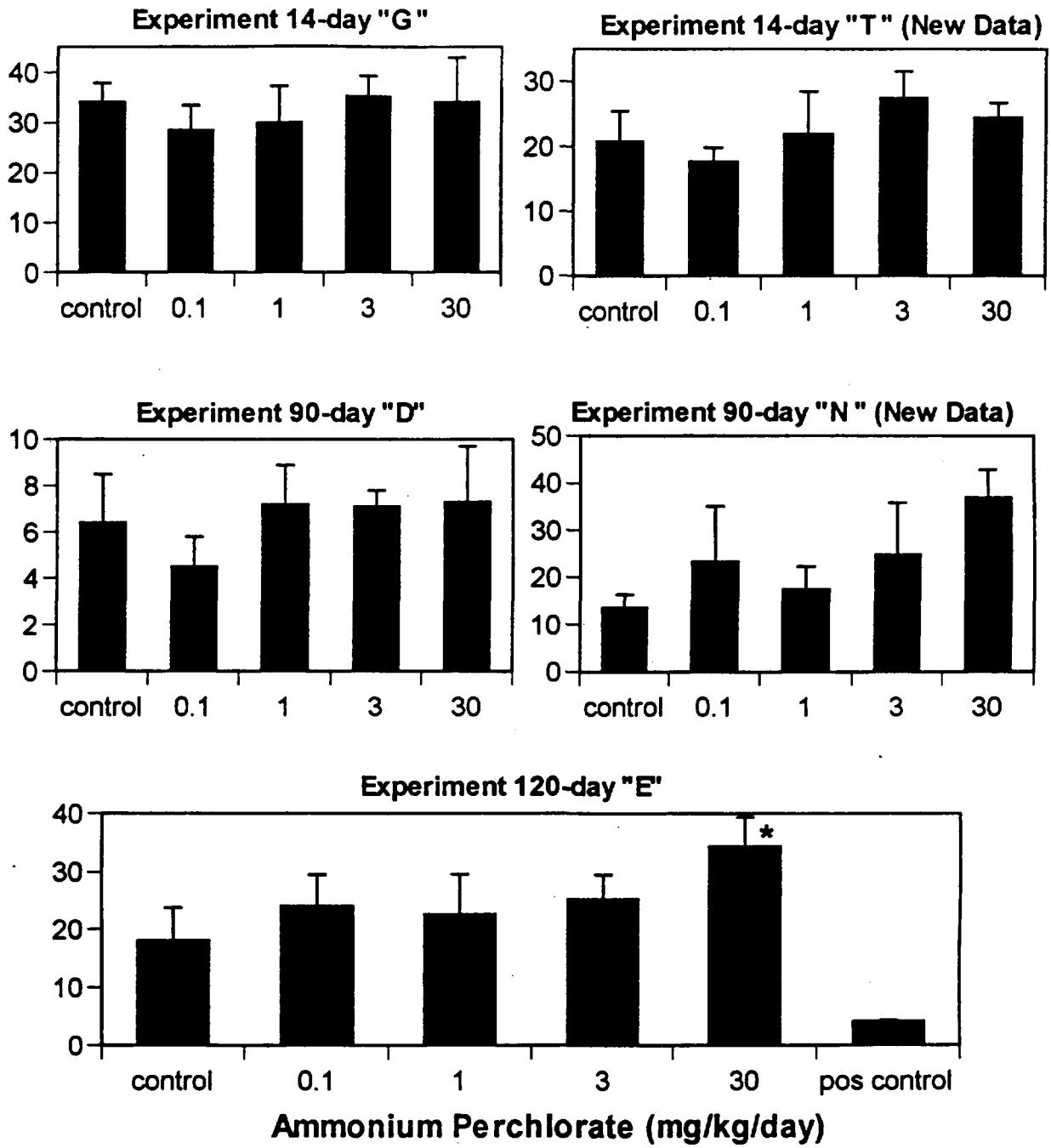
Analysis of variance using Tukey's multiple comparison (* = $p<0.05$) was used to compare treatment groups to control values. Standard deviation is shown. No significant differences were observed in spleen weight and cellularity in this 14-day study.

Splenocyte CD4/CD8 Subpopulations



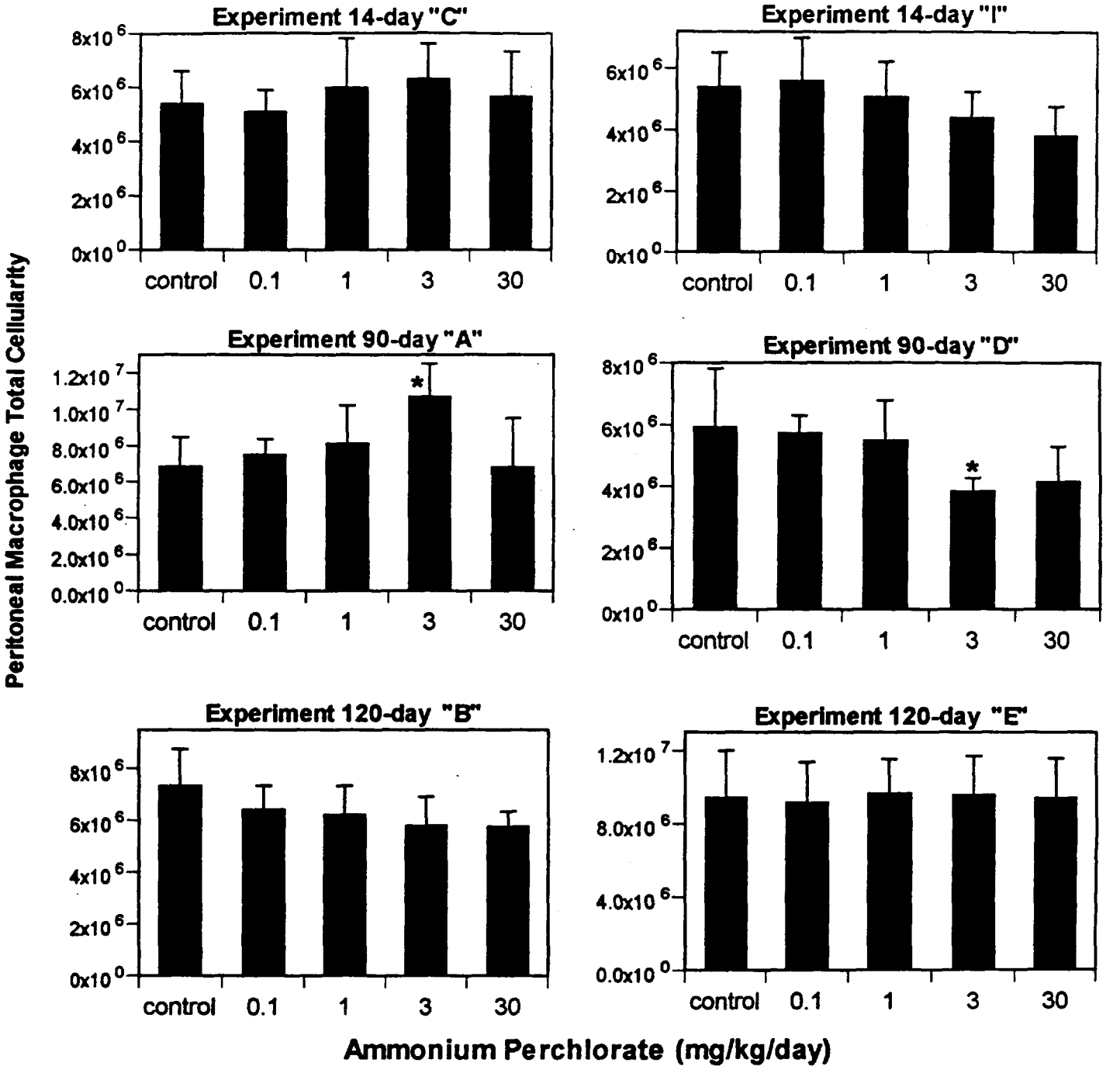
Spleen cells were labeled with fluorescent rat IgG_2 monoclonal antibodies specific fo murine CD4/CD8 (Caltag, Burlingame, CA) and analysis was performed on a flow cytometer at the MUSC medical laboratory. Cells only and isotypic antibody controls were used to establish CD4/CD8 subpopulations in splenic cells. Data were analyzed using analysis of variance with Tukey's multicomparison (* = $p<0.05$). It is important to note that the CD4+/CD8+ subpopulation was less than 1% in all experiments and not visually detectable in the graphs. No significant changes in CD4/CD8 spleni subpopulations were observed.

Natural Killer Cell Activity



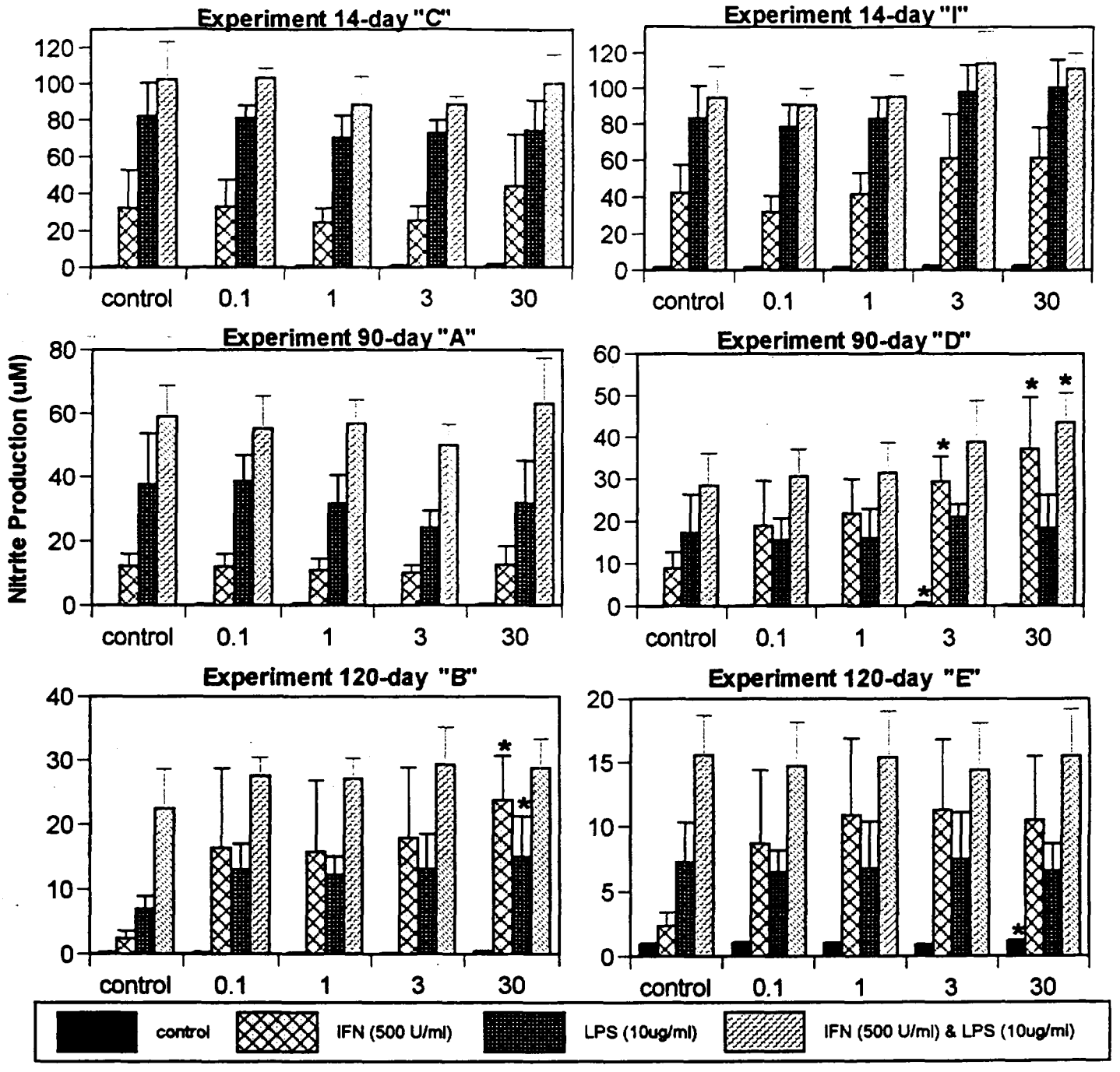
Natural killer activity was measured using a standard 4-hour ^{51}Cr release assay using YAC-1 target cells (Wu *et al.*, 1994). Lytic units per 10^7 splenocytes were calculated (Bryant, *et. al*, 1992). Analysis of variance using Tukey's multiple comparison (* = $p<0.05$) was used to compare treatment groups to control values. Standard deviation is shown. Two B6C3F1 female mice exposed to dexamethasone subcutaneously (40 mg/kg/day for 3 days) served as the positive control. In the 14-day experiments, two consistent replications indicate no significant changes in NK activity. However, in the most recent 90-day experiment ("N") and the 120-day experiment, NK activity was significantly increased in the 30 mg/kg/day treatment groups.

Macrophage Total Cellularity



Total peritoneal macrophage cellularity was measured using a Coulter Model Zm. The coulter counter is calibrated using comparison counts obtained from a hemacytometer prior to use. Analysis of variance using Tukey's multiple comparison (* = $p<0.05$) was used to compare treatment groups to control values. Standard deviation is shown. The only significant differences observed in macrophage cellularity were in the 90-day studies in the 3.0 mg/kg/day treatment group. In the 90-day Experiment "N" study, no significant changes were observed in macrophage cellularity.

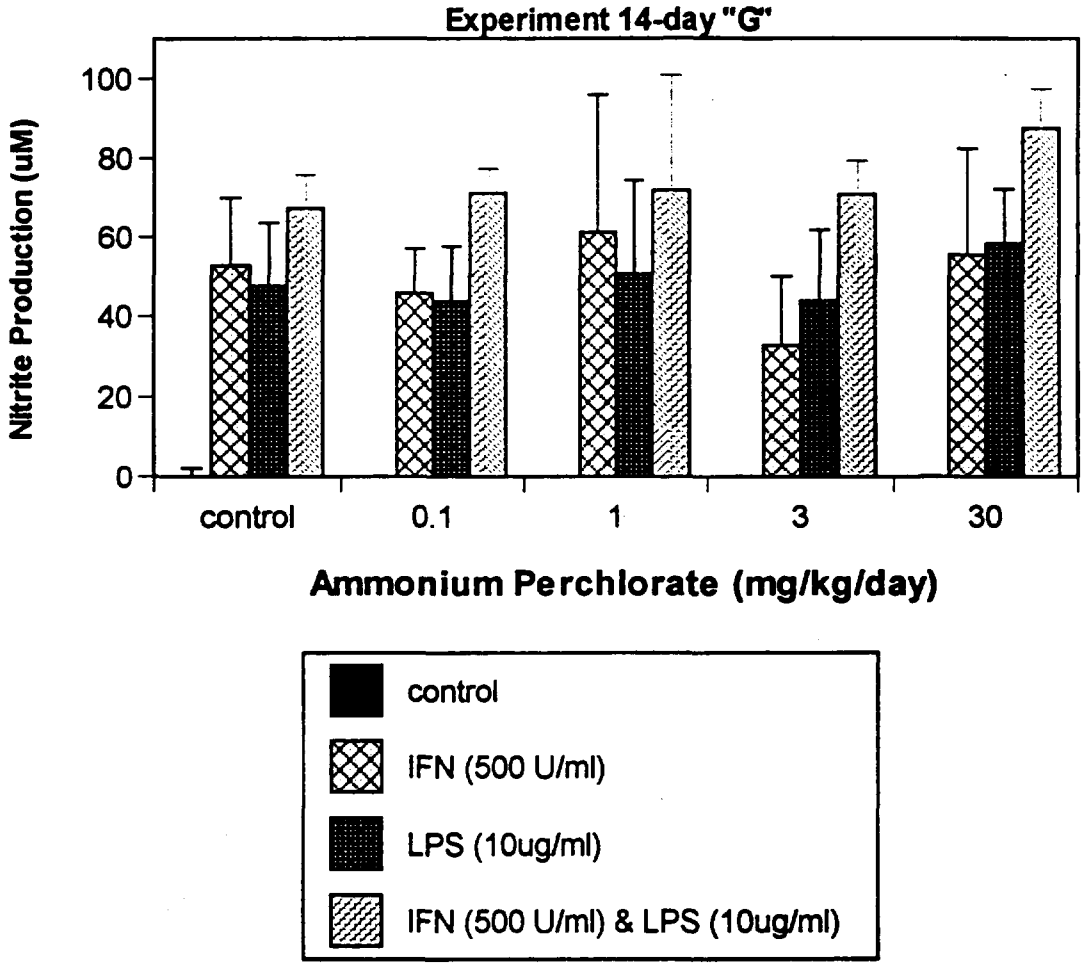
Nitrite Production by Peritoneal Macrophages Stimulated with Lipopolysaccharide and/or Interferon-gamma



Ammonium Perchlorate (mg/kg/day)

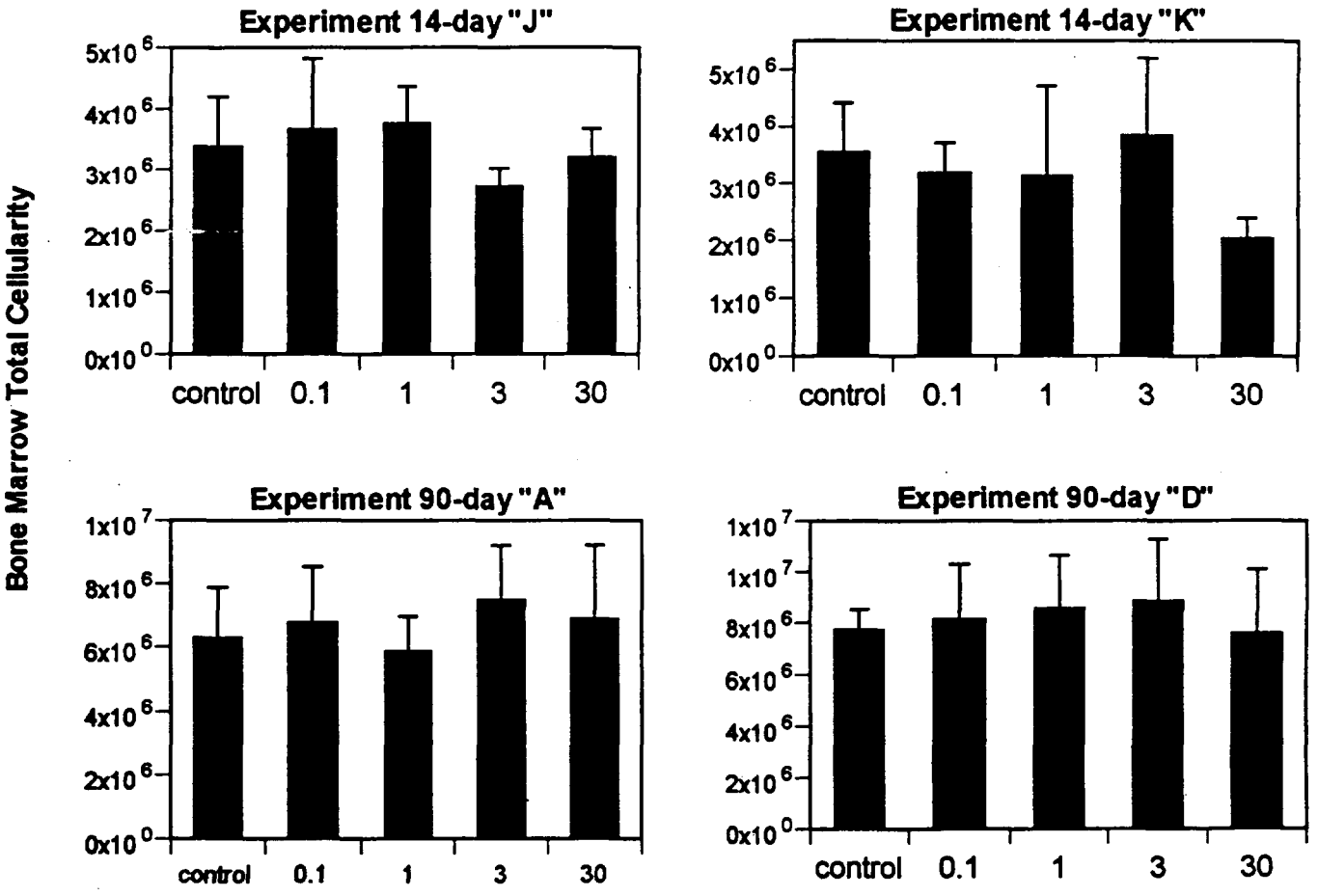
Peritoneal macrophages were aseptically isolated by peritoneal lavage and 2 x 10e5 cells were incubated 24 hours with 10 ug/mL of lipopolysaccharide (LPS), 500 Units/mL of interferon-gamma (IFN-γ) or both LPS and IFN-γ. Control cells contained macrophages only. Background was always less than 0.4 uM. Nitrite was spectrophotometrically measured after the addition of Griess reagent to supernatants from each well. A standard nitrite curve was established for each experiment and data are expressed in uM. Data were analyzed using analysis of variance with Tukey's multicomparison test (*=p<0.05). Standard deviation is shown.

Nitrite Production by Peritoneal Macrophages Stimulated with Lipopolysaccharide and/or Interferon-gamma



Peritoneal macrophages were aseptically isolated by peritoneal lavage and 2 x 10e5 cells wer incubated 24 hours with 10 ug/mL of lipopolysaccharide (LPS), 500 Units/mL of interferon-gamma (IFN-γ) or both LPS and IFN-γ. Control cells contained macrophages only. Background was alway less than 0.4 uM. Nitrite was spectrophotometrically measured after the addition of Griess reagent to supernatants from each well. A standard nitrite curve was established for each experiment an data are expressed in uM. Data were analyzed using analysis of variance with Tukey' multicomparison test (*=p<0.05). Standard deviation is shown.

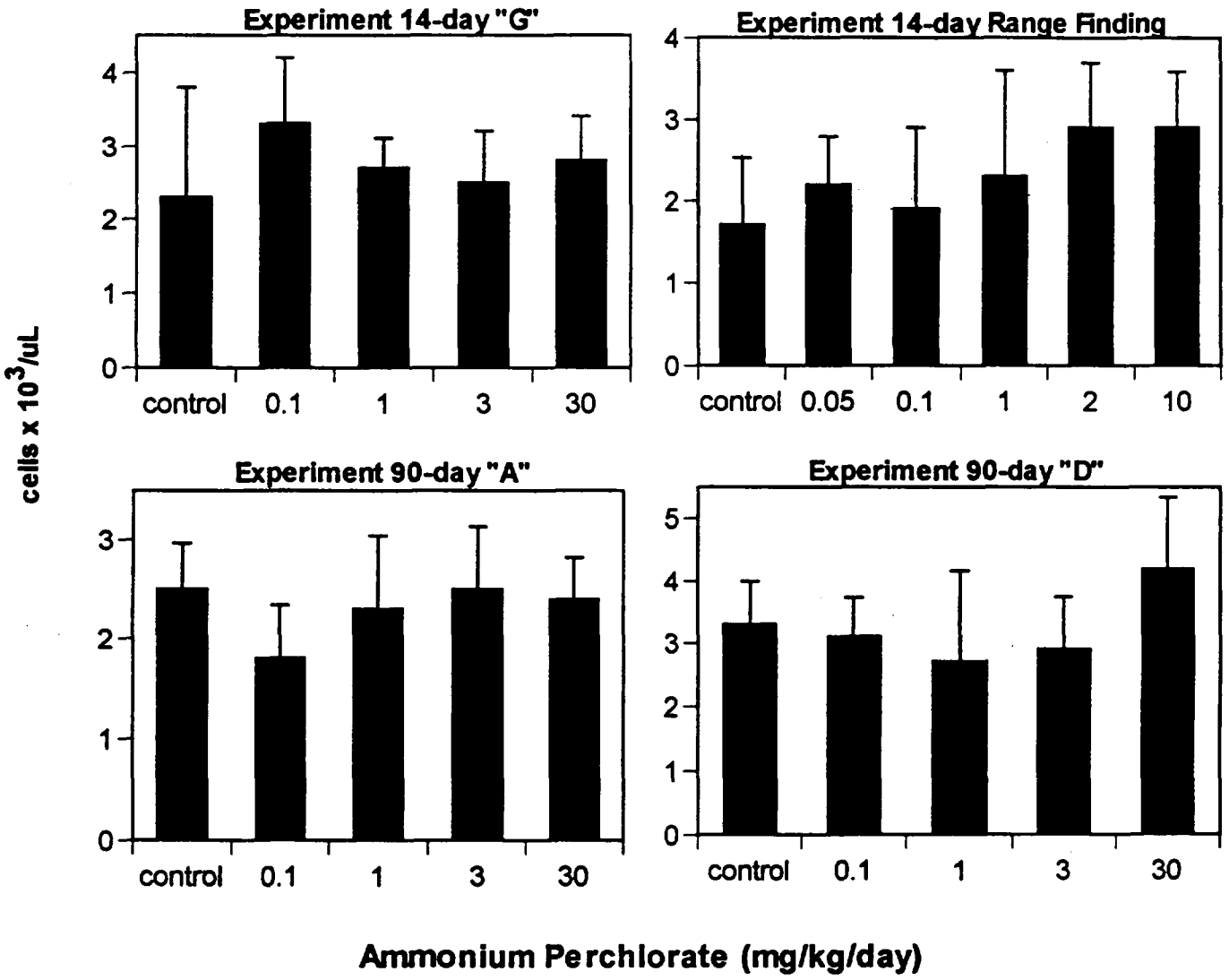
Bone Marrow Total Cellularity



Ammonium Perchlorate (mg/kg/day)

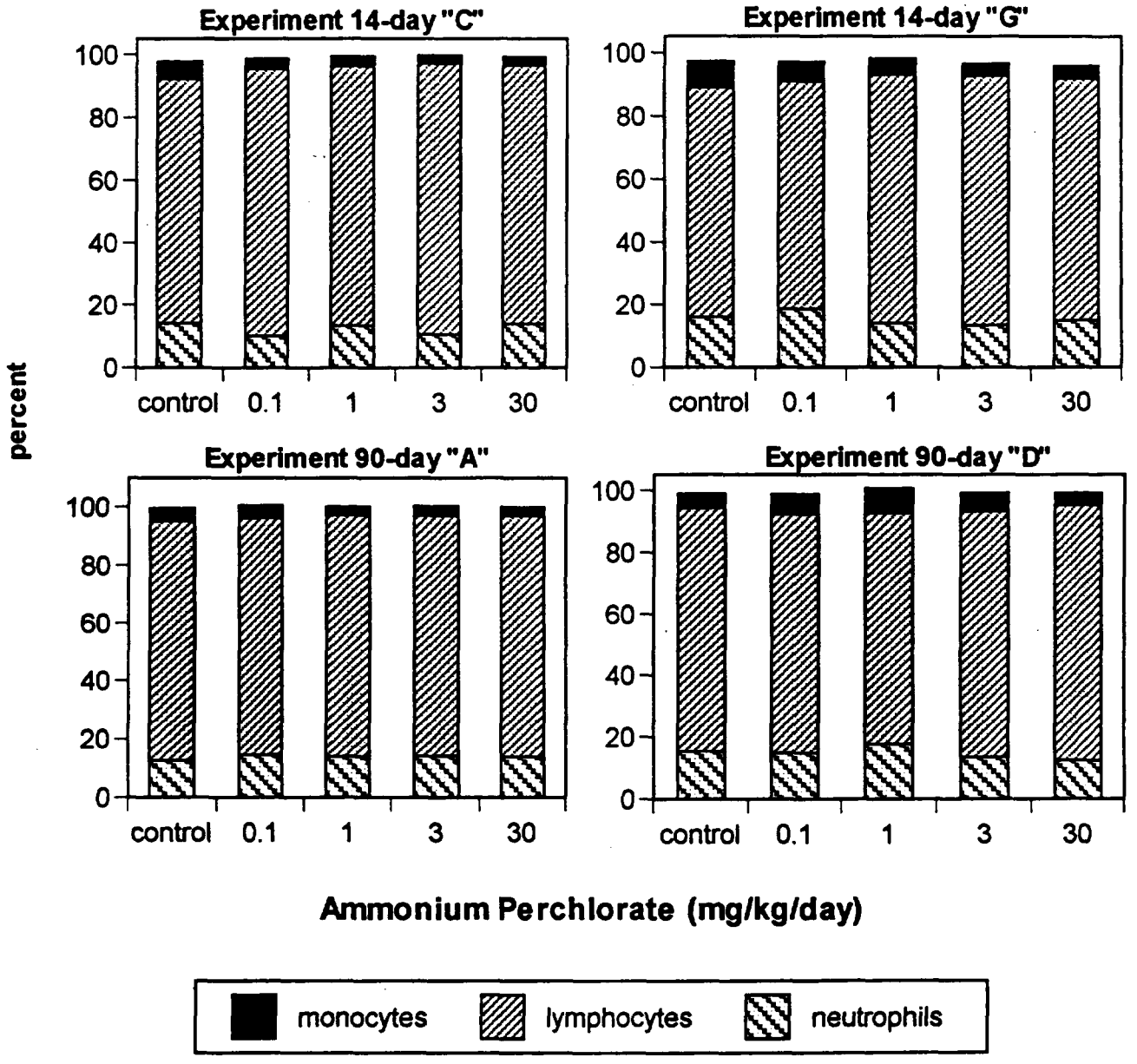
Total bone marrow cellularity was measured using a Coulter Model Zm. The coulter counter is calibrated using comparison counts obtained from a hemacytometer prior to use. Analysis of variance using Tukey's multiple comparison (* = $p<0.05$) was used to compare treatment groups to control values. Standard deviation is shown. No signifcant changes have been detected in bone marrow cellularity. In addition, no significant changes in bone marrow cellularity was observed in the 90-day "N" study.

White Blood Cell Counts



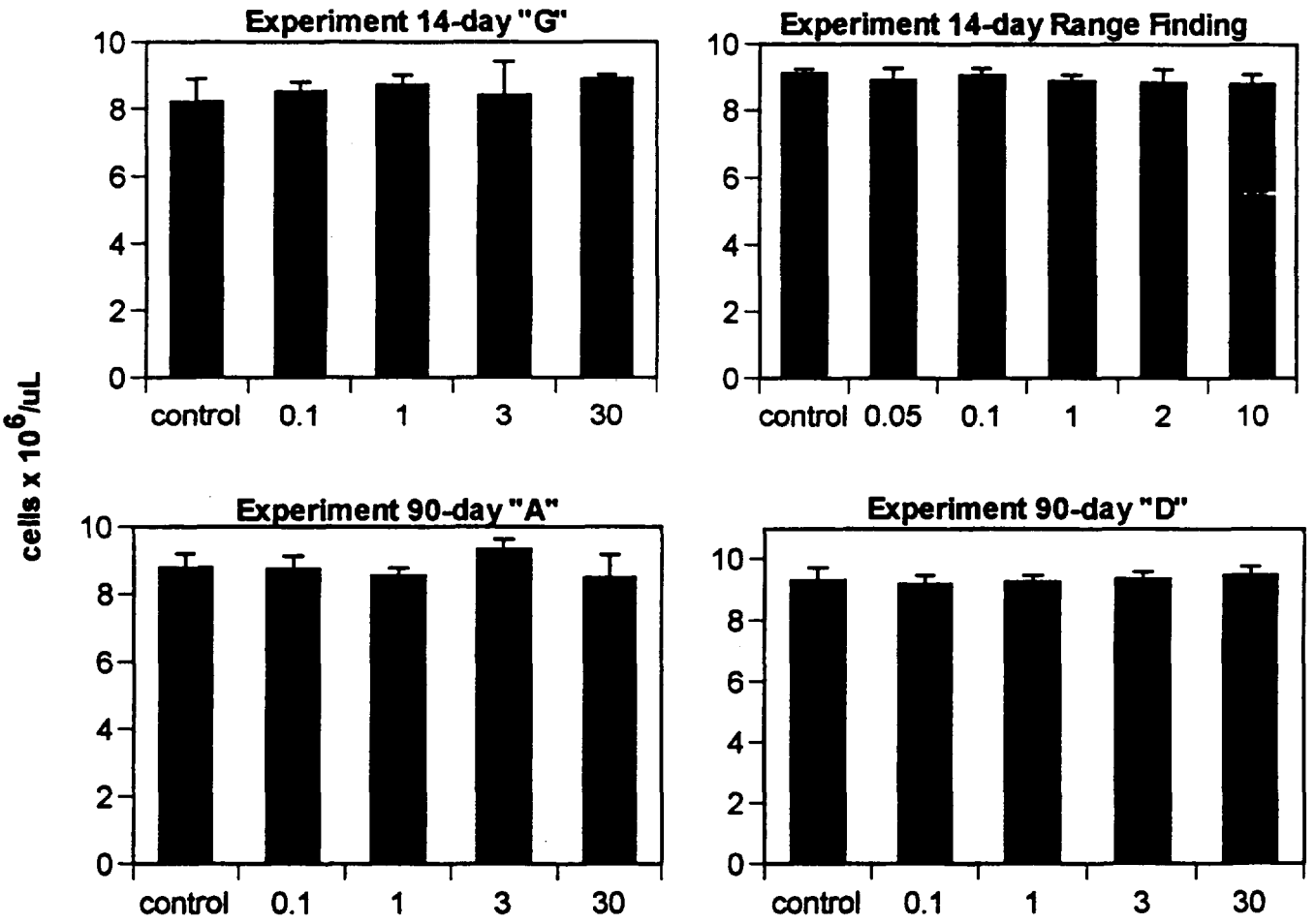
Whole blood was collected in EDTA microtainer and the white blood cell count was performed by a reference laboratory (Antech). Standard deviation is shown.

Differential Cell Counts



A differential count was performed on a blood smear stained with Wright's stain. Data were analyzed using analysis of variance with Tukey's multicomparison (* = p>0.05)

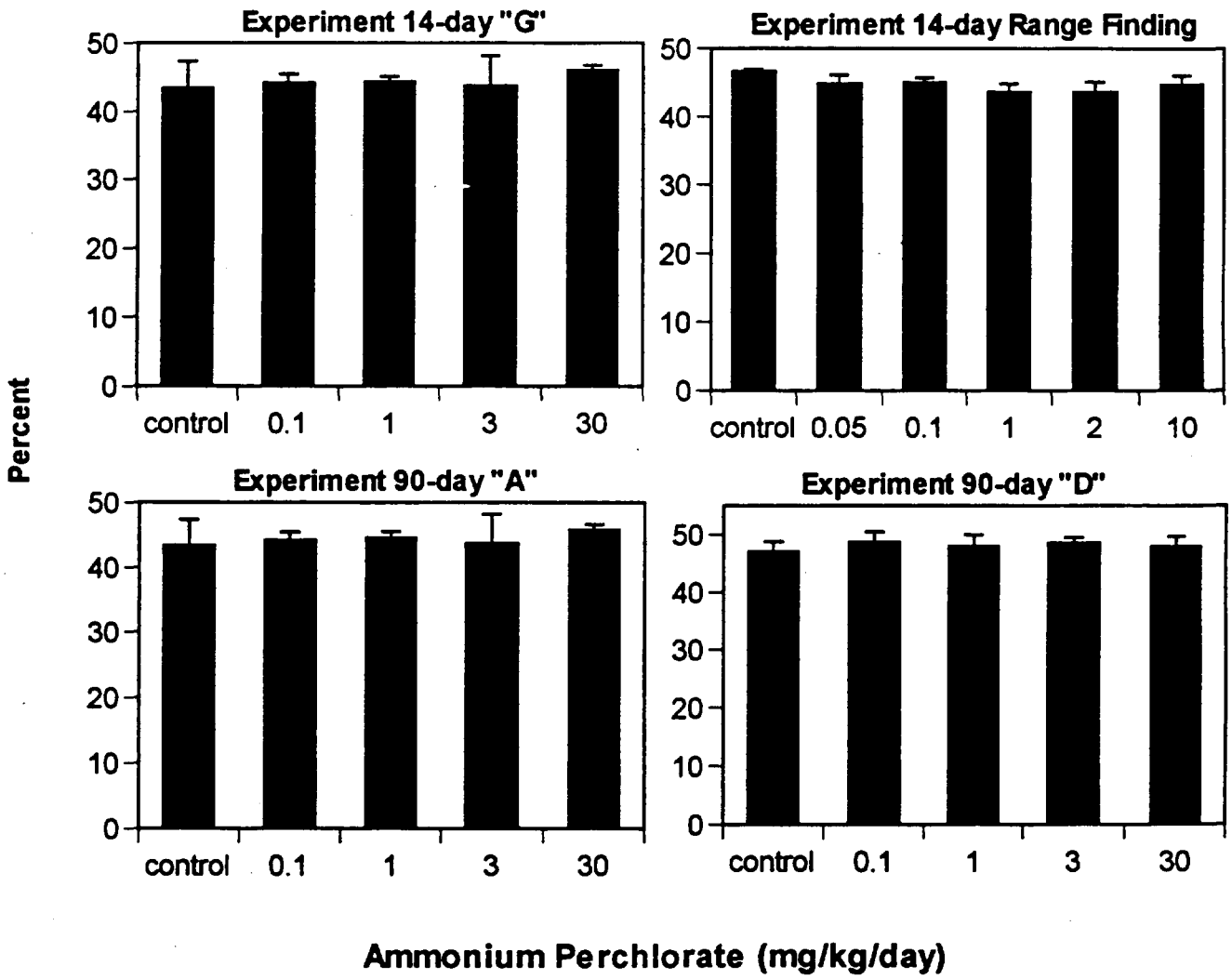
Red Blood Cell Counts



Ammonium Perchlorate (mg/kg/day)

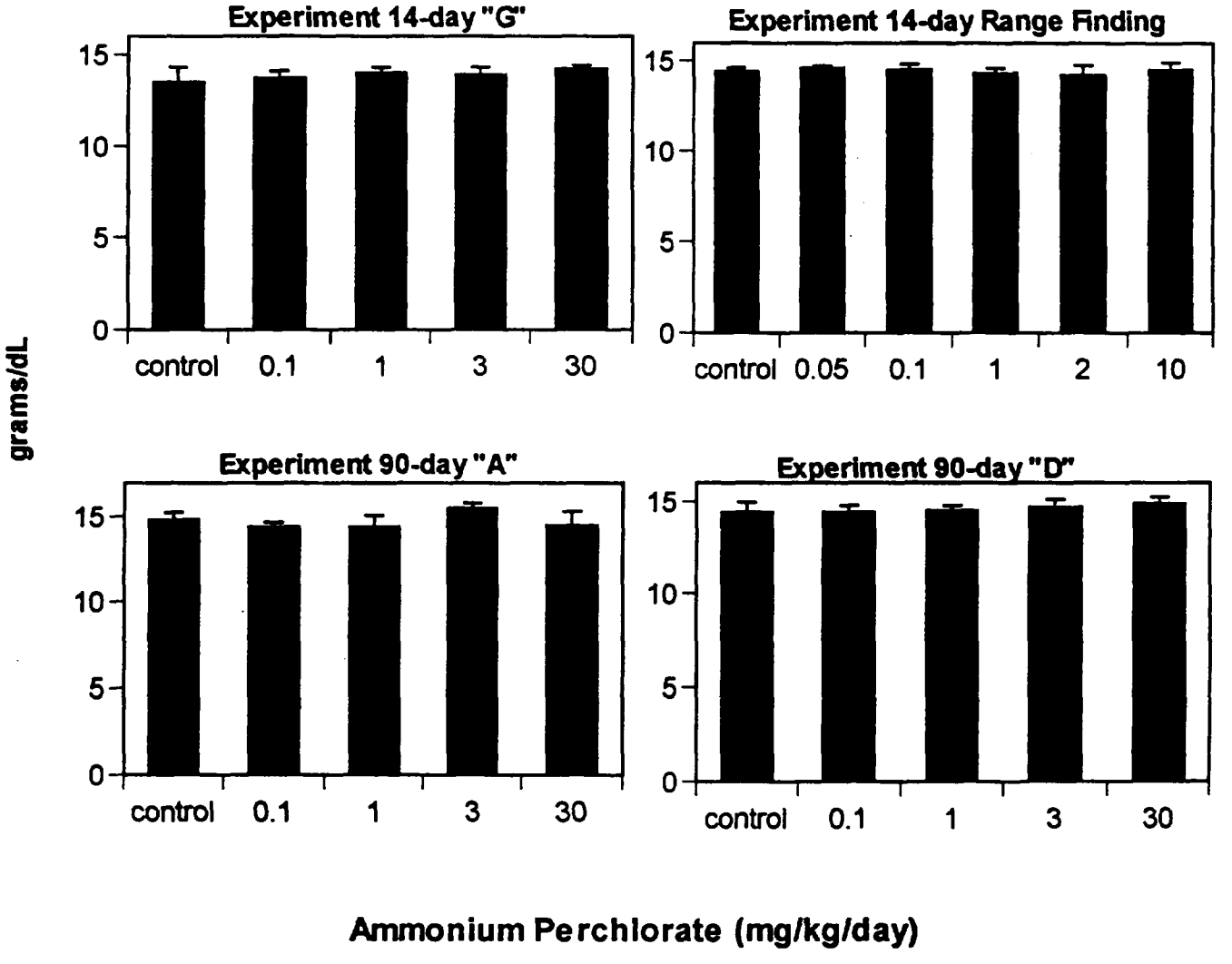
Whole blood was collected in EDTA microtainer and the red blood cell count was performed by a reference laboratory (Antech). Standard deviation is shown.

Red Blood Cells:
Hematocrit



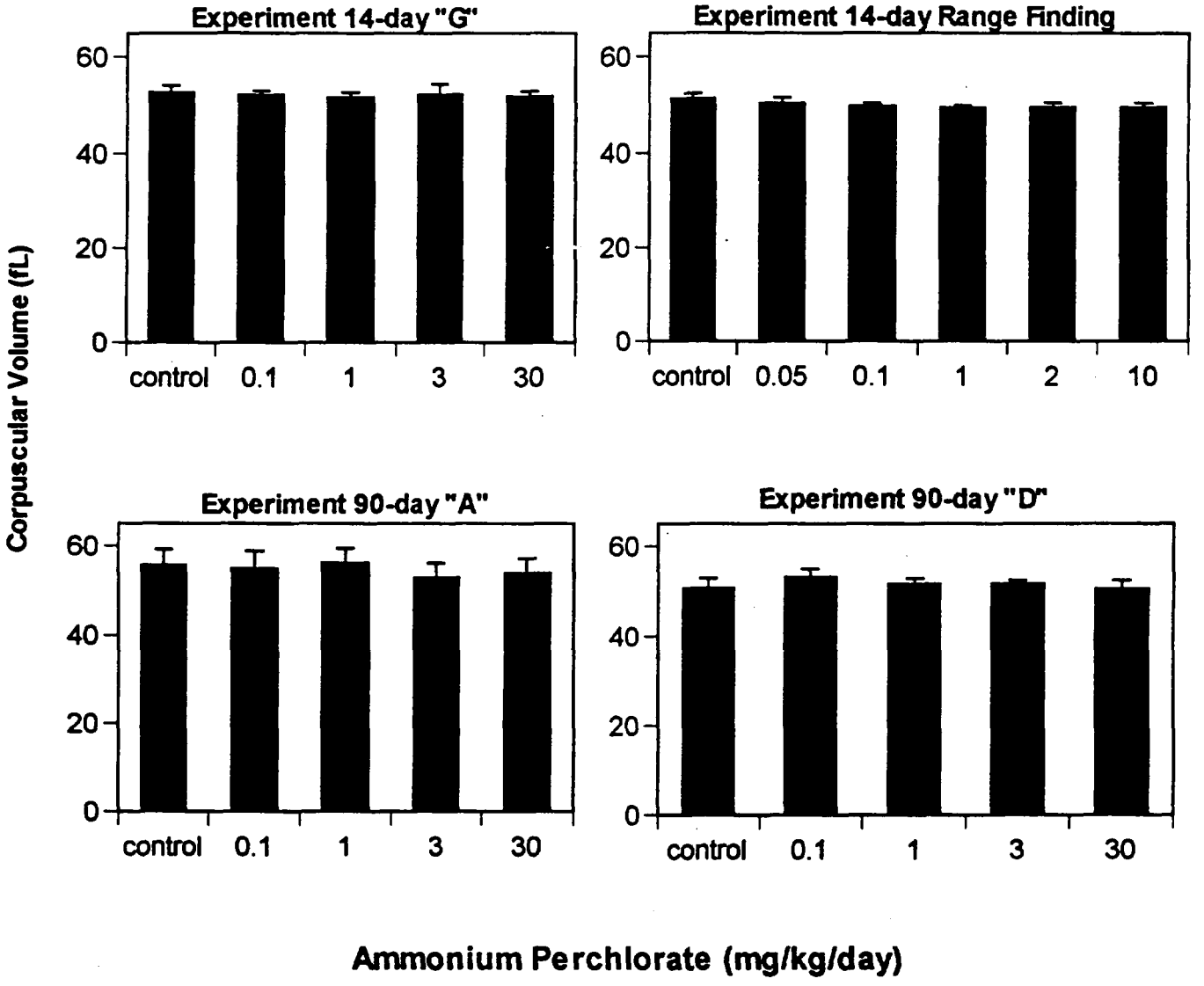
Whole blood was collected in EDTA microtainer and the hematocrit of murine red blood cells was obtained from the complete blood count (CBC) performed by a reference laboratory (Antech). Standard deviation is shown.

Red Blood Cells: Hemoglobin



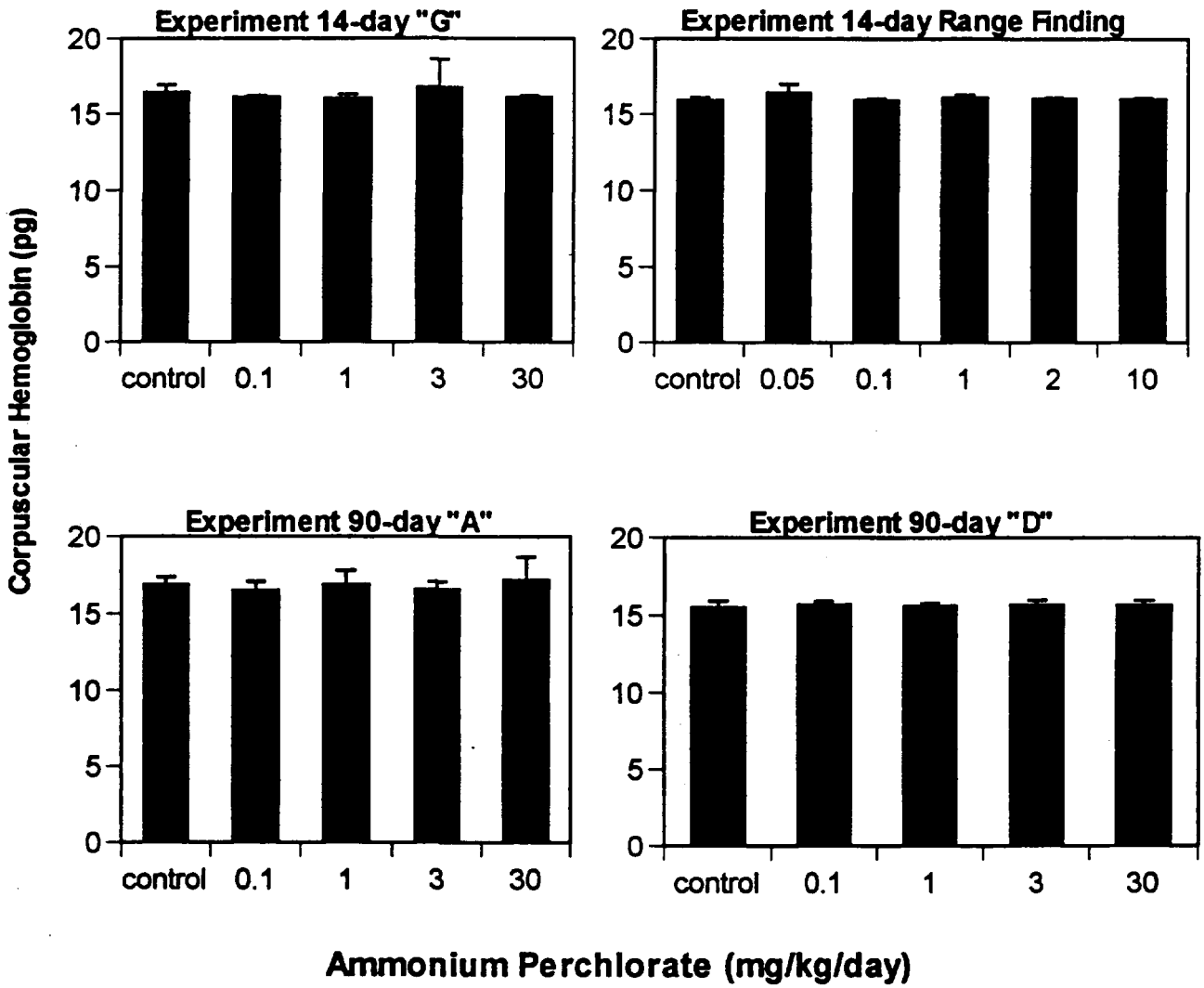
Whole blood was collected in EDTA microtainer and the hemoglobin of murine red blood cells was obtained from the complete blood count (CBC) performed by a reference laboratory (Antech). Standard deviation is shown.

Red Blood Cells:
Mean Corpuscular Volume (MCV)



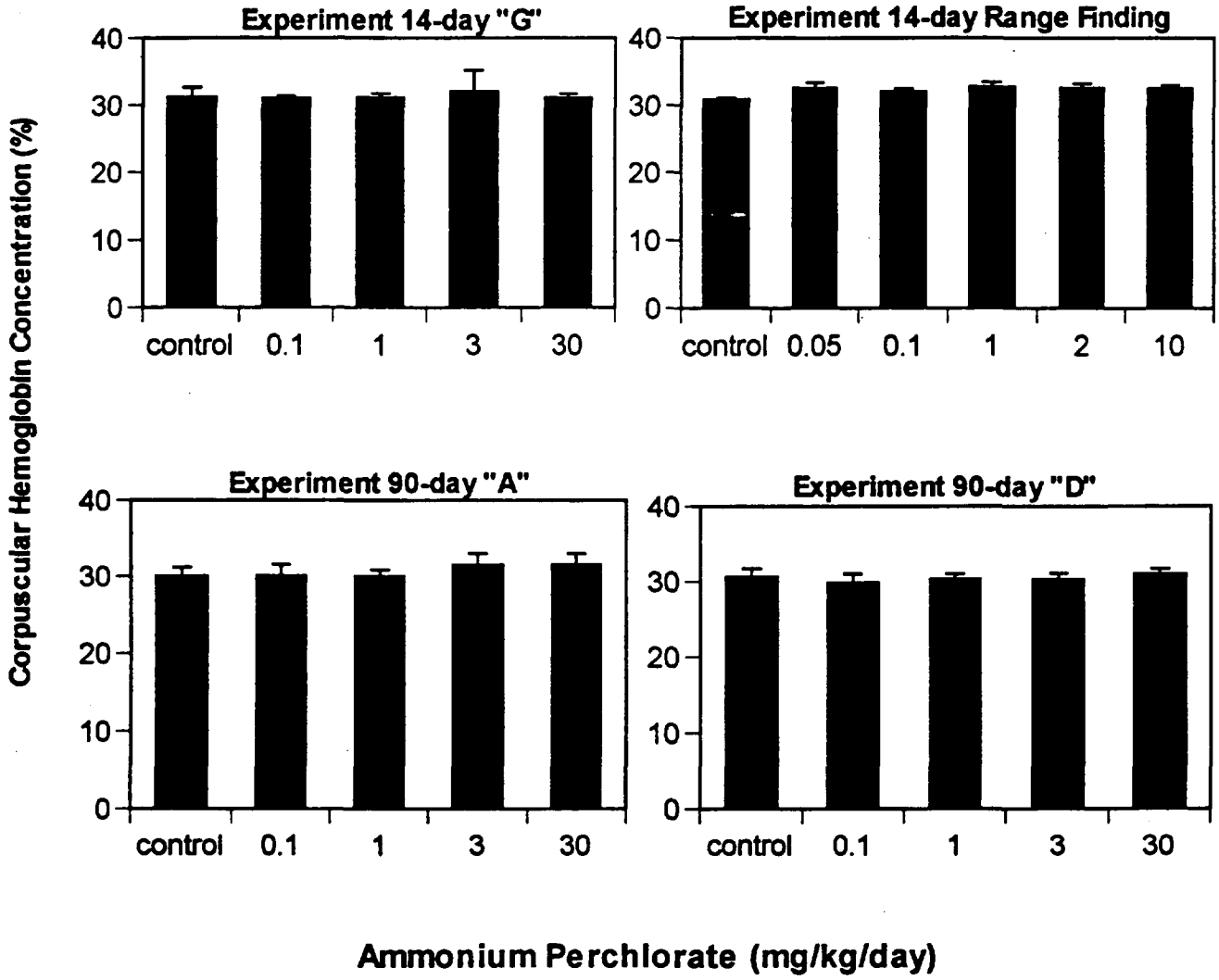
Mean corpusular volume of the murine red blood cells was obtained from the complete blood count (CBC) performed by a reference laboratory (Antech). Standard deviation is shown.

Red Blood Cells:
Mean Corpuscular Hemoglobin (MCH)



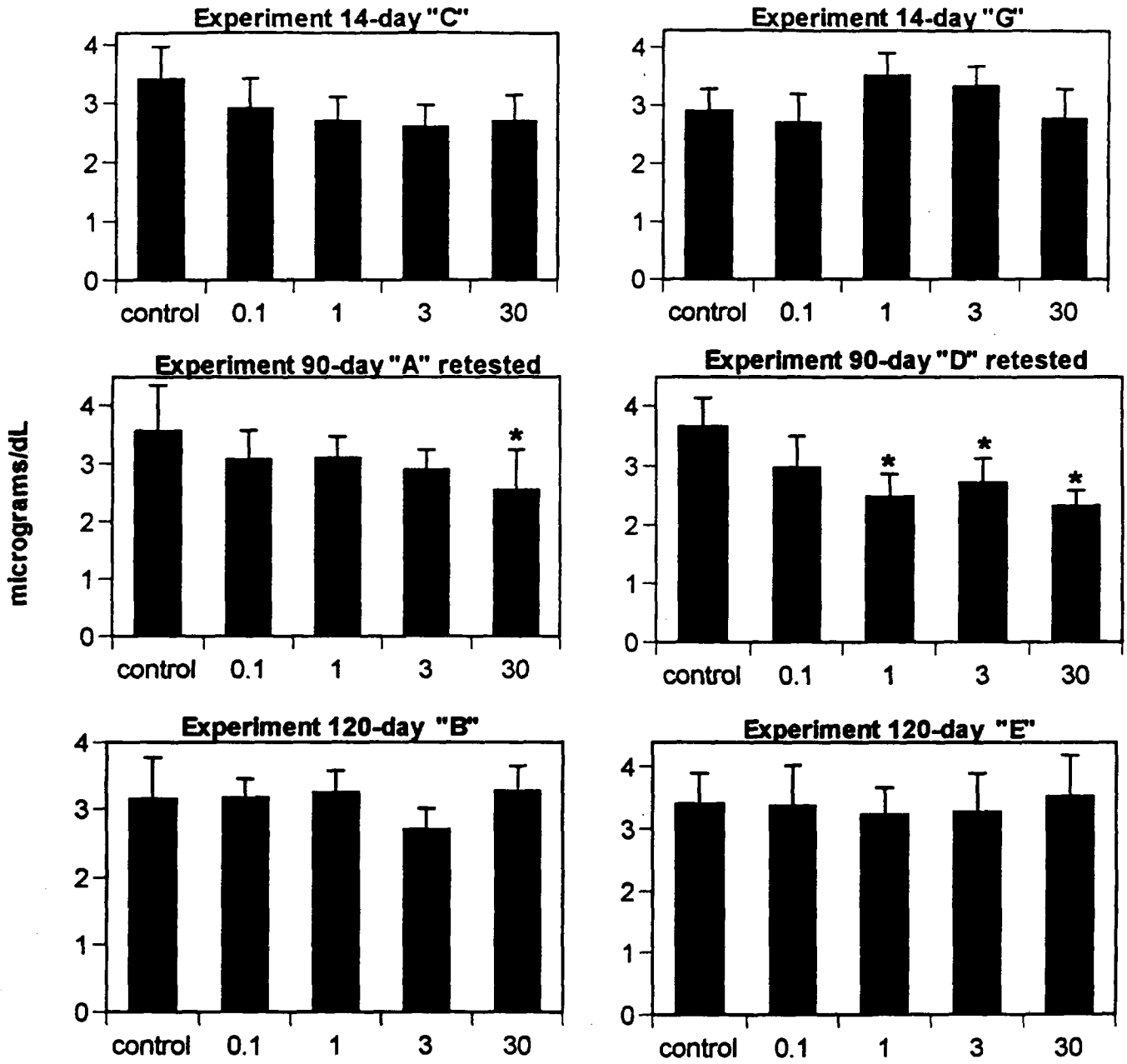
Mean corpusular hemoglobin of the murine red blood cells was obtained from the complete blood count (CBC) performed by a reference laboratory (Antech). Standard deviation is shown.

Red Blood Cells:
Mean Corpuscular Hemoglobin Concentration (MCHC)



Mean corpusular hemoglobin of the murine red blood cells was obtained from the complete blood count (CBC) performed by a reference laboratory (Antech). Standard deviation is shown.

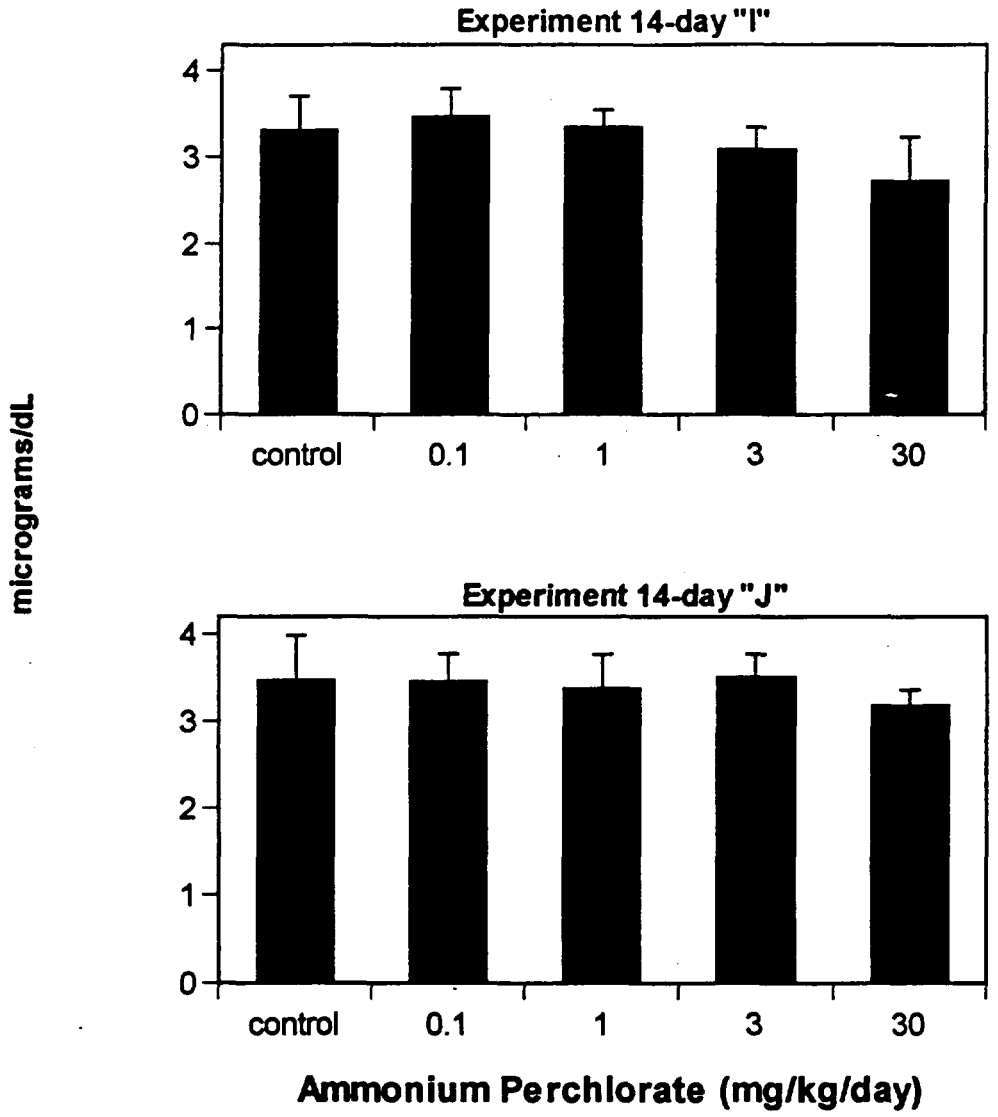
Serum T_4 Levels



Ammonium Perchlorate (mg/kg/day)

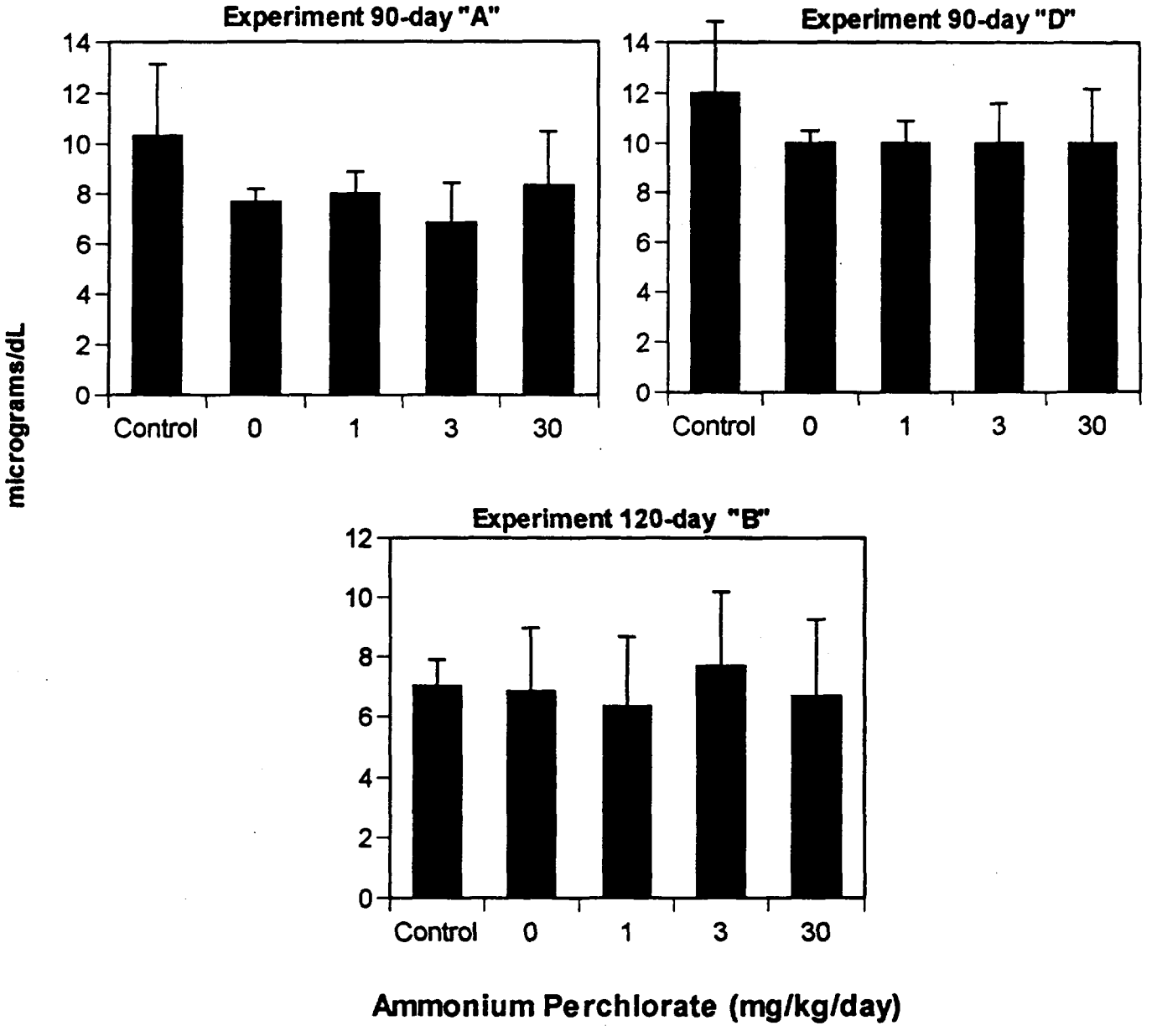
T_4 serum levels were determined using a canine I^{125}-RIA T_4 kit purchased from Diagnostic Products Incorporated (California). Analysis of variance using Tukey's multiple comparison (* = $p<0.05$) was used to compare treatment groups to control values. Standard deviation is shown. Note that additional serum from Experiment A and D were retested due to variability in the original tests.

Serum T_4 Levels



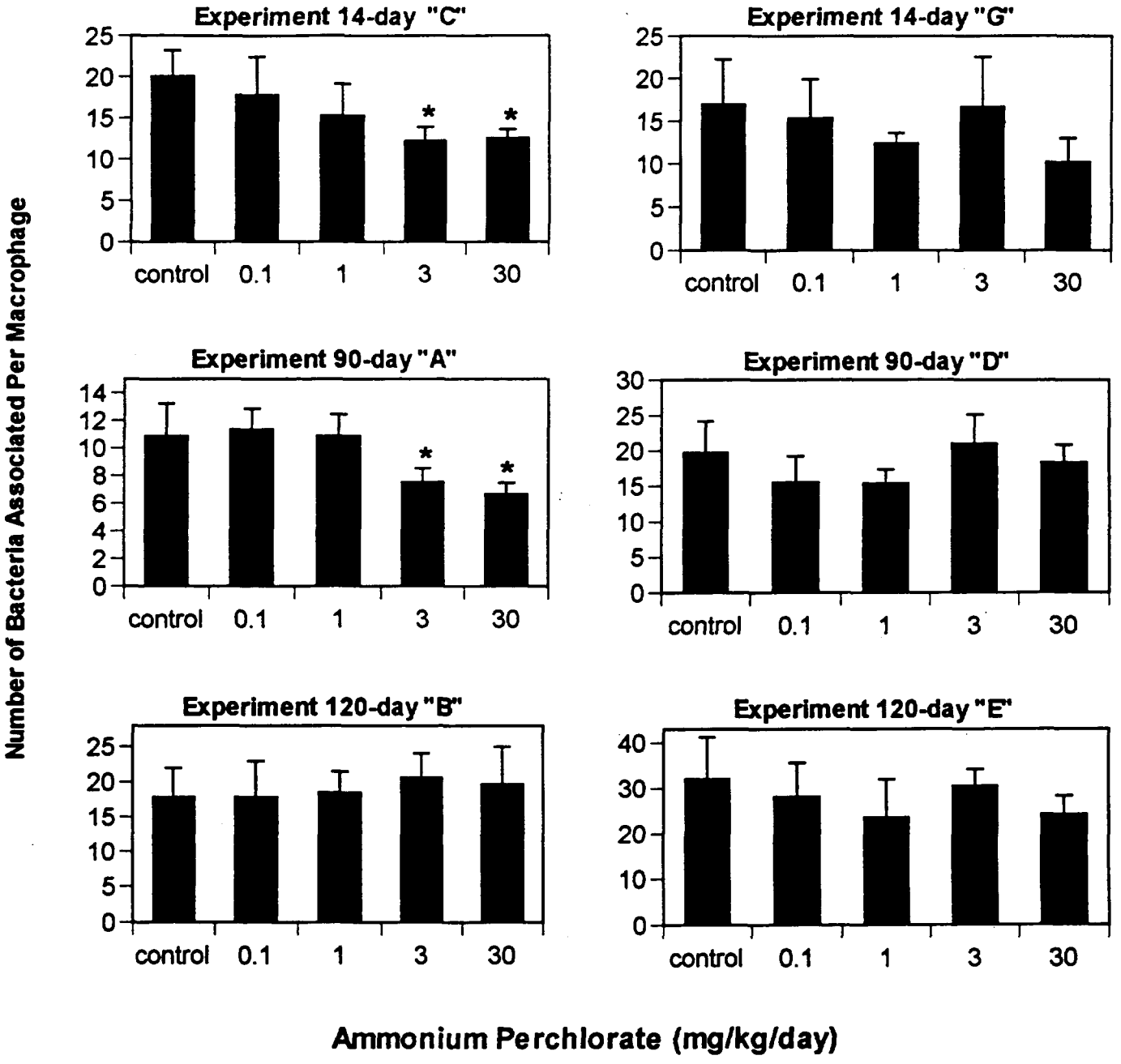
T_4 serum levels were determined using a canine I^{125}-RIA T_4 kit purchased from Diagnostic Products Incorporated (California). Analysis of variance using Tukey's multiple comparison (* = $p<0.05$) was used to compare treatment groups to control values. Standard deviation is shown.

Serum Thyroid Stimulating Hormone (TSH) Levels



Thyroid stimulating hormone (TSH) serum levels were determined using an I^{125}-RIA kit purchased from Amersham. Analysis of variance using Tukey's multiple comparison (* = $p<0.05$) was used to compare treatment groups to control values. Standard deviation is shown.

Peritoneal Macrophage Phagocytosis



Peritoneal macrophages ($2x10^5$/well) were aseptically isolated by peritoneal lavage an incubated 4 hours with *Listeria monocytogenes* at an approximate ratio of 1 macrophage per 10 bacteria. After incubation, the macrophages were aseptically washed, fixed, and stained with Wright's stain. The number of bacteria associated per macrophage was determined using a light microscope. One way analysis of variance using Tukey's multicomparisons (* =$p<0.05$). Standard deviation is shown.

Results Obtained Prior to August 1, 1998

14, 90, and 120-Day AP Studies

Data Tables

T4 Quantitation 120-Day "B"

Mouse	CPM (ave)	Log (cpm)	T4 ug/dL
1B	15946.5	4.20	3.5
2B	14704.9	4.17	4.1
3B	16163.9	4.21	3.3
4B	18142.5	4.26	2.5
5B	17012.6	4.23	3
6B	18248.8	4.26	2.5
Average	16703	4.22	3.15
SD	1372	0.04	0.62
7B	16708.5	4.22	3.1
8B	16573.2	4.22	3.1
9B	16006.3	4.20	3.5
10B	17407.7	4.24	2.8
11B	15990	4.20	3.5
12B	17072.1	4.23	3
Average	16626	4.22	3.17
SD	567	0.01	0.28
13B	16684.6	4.22	3.1
14B	16094.9	4.21	3.3
15B	15558.2	4.19	3.7
16B	15862.4	4.20	3.5
17B	17486.1	4.24	2.8
18B	16643.9	4.22	3.1
Average	16388	4.21	3.25
SD	694	0.02	0.32
19B	17637	4.25	2.7
20B	18352.1	4.26	2.5
21B	18257.2	4.26	2.5
22B	17999.5	4.26	2.5
23B	16202.1	4.21	3.3
24B	17888.6	4.25	2.7
Average	17723	4.25	2.70
SD	788	0.02	0.31
25B	17606.6	4.25	2.7
26B	15749.9	4.20	3.5
27B	15538.9	4.19	3.7
28B	16457.2	4.22	3.1
29B	16671.7	4.22	3.1
30B	15815.8	4.20	3.5
Average	16307	4.21	3.27
SD	773	0.02	0.37

Trt. Group	Ave T4 (ug/dL	SD
Control	3.15	0.62
0.1 mg/kg	3.17	0.28
1.0 mg/kg	3.25	0.32
3.0 mg/kg	2.7	0.31
30.0 mg/kg	3.27	0.37

T4 Quantitation 120-Day "E"

Mouse	CPM (ave)	Log (cpm)	T4 ug/dL
1E	15651.8	4.19	3.7
2E	15863.4	4.20	3.5
3E	16146.7	4.21	3.3
4E	14921.7	4.17	4.1
5E	17579.8	4.25	2.7
6E	16586.2	4.22	3.1
Average	16125	4.21	3.40
SD	902	0.02	0.49
7E	18713.6	4.27	2.4
8E	17242	4.24	2.8
9E	15022.4	4.18	3.9
10E	15961.7	4.20	3.5
11E	14798.9	4.17	4.1
12E	15898.3	4.20	3.5
Average	16273	4.21	3.37
SD	1474	0.04	0.65
13E	15651.6	4.19	3.7
14E	17647.6	4.25	2.7
15E	15966	4.20	3.5
16E	17707	4.25	2.7
17E	15723.4	4.20	3.5
18E	16266.5	4.21	3.3
Average	16494	4.22	3.23
SD	942	0.02	0.43
19E	17570.4	4.24	2.8
20E	16518.7	4.22	3.1
21E	16641.1	4.22	3.1
22E	17038.3	4.23	3
23E	14067.8	4.15	4.5
24E	16743.1	4.22	3.1
Average	16430	4.21	3.27
SD	1217	0.03	0.62
25E	16089.4	4.21	3.3
26E	16687.7	4.22	3.1
27E	16893.6	4.23	3
28E	16468.2	4.22	3.1
29E	13862.6	4.14	4.7
30E	15073.7	4.18	3.9
Average	15846	4.20	3.52
SD	1165	0.03	0.66

Trt. Group	Ave T4 (ug/dL	SD
Control	3.4	0.49
0.1 mg/kg	3.37	0.65
1.0 mg/kg	3.23	0.43
3.0 mg/kg	3.27	0.62
30.0 mg/kg	3.52	0.66

TSH Quantitation 120-Day "B"

Mouse	CPM (ave)	Log (cpm)	TSH (ng/mL)
1B	3847.4	3.59	6
2B	3798.1	3.58	7
3B	3839.8	3.58	7
4B	3675.1	3.57	8
5B	3900.7	3.59	6
6B	3714.8	3.57	8
Average	3796	3.58	7.00
SD	86	0.01	0.89
7B	3750.8	3.57	8
8B	3803.6	3.58	7
9B	3698.9	3.57	8
10B	3655.9	3.56	9
11B	4284.5	3.63	3
12B	3888.8	3.59	6
Average	3847	3.58	6.83
SD	229	0.03	2.14
13B	3857.8	3.59	6
14B	3947.9	3.60	5
15B	3962	3.60	5
16B	3497.8	3.54	11
17B	3859.6	3.59	6
18B	3942	3.60	5
Average	3845	3.58	6.33
SD	176	0.02	2.34
19B	3796	3.58	7
20B	3750.9	3.57	8
21B	3609.9	3.56	9
22B	4286.4	3.63	3
23B	3633	3.56	9
24B	3508.5	3.55	10
Average	3764	3.57	7.67
SD	276	0.03	2.50
25B	3925.9	3.59	6
26B	3814.9	3.58	7
27B	3517.3	3.55	10
28B	3954.9	3.60	5
29B	4245.4	3.63	3
30B	3619.8	3.56	9
Average	3846	3.58	6.67
SD	260	0.03	2.58

Trt. Group	Ave TSH	SD
Control	7	0.89
0.1 mg/kg	6.83	2.14
1.0 mg/kg	6.33	2.34
3.0 mg/kg	7.67	2.5
30.0 mg/kg	6.67	2.58

Phagocytosis 120Day "E"

	0 mg/kg group avg:		32.1	std dev:	9.2		0.1 mg/kg group avg:		28.1	std dev:
Mean	47.6	33.1	31.8	18.9	30.9	30.2	30.2	25.5	21.3	25.7
Mouse #	1	2	3	4	5	6	7	8	9	10
	18	21	27	2	53	3	25	18	9	7
	52	83	34	8	7	49	19	0	11	2
	37	0	36	2	42	6	12	0	1	0
	6	16	0	2	10	11	51	40	0	0
	4	84	64	1	62	24	27	26	14	17
	24	35	20	0	79	51	0	17	2	11
	171	111	53	9	6	28	74	8	0	19
	128	66	8	8	65	12	59	74	0	38
	132	58	39	27	58	34	28	8	0	16
	93	1	28	2	13	17	66	27	16	10
	71	23	17	2	54	25	9	52	29	34
	3	49	19	0	5	19	16	63	18	26
	27	30	45	1	9	23	92	11	35	59
	78	2	20	4	12	46	3	4	10	37
	31	0	17	15	1	84	18	7	21	25
	51	0	15	52	14	18	45	36	31	28
	73	0	37	16	0	35	32	55	17	64
	86	58	54	41	17	73	31	13	24	32
	36	11	18	53	81	42	22	4	38	10
	0	55	39	67	43	27	29	25	5	8
	31	27	17	3	39	53	8	6	19	16
	69	29	0	68	27	11	33	11	7	18
	72	7	0	4	72	69	46	30	9	37
	0	18	3	52	17	37	52	24	21	9
	53	23	53	5	1	1	47	2	5	12
	65	33	64	0	19	0	8	12	17	18
	51	30	2	45	27	0	19	8	24	33
	43	48	67	14	60	54	0	9	12	48
	46	52	56	18	2	43	25	14	34	36
	0	20	48	19	0	26	39	20	28	21
	27	16	0	6	22	62	18	26	19	7
	92	52	0	1	18	51	34	79	59	25
	6	17	37	7	36	38	3	22	11	48
	1	19	65	6	6	2	62	10	23	16
	11	23	72	6	28	45	20	43	36	59
	4	10	43	17	75	30	28	12	65	17
	10	0	76	36	40	24	43	27	4	51
	16	77	102	40	37	85	87	16	0	20
	2	51	79	15	59	49	65	12	19	31
	74	91	34	5	21	54	26	5	5	43
	83	2	48	12	55	0	0	29	36	24
	124	59	18	19	50	23	42	48	28	15
		108	3	26	41	4	2	22	31	8
		1	27	32	26	48	27	7	76	20
		0	49	7	34	19	0	53	39	47
		18	1	47	20	22	48	31	44	11
		46	14	4	48	6	53	67	16	34
		52	71	0	31	0	41	54	9	48
		58	15	61	45	3	0	73	23	30
		15	31	8	51	18	0	67	46	51
		11	15	25	0	21	6	0	58	14
		5	0	16	5	27		0	3	
			17	14	8	34				
			6	26	14	71				
			28	64	33	5				
						16				

7.6		1.0 mg/kg group avg:	18.4	23.6 std dev:		8.3		3.0 mg/kg group avg:		30.6 std dev:		
42.4	23.4 .		14	15	16	17	18	19	20	21	22
11	12	13	20	9	14	41	41	54	19	14	34
81	8	poor stain	43	1	28	29	27	40	23	34	6
74	0		19	13	9	15	24	48	28	48	27
85	0		24	8	21	34	29	44	45	25	14
52	28		14	4	30	35	31	33	39	4	13
29	81		16	20	42	49	39	37	51	21	8
36 end			21	6	24	8	38	28	42	53	29
69			26	29	48	13	18	22	32	31	18
73			17	4	17	31	22	17	31	19	17
11			13	8	11	0	28	33	39	11	31
45			26	12	4	44	56	32	54	32	49
9			18	6	33	16	10	56	17	12	27
10			22	37	27	54	29	52	12	46	21
13			6	8	10	24	38	37	45	25	14
7			24	26	13	29	51	41	18	17	40
end			16	20	17	62	21	29	21	36	25
			27	18	19	20	31	30	39	20	25
			22	2	8	14	48	38	30	9	11
			19	8	36	51	22	32	23	41	14
			24	11	15	23	13	19	19	24	20
			22	20	31	31	15	56	17	63	3
			26	14	6	43	27	22	26	27	17
			9	22	14	38	23	37	24	15	9
			19	15	42	19	39	52	68	34	19
			25	28	23	42	19	45	44	39	29
			31	17	0	41	23	14	23	21	34
			12	18	29	17	21	21	30	43	16
			3	25	13	52	36	56	54	41	21
			6	16	18	44	23	13	29	26	50
			32	8	16	27	18	29	52	33	49
			36	26	6	53	25	68	56	31	28
			39	38	11	22	27	34	35	19	18
			38	2	13	58	29	23	61	18	52
			19	11	21	61	24	44	27	39	44
			10	16	9	19	17	38	37	36	18
			12	0	19	42	19	11	17	6	39
			15	0	52	50	29	27	29	29	11
			41	1	14	39	27	15	37	54	26
			11	8	8	62	33	53	22	20	42
			22	5	21	19	38	20	43	18	51
			12	2	19	11	23	58	24	31	22
			7	12	34	48	36	31	52	22	38
			10	17	13	16	47	24	36	45	19
			12	23	52	28	30	18	27	36	31
			27	35	20	38	34	39	13	25	39
			16	51	3	27	29	47	16	18	28
			9	27	18	53	22	19	22	24	17
			13	31	5	36	34	43	44	63	35
			6	5	11	31	43	50	34	32	13
			0	11	31	43	6	28	39	12	38
			0	29	19	57	53	35	41	54	17
			1	21		50	37	31	25	69	14
				2		49		23	28		
				16							

	3.6		30 mg/kg group avg:		24.2	std dev:	4.2	
	29.1		19.6	24.0	21.6	21.4	29.3	29.5
	23	24	25	26	27	28	29	30
	20	23	30	17	1	8	32	45
	28	42	3	34	21	19	44	132
	8	59	5	14	12	16	26	28
	10	14	19	10	8	3	19	59
	9	19	34	32	6	33	41	15
	16	39	26	18	49	26	28	38
	29	56	8	28	18	41	11	4
	37	21	11	2	23	10	22	6
	18	13	5	21	2	19	38	19
	52	42	7	11	8	26	14	27
	24	19	12	46	15	11	44	13
	26	38	26	15	11	31	15	11
	19	26	38	9	28	25	52	52
	34	34	13	37	3	17	9	18
	15	23	19	40	39	34	38	29
	42	51	22	49	0	14	34	7
	29	20	25	33	11	20	60	19
	47	42	37	20	14	12	16	28
	37	29	5	28	6	48	58	44
	18	19	16	16	22	8	34	65
	26	51	9	31	22	25	31	55
	10	37	31	2	19	1	29	7
	19	42	8	18	38	15	49	21
	24	24	39	13	52	7	10	36
	43	31	4	6	24	7	36	2
	2	11	41	27	91	35	27	15
	28	17	17	22	32	13	47	27
	30	44	6	18	9	19	12	42
	21	30	31	58	57	11	50	14
	58	13	10	33	36	28	48	22
	38	58	10	17	15	42	16	62
	13	19	19	20	3	51	3	31
23		22	21	61	19	35	22	34
	19	9	28	11	8	27	38	23
	31	20	6	29	22	3	47	58
	48	16	18	12	34	48	51	41
	17	25	13	8	48	32	24	17
	52	5	6	13	31	19	16	26
	38	52	23	17	19	3	13	33
	41	33	19	20	21	25	19	50
	32	18	48	4	13	14	17	43
	24	20	62	26	17	9	28	8
	34	36	15	16	20	15	39	3
	47	28	18	37	6	2	41	29
	11	33	13	48	28	22	11	11
	52	54	3	66	37	24	6	48
	23	49	7	52	16	37	4	25
	25	30	9	24	25	14	23	17
	34	41	34	14	19	5	36	5
	24	29	28	5	7	13	24	16
	43	16	43	21	13	52	14	38
	59	13	19	9	24	28	58	14
				36		31	43	29
							31	
							15	

Phagocytosis 120Day "B"

	0 mg/kg group avg:		17.8	std dev:	4.2		0.1 mg/kg group avg:		17.8	std dev:	5.2
Mean	22.2	18.5	11.2	19.8	14.3	20.9	20.8	17.2	25.5	18.5	10.7
Mouse #	1	2	3	4	5	6	7	8	9	10	11
	48	5	10	25	17	35	27	0	7	34	7
	26	13	8	17	9	29	53	10	13	12	3
	57	10	7	2	7	31	11	6	4	16	6
	17	51	16	26	13	27	16	22	28	27	4
	51	47	7	29	8	13	38	27	19	17	9
	48	19	11	10	37	24	21	0	10	33	12
	41	11	12	8	26	40	19	13	17	12	29
	35	16	4	21	7	13	38	5	18	4	25
	38	13	8	20	10	9	15	1	53	33	1
	20	17	13	31	38	37	35	4	47	14	
	32	42	7	26	9	14	32	42	33	7	
	28	40	14	19	34	17	34	64	45	11	
	44	15	10	22	29	26	15	23	24	28	
	21	65	16	29	4	27	17	19	32	20	
	10	20	20	2	28	8	29	38	43	26	
	23	14	14	20	16	17	17	0	38	15	
	12	23	13	0	19	49	28	1	20	0	
	19	27	14	6	10	27	39	54	31	7	
	22	25	21	19	6	15	18	51	24	30	
	13	13	2	21	8	32	33	13	15	42	
	15	29	10	56	3	9	17	18	32	20	
	21	25	15	48	14	16	22	12	26	17	
	16	19	7	7	10	10	37	9	12	14	
	20	18	10	35	2	18	15	19	25	36	
	26	10	9	36	7	26	14	11	33	9	
	32	30	0	2	9	25	11	25	37	22	
	33	12	12	43	18	25	20	28	13	52	
	21	7	7	12	26	21	9	21	45	7	
	10	23	5	25	3	40	18	9	28	18	
	24	15	41	23	12	32	15	4	19	4	
	31	17	15	18	28	16	26	15	24	0	
	29	26	17	11	14	21	16	12	27	13	
	17	23	3	59	10	43	27	16	23	16	
	15	25	26	40	18	13	13	22	31	7	
	20	5	9	47	12	14	23	6	28	1	
	17	4	11	13	18	16	38	31	0	8	
	7	0	9	18	15	42	30	9	19	17	
	9	0	0	12	11	11	16	13		10	
	16	3	3	29	7	23	11	15		26	
	28	1	11	24	16 26+		18	12		34	
	15	2	9	0	9	43	10	9		17	
	11	2	8	0	5	18	4	19		30	
	7	14	9	5	12	16	13	15		19	
	5	12	1	9	30	0	12	8		45	
	33	14	16	16	6	10	9	5		20	
	15	13	42	17	13	2	23	24		15	
	13	24	23	1	10	15	24	24		12	
	24	36	16	0	15	11	6	20		19	
	15	18	8	13	10	9	22	27		23	
	2	19	5	3	0	14	14	0		7	
	14	25	5	19	18	5	20	22		13	
	11	23	7	37	11	20	23	16		5	
	29	8	10	10	22	19	19	19		27	
	10	12	14	13	25	14	10	30		29	
	15	15	0	9	2	22	4	9		37	
	12		3	24	17					21	
	22		16	33	13					14	
				45	13					8	
				7	16					11	
				13	21						

	1.0 mg/kg group avg:		18.5 std dev:		3.0		3.0 mg/kg group avg:		20.6 std dev:		3.5
14.2	16.7	16.3 ***		15.8	22.1	21.4	23.2	21.9	19.4	19.9	24.7
12	13	14	15	16	17	18	19	20	21	22	23
4	1	21 ***		7	5	12	10	9	20	3	46
3	14	18		20	20	48	27	15	4	22	15
2	18	13		16	36	17	8	29	13	7	49
6	20	20		9	11	63	21	17	6	18	31
15	7	7		19	41	23	13	8	19	19	58
6	13	19		14	73	19	25	14	24	32	48
17	16			17	13	30	32	19	28	24	39
12	19			16	14	15	10	22	15	10	35
15	22			9	36	7	36	11	8	14	32
11	5			22	28	26	14	17	13	30	27
30	21			19	62	16	28	10	27	25	21
24	27			9	16	9	24	29	38	0	17
8	25			0	25	17	7	48	4	23	14
15	16			33	2	15	39	20	11	19	22
34	19			10	42	22	16	14	19	2	21
28	21			5	19	13	12	2	15	22	21
14	5			9	26	29	58	17	5	39	13
5	15			2	38	16	14	11	32	11	18
16	26			7	24	11	35	4	24	27	14
13	20			23	11	31	10	19	59	19	25
13	43			34	18	28	27	24	9	57	12
38	21			24	23	13	12	38	17	38	26
4	16			16	6	19	19	40	42	12	24
16	17			19	37	23	11	21	19	9	35
10	13			11	28	16	20	53	7	23	34
9	21			14	63	13	6	15	18	13	19
12	33			6	17	17	12	18	21	19	29
15	30			9	19	30	54	9	10	5	23
19	36			8	11	16	32	20	35	41	25
9	9			13	13	37	5	11	0	20	10
20	12			8	25	5	19	32	6	12	26
42	14			15	8	29	33	10	11	7	29
13	11			18	20	10	18	16	20	26	62
20	22			16	16	51	24	29	17	10	37
14	25			15	10	49	41	23	22	22	12
5	20			22	14	7	13	48	15	37	38
17	26			5	14	6	22	14	37	16	36
19	22			23	10	15	11	57	63	9	22
12	22			15	12	23	52	19	6	12	26
9	11			27	24	16	37	26	11	36	18
1	27			8	20	12	45	33	31	8	16
3	5			17	17	23	13	21	18	7	7
14	8			49	26	12	17	4	13	13	12
5	19			6	33	25	22	48	10	21	46
16	6			11	18	37	15	16	19	18	17
3	4			22	34	10	44	9	22	29	22
27	12			8	8	17	7	0	14	8	16
43	13			33	22	24	16	5	20	10	24
7	30			16	15	15	25	17	17	58	20
1	9			24	19	31	41	52	10	25	26
0	7			29	12	29	23	44	33	33	28
0	7			8	3	24	10	37	37	16	15
45	24			26	13	12	49	21	17	21	16
22	7			1	25		18	15	21		7
14	29			15			22		15		21
7	0			19							13
2	1			25							11
23	15										20
10	9										13
											22

30 mg/kg group avg: 19.7 std dev: 5.3

14.6	12.7	21.9	28.0	19.0	20.8	16.0
24	25	26	27	28	29	30
18	8	9	29	30	23	18
22	30	22	27	11	18	35
27	16	53		20	13	9
19	23	5		11	32	23
14	20	29		15	17	28
8	9	20		0	21	24
16	15	25		26	24	15
18	13	16		51	18	24
15	7	42		19	21	13
9	28	21		23	23	21
21	25	0		21	17	13
37	13	15		19	18	12
8	5	22		14	29	11
11	14	16		7	17	16
24	7	59		10	44	20
21	10	34		13	15	13
11	8	37		17	17	17
22	14	27		16	26	22
6	8	20		33	21	27
10	12	35		18	17	28
29	12	0		31	26	19
17	15	26		14	16	23
28	13	0		20	37	27
13	12	55		15	15	12
10	12	4		26	19	7
9	3	45		31	12	11
18	2	17		34	9	12
26	9	22		29	5	10
13	13	28		32	10	7
15	8	20		13	23	16
4	10	36		15	11	9
2	15	22		19	20	10
12	2	18		14	22	6
22	17	32		12	19	10
7	14	35		10	14	8
18	7	17		29	22	13
16	8	34		24	31	41
9	16	5		21	54	15
10	3	30		11	31	18
14	12	39		4	27	7
16	27	5		15	7	13
3	25	9		21	22	7
5	17	20		30	21	6
16	8	5		7	18	6
18	5	15		2	11	23
7	4	7		12	16	22
25	4	9		29	27	25
13	6	18		17	16	9
0	11	9		10	17	19
6	15	8		13	22	8
8	46			15	14	11
	2			17	23	14
	14			28	20	10
				37	28	8
				29	29	32
				5	27	15
					14	

120-Day Immune Parameter #1 "B" Body Weights

Control	3/19/98	3/26/98	4/2/98	4/9/98	4/16/98	4/23/98	4/30/98	5/7/98	5/14/98	5/21/98	5/28/98	6/4/98	6/11/98	6/18/98	*7/17/98*	Gain in BW (90d)		Gain in BW (120D)	
1B	19.7	20.6	20.4	21.5	21.5	23.4	23.1	25.2	24	26.1	27.4	30.1	31.7	29.6	31	9.9	Average	11.3	Average
2B	21	21	21.9	22.6	23.7	24.8	25.1	25.7	25.1	26.9	26.2	27.5	28.4	28.5	28.4	7.5	8.800	7.4	9.933
3B	19.8	20.9	22	23.1	23.2	24.5	25	24.8	24.4	25.4	26.4	26.9	26.1	27.5	29.6	7.7	SD	9.8	SD
4B	19.8	21	22	23	23.6	25.4	23.6	24.5	25.4	26.2	25.6	26.2	26.5	27.6	27.1	7.8	1.585	7.3	2.147
5B	20.7	21.3	22.1	22.7	23.2	24.6	25.6	27	25.6	27.8	28.8	29.8	30.4	32.2	32.8	11.5		12.1	
6B	21	22	21.7	23.3	24.6	24.7	25.3	27.2	26	27.4	28.4	28.9	29.1	29.4	32.7	8.4		11.7	
0.1 mg/kg/day																			
7B	22	21.8	22.1	23.1	24.3	26.1	27.6	28.5	29.2	31.8	34.3	34.9	38.1	38.5	39.4	16.5	Average	17.4	Average
8B	21.3	21.6	22.7	23.1	25	25.4	25.1	25.7	25.9	26.1	27.3	29.8	32.1	32	31.7	10.7	10.567	10.4	11.200
9B	22.2	23.5	23.9	23.3	24.4	25	25.5	25.8	26.9	27.4	26.8	28.6	30.8	31.4	30.6	9.2	SD	8.4	SD
10B	18.9	21.4	22.5	23	22.8	23.7	25.3	25.6	25.4	26.3	27.2	28.7	29.4	30	32.1	11.1	3.552	13.2	4.081
11B	20.4	20.4	21.5	21.1	22.7	23.3	24.6	25.5	25.2	26.2	27.2	28.7	30.9	30.8	32.6	10.4		12.2	
12B	18.3	19.5	18.2	18.9	18.7	19.9	20.3	21.1	20.9	21.4	21.8	22.4	22.8	23.8	23.9	5.5		5.6	
1.0 mg/kg/day																			
13B	18.7	19.7	20.2	20.5	21.4	22.5	22.1	22.6	22.9	24.2	23.6	23.9	25	26.3	28.1	7.6	Average	9.4	Average
14B	19.2	20.5	21	22.1	22.4	22.8	23.4	24.6	24.1	25.1	24.5	23.9	26.5	26.3	26.9	7.1	9.483	7.7	11.083
15B	20.7	21.9	22.6	23.5	23.9	24.6	24.8	26.3	25.2	25.3	25.8	28.6	29.6	30.8	33.7	10.1	SD	13	SD
16B	22.1	22.7	23.3	25	24.4	25.1	26.9	27.2	27.3	27.7	29.7	29.2	29.8	31.4	32.7	9.3	1.882	10.6	2.420
17B	18.8	20.3	20.5	21.6	23.1	22.3	23.7	24.5	24.6	25.8	26.3	27.9	29.1	29.6	30.2	10.8		11.4	
18B	19.2	22.9	22.8	23.7	24.4	24.2	24.6	25.9	27.8	28.3	29.1	30.8	31.6	31.2	33.6	12		14.4	
3.0 mg/kg/day																			
19B	19.5	19.7	21	22.4	22.6	23.2	24.1	25	25.1	25.1	25.2	26.8	26.7	26.8	28.8	7.3	Average	9.3	Average
20B	21.4	21.7	22.9	25	25.2	26.3	26.8	27.7	27.8	29.1	31	33	33.6	35.3	38.6	13.9	9.217	17.2	10.650
21B	21.7	21.2	22.2	22.8	23.2	23.6	24.6	25.9	24.7	27.1	28.6	28.9	30	30.4	33.6	8.7	SD	11.9	SD
22B	19.1	19.4	21.1	21.7	21.7	22.5	22.8	23.4	23.5	24.4	25.8	26.9	27.8	29.6	30.5	10.5	2.824	11.4	3.872
23B	23.1	24	23.4	23.8	23.8	25.6	26.7	26.8	26.3	27.5	29.2	30.7	30.6	32.3	31.2	9.2		8.1	
24B	18.6	19.5	20.1	20.8	21	21.5	22.6	22.9	23.2	24	24.2	24.6	24.6	24.3	24.6	5.7		6	
30.0 mg/kg/day																			
25B	18.2	22.7	23.4	25.3	26.8	27.5	28.2	29.2	29.3	30.8	32.1	35.2	36.5	37.6	40.1	19.4	Average	21.9	Average
26B	21.2	21.6	22	22.4	23.1	23.4	24.8	25.3	25.3	25.4	26.9	27.6	26.7	27.3	28.9	6.1	11.383	7.7	11.517
27B	20.9	22	22.7	23.1	24.4	24.7	25.4	25.9	25.8	26.7	27.5	28.9	29.9	30.1	29.7	9.2	SD	8.8	SD
28B	22.9	22.5	22.9	23.9	24.8	26.3	25.4	25.6	26.6	27.5	27	27.6	27.8	31.3	29.6	8.4	4.669	6.7	5.569
29B	22.7	22.7	23.2	24.5	26	27.1	27.9	28.4	28.8	30.3	30.6	31.6	33.3	35	33.8	12.3		11.1	
30B	21.8	22.5	23	23.2	23.5	24.3	25.9	27.6	27.6	29.5	30.6	30	32.7	34.7	34.7	12.9		12.9	

120-Day IP Parameters #1
"B"
Organ Weights

Animal	Body Weight gr	Thymus Wt. mg	Spleen Wt. mg	Kidney Wt. mg	Liver Wt. mg
Control					
1B	31	40.1	82.7	340.7	1525.1
2B	28.4	45	99.7	385.1	1385.3
3B	29.6	48.1	121.7	382.5	1552.6
4B	27.1	45	102.1	341.1	1271.6
5B	32.8	52.3	102.9	384.4	1554.2
6B	32.7	37.1	108.4	417.2	1736.1
Average	30.27	44.60	102.92	375.17	1504.15
SD	2.32	5.45	12.67	29.51	159.56
0.1 mg/kg/day					
7B	39.4	41	118.5	444.9	1816.1
8B	31.7	36.1	99.3	423.7	1521.4
9B	30.6	42.1	112.6	403.4	1594.1
10B	32.1	50.6	101	374.6	1454.3
11B	32.6	39	100.8	350.4	1507.3
12B	23.9	48.3	106.4	304.9	1208.8
Average	31.72	42.85	106.43	383.65	1517.00
SD	4.95	5.55	7.59	51.25	197.28
1.0 mg/kg/day					
13B	28.1	48	149.7	335.8	1458.2
14B	26.9	35.8	107.8	338.2	1316.8
15B	33.7	45.8	97.6	360	1487.6
16B	32.7	40.3	109.3	393.1	1546.5
17B	30.2	45.6	94.4	344.6	1412.6
18B	33.6	43.9	81.9	358.2	1427.4
Average	30.87	43.23	106.78	354.98	1441.52
SD	2.92	4.45	23.26	21.19	77.48
3.0 mg/kg/day					
19B	28.8	43	107.1	357.8	1424
20B	38.6	48.6	111.5	420.5	1809.2
21B	33.6	40.5	117.1	363	1551.7
22B	30.5	36.3	81.5	342	1336.6
23B	31.2	39.4	82.6	369.2	1359.5
24B	24.6	42.8	85.5	326.1	1169.8
Average	31.22	41.77	97.55	363.10	1441.80
SD	4.70	4.16	16.09	32.17	218.72
30.0 mg/kg/day					
25B	40.1	50.4	115.6	395.8	1896.1
26B	28.9	44.7	106.7	333.6	1441.3
27B	29.7	38.4	107.9	389.8	1463.2
28B	29.6	51.1	103.6	381.9	1439.5
29B	33.8	47.9	106.8	452.9	1503.3
30B	34.7	39.8	93.8	395.9	1398.6
Average	32.80	45.38	105.73	391.65	1523.67
SD	4.31	5.38	7.09	38.09	185.63

120-Day IP Parameters
"B"
Organ/BW Ratio (%)

Animal	Body Weight gr	Liver Wt. mg	LW/BW (mg)%
Control			
1B	31	1525.1	4.920
2B	28.4	1385.3	4.878
3B	29.6	1552.6	5.245
4B	27.1	1271.6	4.692
5B	32.8	1554.2	4.738
6B	32.7	1736.1	5.309
Average	30.27	1504.15	4.96
SD	2.32	159.66	0.26
0.1 mg/kg/day			
7B	39.4	1816.1	4.609
8B	31.7	1521.4	4.799
9B	30.6	1594.1	5.209
10B	32.1	1454.3	4.531
11B	32.6	1507.3	4.624
12B	23.9	1208.8	5.058
Average	31.72	1517.00	4.81
SD	4.95	197.20	0.27
1.0 mg/kg/day			
13B	28.1	1458.2	5.189
14B	26.9	1316.8	4.895
15B	33.7	1487.6	4.414
16B	32.7	1546.5	4.729
17B	30.2	1412.6	4.677
18B	33.6	1427.4	4.248
Average	30.87	1441.52	4.69
SD	2.92	77.48	0.34
3.0 mg/kg/day			
19B	28.8	1424	4.944
20B	38.6	1809.2	4.687
21B	33.6	1551.7	4.618
22B	30.5	1336.6	4.382
23B	31.2	1359.5	4.357
24B	24.6	1169.8	4.755
Average	31.22	1441.80	4.62
SD	4.70	218.72	0.23
30.0 mg/kg/day			
25B	40.1	1896.1	4.728
26B	28.9	1441.3	4.987
27B	29.7	1463.2	4.927
28B	29.6	1439.5	4.863
29B	33.8	1503.3	4.448
30B	34.7	1398.6	4.031
Average	32.80	1523.67	4.66
SD	4.31	185.63	0.36

120-Day IP Parameters
"B"
Organ/BW Ratio (%)

Animal	Body Weight gr	Kidney Wt. mg	KW/BW (mg)%
Control			
1B	31	340.7	1.099
2B	28.4	385.1	1.356
3B	29.6	382.5	1.292
4B	27.1	341.1	1.259
5B	32.8	384.4	1.172
6B	32.7	417.2	1.276
Average	30.27	375.17	1.24
SD	2.32	29.51	0.09
0.1 mg/kg/day			
7B	39.4	444.9	1.129
8B	31.7	423.7	1.337
9B	30.6	403.4	1.318
10B	32.1	374.6	1.167
11B	32.6	350.4	1.075
12B	23.9	304.9	1.276
Average	31.72	383.65	1.22
SD	4.95	51.25	0.11
1.0 mg/kg/day			
13B	28.1	335.8	1.195
14B	26.9	338.2	1.257
15B	33.7	360	1.068
16B	32.7	393.1	1.202
17B	30.2	344.6	1.141
18B	33.6	358.2	1.066
Average	30.57	354.98	1.15
SD	2.92	21.19	0.08
3.0 mg/kg/day			
19B	28.8	357.8	1.242
20B	38.6	420.5	1.089
21B	33.6	363	1.080
22B	30.5	342	1.121
23B	31.2	369.2	1.183
24B	24.6	326.1	1.326
Average	31.22	363.10	1.17
SD	4.70	32.17	0.10
30.0 mg/kg/day			
25B	40.1	395.8	0.987
26B	28.9	333.6	1.154
27B	29.7	389.8	1.312
28B	29.6	381.9	1.290
29B	33.8	452.9	1.340
30B	34.7	395.9	1.141
Average	32.80	391.65	1.20
SD	4.31	38.09	0.14

120-Day IP Parameters
"B"
Organ/BW Ratio (%)

Animal	Body Weight gr	Thymus Wt. mg	TW/BW (mg)%
Control			
1B	31	40.1	0.129
2B	28.4	45	0.158
3B	29.6	48.1	0.163
4B	27.1	45	0.166
5B	32.8	52.3	0.159
6B	32.7	37.1	0.113
Average	30.27	44.60	0.15
SD	2.32	5.45	0.02
0.1 mg/kg/day			
7B	39.4	41	0.104
8B	31.7	36.1	0.114
9B	30.6	42.1	0.138
10B	32.1	50.6	0.158
11B	32.6	39	0.120
12B	23.9	48.3	0.202
Average	31.72	42.85	0.14
SD	4.95	5.55	0.04
1.0 mg/kg/day			
13B	28.1	48	0.171
14B	26.9	35.8	0.133
15B	33.7	45.8	0.136
16B	32.7	40.3	0.123
17B	30.2	45.6	0.151
18B	33.6	43.9	0.131
Average	30.87	43.23	0.14
SD	2.92	4.46	0.02
3.0 mg/kg/day			
19B	28.8	43	0.149
20B	38.6	48.6	0.126
21B	33.6	40.5	0.121
22B	30.5	36.3	0.119
23B	31.2	39.4	0.126
24B	24.6	42.8	0.174
Average	31.22	41.77	0.14
SD	4.70	4.16	0.02
30.0 mg/kg/day			
25B	40.1	50.4	0.126
26B	28.9	44.7	0.155
27B	29.7	38.4	0.129
28B	29.6	51.1	0.173
29B	33.8	47.9	0.142
30B	34.7	39.8	0.115
Average	32.80	45.38	0.14
SD	4.31	5.38	0.02

120-Day IP Parameters
"B"
Organ/BW Ratio (%)

Animal	Body Weight gr	Spleen Wt. mg	SW/BW (mg)%
Control			
1B	31	82.7	0.267
2B	28.4	99.7	0.351
3B	29.6	121.7	0.411
4B	27.1	102.1	0.377
5B	32.8	102.9	0.314
6B	32.7	108.4	0.331
Average	30.27	102.92	0.34
SD	2.32	12.67	0.06
0.1 mg/kg/day			
7B	39.4	118.5	0.301
8B	31.7	99.3	0.313
9B	30.6	112.6	0.368
10B	32.1	101	0.315
11B	32.6	100.8	0.309
12B	23.9	106.4	0.445
Average	31.72	106.43	0.34
SD	4.95	7.69	0.06
1.0 mg/kg/day			
13B	28.1	149.7	0.533
14B	26.9	107.8	0.401
15B	33.7	97.6	0.290
16B	32.7	109.3	0.334
17B	30.2	94.4	0.313
18B	33.6	81.9	0.244
Average	30.87	106.78	0.35
SD	2.92	23.26	0.10
3.0 mg/kg/day			
19B	28.8	107.1	0.372
20B	38.6	111.5	0.289
21B	33.6	117.1	0.349
22B	30.5	81.5	0.267
23B	31.2	82.6	0.265
24B	24.6	85.5	0.348
Average	31.22	97.55	0.31
SD	4.70	16.09	0.05
30.0 mg/kg/day			
25B	40.1	115.6	0.288
26B	28.9	106.7	0.369
27B	29.7	107.9	0.363
28B	29.6	103.6	0.350
29B	33.8	106.8	0.316
30B	34.7	93.8	0.270
Average	32.80	105.73	0.33
SD	4.31	7.09	0.04

Date: 07/17/98

120-Day Immune Parameters
"B"
Spleen Cell Counts

Animal	Coulter Counter	Total Cellularity
Control	cells counts adjusted as per calibration	
1B	5423	8.13E+07
2B	8415	1.26E+08
3B	10458	1.57E+08
4B	8191	1.23E+08
5B	8579	1.29E+08
6B	8286	1.24E+08
Average	8225	1.23E+08
SD	1613	2.42E+07
0.1 mg/kg/day		
7B	9855	1.48E+08
8B	10029	1.50E+08
9B	8393	1.26E+08
10B	9466	1.42E+08
11B	11559	1.73E+08
12B	14086	2.11E+08
Average	10565	1.58E+08
SD	2005	3.01E+07
1.0 mg/kg/day		
13B	9076	1.36E+08
14B	9698	1.45E+08
15B	10718	1.61E+08
16B	10938	1.64E+08
17B	8344	1.25E+08
18B	9598	1.44E+08
Average	9729	1.46E+08
SD	988	1.47E+07
3.0 mg/kg/day		
19B	10389	1.56E+08
20B	10869	1.63E+08
21B	10615	1.59E+08
22B	7923	1.19E+08
23B	7389	1.11E+08
24B	8776	1.32E+08
Average	9327	1.40E+08
SD	1496	2.24E+07
30.0 mg/kg/day		
25B	10309	1.55E+08
26B	11100	1.67E+08
27B	10624	1.59E+08
28B	10468	1.57E+08
29B	10974	1.65E+08
30B	11866	1.78E+08
Average	10890	1.63E+08
SD	564	8.46E+06

Date: 07/17/98

120-Day Immune Parameters
"B"
Macrophage Cell Counts

Animal	Coulter Counter	Total Cellularity
Control	cells counts adjusted as per calibration	
1B	3827	7.65E+06
2B	4601	9.20E+06
3B	4191	8.38E+06
4B	3680	7.36E+06
5B	2836	5.67E+06
6B	2914	5.83E+06
Average	3675	7.35E+06
SD	697	1.39E+06
0.1 mg/kg/day		
7B	3581	7.16E+06
8B	3189	6.38E+06
9B	3154	6.31E+06
10B	3028	6.06E+06
11B	2513	5.03E+06
12B	3843	7.69E+06
Average	3218	6.44E+06
SD	461	9.21E+05
1.0 mg/kg/day		
13B	3181	6.36E+06
14B	2717	5.43E+06
15B	2856	5.71E+06
16B	2620	5.24E+06
17B	4172	8.34E+06
18B	3112	6.22E+06
Average	3118	6.22E+06
SD	564	1.13E+06
3.0 mg/kg/day		
19B	2484	4.97E+06
20B	2941	5.88E+06
21B	2906	5.81E+06
22B	3998	8.00E+06
23B	2318	4.64E+06
24B	3003	1.80E+07
Average	2942	7.89E+06
SD	586	5.10E+06
30.0 mg/kg/day		
25B	3207	6.41E+06
26B	3062	6.12E+06
27B	2899	5.80E+06
28B	2593	5.19E+06
29B	2431	4.86E+06
30B	3054	6.11E+06
Average	2874	5.75E+06
SD	301	6.03E+05

outlier *

~~1.62x10^6~~ avg
5.8 avg.

NO2 Prod. By Peritoneal Macrophages after Stimulation by IFN-y &/or LPS: 120Day #1

Animal	Control	NO2 (uM)	INF-y	NO2 (uM)	LPS	NO2 (uM)	IFN-y/LPS	NO2 (uM)
Control								
1B	0.046	0.248	0.056	1.367	0.096	5.843	0.201	17.592
2B	0.046	0.248	0.057	1.479	0.099	6.179	0.202	17.704
3B	0.047	0.360	0.069	2.822	0.129	9.536	0.233	21.172
4B	0.046	0.248	0.060	1.815	0.102	6.514	0.206	18.151
5B	0.045	0.137	0.074	3.381	0.130	9.647	0.292	27.774
6B	0.046	0.248	0.081	4.165	0.085	4.612	0.335	32.586
Average	0.046	0.248	0.066	2.505	0.107	7.055	0.245	22.497
SD	0.001	0.071	0.010	1.135	0.018	2.067	0.058	6.282
0.1 mg/kg/day								
7B	0.047	0.360	0.090	5.172	0.216	19.270	0.296	28.222
8B	0.044	0.025	0.063	2.151	0.115	7.969	0.268	25.089
9B	0.046	0.248	0.342	33.369	0.174	14.571	0.332	32.250
10B	0.046	0.248	0.291	27.662	0.123	8.864	0.300	28.669
11B	0.045	0.137	0.204	17.928	0.181	15.354	0.258	23.970
12B	0.044	0.025	0.156	12.557	0.153	12.221	0.290	27.550
Average	0.045	0.174	0.191	16.473	0.160	13.042	0.291	27.625
SD	0.001	0.136	0.110	12.337	0.038	4.251	0.026	2.920
1.0 mg/kg/day								
13B	0.046	0.248	0.168	13.899	0.197	17.144	0.292	27.774
14B	0.045	0.137	0.121	8.640	0.158	12.780	0.313	30.124
15B	0.045	0.137	0.108	7.186	0.147	11.550	0.243	22.291
16B	0.045	0.137	0.097	5.955	0.124	8.976	0.283	26.767
17B	0.046	0.248	0.295	28.110	0.164	13.452	0.321	31.019
18B	0.046	0.248	0.321	31.019	0.128	9.424	0.259	24.082
Average	0.046	0.193	0.185	15.802	0.153	12.221	0.285	27.010
SD	0.001	0.061	0.099	11.038	0.027	2.996	0.030	3.384
3.0 mg/kg/day								
19B	0.045	0.137	0.292	27.774	0.132	9.871	0.293	27.886
20B	0.045	0.137	0.355	34.823	0.152	12.109	0.277	26.096
21B	0.045	0.137	0.201	17.592	0.184	15.690	0.307	29.453
22B	0.045	0.137	0.121	8.640	0.109	7.298	0.229	20.725
23B	0.045	0.137	0.155	12.445	0.248	22.851	0.372	36.726
24B	0.044	0.025	0.100	6.291	0.143	11.102	0.359	35.271
Average	0.045	0.118	0.204	17.928	0.161	13.153	0.306	29.359
SD	0.000	0.046	0.101	11.263	0.049	5.492	0.053	5.943
30.0 mg/kg/day								
25B	0.049	0.584	0.264	24.641	0.116	8.081	0.289	27.438
26B	0.046	0.248	0.268	25.089	0.135	10.207	0.291	27.662
27B	0.047	0.360	0.279	26.320	0.157	12.669	0.279	26.320
28B	0.047	0.360	0.301	28.781	0.185	15.802	0.262	24.417
29B	0.047	0.360	0.305	29.229	0.203	17.816	0.379	37.509
30B	0.048	0.472	0.119	8.417	0.273	25.648	0.310	29.788
Average	0.047	0.398	0.256	23.746	0.178	15.037	0.302	28.856
SD	0.001	0.116	0.069	7.741	0.056	6.296	0.041	4.589

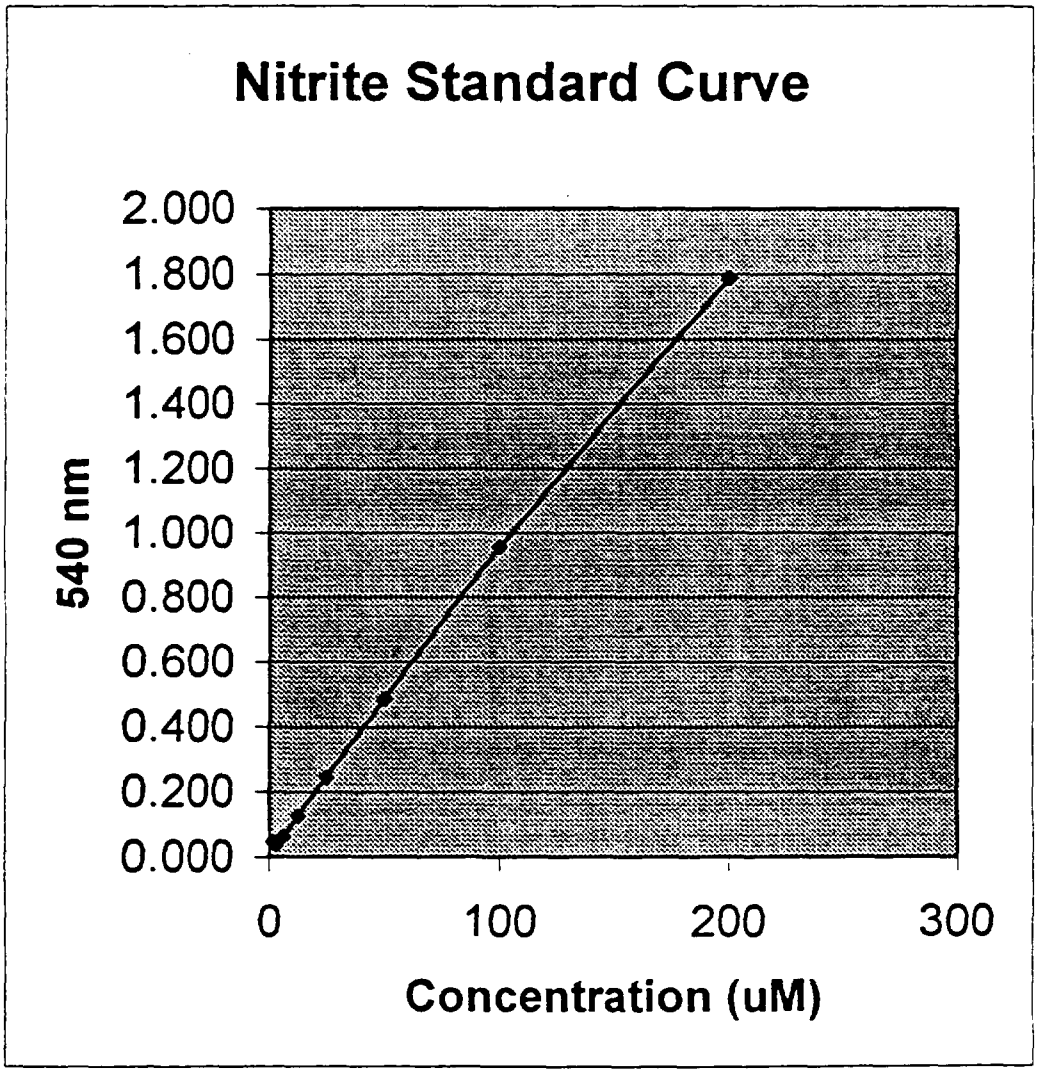
NO2 Production by Peritoneal Macrophages: Standard Curve 90 Day #1

Conc.	Standard			
uM	Rep 1	Rep 2	Rep 3	Average
200	1.841	1.818	1.839	1.789
100	1.017	0.983	1.004	0.957
50	0.526	0.524	0.533	0.484
25	0.287	0.291	***	0.245
12.5	0.175	0.17	0.172	0.128
6.25	0.108	0.109	0.11	0.065
3.125	0.078	0.083	0.091	0.040
1.56	0.091	0.091	0.09	0.047

Slope	Intercept
111.893	0.024684

Greiss Blank
0.044

Formula to calculate nitrite concentration (uM):
=(Slope * (Spec-Greiss Blank))+intercept



120-Day Immune Parameter #2 "E" Body Weights

Control	3/25/98	4/1/98	4/8/98	4/15/98	4/22/98	4/29/98	5/6/98	5/13/98	5/20/98	5/27/98	6/3/98	6/10/98	6/16/98	6/24/98	*7/23/98*	Gain in BW (90d)		Gain in BW (120D)	
1E	20.9	21.1	21.8	22.3	22.7	23.6	24.7	23.4	23.7	24.1	25.5	26.4	25.7	26.6	26.9	5.7	Average	6	Average
2E	18.8	19.8	20.2	20.8	21.7	22.6	24	23.9	25.3	26.5	27.5	28.8	29.5	31.8	29.9	13	10.950	11.1	10.100
3E	19.4	22.4	23.4	23.1	23.3	24	24	22.7	24.5	24.3	24	24.3	24.4	25	26.1	5.6	SD	6.7	SD
4E	20.2	21.2	21.4	22	23.7	24.6	25.3	24.9	26.1	28.5	28.8	29.9	30.8	32.9	29.7	12.7	5.363	9.5	4.737
5E	19.2	20.7	20.8	21.5	22.8	23.4	25.8	23.7	24.7	25.4	25.4	26	26.6	28.2	27.5	9		8.3	
6E	20.5	22.5	24.2	25.7	26.8	27.9	30.9	31	30.7	34.2	36.4	38.5	37.7	40.2	39.5	19.7		19	
0.1 mg/kg/day																			
7E	20.4	20.1	21.3	21.4	22.6	23.4	24	23.8	25.8	27.6	28.9	26.2	27.1	29.4	29.4	9	Average	9	Average
8E	20.8	20.3	21.8	22.6	23.7	24.5	24.4	24	25.7	27.1	27.3	28.7	29.4	30.8	31	10	9.100	10.2	8.817
9E	20	20.4	21.9	21.4	22.4	23.9	24.2	24.1	24.8	27	28.4	27.2	27.4	30	26.9	10	SD	6.9	SD
10E	19.5	19.9	21.7	20.8	22	23.3	22.6	22	23.6	24	24.4	25.6	26.5	28.1	28.6	8.6	1.456	9.1	1.329
11E	20.2	21	22.1	20.7	22.7	24.5	24.6	25.2	25.5	28	28.4	29.4	30.1	30.7	30.3	10.5		10.1	
12E	18.9	20.9	21.3	21	22.1	23.1	23.8	23.3	24.1	25.1	25.5	25	25	25.4	26.5	6.5		7.6	
1.0 mg/kg/day																			
13E	20.4	20.4	20.8	21.7	22.9	23.6	23.9	23.7	24.4	25.3	25.8	27.5	28.2	29.8	27.4	9.4	Average	7	Average
14E	19.7	20.5	22	22.3	22.5	23.3	24.7	24.4	25.3	26.8	26.3	27.2	27.2	28.5	27.6	8.8	8.733	7.9	7.933
15E	20.2	21.9	23.2	22.4	23.2	24.1	24.9	24.7	25	27.3	26.7	27.8	27.9	28.8	28.6	8.6	SD	8.4	SD
16E	21.5	22.7	24.2	24.2	24	25.1	25.4	26.3	26.7	27.8	27.4	28.2	28.6	30.6	30	9.1	1.436	8.5	0.927
17E	19.9	19.9	21	21	22.4	23.4	24	23.1	24.9	27	27.7	28.7	28.6	30.3	29	10.4		9.1	
18E	19.5	20.4	21	21	21.6	22.9	23.2	22.7	23.6	25.9	24.4	26.1	26.4	25.6	26.2	6.1		6.7	
3.0 mg/kg/day																			
19E	19.4	20.7	21.6	21.7	22.3	24.1	24.6	25	26.4	28	29.2	30.3	30.8	33.2	28.7	13.8	Average	9.3	Average
20E	20.1	20.8	22.9	21.3	22.6	23.4	24.8	23.7	24.4	27.2	28.8	26.5	27.8	29.1	30.5	9	9.200	10.4	8.150
21E	19.8	20.4	21.9	21.6	22.7	23.5	23.6	23.8	24.1	25.7	25.2	25.8	25.5	26.4	25.5	6.6	SD	5.7	SD
22E	21.7	23.1	24.4	23	24.3	25	25.3	25.1	25.3	28.2	28.4	27.1	27.2	28.4	28.6	6.7	2.630	6.9	1.789
23E	20.7	20.9	22.4	22.7	23.4	24.5	25.2	24.6	26.1	27.6	28.9	29.4	30.2	30	28	9.3		7.3	
24E	20.7	21.4	21.7	22.4	23.5	23.9	24.6	25.3	25.8	26.6	27.1	26.8	27.8	30.5	30	9.8		9.3	
30.0 mg/kg/day																			
25E	20.1	20.9	21	21.3	22.9	24	24.6	23.4	24.9	26	26.9	26.8	27.6	30.4	28.7	10.3	Average	8.6	Average
26E	20.7	21.5	22.2	22.5	24.7	25.4	25.2	24.5	25.5	26.6	26.7	27.6	27.3	28.2	30	7.5	10.517	9.3	10.417
27E	21.3	21.8	22.3	23.6	24.1	24.7	26.2	26.4	26	27.4	27.6	28	27.8	29.7	28.5	8.4	SD	7.2	SD
28E	19.4	20.9	21.9	22.6	23.4	24.3	25.6	23.9	24.9	26.9	27	28	28.8	30.1	30	10.7	2.742	10.6	3.076
29E	21	21.4	22.6	22.4	24.3	25.9	25.8	24.1	25.3	28	29.2	28.5	29.9	31.8	31.7	10.8		10.7	
30E	20.8	21	22.1	23.6	23.3	24	25.2	25.1	26.1	27.4	32.1	31.5	32.9	36.2	36.9	15.4		16.1	

120-Day IP Parameters #2
"E"
Organ Weights

Animal	Body Weight gr	Thymus Wt. mg	Spleen Wt. mg	Kidney Wt. mg	Liver Wt. mg
Control					
1E	26.9	39.4	88.6	345.8	1230.5
2E	29.9	47.7	98.3	347.7	1418.7
3E	26.1	36.8	85.8	320.7	1149.5
4E	29.7	44.2	86.6	357.8	1326.2
5E	27.5	50.4	106.9	348.1	1389.7
6E	39.5	47.3	89.9	380.8	1583.3
Average	29.91	44.30	92.68	350.15	1349.65
SD	4.93	5.25	8.28	19.46	152.16
0.1 mg/kg/day					
7E	29.4	51.9	90.2	359.5	1432.6
8E	31	47.7	95.7	360.1	1438.1
9E	26.9	39.9	82.9	355	1253.4
10E	28.6	36.3	82.7	332.3	1274.8
11E	30.3	36.2	89.7	357.2	1188.2
12E	26.5	44.9	88.1	343.5	1388.5
Average	28.78	42.82	88.22	351.27	1329.27
SD	1.81	6.41	4.92	11.09	104.55
1.0 mg/kg/day					
13E	27.4	37.5	86.3	342.6	1244.7
14E	27.6	33.4	76	304.7	1161
15E	28.6	42.2	85.5	345.9	1377.6
16E	30	39.3	99.2	374.3	1480.1
17E	29	43.5	90.8	367.1	1359.9
18E	26.2	34.6	89.3	377.2	1370.6
Average	28.13	38.82	87.85	351.97	1332.32
SD	1.34	4.04	7.59	27.29	112.38
3.0 mg/kg/day					
19E	28.7	34	81.4	365.2	1193.6
20E	30.5	36.9	120.3	379.5	1552.7
21E	25.5	37.6	92.6	363.6	1323.8
22E	28.6	46.5	90.9	344.5	1287.1
23E	28	39	100.8	374.9	1312.6
24E	30	43.3	102.3	345	1368
Average	28.55	39.55	98.05	362.12	1339.63
SD	1.76	4.57	13.26	14.70	119.39
30.0 mg/kg/day					
25E	28.7	45.8	89.8	355.2	1310.4
26E	30	45.7	115.9	383.9	1587.4
27E	28.5	42.8	96.9	382.7	1290
28E	30	49.9	94	340.2	1311.5
29E	31.7	42.6	93	337.8	1292.7
30E	36.9	54.6	102	385	1586.8
Average	30.97	46.90	98.60	364.13	1396.47
SD	3.13	4.61	9.42	22.44	147.93

120-Day IP Parameters
"E"
Organ/BW Ratio (%)

Animal	Body Weight gr	Kidney Wt. mg	KW/BW (mg)%
Control			
1E	26.9	345.8	1.286
2E	29.9	347.7	1.163
3E	26.1	320.7	1.229
4E	29.7	357.8	1.205
5E	27.5	348.1	1.266
6E	39.5	380.8	0.964
Average	29.93	350.15	1.19
SD	4.93	19.45	0.12
0.1 mg/kg/day			
7E	29.4	359.5	1.223
8E	31	360.1	1.162
9E	26.9	355	1.320
10E	28.6	332.3	1.162
11E	30.3	357.2	1.179
12E	26.5	343.5	1.296
Average	28.78	351.27	1.22
SD	1.81	11.89	0.07
1.0 mg/kg/day			
13E	27.4	342.6	1.250
14E	27.6	304.7	1.104
15E	28.6	345.9	1.209
16E	30	374.3	1.248
17E	29	367.1	1.266
18E	26.2	377.2	1.440
Average	28.13	351.97	1.26
SD	1.34	27.29	0.11
3.0 mg/kg/day			
19E	28.7	365.2	1.272
20E	30.5	379.5	1.244
21E	25.5	363.6	1.426
22E	28.6	344.5	1.205
23E	28	374.9	1.339
24E	30	345	1.150
Average	28.55	362.12	1.27
SD	1.76	14.70	0.10
30.0 mg/kg/day			
25E	28.7	355.2	1.238
26E	30	383.9	1.280
27E	28.5	382.7	1.343
28E	30	340.2	1.134
29E	31.7	337.8	1.066
30E	36.9	385	1.043
Average	30.97	364.13	1.18
SD	3.13	22.44	0.12

120-Day IP Parameters
"E"
Organ/BW Ratio (%)

Animal	Body Weight gr	Liver Wt. mg	LW/BW (mg)%
Control			
1E	26.9	1230.5	4.574
2E	29.9	1418.7	4.745
3E	26.1	1149.5	4.404
4E	29.7	1326.2	4.465
5E	27.5	1389.7	5.053
6E	39.5	1583.3	4.008
Average	29.93	1349.65	4.54
SD	4.93	152.16	0.35
0.1 mg/kg/day			
7E	29.4	1432.6	4.873
8E	31	1438.1	4.639
9E	26.9	1253.4	4.659
10E	28.6	1274.8	4.457
11E	30.3	1188.2	3.921
12E	26.5	1388.5	5.240
Average	28.78	1329.27	4.63
SD	1.81	104.55	0.44
1.0 mg/kg/day			
13E	27.4	1244.7	4.543
14E	27.6	1161	4.207
15E	28.6	1377.6	4.817
16E	30	1480.1	4.934
17E	29	1359.9	4.689
18E	26.2	1370.6	5.231
Average	28.13	1332.32	4.74
SD	1.34	112.36	0.35
3.0 mg/kg/day			
19E	28.7	1193.6	4.159
20E	30.5	1552.7	5.091
21E	25.5	1323.8	5.191
22E	28.6	1287.1	4.500
23E	28	1312.6	4.688
24E	30	1368	4.560
Average	28.55	1339.63	4.70
SD	1.76	119.39	0.39
30.0 mg/kg/day			
25E	28.7	1310.4	4.566
26E	30	1587.4	5.291
27E	28.5	1290	4.526
28E	30	1311.5	4.372
29E	31.7	1292.7	4.078
30E	36.9	1586.8	4.300
Average	30.97	1396.47	4.52
SD	3.13	147.93	0.42

120-Day IP Parameters
"E"
Organ/BW Ratio (%)

Animal	Body Weight gr	Thymus Wt. mg	TW/BW (mg)%
Control			
1E	26.9	39.4	0.146
2E	29.9	47.7	0.160
3E	26.1	36.8	0.141
4E	29.7	44.2	0.149
5E	27.5	50.4	0.183
6E	39.5	47.3	0.120
Average	29.93	44.30	0.15
SD	4.93	5.25	0.02
0.1 mg/kg/day			
7E	29.4	51.9	0.177
8E	31	47.7	0.154
9E	26.9	39.9	0.148
10E	28.6	36.3	0.127
11E	30.3	36.2	0.119
12E	26.5	44.9	0.169
Average	28.78	42.82	0.15
SD	1.81	6.41	0.02
1.0 mg/kg/day			
13E	27.4	37.5	0.137
14E	27.6	33.4	0.121
15E	28.6	42.2	0.148
16E	30	39.3	0.131
17E	29	43.5	0.150
18E	26.2	34.6	0.132
Average	28.13	38.42	0.14
SD	1.34	4.04	0.01
3.0 mg/kg/day			
19E	28.7	34	0.118
20E	30.5	36.9	0.121
21E	25.5	37.6	0.147
22E	28.6	46.5	0.163
23E	28	39	0.139
24E	30	43.3	0.144
Average	28.55	39.55	0.14
SD	1.76	4.57	0.02
30.0 mg/kg/day			
25E	28.7	45.8	0.160
26E	30	45.7	0.152
27E	28.5	42.8	0.150
28E	30	49.9	0.166
29E	31.7	42.6	0.134
30E	36.9	54.6	0.148
Average	30.97	46.90	0.15
SD	3.13	4.61	0.01

120-Day IP Parameters
"E"
Organ/BW Ratio (%)

Animal	Body Weight gr	Spleen Wt. mg	SW/BW (mg)%
Control			
1E	26.9	88.6	0.329
2E	29.9	98.3	0.329
3E	26.1	85.8	0.329
4E	29.7	86.6	0.292
5E	27.5	106.9	0.389
6E	39.5	89.9	0.228
Average	29.93	92.68	0.32
SD	4.93	8.28	0.05
0.1 mg/kg/day			
7E	29.4	90.2	0.307
8E	31	95.7	0.309
9E	26.9	82.9	0.308
10E	28.6	82.7	0.289
11E	30.3	89.7	0.296
12E	26.5	88.1	0.332
Average	28.78	88.22	0.31
SD	1.81	4.92	0.01
1.0 mg/kg/day			
13E	27.4	86.3	0.315
14E	27.6	76	0.275
15E	28.6	85.5	0.299
16E	30	99.2	0.331
17E	29	90.8	0.313
18E	26.2	89.3	0.341
Average	28.13	87.85	0.31
SD	1.34	7.59	0.02
3.0 mg/kg/day			
19E	28.7	81.4	0.284
20E	30.5	120.3	0.394
21E	25.5	92.6	0.363
22E	28.6	90.9	0.318
23E	28	100.8	0.360
24E	30	102.3	0.341
Average	28.55	93.05	0.34
SD	1.76	13.26	0.04
30.0 mg/kg/day			
25E	28.7	89.8	0.313
26E	30	115.9	0.386
27E	28.5	96.9	0.340
28E	30	94	0.313
29E	31.7	93	0.293
30E	36.9	102	0.276
Average	30.97	98.60	0.32
SD	3.13	9.42	0.04

Date: 07/23/98

120-Day Immune Parameters
"E"
Spleen Cell Counts

Animal	Coulter Counter	Total Cellularity
Control		
1E	7223	1.08E+08
2E	9245	1.39E+08
3E	7708	1.16E+08
4E	8180	1.23E+08
5E	10218	1.53E+08
6E	7662	1.15E+08
Average	8373	1.26E+08
SD	1138	1.71E+07
0.1 mg/kg/day		
7E	6726	1.01E+08
8E	7610	1.14E+08
9E	7184	1.08E+08
10E	7096	1.06E+08
11E	7730	1.16E+08
12E	7493	1.12E+08
Average	7307	1.10E+08
SD	375	5.62E+06
1.0 mg/kg/day		
13E	7054	1.06E+08
14E	5735	8.60E+07
15E	8485	1.27E+08
16E	8990	1.35E+08
17E	8612	1.29E+08
18E	5284	7.93E+07
Average	7360	1.10E+08
SD	1583	2.37E+07
3.0 mg/kg/day		
19E	6036	9.05E+07
20E	9610	1.44E+08
21E	9841	1.48E+08
22E	9002	1.35E+08
23E	9488	1.42E+08
24E	8540	1.28E+08
Average	8753	1.31E+08
SD	1411	2.12E+07
30.0 mg/kg/day		
25E	7098	1.06E+08
26E	9134	1.37E+08
27E	8557	1.28E+08
28E	7854	1.18E+08
29E	7713	1.16E+08
30E	7435	1.12E+08
Average	7965	1.19E+08
SD	752	1.13E+07

Date: 07/23/98

120-Day Immune Parameters
"E"
Macrophage Cell Counts

Animal	Coulter Counter	Total Cellularity
Control		
1E	1638	8.19E+06
2E	1205	6.03E+06
3E	1566	7.83E+06
4E	2305	1.15E+07
5E	2087	1.04E+07
6E	2548	1.27E+07
Average	1892	9.46E+06
SD	506	2.53E+06
0.1 mg/kg/day		
7E	1365	6.83E+06
8E	2560	1.28E+07
9E	1510	7.55E+06
10E	2082	1.04E+07
11E	1618	8.09E+06
12E	1869	9.35E+06
Average	1834	9.17E+06
SD	438	2.19E+06
1.0 mg/kg/day		
13E	1396	6.98E+06
14E	1859	9.30E+06
15E	1817	9.09E+06
16E	1891	9.46E+06
17E	2525	1.26E+07
18E	2116	1.06E+07
Average	1934	9.67E+06
SD	372	1.86E+06
3.0 mg/kg/day		
19E	1536	7.68E+06
20E	2181	1.09E+07
21E	1372	6.86E+06
22E	2422	1.21E+07
23E	2244	1.12E+07
24E	1737	8.69E+06
Average	1915	9.58E+06
SD	426	2.13E+06
30.0 mg/kg/day		
25E	1879	9.40E+06
26E	2136	1.07E+07
27E	2602	1.30E+07
28E	1565	7.83E+06
29E	1671	8.36E+06
30E	1466	7.33E+06
Average	1887	9.43E+06
SD	424	2.12E+06

NO2 Prod. By Peritoneal Macrophages after Stimulation by IFN-y &/or LPS: 120Day #2

Animal	Control	NO2 (uM)	INF-y	NO2 (uM)	LPS	NO2 (uM)	IFN-y/LPS	NO2 (uM)
Control								
1B	0.046	0.986	0.054	1.787	0.098	6.196	0.170	13.411
2B	0.044	0.785	0.072	3.591	0.155	11.908	0.199	16.317
3B	0.047	1.086	0.069	3.290	0.121	8.501	0.242	20.626
4B	0.046	0.986	0.051	1.487	0.087	5.094	0.172	13.611
5B	0.046	0.986	0.065	2.890	0.126	9.002	0.212	17.620
6B	0.045	0.885	0.048	1.186	0.071	3.491	0.158	12.209
Average	0.046	0.952	0.060	2.372	0.110	7.365	0.192	15.632
SD	0.001	0.103	0.010	1.013	0.030	3.038	0.032	3.165
0.1 mg/kg/day								
7B	0.046	0.986	0.064	2.789	0.118	8.200	0.225	18.922
8B	0.045	0.885	0.052	1.587	0.074	3.791	0.142	10.605
9B	0.048	1.186	0.192	15.616	0.093	5.695	0.226	19.023
10B	0.047	1.086	0.119	8.301	0.098	6.196	0.156	12.008
11B	0.047	1.086	0.177	14.112	0.121	8.501	0.163	12.710
12B	0.046	0.986	0.139	10.305	0.106	6.998	0.188	15.215
Average	0.047	1.036	0.124	8.785	0.102	6.564	0.183	14.747
SD	0.001	0.105	0.057	5.751	0.017	1.743	0.038	3.598
1.0 mg/kg/day								
13B	0.047	1.086	0.231	19.524	0.170	13.411	0.201	16.517
14B	0.047	1.086	0.136	10.004	0.125	8.902	0.199	16.317
15B	0.046	0.986	0.098	6.196	0.081	4.493	0.181	14.513
16B	0.045	0.885	0.082	4.593	0.090	5.395	0.191	15.515
17B	0.047	1.086	0.119	8.301	0.073	3.691	0.128	9.202
18B	0.045	0.885	0.208	17.219	0.087	5.094	0.241	20.526
Average	0.046	1.002	0.146	10.973	0.104	6.831	0.190	15.432
SD	0.001	0.099	0.060	6.062	0.037	3.688	0.037	3.676
3.0 mg/kg/day								
19B	0.045	0.885	0.253	21.728	0.166	13.010	0.227	19.123
20B	0.045	0.885	0.162	12.609	0.110	7.399	0.185	14.914
21B	0.045	0.885	0.097	6.096	0.061	2.489	0.130	9.403
22B	0.045	0.885	0.141	10.505	0.122	8.601	0.166	13.010
23B	0.045	0.885	0.119	8.301	0.086	4.994	0.155	11.908
24B	0.047	1.086	0.124	8.802	0.126	9.002	0.220	18.421
Average	0.045	0.919	0.149	11.340	0.112	7.582	0.181	14.463
SD	0.001	0.082	0.055	5.539	0.036	3.611	0.038	3.790
30.0 mg/kg/day								
25B	0.048	1.186	0.208	17.219	0.121	8.501	0.257	22.129
26B	0.047	1.086	0.196	16.016	0.078	4.192	0.214	17.820
27B	0.049	1.286	0.116	8.000	0.077	4.092	0.166	13.010
28B	0.048	1.186	0.128	9.202	0.112	7.599	0.176	14.012
29B	0.049	1.286	0.126	9.002	0.128	9.202	0.175	13.912
30B	0.048	1.186	0.076	3.992	0.101	6.497	0.159	12.309
Average	0.048	1.203	0.142	10.572	0.103	6.681	0.191	15.532
SD	0.001	0.075	0.051	5.061	0.022	2.165	0.037	3.753
Dex. Positive Cont								
Dex1	0.049	1.286	0.087	5.094	0.064	2.789	0.247	21.127
Dex2	0.047	1.086	0.068	3.190	0.079	4.292	0.274	23.832
Average	0.048	1.186	0.078	4.142	0.072	3.541	0.261	22.480
SD	0.001	0.142	0.013	1.346	0.011	1.063	0.019	1.913

max	12570	12346	11027	11855
11942	11512	12026	11459	12744
min	960	930	921	943
930	876	932	982	897

avg max release = 11942
avg spontaneous release = 930

July 23-98 " "
120 day NK assay #2 E

LU/10e7/group

animal	E:T ratio (X)	CPM Raw	avg CPM	pec. Lysi	ln(Y/(100	mean Y*	exp	LU/10^7 cells	
1	100	1927	2262	12.1	-1.983	-2.492	0.745	15.5	control 18.4
		2478							std dev 5.8
		2382							
	50	1919	1855	8.4	-2.390				
		1867							
		1778							
	25	1370	1403	4.3	-3.104				
		1442							
		1397							
	10	1140	1194	2.4	.				
		1161							
		1280							
2	100	1837	1872	8.6	-2.369	-2.680	0.617	12.8	
		2046							
		1733							
	50	1675	1663	6.7	-2.641				
		1506							
		1808							
	25	1425	1438	4.6	-3.029				
		1493							
		1396							
	10	1121	1134	1.9	.				
		1129							
		1153							
3	100	2584	2616	15.3	-1.711	-1.995	1.224	25.5	
		2449							
		2814							
	50	2491	2340	12.8	-1.919				
		2314							
		2214							
	25	2054	1883	8.7	-2.357				
		1833							
		1762							
	10	1276	1325	3.6	.				
		1359							
		1339							
4	100	2300	2472	14.0	-1.815	-2.437	0.786	16.4	
		2929							
		2188							
	50	1808	1752	7.5	-2.517				
		1796							
		1653							
	25	1404	1462	4.8	-2.981				
		1466							
		1516							
	10	1233	1237	2.8	.				
		1266							
		1212							
5	100	2859	2997	18.8	-1.465	-1.979	1.244	25.9	
		2916							
		3217							
	50	2472	2230	11.8	-2.011				
		2374							
		1845							
	25	1765	1796	7.9	-2.461				
		1769							
		1854							
	10	1267	1338	3.7	.				
		1489							
		1258							
6	100	2179	2079	10.4	-2.150	-2.568	0.690	14.4	
		2232							
		1825							
	50	1763	1873	8.6	-2.368				

		1965							
		1891							
	25	1422	1368	4.0	-3.185				
		1327							
		1354							
	10	1022	1139	1.9					
		1232							
		1164							
7	100	2879	3094	19.6	-1.408	-1.880	1.373	28.6	0.1 mg/kg 24.1
		3103							std dev 6.5
		3299							
	50	2559	2516	14.4	-1.782				
		2384							
		2606							
	25	1771	1805	7.9	-2.450				
		1958							
		1685							
	10	1319	1414	4.4					
		1534							
		1388							
8	100	2496	2534	14.6	-1.769	-2.481	0.753	15.7	
		2700							
		2406							
	50	1999	1835	8.2	-2.413				
		1699							
		1807							
	25	1501	1337	3.7	-3.260				
		1192							
		1318							
	10	1142	1204	2.5					
		1173							
		1298							
9	100	2310	2408	13.4	-1.864	-2.239	0.959	19.9	
		2359							
		2554							
	50	1858	1849	8.3	-2.396				
		1875							
		1814							
	25	1773	1799	7.9	-2.458				
		1995							
		1628							
	10	1276	1258	3.0					
		1313							
		1186							
10	100	2260	2645	15.6	-1.691	-1.933	1.303	27.1	
		2823							
		2851							
	50	2587	2430	13.6	-1.847				
		2477							
		2225							
	25	2071	1970	9.4	-2.261				
		1840							
		1999							
	10	1472	1579	5.9					
		1606							
		1659							
11	100	2314	2763	16.6	-1.611	-1.838	1.432	29.8	
		2809							
		3103							
	50	2826	2650	15.6	-1.687				
		2711							
		2588							
	25	2048	2013	9.8	-2.216				
		2000							
		1991							
	10	1492	1501	5.2					
		1540							
		1470							
12	100	2064	2381	13.2	-1.886	-2.072	1.134	23.6	
		2438							
		2640							
	50	2291	2273	12.2	-1.974				

		2365							
		2163							
	25	1816	1884	8.7	-2.355				
		2043							
		1793							
	10	1415	1380	4.1					
		1342							
		1384							
13	100	1964	2199	11.5	-2.038	-2.435	0.788	16.4	1.0 mg/kg 22.6
		2186							std dev 7.0
		2626							
	50	2021	1844	8.3	-2.402				
		2103							
		1855							
	25	1575	1524	5.4	-2.865				
		1622							
		1622							
	10	1327	1240	2.8					
		1243							
		1237							
14	100	2109	2314	12.6	-1.940	-2.178	1.020	21.2	
		2152							
		2680							
	50	2050	2065	10.3	-2.164				
		2153							
		1991							
	25	1829	1821	8.1	-2.430				
		1716							
		1919							
	10	1403	1466	4.9					
		1497							
		1498							
15	100	1878	2161	11.2	-2.073	-2.392	0.823	17.1	
		2269							
		2335							
	50	1997	1883	8.7	-2.356				
		1799							
		1854							
	25	1591	1593	6.0	-2.747				
		1496							
		1693							
	10	1347	1357	3.9					
		1361							
		1362							
16	100	2431	2450	13.8	-1.831	-2.224	0.974	20.2	
		2605							
		2315							
	50	2232	2031	10.0	-2.198				
		2040							
		1820							
	25	1610	1662	6.6	-2.643				
		1733							
		1642							
	10	1359	1419	4.4					
		1474							
		1423							
17	100	2557	2742	16.5	-1.625	-1.993	1.226	25.5	
		2878							
		2790							
	50	2144	2253	12.0	-1.991				
		2219							
		2397							
	25	1903	1876	8.6	-2.364				
		1913							
		1813							
	10	1393	1411	4.4					
		1419							
		1422							
18	100	2364	2975	18.6	-1.478	-1.669	1.695	35.3	
		3252							
		3308							
	50	2691	2779	16.8	-1.600				

		2805							
		2842							
	25	2399	2326	12.7	-1.930				
		2308							
		2272							
	10	1792	1801	7.9					
		1814							
		1797							
19	100	2852	3084	19.6	-1.414	-1.728	1.599	33.3	3.0 mg/kg 25.4
		3153							std dev 4.2
		3247							
	50	2527	2632	15.5	-1.699				
		2737							
		2436							
	25	2162	2164	11.2	-2.070				
		1893							
		2099							
	10	1537	1753	7.5					
		1624							
		1635							
20	100	2471	2273	12.2	-1.974	-2.048	1.161	24.1	
		2713							
		2912							
	50	2123	2412	13.5	-1.861				
		2202							
		2286							
	25	1738	1925	9.0	-2.309				
		1751							
		1750							
	10	1352	1545	5.6					
		1533							
		1213							
21	100	2396	2050	10.2	-2.178	-2.156	1.042	21.7	
		2541							
		2755							
	50	1979	2274	12.2	-1.973				
		2088							
		2060							
	25	1896	1919	9.0	-2.316				
		1802							
		1739							
	10	1394	1527	5.4					
		1449							
		1194							
22	100	2588	2203	11.6	-2.035	-1.940	1.294	26.9	
		2827							
		3162							
	50	2314	2571	14.9	-1.742				
		2237							
		2511							
	25	2056	2195	11.5	-2.042				
		2017							
		2150							
	10	1378	1687	6.9					
		1533							
		1387							
23	100	2495	2131	10.9	-2.100	-2.088	1.116	23.2	
		2511							
		2861							
	50	2176	2415	13.5	-1.859				
		2207							
		2166							
	25	1840	1930	9.1	-2.303				
		1785							
		1930							
	10	1405	1580	5.9					
		1406							
		1319							
24	100	2641	2139	11.0	-2.093	-2.091	1.112	23.1	
		2458							
		2780							
	50	2174	2333	12.7	-1.924				

		2046							
		2165							
	25	1881	1975	9.5	-2.256				
		1878							
		1861							
	10	1374	1580	5.9					
		1506							
		1273							
25	100	2711	2457	13.9	-1.826	-1.755	1.555	32.4	30 mg/kg 34.3
		3387							std dev. 5.1
		3403							
	50	2571	2867	17.6	-1.544				
		2628							
		2590							
	25	2109	2368	13.1	-1.896				
		2405							
		2001							
	10	1419	1649	6.5					
		1528							
		1488							
26	100	2491	2412	13.5	-1.861	-1.811	1.472	30.6	
		3256							
		3433							
	50	2380	2781	16.8	-1.599				
		2529							
		2541							
	25	2274	2277	12.2	-1.971				
		2015							
		1999							
	10	1512	1695	6.9					
		1575							
		1821							

27	100	3339	3011	18.9	-1.456	-1.560	1.892	39.3		
		3874								
		3804								
	50	2959	3201	20.6	-1.348					
		2841								
		2856								
	25	2171	2394	13.3	-1.875					
		2154								
		1997								
	10	1557	1720	7.2						
		1606								
		1719								
28	100	3807	3153	20.2	-1.375	-1.492	2.024	42.1		
		3933								
		3794								
	50	2946	3233	20.9	-1.330					
		2959								
		3054								
	25	2241	2531	14.5	-1.771					
		2299								
		2129								
	10	1716	1830	8.2						
		1644								
		1685								
29	100	3142	2758	16.6	-1.614	-1.809	1.474	30.7		
		3447								
		3204								
	50	2506	2708	16.1	-1.647					
		2415								
		2398								
	25	1923	2062	10.3	-2.167					
		1865								
		1935								
	10	1508	1663	6.7						
		1545								
		1462								
30	100	2832	2490	14.2	-1.802	-1.805	1.480	30.8		
		3176								
		3301								
	50	2601	2827	17.2	-1.570					
		2578								
		2669								
	25	1942	2193	11.5	-2.044					
		1967								
		1973								
	10	1606	1559	5.7						
		1590								
		1360								
dex#1	100	1264	1272	3.1	-3.442	-3.910	18.803	4.3	pos control	4.1
pos control		1294							std dev	0.2
40.0 mg/kg dex 3d		1273								
	50	1167	1167	2.1	-3.819					
		1154								
		1153								
	25	1086	1055	1.1	-4.470					
		1009								
		1029								
	10	996	1054	1.1						
		943								
		1020								
dex #2	100	1281	1185	2.3	-3.743	-3.985	18.803	4.0		
pos control		1240								
40.0 mg/kg dex 3d		1232								
	50	1151	1152	2.0	-3.882					
		1194								
		1110								
	25	1075	1073	1.3	-4.331					
		1042								
		1055								
	10	1083	1037	1.0						
		993								
		1017								

avg max release = 15106
avg spontaneous release = 1094

120 day NK assay #1 "B"

animal	E:T ratio (X)	CPM Raw	avg CPM	pec. Lysis	ln(Y/(100	mean Y*	exp	LU/10^7 cells	LU/10e7/group
1	100	6670	4806	26.5	-1.021	-0.958	3.454	71.8	control 78.5
		2941							std dev 6.6
	50	5160	5160	29.0	-0.895				
	25								
	10								
2	100	9025	6412	38.0	-0.492	-0.748	4.258	88.6	
		3799							
	50	3398	4848	26.8	-1.005				
		6297							
	25								
	10								
3	100	6816	5075	28.4	-0.924	-0.887	3.709	77.1	
		5137							
		3271							
	50	4887	5293	30.0	-0.849				
		5465							
		5527							
	25	8712	8712	54.4					
	10								
4	100	6013	6013	35.1	-0.614	-0.831	3.921	81.6	
	50	4118	4734	26.0	-1.047				
		5350							
	25								
	10								
5	100	6138	7641	46.7	-0.131	-0.781	4.121	85.7	
		7936							
		8848							
	50	4552	4650	25.4	-1.079				
		4616							
		4781							
	25	3401	4506	24.3	-1.134				
		5610							
	10	4476	4990	27.8					
		5504							
6	100	4641	7197	43.6	-0.259	-1.040	3.181	66.2	
		9753							
	50	5031	5165	29.1	-0.893				
		5511							
		4953							
	25	3430	2812	12.3	-1.968				
		2193							
	10	3809	3809	19.4					

plate dropped falsely elevating #1-8 samples

7	100	3955	4833	26.7	-1.011	-1.142	2.874	59.8	0.1 mg/kg 31.4
		5711							std dev 25.4
	50	3934	4163	21.9	-1.271				
		4247							
		4309							
	25	4909	4482	24.2	-1.143				
		6328							
		2208							
	10	3535	3535	17.4					
8	100	5355	7882	48.4	-0.062	-1.011	3.275	68.1	
		10408							
	50	6024	3874	19.8	-1.396				
		2453							
		3144							
	25	2862	3499	17.2	-1.574				
		4136							
	10								
9	100	2935	5107	28.6	-0.913	-2.346	0.862	17.9	
		2978							
		9408							
	50	2111	2094	7.1	-2.566				
		1989							
		2183							
	25	1498	1481	2.8	-3.560				
		1483							
		1463							
	10	1060	1116	0.2					
		1064							
		1225							
10	100	2663	5740	33.2	-0.701	-2.472	0.760	15.8	
		2732							
		11825							
	50	1977	1899	5.7	-2.797				
		1877							
		1844							
	25	1436	1367	2.0	-3.917				
		1336							
		1330							
	10	1073	1061	-0.2					
		1100							
		1011							
11	100	2360	4708	25.8	-1.057	-2.654	0.633	13.2	
		2351							
		12294							
	50	1826	1779	4.9	-2.969				
		1731							
		1826							
	25	1400	1362	1.9	-3.937				
		1387							
		1299							
	10	994	1001	-0.7					
		1030							
		980							
12	100	2559	5133	28.8	-0.904	-2.637	0.644	13.4	
		2401							
		10439							
	50	1994	1867	5.5	-2.841				
		1885							
		1721							
	25	1317	1308	1.5	-4.166				
		1288							
		1319							
	10	1009	1053	-0.3					
		1035							
		1115							

Avg of 4 in this group not dropped = 15.08 LU/10^7 splenocs

13	100	2414	2822	12.3	-1.961	-3.036	0.432	9.0	1.0 mg/kg	8.6
		2427							std dev	4.0
		4545								
	50	1903	1853	5.4	-2.860					
		2043								
		1963								
	25	1554	1284	1.4	-4.289					
		1455								
		1358								
	10	1038	1112	0.1						
		1090								
		1133								
14	100	3098	2562	10.5	-2.146	-3.358	0.313	6.5		
		2323								
		2264								
	50	1608	1584	3.5	-3.318					
		1586								
		1557								
	25	1227	1232	1.0	-4.611					
		1214								
		1255								
	10	955	966	-0.9						
		1005								
		939								
15	100	2580	2201	7.9	-2.456	-3.687	0.225	4.7		
		1927								
		2096								
	50	1460	1552	3.3	-3.388					
		1553								
		1642								
	25	1205	1170	0.5	-5.216					
		1142								
		1162								
	10	980	912	-1.3						
		899								
		856								
16	100	1674	1827	5.2	-2.897	-3.455	0.284	5.9		
		1989								
		1818								
	50	1657	1608	3.7	-3.267					
		1526								
		1642								
	25	1364	1301	1.5	-4.200					
		1263								
		1276								
	10	1029	994	-0.7						
		982								
		970								
17	100	290	2230	8.1	-2.428	-2.475	0.758	15.8		
		3712								
		2687								
	50	2164	2137	7.4	-2.521					
		2194								
		2052								
	25	1253	2182	7.8	-2.475					
		3472								
		1821								
	10	1189	1210	0.8						
		1164								
		1277								
18	100	3125	3882	19.9	-1.393	-2.975	0.459	9.6		
		5219								
		3303								
	50	2216	2137	7.4	-2.520					
		2073								
		2123								
	25	1603	1475	2.7	-3.576					
		1436								
		1387								
	10	1175	1262	1.2	-4.412					
		1290								
		1321								

19	100	4318	5280	29.9	-0.853	-2.451	0.776	16.1	3.0 mg/kg	16.4
		7405							std dev	4.6
		4118								
	50	2792	2408	9.4	-2.268					
		2024								
		2043								
	25	1493	1687	4.2	-3.119					
		1525								
		1904								
	10	1251	1481	2.8	-3.562					
		1287								
		1568								
20	100	4859	4179	22.0	-1.265	-2.899	0.496	10.3		
		6111								
		3229								
	50	2957	2702	11.5	-2.043					
		1920								
		1952								
	25	1395	1565	3.4	-3.358					
		1349								
		1493								
	10	1030	1195	0.7	-4.929					
		1061								
		1292								
21	100	4056	3248	15.4	-1.705	-2.592	0.674	14.0		
		4397								
		2554								
	50	1784	2108	7.2	-2.551					
		1986								
		1782								
	25	1346	1497	2.9	-3.520					
		1363								
		1338								
	10	939	1112	0.1						
		1059								
		1017								
22	100	4071	2841	12.5	-1.949	-2.404	0.813	16.9		
		3436								
		2885								
	50	2197	2420	9.5	-2.258					
		2179								
		2188								
	25	1474	1755	4.7	-3.005					
		1604								
		1532								
	10	1147	1262	1.2						
		1106								
		1251								
23	100	5350	3481	17.0	-1.583	-2.052	1.156	24.0		
		3842								
		3733								
	50	2731	2980	13.5	-1.861					
		2476								
		2361								
	25	1782	1966	6.2	-2.712					
		1756								
		1789								
	10	1210	1465	2.6						
		1396								
		1431								
24	100	3789	2823	12.3	-1.960	-2.391	0.824	17.1		
		3250								
		3341								
	50	2091	2489	10.0	-2.202					
		2035								
		2229								
	25	1498	1753	4.7	-3.009					
		1531								
		1541								
	10	1159	1321	1.6						
		1263								
		1116								

25	100	3946	2776	12.0	-1.992	-2.019	1.195	24.9	30 mg/kg 19.1
		3266							std dev 8.2
		3003							
	50	3520	3220	15.2	-1.721				
		3138							
		2448							
	25	2160	2321	8.8	-2.344				
		2355							
		1437							
	10	1272	1300	1.5					
		1192							
		1300							
26	100	4183	2933	13.1	-1.890	-2.446	0.780	16.2	
		3316							
		3948							
	50	3391	3342	16.0	-1.655				
		2688							
		2948							
	25	1746	2163	7.6	-2.494				
		1794							
		1519							
	10	1487	1418	2.3	-3.744				
		1248							
		1242							
27	100	4576	2888	12.8	-1.918	-1.819	1.460	30.4	
		2846							
		3668							
	50	9304	5214	29.4	-0.876				
		2671							
		3511							
	25	3154	3240	15.3	-1.710				
		3054							
		2761							
	10	1555	1919	5.9	-2.772				
		1441							
		1414							
28	100	4902	3353	16.1	-1.649	-2.169	1.029	21.4	
		3744							
		3864							
	50	5036	4049	21.1	-1.320				
		3246							
		2843							
	25	1952	2296	8.6	-2.367				
		2092							
		1817							
	10	1533	1574	3.4	-3.339				
		1372							
		1486							
29	100	3022	2387	9.2	-2.286	-2.548	0.704	14.6	
		2652							
		3039							
	50	2550	2505	10.1	-2.189				
		1927							
		2038							
	25	1616	1660	4.0	-3.168				
		1325							
		1395							
	10	838	1130	0.3					
		1156							
		1279							
30	100	1871	1709	4.4	-3.081	-3.276	0.340	7.1	
		1977							
		2139							
	50	1485	1625	3.8	-3.235				
		1250							
		1484							
	25	1591	1500	2.9	-3.511				
		1426							
		1197							
	10	962	1060	-0.2					
		1022							
		1062							

TSH Quantitation 90-Day "A"

Mouse	CPM	Log (cpm)	TSH (ng/mL)
1A	3787	3.58	7
2A	3298.6	3.52	9
3A	3212.3	3.51	9
4A	3364.5	3.53	11
5A	3621.7	3.56	9
6A	3703.8	3.57	8
Average	3498	3.54	8.83
SD	237	0.03	1.33
7A	3829.9	3.58	7
8A	3677.8	3.57	8
9A	3763.8	3.58	7
10A	3721.8	3.57	8
11A	3710.9	3.57	8
12A	3730	3.57	8
Average	3739	3.57	7.67
SD	53	0.01	0.52
13A	3780	3.58	7
14A	3733.7	3.57	8
15A	3638.7	3.56	6
16A	3641.7	3.56	9
17A	3836.2	3.58	7
18A	3684.8	3.57	5
Average	3719	3.57	7.00
SD	79	0.01	1.41
19A	3951.1	3.60	5
20A	3940.1	3.60	5
21A	3774	3.58	7
22A	3737	3.57	6
23A	3801.7	3.58	7
24A	3594.6	3.56	9
Average	3800	3.58	6.50
SD	134	0.02	1.52
25A	3949.9	3.60	5
26A	3376.9	3.53	8
27A	3737.8	3.57	6
28A	3628.5	3.56	9
29A	3793	3.58	7
30A	3549.8	3.55	10
Average	3673	3.56	7.50
SD	200	0.02	1.87

Trt. Group	Ave TSH	SD
Control	8.83	1.33
0.1 mg/kg	7.67	0.52
1.0 mg/kg	7	1.41
3.0 mg/kg	6.5	1.52
30.0 mg/kg	7.5	1.87

90-Day Immune Parameter #1 "A" Body Weights

Control	3/18/98	3/26/98	4/2/98	4/9/98	4/16/98	4/23/98	4/30/98	5/7/98	5/14/98	5/21/98	5/28/98	6/4/98	6/11/98	6/17/98	Gain in Body Weight		
1D	20	20.8	21.5	22.6	22.9	24.4	24.7	25.2	25.2	26.6	27.2	28.6	29.4	29.5	9.5	Average=	7.40
2D	20.6	21.1	21.9	22.6	23.5	23.3	24.8	26.5	26.1	27.2	26.2	28.1	28.3	29.5	8.9	SD=	2.24
3D	17.1	17.6	17	17.7	17.7	18.3	18.5	18.5	19.1	19.6	19.3	20.5	21.1	20.6	3.5		
4D	20.8	22.1	22.2	22.1	22.9	23.5	24.8	25	25.2	25.8	25.9	27.3	26.7	27.1	6.3		
5D	20.2	21.4	21.8	22.3	23.4	23.4	23.5	23.8	24.6	25.4	24.5	25.5	26.4	27.6	7.4		
6D	19.6	21.1	21.6	22.9	23.1	23.6	23.8	26.3	24.3	26.2	25.3	25.8	27.1	28.4	8.8		
0.1mg/kg/day																	
7D	18.8	20	20.1	20.3	21.5	22.2	22.5	23	23.6	25	24.8	25.1	25.6	25.8	7	Average=	8.92
8D	17.3	18.6	18.4	18.9	19.1	20.3	20.9	21.4	20.8	21.3	21.5	22.5	23.3	22.8	5.5	SD=	2.60
9D	20.3	22.6	22.7	23.2	24.8	25.5	25.5	25.9	26.7	28.2	28	28.9	30.2	30.6	10.3		
10D	19.7	21.8	22.8	24.2	22.8	25	25	25.9	29.6	27.8	28.2	30.3	34.1	31.1	11.4		
11D	18.6	20.2	20.2	21	22	22.7	22.8	23.7	24	29	24.5	24.8	25.8	26.1	7.5		
12D	20.7	23.1	22.8	23.4	23.7	25.2	25.9	27.6	27.6	24.7	29.5	31.5	31.8	32.5	11.8		
1 mg/kg/day																	
13D	20.6	21.7	22.6	23.9	23.9	23.9	24.8	26	27.3	27.2	27	29.3	29.7	30	9.4	Average=	9.83
14D	19.6	21.4	21.4	21.9	22.2	22.5	23.6	23.6	23.4	24.2	24.7	25.6	25.7	26.5	6.9	SD=	1.92
15D	20.4	22.3	22.4	23.3	24.2	24.2	25	25.9	26.3	27.3	27.4	29	30	30.6	10.2		
16D	20.5	22.7	24	24.4	24.2	25.6	25.9	26	27.3	28.2	27.7	29.9	31.4	32	11.5		
17D	18.9	21.3	23	23.9	24.3	24.8	25.7	26.1	26.7	28.5	29.6	31.8	30.4	31.1	12.2		
18D	19.2	20.4	21.3	21.8	22.8	24.1	23.9	24.5	25.3	26.2	26.2	27.6	27.7	28	8.8		
3 mg/kg/day																	
19D	19.9	21.9	21.9	24.7	24.9	26	26.2	26	26.8	27.8	28.3	30.6	32.8	32.6	12.7	Average=	10.00
20D	18.4	20.3	20.2	21.3	21.3	23	23.3	23.2	23.3	24.5	23.9	24.7	26	24.4	6	SD=	2.93
21D	20.5	21.9	22.5	24	24.7	25.4	25.5	25.8	26.3	27.5	27.3	30	33.6	31.4	10.9		
22D	19.5	20.5	20.8	22.4	24.2	24.6	25.4	25.2	25.5	26.8	26.8	28.6	30.8	31.5	12		
23D	19.9	22	20.7	21.5	22.2	23	23.7	24.2	24.2	25.4	25.3	25.8	26.7	26.5	6.6		
24D	20.8	22	22.4	22.7	23.5	26.4	24.8	26.3	27.4	28.4	26.3	29.9	31.5	32.6	11.8		
30 mg/kg/day																	
25D	19.4	20.9	21.3	21.7	22.3	22.9	23.5	24.3	24.3	26.5	26.4	26.9	26.2	27.1	7.7	Average=	8.67
26D	18.8	19.5	20.3	21	21	22.3	22.7	22.3	22.8	23.1	23.5	24.7	25	25.8	7	SD=	1.09
27D	20	21.2	22.9	22.1	23.4	23.4	24.6	25.6	25.5	25.9	26.1	28.6	29.4	29.1	9.1		
28D	21.2	23.5	23.5	25.3	26	26	27.1	27.7	27.1	27.9	26.8	28.7	29.3	30.1	8.9		
29D	20.3	21.5	21.1	22.5	23.5	24.3	24	24.8	24.9	27.4	25.5	27.7	28.6	29.9	9.6		
30D	21.6	22.8	22.7	23.1	23.9	24.6	25.6	27.1	26.9	27.4	27.6	29.9	30.6	31.3	9.7		

NO2 Prod. By Peritoneal Macrophages after Stimulation by IFN-y &/or LPS: 90Day #1

Animal	Control	NO2 (uM)	INF-y	NO2 (uM)	LPS	NO2 (uM)	IFN-y/LPS	NO2 (uM)
Control								
1A	0.045	-0.045	0.145	11.526	0.295	28.883	0.487	51.099
2A	0.045	-0.045	0.129	9.675	0.428	44.272	0.558	59.314
3A	0.045	-0.045	0.186	16.270	0.431	44.619	0.670	72.274
4A	0.045	-0.045	0.195	17.312	0.575	61.281	0.591	63.133
5A	0.045	-0.045	0.132	10.022	0.320	31.775	0.597	63.827
6A	0.045	-0.045	0.109	7.361	0.171	14.535	0.429	44.388
Average	0.045	-0.045	0.149	12.027	0.370	37.561	0.555	59.006
SD	0.000	0.000	0.034	3.937	0.139	16.103	0.086	9.926
0.1 mg/kg/day								
7A	0.045	-0.045	0.085	4.583	0.343	34.437	0.377	38.371
8A	0.049	0.418	0.167	14.072	0.461	48.090	0.481	50.405
9A	0.048	0.302	0.134	10.253	0.361	36.519	0.530	56.074
10A	0.047	0.186	0.176	15.113	0.433	44.851	0.618	66.257
11A	0.048	0.302	0.154	12.567	0.268	25.758	0.528	55.843
12A	0.046	0.071	0.173	14.766	0.413	42.536	0.601	64.290
Average	0.047	0.206	0.148	11.892	0.380	38.699	0.523	55.207
SD	0.001	0.170	0.035	3.999	0.070	8.138	0.087	10.122
1.0 mg/kg/day								
13A	0.046	0.071	0.139	10.832	0.314	31.081	0.556	59.083
14A	0.045	-0.045	0.138	10.716	0.225	20.783	0.473	49.479
15A	0.045	-0.045	0.098	6.088	0.238	22.287	0.452	47.049
16A	0.045	-0.045	0.186	16.270	0.431	44.619	0.638	68.571
17A	0.047	0.186	0.120	8.633	0.358	36.172	0.533	56.422
18A	0.053	0.881	0.154	12.567	0.342	34.321	0.557	59.199
Average	0.047	0.167	0.139	10.851	0.318	31.544	0.535	56.634
SD	0.003	0.362	0.030	3.462	0.077	8.964	0.067	7.722
3.0 mg/kg/day								
19A	0.046	0.071	0.099	6.203	0.256	24.370	0.393	40.222
20A	0.046	0.071	0.155	12.683	0.269	25.874	0.458	47.743
21A	0.045	-0.045	0.124	9.096	0.172	14.650	0.390	39.875
22A	0.045	-0.045	0.145	11.526	0.278	26.916	0.489	51.330
23A	0.044	-0.161	0.145	11.526	0.248	23.444	0.517	54.570
24A	0.045	-0.045	0.125	9.212	0.302	29.693	0.510	53.760
Average	0.045	-0.026	0.132	10.041	0.254	24.158	0.460	47.917
SD	0.001	0.087	0.020	2.354	0.044	5.141	0.057	6.542
30.0 mg/kg/day								
25A	0.048	0.302	0.119	8.518	0.283	27.494	0.511	53.876
26A	0.046	0.071	0.167	14.072	0.325	32.354	0.610	65.331
27A	0.047	0.186	0.223	20.551	0.516	54.455	0.792	86.391
28A	0.046	0.071	0.174	14.882	0.335	33.511	0.616	66.026
29A	0.046	0.071	0.158	13.030	0.294	28.767	0.594	63.480
30A	0.050	0.534	0.082	4.236	0.163	13.609	0.418	43.115
Average	0.047	0.206	0.154	12.548	0.319	31.698	0.590	63.036
SD	0.002	0.185	0.048	5.610	0.114	13.229	0.125	14.426

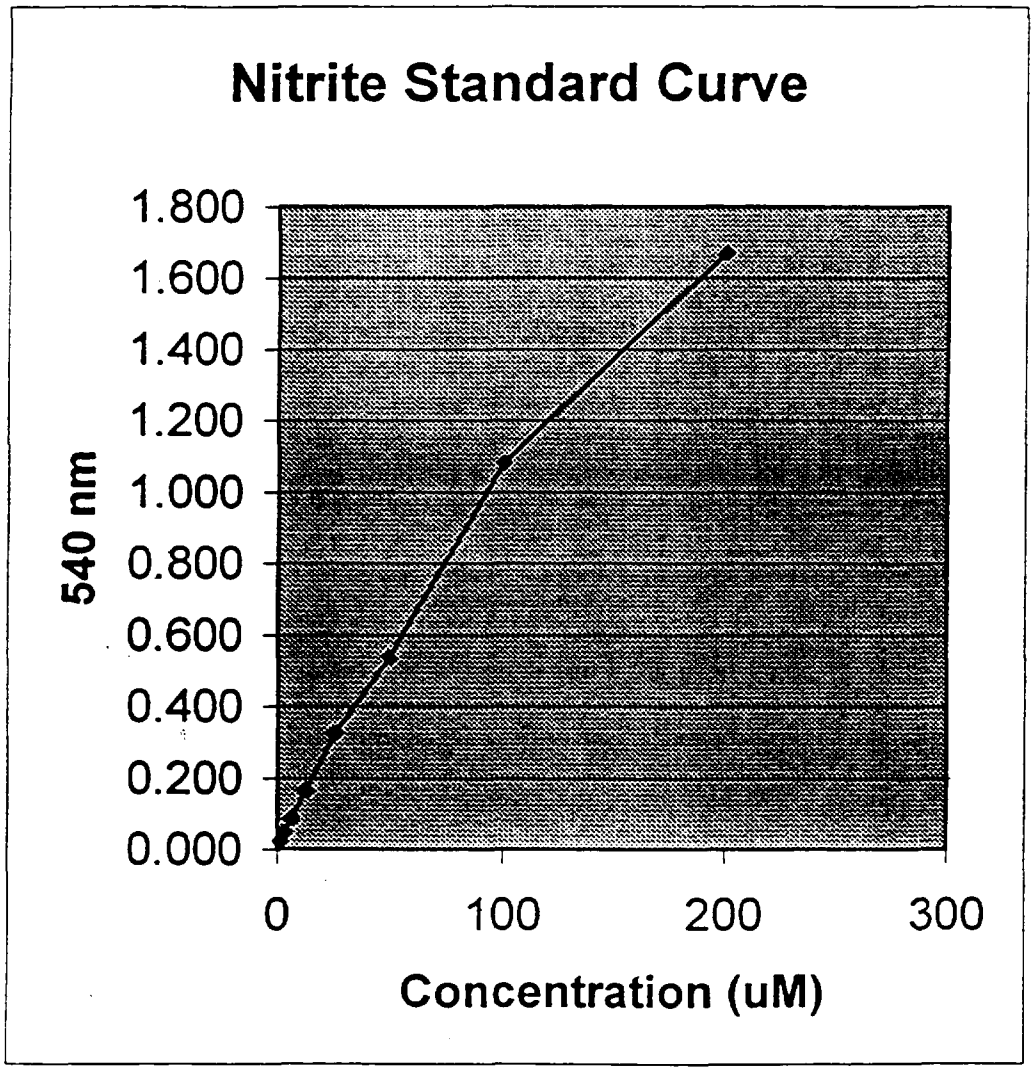
NO2 Production by Peritoneal Macrophages: Standard Curve 90 Day #1

Conc.	Standard			
uM	Rep 1	Rep 2	Rep 3	Average
200	1.672	1.706	1.769	1.670
100	1.177	1.088	1.125	1.084
50	0.558	0.61	0.584	0.538
25	0.378	0.374	0.36	0.325
12.5	0.218	0.211	0.206	0.166
6.25	0.136	0.134	0.129	0.087
3.125	0.095	0.095	0.094	0.049
1.56	0.072	0.071	0.07	0.025

Slope	Intercept
115.7101	0.070776

Greiss Blank
0.046

Formula to calculate nitrite concentration (uM):
=(Slope * (Spec-Greiss Blank))+intercept



90 Day AP Experiment "A"

Hematology Results

Trt. Group	WBC	RBC	HCT	HGB
Control	(x10e3 cells/μL)	(x10e6 cells/μL)	%	g/dL
1A	3.0	8.77	52.1	15.2
2A	3.0	8.88	48.6	14.9
3A	2.2	8.15	48.0	14.4
4A	2.6	9.41	48.0	15.4
5A	2.1	8.90	46.3	14.6
6A	1.9	8.45	49.1	14.3
Average	2.5	8.76	48.7	14.8
SD	0.47	0.43	1.92	0.44
0.1 mg/kg/day				
7A	2.4	8.80	48.0	14.5
8A	2.2	9.29	45.0	14.8
9A	1.9	8.92	48.6	14.6
10A	1.3	8.15	47.8	14.3
11A	2.0	8.68	48.6	14.0
12A	1.0	8.61	49.8	14.3
Average	1.8	8.74	48.0	14.4
SD	0.54	0.38	1.61	0.28
1.0 mg/kg/day				
13A	3.0	8.73	45.0	14.2
14A	1.3	8.71	51.0	14.9
15A	1.9	8.35	49.2	14.5
16A	2.0	8.63	45.0	13.4
17A	3.3	8.61	49.6	15.3
18A	2.3	8.13	46.0	14.2
Average	2.3	8.53	47.6	14.4
SD	0.74	0.24	2.62	0.66
3.0 mg/kg/day				
19A	2.5	9.53	48.6	15.7
20A	2.9	8.96	52.7	15.3
21A	1.3	9.38	49.0	15.4
22A	2.9	9.31	49.0	15.0
23A	2.3	9.74	48.3	15.9
24A	2.9	8.92	46.9	15.4
Average	2.5	9.31	49.1	15.5
SD	0.63	0.32	1.93	0.31
30.0 mg/kg/day				
25A	2.5	7.33	44.0	14.7
26A	2.3	8.49	45.3	13.5
27A	1.7	9.02	48.0	15.0
28A	2.2	8.79	47.9	15.0
29A	2.7	8.10	44.0	13.4
30A	2.9	9.12	46.0	15.2
Average	2.4	8.48	45.9	14.5
SD	0.42	0.67	1.79	0.80

90 day AP experiment "A" 6/17/98

Mouse #	Neutrophils	Lymphocytes	Monocytes	Eosinophils	Bands	Basophil
1	12	83.5	2.5	0	1	0
2	14	82	3.5	0	0.5	0
3	10	81.5	4.5	0	0.5	0
4	13.5	88.5	2.5	0	0.5	0
5	8	89	3	0	0	0
6	17	72.5	9.5	0	0	0
mean	**12.4**	**82.8**	**4.3**	**0.0**	**0.4**	**0.0**
std dev	**2.9**	**5.5**	**2.4**	**0.0**	**0.3**	**0.0**
Mouse #	Neutrophils	Lymphocytes	Monocytes	Eosinophils	Bands	Basophil
7	9	85.5	8.5	0	0	0
8	11.5	83.5	5	0	0	0
9	20.5	77.5	2	0	0	0
10	13.5	82.5	4	0	0	0
11	13	85	2	0	0	0
12	18.5	78	3.5	0	0	0
mean	**14.3**	**82.0**	**4.2**	**0.0**	**0.0**	**0.0**
std dev	**4.0**	**3.2**	**2.2**	**0.0**	**0.0**	**0.0**
Mouse #	Neutrophils	Lymphocytes	Monocytes	Eosinophils	Bands	Basophil
13	9.5	88.5	3	0	0	0
14	15	80.5	4.5	0	0	0
15	11.5	85.5	2.5	0	0	0
16	13	83	4	0	0	0
17	17	81.5	1.5	0	0	0
18	17	82	0.5	0	0	0
mean	**13.8**	**83.5**	**2.7**	**0.0**	**0.0**	**0.0**
std dev	**2.8**	**2.7**	**1.4**	**0.0**	**0.0**	**0.0**
Mouse #	Neutrophils	Lymphocytes	Monocytes	Eosinophils	Bands	Basophil
19	11.5	85.5	3.5	0	0	0
20	15	84.5	0.5	0	0	0
21	23	74	3	0	0	0
22	14	83.5	3	0	0	0
23	9.5	87.5	3	0	0	0
24	10.5	83.5	6	0	0	0
mean	**13.9**	**83.1**	**3.2**	**0.0**	**0.0**	**0.0**
std dev	**4.5**	**4.3**	**1.6**	**0.0**	**0.0**	**0.0**
Mouse #	Neutrophils	Lymphocytes	Monocytes	Eosinophils	Bands	Basophil
25	15.5	82.5	1.5	0	0.5	0
26	17	79.5	4	0	0	0
27	16	81.5	2	0	0.5	0
28	9.5	87.5	3	0	0	0
29	14	81.5	4	0	0	0
30	10	88	2	0	0.5	0
mean	**13.7**	**83.4**	**2.8**	**0.0**	**0.3**	**0.0**
std dev	**2.9**	**3.2**	**1.0**	**0.0**	**0.3**	**0.0**

90 Day AP study Experiment "A"

Thymus CD4/CD8 Subpopulations

Trt. Group	CD8+/CD4-	CD8+/CD4+	CD8-/CD4-	CD8-/CD4+
Control				
1A	2.4	84.2	4.9	8.5
2A	2.4	81.4	4.4	11.9
3A	2.5	82.7	3.8	11.1
4A	2.9	82.1	4.4	10.6
5A	2.4	86.4	3.5	7.7
6A	2.0	77.4	6.4	14.3
Average	2.4	82.4	4.6	10.7
SD	0.29	3.01	1.03	2.38
0.1 mg/kg/day				
7A	2.3	83.1	3.6	11.0
8A	1.8	84.1	3.6	10.5
9A	2.4	73.9	6.2	17.6
10A	2.7	78.9	4.9	13.5
11A	2.3	82.1	3.7	11.9
12A	1.3	54.2	7.7	36.8
Average	2.1	76.1	5.0	16.9
SD	0.50	11.32	1.69	10.09
1.0 mg/kg/day				
13A	2.5	81.1	5.2	11.2
14A	2.0	86.4	3.5	8.1
15A	1.6	85.1	3.8	9.5
16A	1.9	84.5	4.0	9.6
17A	2.2	84.8	4.3	8.7
18A	2.0	80.8	5.6	11.5
Average	2.0	83.8	4.4	9.8
SD	0.30	2.29	0.83	1.35
3.0 mg/kg/day				
19A	2.1	82.7	4.2	11.0
20A	2.3	76.1	5.1	16.5
21A	2.7	77.3	6.1	13.8
22A	1.8	82.1	5.0	11.1
23A	3.0	69.3	7.6	20.1
24A	2.3	74.8	6.4	16.5
Average	2.4	77.1	5.7	14.8
SD	0.43	4.97	1.21	3.55
30.0 mg/kg/day				
25A	2.1	86.5	4.4	7.1
26A	1.9	85.6	3.6	8.8
27A	2.3	84.5	4.8	8.5
28A	1.9	82.6	4.3	11.1
29A	1.8	86.2	3.9	8.1
30A	3.0	79.5	5.0	12.6
Average	2.2	84.2	4.3	9.4
SD	0.45	2.68	0.53	2.06

90 Day AP study Experiment "A"

Spleen CD4/CD8 Subpopulations

Trt. Group	CD8+/CD4-	CD8+/CD4+	CD8-/CD4-	CD8-/CD4+
Control				
1A	10.6	0.2	71.1	18.1
2A	9.5	0.0	72.6	17.8
3A	10.5	0.3	69.2	20.0
4A	10.4	0.3	69.8	19.6
5A	10.3	0.1	69.6	20.0
6A	10.7	0.1	70.0	19.2
Average	10.3	0.2	70.4	19.1
SD	0.43	0.12	1.26	0.96
0.1 mg/kg/day				
7A	10.4	0.3	70.2	19.2
8A	12.4	0.2	64.9	22.5
9A	12.4	0.2	66.0	21.4
10A	10.2	0.2	70.3	19.3
11A	10.7	0.1	69.3	19.9
12A	12.7	0.2	64.9	22.1
Average	11.5	0.2	67.6	20.7
SD	1.15	0.06	2.61	1.45
1.0 mg/kg/day				
13A	10.7	0.2	67.4	21.6
14A	11.1	0.1	69.1	19.6
15A	10.8	0.3	68.2	20.8
16A	9.9	0.2	69.3	20.6
17A	9.2	0.1	75.4	15.3
18A	11.0	0.1	68.2	20.7
Average	10.5	0.2	69.6	19.8
SD	0.74	0.08	2.92	2.28
3.0 mg/kg/day				
19A	10.7	0.1	68.6	20.6
20A	10.9	0.2	67.5	21.4
21A	12.4	0.1	67.2	20.2
22A	10.3	0.0	71.4	18.3
23A	11.9	0.1	64.1	23.9
24A	11.2	0.1	68.9	19.8
Average	11.2	0.1	68.0	20.7
SD	0.78	0.06	2.40	1.87
30.0 mg/kg/day				
25A	10.8	0.2	70.8	18.2
26A	9.0	0.2	74.3	16.5
27A	10.4	0.1	73.0	16.5
28A	10.6	0.1	69.8	19.5
29A	10.9	0.1	68.5	20.5
30A	10.3	0.2	70.8	18.8
Average	10.3	0.2	71.2	18.3
SD	0.69	0.05	2.12	1.61

Date: 06/17/98

90-Day Immune Parameters
"A"
Bone Marrow Cell Counts

Animal	Coulter Counter	Total Cellularity
Control		
1A	544	8.16E+06
2A	307	4.61E+06
3A	448	6.72E+06
4A	481	7.22E+06
5A	268	4.02E+06
6A	462	6.93E+06
Average	**418**	**6.28E+06**
SD	**107**	**1.61E+06**
0.1 mg/kg/day		
7A	612	9.18E+06
8A	375	5.63E+06
9A	504	7.56E+06
10A	554	8.31E+06
11A	302	4.53E+06
12A	358	5.37E+06
Average	**451**	**6.76E+06**
SD	**123**	**1.85E+06**
1.0 mg/kg/day		
13A	407	6.11E+06
14A	390	5.85E+06
15A	507	7.61E+06
16A	408	6.12E+06
17A	341	5.12E+06
18A	286	4.29E+06
Average	**390**	**5.85E+06**
SD	**74**	**1.11E+06**
3.0 mg/kg/day		
19A	677	1.02E+07
20A	478	7.17E+06
21A	425	6.38E+06
22A	387	5.81E+06
23A	424	6.36E+06
24A	602	9.03E+06
Average	**499**	**7.48E+06**
SD	**115**	**1.73E+06**
30.0 mg/kg/day		
25A	589	8.84E+06
26A	404	6.06E+06
27A	280	4.20E+06
28A	650	9.75E+06
29A	534	8.01E+06
30A	297	4.46E+06
Average	**459**	**6.89E+06**
SD	**155**	**2.33E+06**

Date: 06/17/98

90-Day Immune Parameters
"A"
Macrophage Cell Counts

Animal	Coulter Counter	Total Cellularity
Control		
1A	479	7.19E+06
2A	483	7.25E+06
3A	341	5.12E+06
4A	384	5.76E+06
5A	413	6.20E+06
6A	645	9.68E+06
Average	**458**	**6.86E+06**
SD	**107**	**1.60E+06**
0.1 mg/kg/day		
7A	568	8.52E+06
8A	461	6.92E+06
9A	569	8.54E+06
10A	465	6.98E+06
11A	437	6.56E+06
12A	504	7.56E+06
Average	**501**	**7.51E+06**
SD	**57**	**8.52E+05**
1.0 mg/kg/day		
13A	510	7.65E+06
14A	459	6.89E+06
15A	783	1.17E+07
16A	384	5.76E+06
17A	609	9.14E+06
18A	502	7.53E+06
Average	**541**	**8.12E+06**
SD	**139**	**2.09E+06**
3.0 mg/kg/day		
19A	883	1.32E+07
20A	587	8.81E+06
21A	752	1.13E+07
22A	705	1.06E+07
23A	565	8.48E+06
24A	782	1.17E+07
Average	**712**	**1.07E+07**
SD	**121**	**1.81E+06**
30.0 mg/kg/day		
25A	416	6.24E+06
26A	423	6.35E+06
27A	276	4.14E+06
28A	401	6.02E+06
29A	412	6.18E+06
30A	805	1.21E+07
Average	**456**	**6.83E+06**
SD	**180**	**2.70E+06**

Date: 06/17/98

90-Day Immune Parameters
"A"
Thymus Cell Counts

Animal	Coulter Counter	Total Cellularity
Control	adjusted as per calibration factor	
1A	2475	3.71E+07
2A	1706	2.56E+07
3A	1111	1.67E+07
4A	2120	3.18E+07
5A	1652	2.48E+07
6A	2664	4.00E+07
Average	1955	[illegible]
SD	577	[illegible]
0.1 mg/kg/day		
7A	1835	2.75E+07
8A	1388	2.08E+07
9A	1751	2.63E+07
10A	1236	1.85E+07
11A	1363	2.04E+07
12A	1519	2.28E+07
Average	1515	[illegible]
SD	235	[illegible]
1.0 mg/kg/day		
13A	1343	2.01E+07
14A	1371	2.06E+07
15A	1470	2.21E+07
16A	1491	2.24E+07
17A	1842	2.76E+07
18A	1174	1.76E+07
Average	1449	[illegible]
SD	223	[illegible]
3.0 mg/kg/day		
19A	1615	2.42E+07
20A	1587	2.38E+07
21A	980	1.47E+07
22A	1254	1.88E+07
23A	1459	2.19E+07
24A	2244	3.37E+07
Average	1523	[illegible]
SD	425	[illegible]
30.0 mg/kg/day		
25A	1440	2.16E+07
26A	1722	2.58E+07
27A	1684	2.53E+07
28A	1601	2.40E+07
29A	2264	3.40E+07
30A	1882	2.82E+07
Average	1766	[illegible]
SD	284	[illegible]

90-Day IP Parameters #1
"A"
Organ Weights

Animal	Body Weight gr	Thymus Wt. mg	Spleen Wt. mg	Kidney Wt. mg	Liver Wt. mg
Control					
1A	29.5	75	85	327	1431
2A	29.5	67	96	351	1482
3A	20.6	42	82	313	1096
4A	27.1	50	109	348	1501
5A	27.6	51	98	352	1431
6A	28.4	54	104	361	1610
Average	**27.12**	**56.50**	**95.67**	**342.00**	**1425.17**
SD	**3.34**	**12.18**	**10.52**	**18.13**	**174.11**
0.1 mg/kg/day					
7A	25.8	49	93	325	1426
8A	22.8	51	98	292	1116
9A	30.6	57	113	367	1502
10A	31.1	47	93	387	1603
11A	26.1	46	81	329	1299
12A	32.5	57	96	388	1612
Average	**28.15**	**51.17**	**95.67**	**348.00**	**1426.33**
SD	**3.79**	**4.83**	**10.35**	**38.75**	**191.80**
1.0 mg/kg/day					
13A	30	48	120	371	1422
14A	26.5	46	95	355	1360
15A	30.6	53	109	351	1394
16A	32	48	117	411	1485
17A	31.1	55	128	365	1574
18A	28	44	101	352	1324
Average	**29.70**	**49.00**	**111.67**	**367.50**	**1426.50**
SD	**2.06**	**4.20**	**12.36**	**22.71**	**90.76**
3.0 mg/kg/day					
19A	32.6	44	123	413	1690
20A	24.4	39	91	351	1196
21A	31.4	52	115	421	1671
22A	31.5	46	110	393	1618
23A	26.5	46	105	346	1209
24A	32.6	52	104	397	1646
Average	**29.83**	**46.50**	**108.00**	**386.83**	**1505.00**
SD	**3.50**	**4.97**	**10.88**	**31.45**	**235.60**
30.0 mg/kg/day					
25A	27.1	47	86	348	1363
26A	25.8	44	111	333	1380
27A	29.1	40	93	366	1394
28A	30.1	44	100	390	1524
29A	29.9	53	126	369	1513
30A	31.3	48	104	398	1448
Average	**28.88**	**46.00**	**103.33**	**367.33**	**1437.00**
SD	**2.05**	**4.43**	**14.08**	**24.54**	**69.34**

90-Day IP Parameters
"A"
Organ/BW Ratio (%)

Animal	Body Weight g	Kidney Wt. mg	KW/BW (mg)%
Control			
1A	29.5	327	1.108
2A	29.5	351	1.190
3A	20.6	313	1.519
4A	27.1	348	1.284
5A	27.6	352	1.275
6A	28.4	361	1.271
Average	**27.12**	**342.00**	**1.27**
SD	**3.34**	**18.13**	**0.14**
0.1 mg/kg/day			
7A	25.8	325	1.260
8A	22.8	292	1.281
9A	30.6	367	1.199
10A	31.1	387	1.244
11A	26.1	329	1.261
12A	32.5	388	1.194
Average	**28.15**	**348.00**	**1.24**
SD	**3.79**	**38.75**	**0.04**
1.0 mg/kg/day			
13A	30	371	1.237
14A	26.5	355	1.340
15A	30.6	351	1.147
16A	32	411	1.284
17A	31.1	365	1.174
18A	28	352	1.257
Average	**29.70**	**367.50**	**1.24**
SD	**2.06**	**22.71**	**0.07**
3.0 mg/kg/day			
19A	32.6	413	1.267
20A	24.4	351	1.439
21A	31.4	421	1.341
22A	31.5	393	1.248
23A	26.5	346	1.306
24A	32.6	397	1.218
Average	**29.83**	**386.83**	**1.30**
SD	**3.50**	**31.45**	**0.08**
30.0 mg/kg/day			
25A	27.1	348	1.284
26A	25.8	333	1.291
27A	29.1	366	1.258
28A	30.1	390	1.296
29A	29.9	369	1.234
30A	31.3	398	1.272
Average	**28.88**	**367.33**	**1.27**
SD	**2.05**	**24.54**	**0.02**

90-Day IP Parameters
"A"
Organ/BW Ratio (%)

Animal	Body Weight g	Thymus Wt. m	TW/BW (mg)%
Control			
1A	29.5	75	0.254
2A	29.5	67	0.227
3A	20.6	42	0.204
4A	27.1	50	0.185
5A	27.6	51	0.185
6A	28.4	54	0.190
Average	**27.12**	**56.50**	**0.21**
SD	**3.34**	**12.18**	**0.03**
0.1 mg/kg/day			
7A	25.8	49	0.190
8A	22.8	51	0.224
9A	30.6	57	0.186
10A	31.1	47	0.151
11A	26.1	46	0.176
12A	32.5	57	0.175
Average	**28.15**	**51.17**	**0.18**
SD	**3.79**	**4.83**	**0.02**
1.0 mg/kg/day			
13A	30	48	0.160
14A	26.5	46	0.174
15A	30.6	53	0.173
16A	32	48	0.150
17A	31.1	55	0.177
18A	28	44	0.157
Average	**29.70**	**49.00**	**0.17**
SD	**2.06**	**4.20**	**0.01**
3.0 mg/kg/day			
19A	32.6	44	0.135
20A	24.4	39	0.160
21A	31.4	52	0.166
22A	31.5	46	0.146
23A	26.5	46	0.174
24A	32.6	52	0.160
Average	**29.83**	**46.50**	**0.16**
SD	**3.50**	**4.97**	**0.01**
30.0 mg/kg/day			
25A	27.1	47	0.173
26A	25.8	44	0.171
27A	29.1	40	0.137
28A	30.1	44	0.146
29A	29.9	53	0.177
30A	31.3	48	0.153
Average	**28.88**	**46.00**	**0.16**
SD	**2.05**	**4.43**	**0.02**

90-Day IP Parameters
"A"
Organ/BW Ratio (%)

Animal	Body Weight g	Liver Wt. mg	LW/BW (mg)%
Control			
1A	29.5	1431	4.851
2A	29.5	1482	5.024
3A	20.6	1096	5.320
4A	27.1	1501	5.539
5A	27.6	1431	5.185
6A	28.4	1610	5.669
Average	**27.12**	**1425.17**	**5.26**
SD	**3.34**	**174.11**	**0.31**
0.1 mg/kg/day			
7A	25.8	1426	5.527
8A	22.8	1116	4.895
9A	30.6	1502	4.908
10A	31.1	1603	5.154
11A	26.1	1299	4.977
12A	32.5	1612	4.960
Average	**28.15**	**1426.33**	**5.07**
SD	**3.79**	**191.80**	**0.24**
1.0 mg/kg/day			
13A	30	1422	4.740
14A	26.5	1360	5.132
15A	30.6	1394	4.556
16A	32	1485	4.641
17A	31.1	1574	5.061
18A	28	1324	4.729
Average	**29.70**	**1426.50**	**4.81**
SD	**2.06**	**90.76**	**0.23**
3.0 mg/kg/day			
19A	32.6	1690	5.184
20A	24.4	1196	4.902
21A	31.4	1671	5.322
22A	31.5	1618	5.137
23A	26.5	1209	4.562
24A	32.6	1646	5.049
Average	**29.83**	**1505.00**	**5.03**
SD	**3.50**	**235.60**	**0.27**
30.0 mg/kg/day			
25A	27.1	1363	5.030
26A	25.8	1380	5.349
27A	29.1	1394	4.790
28A	30.1	1524	5.063
29A	29.9	1513	5.060
30A	31.3	1448	4.626
Average	**28.88**	**1437.00**	**4.99**
SD	**2.05**	**69.34**	**0.25**

90-Day IP Parameters
"A"
Organ/BW Ratio (%)

Animal	Body Weight g	Spleen Wt. mg	SW/BW (mg)%
Control			
1A	29.5	85	0.288
2A	29.5	96	0.325
3A	20.6	82	0.398
4A	27.1	109	0.402
5A	27.6	98	0.355
6A	28.4	104	0.366
Average	**27.12**	**95.67**	**0.36**
SD	**3.34**	**10.52**	**0.04**
0.1 mg/kg/day			
7A	25.8	93	0.360
8A	22.8	98	0.430
9A	30.6	113	0.369
10A	31.1	93	0.299
11A	26.1	81	0.310
12A	32.5	96	0.295
Average	**28.15**	**95.67**	**0.34**
SD	**3.79**	**10.35**	**0.05**
1.0 mg/kg/day			
13A	30	120	0.400
14A	26.5	95	0.358
15A	30.6	109	0.356
16A	32	117	0.366
17A	31.1	128	0.412
18A	28	101	0.361
Average	**29.70**	**111.67**	**0.38**
SD	**2.06**	**12.36**	**0.02**
3.0 mg/kg/day			
19A	32.6	123	0.377
20A	24.4	91	0.373
21A	31.4	115	0.366
22A	31.5	110	0.349
23A	26.5	105	0.396
24A	32.6	104	0.319
Average	**29.83**	**108.00**	**0.36**
SD	**3.50**	**10.88**	**0.03**
30.0 mg/kg/day			
25A	27.1	86	0.317
26A	25.8	111	0.430
27A	29.1	93	0.320
28A	30.1	100	0.332
29A	29.9	126	0.421
30A	31.3	104	0.332
Average	**28.88**	**103.33**	**0.36**
SD	**2.05**	**14.08**	**0.05**

TSH Quantitation 90-Day "D"

Mouse	CPM	Log (cpm)	TSH (ng/mL)
1D	3813.4	3.58	7
2D	3485.8	3.54	11
3D	3650.6	3.56	9
4D	3439.7	3.54	11
5D	***	N/A	***
6D	***	N/A	***
Average	3597	3.56	9.50
SD	170	0.02	1.91
7D	3698.7	3.57	8
8D	3503.6	3.54	11
9D	3705.8	3.57	8
10D	3807.3	3.58	7
11D	***	N/A	***
12D	***	N/A	***
Average	3679	3.57	8.50
SD	127	0.02	1.73
13D	3723.9	3.57	8
14D	***	N/A	***
15D	***	N/A	***
16D	3572.8	3.55	10
17D	3636.9	3.56	9
18D	3935	3.59	6
Average	3717	3.57	8.25
SD	158	0.02	1.71
19D	3624.9	3.56	9
20D	3562.6	3.55	10
21D	3303.4	3.52	13
22D	3824.3	3.58	7
23D	3438.6	3.54	11
24D	***	N/A	***
Average	3551	3.55	10.00
SD	196	0.02	2.24
25D	3568.7	3.55	10
26D	3913.1	3.59	6
27D	2700.1	3.43	22
28D	***	N/A	***
29D	***	N/A	***
30D	***	N/A	***
Average	3394	3.53	12.67
SD	625	0.08	8.33

Trt. Group	Ave TSH	SD
Control	9.5	1.91
0.1 mg/kg	8.5	1.73
1.0 mg/kg	8.25	1.71
3.0 mg/kg	10	2.24
30.0 mg/kg	12.67	8.33

90-Day Immune Parameter #2 "D" Body Weights

Control	3/25/98	4/1/98	4/8/98	4/15/98	4/22/98	4/29/98	5/6/98	5/13/98	5/20/98	5/27/98	6/3/98	6/10/98	6/16/98	6/23/98	Gain In Body Weight		
1D	20	21.4	21.8	22.8	23.3	24.6	25.1	25.7	26.8	27.4	27.8	28.1	28.6	29.7	9.7	Average=	10.47
2D	20	21.3	21.3	21.7	22.7	23.6	24.6	24.9	26.7	28.1	29.1	29.9	28.3	30.3	10.3	SD=	2.97
3D	19.3	20.3	22.4	21.9	22.6	23.4	26.3	24.6	25.8	28.1	28	29.3	30.1	32	12.7		
4D	19.6	21.1	21.1	21.9	23.1	23.7	24	23.3	24.2	24.1	25	25.2	26.4	25.4	5.8		
5D	19.1	21.1	20.7	21.6	22	22.8	24	22.9	25.1	26.3	26.2	27.5	27.2	28.9	9.8		
6D	19.8	20.7	21.1	21.8	23.1	23.9	25.8	26	26.7	28.2	30.2	32.2	32.6	34.3	14.5		
0.1mg/kg/day																	
7D	20.8	21	21.7	22.5	24	24.2	25	24.7	26.6	28	29	28.5	30.7	33.1	12.3	Average=	11.65
8D	20	21.4	22.1	22.7	23.8	24.8	25.8	25.7	27	27.6	27.3	28	28	29.4	9.4	SD=	1.59
9D	20.6	20.5	22.2	22.2	23.4	25.4	26.2	25.1	27.9	27.4	28.6	29.3	30.2	32.4	11.8		
10D	19.4	21.1	21.8	22.9	23	23.8	25.7	24.6	26.1	29.2	29.7	28.2	28.4	29.8	10.4		
11D	20	21.8	20.9	21.6	22.1	23.5	24.5	25.1	26.4	28.3	29.2	29.8	30.3	32	12		
12D	19.2	20	22.5	22.5	22.5	23.3	25.3	25.7	27.5	30.5	31.7	32.7	31.8	33.2	14		
1 mg/kg/day																	
13D	20.8	22.3	23.5	24	25.1	26.4	26.6	26.5	26.8	29	27.6	27.9	28.9	30.7	9.9	Average=	11.32
14D	19.9	20.6	21.4	21.4	22	22.6	24.2	25.2	25.4	25.7	26.7	27.8	25.8	27.6	7.7	SD=	3.56
15D	21.2	20.5	21.7	22.1	23.2	24.4	25.6	26.1	27	29.5	30.7	32.1	31.3	30.7	9.5		
16D	20.9	21.6	22.4	23.1	24.3	26.2	25.5	25.3	25.9	27.3	26.6	27.4	29.1	30.3	9.4		
17D	19.7	21	22.7	22.5	23.6	24.3	26.3	25.6	26.9	29.9	30.9	33.1	34.9	36.6	16.9		
18D	19.9	21.2	22	22.4	23.1	24.8	25.8	25.5	26.5	28.7	29.6	31.4	32.7	34.4	14.5		
3 mg/kg/day																	
19D	20.3	20.7	21	22.3	23.4	23.7	25.3	24.3	26.4	27.5	27.4	26.9	28.7	30.9	10.6	Average=	10.88
20D	21.2	21.6	23.7	24.3	25.4	24.8	25.9	26	27.7	29.4	30	32.2	32.4	33.8	12.6	SD=	1.76
21D	20.9	22.6	23.6	23.7	24.8	24.6	25.5	26.3	27	27.6	28.8	30.1	30.5	32.3	11.4		
22D	19.3	21.5	22.1	22.6	23.1	24.2	25.6	25.9	27.7	30	31.2	31.9	32.2	31.6	12.3		
23D	19.3	21.1	22.4	22	22.6	23.9	24.5	24.1	25	26.1	25.9	26	25.9	27	7.7		
24D	19.1	20.3	21	21.9	23	24.1	24.3	23.9	25.2	25.9	27.7	28.3	29.1	29.8	10.7		
30 mg/kg/day																	
25D	20.1	21.8	21.8	22.8	22.9	24.7	26.8	25.8	26.5	27.9	30	30	31.1	31	10.9	Average=	9.17
26D	18.8	20.6	20.5	21	22.2	24.2	24.3	23.4	25.2	26.3	27.4	27.9	28.9	29.6	10.8	SD=	1.74
27D	21	21.2	22.5	22.1	23.7	24.3	25	24.8	26.4	26.6	26.7	27.2	26.4	27.5	6.5		
28D	20.2	20.5	21.5	22.6	23.4	24.1	24.8	24.4	24.7	25.5	25.9	25.8	26.7	28	7.8		
29D	20	20.9	21.8	22.6	23.7	23.9	24.7	24.6	25.4	26.8	26.8	26.8	27.5	29.1	9.1		
30D	21.8	21.7	24	23.5	24.1	25.3	25.8	25.6	25.7	26.5	27	27	28.4	31.7	9.9		

NO2 Prod. by Peritoneal Macrophages after Stimulation by IFN-y &/or LPS: 90 Day IP #2

Animal	Control	NO2 (uM)	INF-y	NO2 (uM)	LPS	NO2 (uM)	IFN-y/LPS	NO2 (uM)
Control								
1D	0.044	0.010	0.109	7.036	0.212	18.171	0.267	24.116
2D	0.043	-0.098	0.092	5.199	0.132	9.523	0.232	20.333
3D	0.044	0.010	0.105	6.604	0.144	10.820	0.255	22.819
4D	0.043	-0.098	0.194	16.225	0.343	32.332	0.406	39.142
5D	0.043	-0.098	0.125	8.766	0.141	10.496	0.294	27.035
6D	0.043	-0.098	0.128	9.090	0.250	22.278	0.384	36.764
Average	0.043	-0.062	0.126	8.820	0.204	17.270	0.306	28.368
SD	0.001	0.056	0.036	3.902	0.083	8.947	0.072	7.769
0.1 mg/kg/day								
7D	0.042	-0.206	0.108	6.928	0.195	16.333	0.289	26.494
8D	0.043	-0.098	0.107	6.820	0.139	10.279	0.287	26.278
9D	0.045	0.118	0.368	35.034	0.180	14.711	0.303	28.008
10D	0.044	0.010	0.237	20.873	0.146	11.036	0.280	25.521
11D	0.044	0.010	0.246	21.846	0.188	15.576	0.392	37.629
12D	0.045	0.118	0.246	21.846	0.273	24.765	0.414	40.007
Average	0.044	-0.008	0.219	18.891	0.187	15.450	0.328	30.656
SD	0.001	0.126	0.099	10.685	0.048	5.183	0.059	6.417
1.0 mg/kg/day								
13D	0.045	0.118	0.318	29.629	0.299	27.575	0.419	40.547
14D	0.044	0.010	0.284	25.954	0.235	20.657	0.379	36.223
15D	0.044	0.010	0.134	9.739	0.158	12.333	0.262	23.576
16D	0.045	0.118	0.203	17.198	0.169	13.522	0.372	35.467
17D	0.045	0.118	0.203	17.198	0.128	9.090	0.255	22.819
18D	0.044	0.010	0.325	30.386	0.163	12.874	0.322	30.062
Average	0.045	0.064	0.245	21.684	0.192	16.009	0.335	31.449
SD	0.001	0.059	0.076	8.246	0.063	6.823	0.067	7.213
3.0 mg/kg/day								
19D	0.045	0.118	0.301	27.792	0.212	18.171	0.289	26.494
20D	0.054	1.091	0.421	40.764	0.249	22.170	0.412	39.791
21D	0.050	0.658	0.292	26.819	0.250	22.278	0.452	44.115
22D	0.047	0.334	0.319	29.737	0.242	21.414	0.351	33.197
23D	0.044	0.010	0.260	23.359	0.276	25.089	0.364	34.602
24D	0.047	0.334	0.307	28.440	0.197	16.549	0.551	54.817
Average	0.048	0.424	0.317	29.485	0.238	20.945	0.403	38.836
SD	0.004	0.395	0.055	5.931	0.029	3.088	0.091	9.861
30.0 mg/kg/day								
25D	0.045	0.118	0.431	41.845	0.171	13.739	0.432	41.953
26D	0.045	0.118	0.453	44.223	0.255	22.819	0.480	47.141
27D	0.045	0.118	0.476	46.709	0.238	20.981	0.503	49.628
28D	0.045	0.118	0.470	46.060	0.318	29.629	0.468	45.844
29D	0.045	0.118	0.193	16.117	0.108	6.928	0.319	29.737
30D	0.047	0.334	0.305	28.224	0.187	15.468	0.476	46.709
Average	0.045	0.154	0.388	37.196	0.213	18.261	0.446	43.502
SD	0.001	0.088	0.114	12.368	0.073	7.926	0.067	7.189

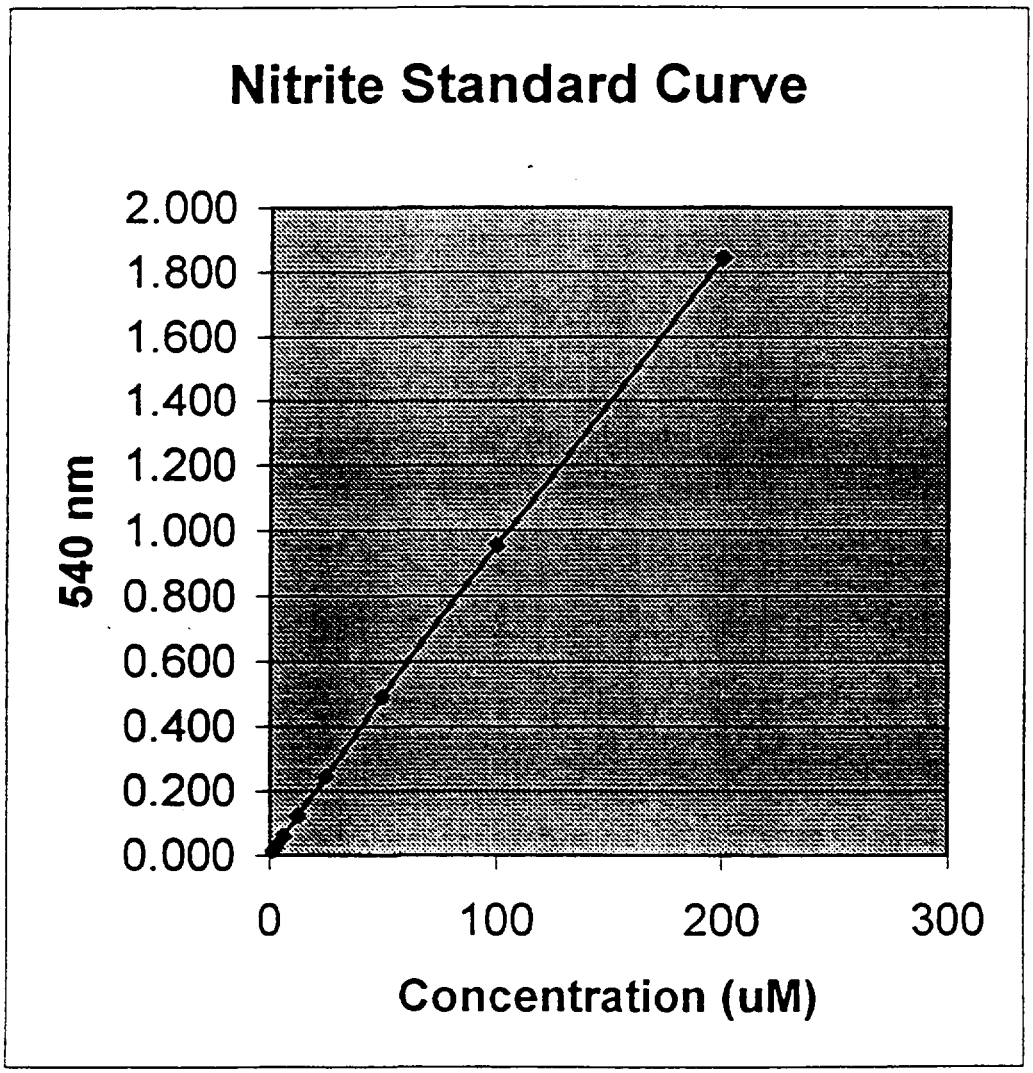
Nitrite Production by Peritoneal Macrophages: 90 Day "D" Standard Curve

Conc.	Standard			
uM	Rep 1	Rep 2	Rep 3	Average
200	1.882	1.879	1.903	1.844
100	0.999	1.002	0.998	0.956
50	0.539	0.534	0.533	0.491
25	0.291	0.28	0.293	0.244
12.5	0.165	0.167	0.17	0.123
6.25	0.103	0.104	0.107	0.061
3.125	0.071	0.074	0.075	0.029
1.56	0.058	0.059	0.059	0.015

Slope	Intercept
108.0999	0.009857

Greiss Blank
0.044

Formula to calculate nitrite concentration (uM):
=(Slope * (Spec-Greiss Blank))+intercept



90 Day AP Experiment "D"

Hematology Results

Trt. Group	WBC	RBC	HCT	HGB
Control	(x10e3 cells/µL)	(x10e6 cells/uL)	%	g/dL
1D	3.3	9.89	48.0	15.3
2D	4.3	9.51	46.0	14.6
3D	3.9	9.22	49.0	14.4
4D	2.6	9.40	48.6	14.4
5D	2.6	8.66	45.5	14.0
6D	3.2	9.07	45.0	13.6
Average	3.3	9.29	47.0	14.4
SD	0.69	0.42	1.72	0.57
0.1 mg/kg/day				
7D	4.1	9.05	45.0	14.3
8D	3.1	9.66	50.0	15.1
9D	3.3	8.89	48.9	14.1
10D	2.3	9.22	49.4	14.2
11D	2.6	9.32	49.9	14.6
12D	3.4	8.95	48.2	14.3
Average	3.1	9.18	48.6	14.4
SD	0.63	0.28	1.87	0.37
1.0 mg/kg/day				
13D	2.3	9.14	46.4	14.3
14D	1.8	9.24	47.0	14.3
15D	0.8	9.64	51.4	15.0
16D	2.7	9.25	48.9	14.5
17D	5.1	9.09	47.4	14.5
18D	3.3	9.22	46.0	14.2
Average	2.7	9.26	47.9	14.5
SD	1.46	0.19	2.01	0.29
3.0 mg/kg/day				
19D	3.0	9.29	48.4	14.9
20D	4.2	9.77	50.0	15.3
21D	2.6	9.28	47.9	14.7
22D	2.0	9.39	49.2	14.4
23D	2.1	9.14	48.1	14.1
24D	3.5	9.26	47.5	14.7
Average	2.9	9.36	48.5	14.7
SD	0.85	0.22	0.92	0.41
30.0 mg/kg/day				
25D	2.8	9.61	49.0	15.2
26D	5.7	9.43	48.9	14.9
27D	4.4	9.86	49.8	15.3
28D	3.2	9.56	45.0	14.6
29D	5.2	9.40	47.8	14.7
30D	3.8	9.02	47.1	14.4
Average	4.2	9.48	47.9	14.9
SD	1.13	0.28	1.72	0.35

90 day AP experiment "D" 6/17/98

Mouse #	Neutrophils	Lymphocytes	Monocytes	Eosinophils	Bands	Basophil
1	16.5	79	3.5	0	1	0
2	13.5	84	1	0	0.5	0
3	11.5	82.5	3.5	0	0.5	0
4	12.5	82.5	5	0	0	0
5	22.5	71.5	6	0	0	0
6	15	75	8.5	0	1.5	0
mean	**15.3**	**79.1**	**4.6**	**0.0**	**0.6**	**0.0**
std dev	**3.6**	**4.5**	**2.3**	**0.0**	**0.5**	**0.0**
Mouse #	Neutrophils	Lymphocytes	Monocytes	Eosinophils	Bands	Basophil
7	13	78.5	8	0	0.5	0
8	13	77.5	7.5	0	0	0
9	17.5	71.5	7.5	0	0.5	0
10	14	81.5	4	0	1	0
11	17	76	6	0.5	0.5	0
12	13.5	80.5	6	0	0	0
mean	**14.7**	**77.6**	**6.5**	**0.1**	**0.4**	**0.0**
std dev	**1.9**	**3.3**	**1.4**	**0.2**	**0.3**	**0.0**
Mouse #	Neutrophils	Lymphocytes	Monocytes	Eosinophils	Bands	Basophil
13	18	73	8.5	0.5	0	0
14	18	74	7	0	1	0
15	19.5	78	8.5	0	0.5	0
16	15.5	77	7	0	0.5	0
17	17	75.5	7	0.5	0	0
18	18	73	8.5	0.5	0	0
mean	**17.7**	**75.1**	**7.8**	**0.3**	**0.3**	**0.0**
std dev	**1.2**	**1.9**	**0.8**	**0.3**	**0.4**	**0.0**
Mouse #	Neutrophils	Lymphocytes	Monocytes	Eosinophils	Bands	Basophil
19	14	77.5	7.5	0.5	0.5	0
20	13	81	5.5	0	0.5	0
21	14	78	6.5	0	1.5	0
22	14.5	77.5	6.5	1	0.5	0
23	13	81.3	5.3	0	0.3	0
24	11.5	84	4.5	0	0	0
mean	**13.3**	**79.9**	**6.0**	**0.3**	**0.6**	**0.0**
std dev	**1.0**	**2.4**	**1.0**	**0.4**	**0.5**	**0.0**
Mouse #	Neutrophils	Lymphocytes	Monocytes	Eosinophils	Bands	Basophil
25	16	78.5	5	0.5	0	0
26	10	87.3	1.7	0	0.3	0
27	26	69	3	0	2	0
28	8	87	5.5	0	0	0
29	9	86	4	0	1	0
30	4	90.5	4	0	1.5	0
mean	**12.2**	**83.1**	**3.9**	**0.1**	**0.8**	**0.0**
std dev	**7.1**	**7.3**	**1.3**	**0.2**	**0.8**	**0.0**

Bone marrow assay

Experiment "D" 90 day

90 day Experiment "A" = counts range from 0-3 -

apparently no proliferation for undetermined reasons = no replication

90 day Experiment "D"				avg x 2 to account for 1 ml sample	CFU/10e5 cells
	2 ml samples				
mouse #	rep #1	rep #2	rep #3		
1	5	7	8	6.7	6.7.E+05
2	7	2	5	4.7	4.7.E+05
3	5	5	6	5.3	5.3.E+05
4	8	7	7	7.3	7.3.E+05
5	0	0	0	0.0	0.0.E+00
6	6	10	7	7.7	7.7.E+05
	group average			5.3	5.3E+05
	std error			1.2	1.2E+05
7	9	5	8	7.3	7.3.E+05
8	8	8	7	7.7	7.7.E+05
9	12	9	11	10.7	1.1.E+06
10	10	7	9	8.7	8.7.E+05
11	7	9	12	9.3	9.3.E+05
12	15	14	12	13.7	1.4.E+06
	group average			9.6	9.6E+05
	std error			1.0	9.6E+04
13	4	4	4	4.0	4.0.E+05
14	1	contaminated.....		1.0	1.0.E+05
15	8	5	7	6.7	6.7.E+05
16	4	7	10	7.0	7.0.E+05
17	contaminated.....				
18	8	7	7	7.3	7.3.E+05
	group average			5.2	5.2E+05
	std error			1.1	1.1E+05
19	0	7	contamin.	3.5	3.5.E+05
20	5	14	2	7.0	7.0.E+05
21	12	11	5	9.3	9.3.E+05
22	11	11	6	9.3	9.3.E+05
23	4	4	2	3.3	3.3.E+05
24	3	3	4	3.3	3.3.E+05
	group average			6.0	6.0E+05
	std error			1.2	1.2E+05
25	9	8	4	7.0	7.0.E+05
26	7	3	8	6.0	6.0.E+05
27	6	9	9	8.0	8.0.E+05
28	6	3	4	4.3	4.3.E+05
29	9	2	0	3.7	3.7.E+05
30	6	5	6	5.7	5.7.E+05
	group average			5.8	5.8E+05
	std error			0.7	6.6E+04

90 day AP Study Experiment "D"

Thymus CD4/CD8 Subpopulations

Trt. Group	CD8+/CD4-	CD8+/CD4+	CD8-/CD4-	CD8-/CD4+
Control				
1D	2.8	86.3	3.3	7.6
2D	3.4	84.0	3.9	8.7
3D	3.2	83.1	4.0	9.8
4D	4.2	82.1	3.5	10.2
5D	3.9	84.2	3.1	8.7
6D	3.9	82.1	5.1	8.9
Average	3.6	83.6	3.8	9.0
SD	0.52	1.58	0.72	0.92
0.1 mg/kg/day				
7D	3.9	83.3	4.0	8.8
8D	3.3	84.4	3.3	9.0
9D	3.5	85.1	3.5	7.9
10D	4.4	82.7	3.9	8.9
11D	4.5	83.1	3.8	8.6
12D	2.4	87.3	3.8	6.5
Average	3.7	84.3	3.7	8.3
SD	0.78	1.71	0.26	0.96
1.0 mg/kg/day				
13D	3.7	85.0	3.3	8.0
14D	4.1	84.3	4.7	6.8
15D	4.3	81.5	4.2	10.0
16D	3.8	82.1	4.1	10.0
17D	3.4	84.5	3.5	8.6
18D	3.0	87.0	3.5	6.5
Average	3.7	84.1	3.9	8.3
SD	0.47	2.01	0.54	1.51
3.0 mg/kg/day				
19D	2.9	86.2	3.3	7.7
20D	3.5	84.9	4.3	7.4
21D	3.2	86.7	3.2	6.8
22D	4.4	82.7	4.8	8.1
23D	3.9	84.8	3.3	8.0
24D	3.6	85.1	3.1	8.2
Average	3.6	85.1	3.7	7.7
SD	0.53	1.39	0.71	0.53
30.0 mg/kg/day				
25D	3.2	86.4	2.4	8.0
26D	3.3	86.7	3.4	6.5
27D	2.9	88.0	2.7	6.4
28D	2.7	88.9	2.8	5.5
29D	3.6	85.3	3.4	7.7
30D	3.3	85.8	3.3	7.6
Average	3.2	86.9	3.0	7.0
SD	0.32	1.36	0.42	0.97

90 day AP Study Experiment "D"

Spleen CD4/CD8 Subpopulations

Trt. Group	CD8+/CD4-	CD8+/CD4+	CD8-/CD4-	CD8-/CD4+
Control				
1D	12.7	0.7	64.1	22.6
2D	12.2	0.6	64.2	23.0
3D	12.1	0.7	63.4	23.9
4D	11.1	0.5	65.1	23.3
5D	11.3	0.2	69.0	19.4
6D	12.2	0.2	64.6	22.9
Average	11.9	0.5	65.1	22.5
SD	0.61	0.23	2.01	1.59
0.1 mg/kg/day				
7D	13.6	0.5	61.9	24.1
8D	14.5	0.2	59.9	25.3
9D	14.9	0.8	59.9	24.4
10D	15.1	0.7	58.3	26.0
11D	10.8	0.4	68.0	20.9
12D	12.4	0.4	63.7	23.5
Average	13.6	0.5	62.0	24.0
SD	1.67	0.22	3.50	1.77
1.0 mg/kg/day				
13D	12.9	0.5	63.0	23.6
14D	12.7	0.4	65.7	21.2
15D	11.8	0.8	64.5	22.9
16D	11.8	0.3	67.7	20.2
17D	11.1	0.3	66.8	21.8
18D	10.2	0.4	71.4	18.0
Average	11.8	0.5	66.5	21.3
SD	1.01	0.19	2.91	2.01
3.0 mg/kg/day				
19D	12.7	0.9	62.1	24.4
20D	11.6	0.4	65.8	22.2
21D	11.3	0.5	67.6	20.6
22D	11.6	0.5	66.3	21.6
23D	13.1	0.3	61.7	24.9
24D	12.4	0.3	68.2	19.2
Average	12.1	0.5	65.3	22.2
SD	0.72	0.22	2.76	2.19
30.0 mg/kg/day				
25D	12.6	0.7	62.6	24.1
26D	12.7	0.6	60.2	26.6
27D	11.8	1.1	62.3	24.8
28D	13.0	0.8	63.4	22.8
29D	11.4	0.6	65.8	22.2
30D	11.8	0.3	63.6	24.2
Average	12.2	0.7	63.0	24.1
SD	0.63	0.26	1.84	1.55

Date: 06/23/98

90-Day Immune Parameters
"D"
Bone Marrow Cell Counts

Animal	Coulter Counter	Total Cellularity
Control		
1D	1374	6.87E+06
2D	1760	8.80E+06
3D	1388	6.94E+06
4D	1587	7.94E+06
5D	1679	8.40E+06
6D	1482	7.41E+06
Average	**1545**	**7.73E+06**
SD	**157**	**7.87E+05**
0.1 mg/kg/day		
7D	1271	6.36E+06
8D	1350	6.75E+06
9D	1880	9.40E+06
10D	2389	1.19E+07
11D	1358	6.79E+06
12D	1487	7.44E+06
Average	**1623**	**8.11E+06**
SD	**434**	**2.17E+06**
1.0 mg/kg/day		
13D	1505	7.53E+06
14D	1848	9.24E+06
15D	1739	8.70E+06
16D	2282	1.14E+07
17D	1029	5.15E+06
18D	1861	9.31E+06
Average	**1711**	**8.55E+06**
SD	**418**	**2.09E+06**
3.0 mg/kg/day		
19D	978	4.89E+06
20D	1840	9.20E+06
21D	2075	1.04E+07
22D	2400	1.20E+07
23D	1523	7.62E+06
24D	1793	8.97E+06
Average	**1768**	**8.84E+06**
SD	**487**	**2.43E+06**
30.0 mg/kg/day		
25D	1425	7.13E+06
26D	1235	6.18E+06
27D	946	4.73E+06
28D	1780	8.90E+06
29D	2362	1.18E+07
30D	1347	6.74E+06
Average	**1516**	**7.58E+06**
SD	**495**	**2.48E+06**

Date: 06/23/98

90-Day Immune Parameters
"D"
Macrophage Cell Counts

Animal	Coulter Counter	Total Cellularity
Control		
1D	1300	6.50E+06
2D	1787	8.94E+06
3D	1267	6.34E+06
4D	642	3.21E+06
5D	1103	5.52E+06
6D	989	4.95E+06
Average	**1181**	**5.91E+06**
SD	**380**	**1.90E+06**
0.1 mg/kg/day		
7D	1252	6.26E+06
8D	1275	6.38E+06
9D	963	4.82E+06
10D	1106	5.53E+06
11D	1110	5.55E+06
12D	1167	5.84E+06
Average	**1146**	**5.73E+06**
SD	**114**	**5.69E+05**
1.0 mg/kg/day		
13D	800	4.00E+06
14D	1036	5.18E+06
15D	1379	6.90E+06
16D	852	4.26E+06
17D	1416	7.08E+06
18D	1097	5.49E+06
Average	**1097**	**5.48E+06**
SD	**258**	**1.29E+06**
3.0 mg/kg/day		
19D	864	4.32E+06
20D	799	4.00E+06
21D	767	3.84E+06
22D	810	4.05E+06
23D	752	3.76E+06
24D	600	3.00E+06
Average	**765**	**3.83E+06**
SD	**90**	**4.49E+05**
30.0 mg/kg/day		
25D	817	4.09E+06
26D	715	3.58E+06
27D	668	3.34E+06
28D	651	3.26E+06
29D	1280	6.40E+06
30D	814	4.07E+06
Average	**824**	**4.12E+06**
SD	**234**	**1.17E+06**

Date: 06/23/98

90-Day Immune Parameters
"D"
Spleen Cell Counts

Animal	Coulter Counter	Total Cellularity
Control		
1D	10119	1.52E+08
2D	14336	2.15E+08
3D	8778	1.32E+08
4D	9377	1.41E+08
5D	10645	1.60E+08
6D	8987	1.35E+08
Average	**10374**	**1.56E+08**
SD	**2064**	**3.10E+07**
0.1 mg/kg/day		
7D	9669	1.45E+08
8D	14112	2.12E+08
9D	9288	1.39E+08
10D	10533	1.58E+08
11D	10843	1.63E+08
12D	12668	1.90E+08
Average	**11186**	**1.68E+08**
SD	**1855**	**2.78E+07**
1.0 mg/kg/day		
13D	12455	1.87E+08
14D	11142	1.67E+08
15D	9679	1.45E+08
16D	10151	1.52E+08
17D	10552	1.58E+08
18D	10923	1.64E+08
Average	**10817**	**1.62E+08**
SD	**960**	**1.44E+07**
3.0 mg/kg/day		
19D	11516	1.73E+08
20D	14913	2.24E+08
21D	12211	1.83E+08
22D	8142	1.22E+08
23D	10555	1.58E+08
24D	10184	1.53E+08
Average	**11254**	**1.69E+08**
SD	**2267**	**3.40E+07**
30.0 mg/kg/day		
25D	10226	1.53E+08
26D	14699	2.20E+08
27D	13005	1.95E+08
28D	13579	2.04E+08
29D	11765	1.76E+08
30D	12611	1.89E+08
Average	12648	1.90E+08
SD	1539	2.31E+07

Date: 06/23/98

90-Day Immune Parameters
"D"
Thymus Cell Counts

Animal	Coulter Counter	Total Cellularity
Control	adjusted as per calibration	
1D	3426	5.14E+07
2D	3978	5.97E+07
3D	2612	3.92E+07
4D	2619	3.93E+07
5D	3416	5.12E+07
6D	3284	4.93E+07
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
0.1 mg/kg/day		
7D	3236	4.85E+07
8D	3373	5.06E+07
9D	4062	6.09E+07
10D	3654	5.48E+07
11D	1737	2.61E+07
12D	2802	4.20E+07
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
1.0 mg/kg/day		
13D	2357	3.54E+07
14D	2643	3.96E+07
15D	3878	5.82E+07
16D	2480	3.72E+07
17D	3318	4.98E+07
18D	3278	4.92E+07
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
3.0 mg/kg/day		
19D	3238	4.86E+07
20D	4242	6.36E+07
21D	3971	5.96E+07
22D	1575	2.36E+07
23D	3311	4.97E+07
24D	2864	4.30E+07
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
30.0 mg/kg/day		
25D	1754	2.63E+07
26D	4135	6.20E+07
27D	3763	5.64E+07
28D	3189	4.78E+07
29D	3260	4.89E+07
30D	3935	5.90E+07
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]

90-Day IP Parameters #2
"D"
Organ Weights

Animal	Body Weight gr	Thymus Wt. mg	Spleen Wt. mg	Kidney Wt. mg	Liver Wt. mg
Control					
1D	29.7	47	98	334	1406
2D	30.3	44	102	343	1429
3D	41.7	42	103	334	1538
4D	25.4	34	88	332	1318
5D	28.9	45	92	360	1493
6D	34.3	38	85	331	1548
Average	**31.72**	**41.67**	**94.67**	**339.00**	**1455.33**
SD	**5.66**	**4.84**	**7.47**	**11.14**	**88.12**
0.1 mg/kg/day					
7D	33.1	44	97	357	1692
8D	29.4	53	99	353	1519
9D	32.4	51	99	370	1669
10D	29.8	47	98	330	1437
11D	32	48	83	335	1436
12D	33.2	49	114	364	1716
Average	**31.65**	**48.67**	**98.33**	**351.50**	**1578.17**
SD	**1.65**	**3.14**	**9.83**	**15.91**	**129.50**
1.0 mg/kg/day					
13D	30.7	47	99	396	1493
14D	27.6	42	103	369	1404
15D	30.7	52	97	398	1550
16D	30.3	46	100	354	1485
17D	36.6	52	92	356	1582
18D	34.4	51	97	362	1692
Average	**31.72**	**48.33**	**98.00**	**372.50**	**1534.33**
SD	**3.23**	**4.03**	**3.69**	**19.70**	**98.49**
3.0 mg/kg/day					
19D	30.9	49	105	354	1570
20D	33.8	53	130	398	1581
21D	32.3	47	105	408	1562
22D	31.6	23	79	339	1395
23D	27	33	88	353	1342
24D	29.8	47	100	357	1276
Average	**30.90**	**42.00**	**101.17**	**368.17**	**1454.33**
SD	**2.34**	**11.51**	**17.47**	**27.87**	**133.38**
30.0 mg/kg/day					
25D	32	47	88	381	1375
26D	29.6	49	99	351	1366
27D	27.5	48	104	397	1337
28D	28	48	98	325	1296
29D	29.1	56	121	413	1601
30D	31.7	45	98	344	1475
Average	**29.65**	**48.83**	**101.33**	**368.50**	**1408.33**
SD	**1.86**	**3.76**	**10.95**	**33.90**	**111.51**

90-Day IP Parameters
"D"
Organ/BW Ratio (%)

Animal	Body Weight g	Thymus Wt. m	TW/BW (mg)%
Control			
1D	29.7	47	0.158
2D	30.3	44	0.145
3D	41.7	42	0.101
4D	25.4	34	0.134
5D	28.9	45	0.156
6D	34.3	38	0.111
Average	**31.72**	**41.67**	**0.13**
SD	**5.66**	**4.84**	**0.02**
0.1 mg/kg/day			
7D	33.1	44	0.133
8D	29.4	53	0.180
9D	32.4	51	0.157
10D	29.8	47	0.158
11D	32	48	0.150
12D	33.2	49	0.148
Average	**31.65**	**48.67**	**0.15**
SD	**1.65**	**3.14**	**0.02**
1.0 mg/kg/day			
13D	30.7	47	0.153
14D	27.6	42	0.152
15D	30.7	52	0.169
16D	30.3	46	0.152
17D	36.6	52	0.142
18D	34.4	51	0.148
Average	**31.72**	**48.33**	**0.15**
SD	**3.23**	**4.03**	**0.01**
3.0 mg/kg/day			
19D	30.9	49	0.159
20D	33.8	53	0.157
21D	32.3	47	0.146
22D	31.6	23	0.073
23D	27	33	0.122
24D	29.8	47	0.158
Average	**30.90**	**42.00**	**0.14**
SD	**2.34**	**11.51**	**0.03**
30.0 mg/kg/day			
25D	32	47	0.147
26D	29.6	49	0.166
27D	27.5	48	0.175
28D	28	48	0.171
29D	29.1	56	0.192
30D	31.7	45	0.142
Average	**29.65**	**48.83**	**0.17**
SD	**1.86**	**3.76**	**0.02**

90-Day IP Parameters
"D"
Organ/BW Ratio (%)

Animal	Body Weight g	Liver Wt. mg	LW/BW (mg)%
Control			
1D	29.7	1406	4.734
2D	30.3	1429	4.716
3D	41.7	1538	3.688
4D	25.4	1318	5.189
5D	28.9	1493	5.166
6D	34.3	1548	4.513
Average	**31.72**	**1455.33**	**4.67**
SD	**5.66**	**88.12**	**0.55**
0.1 mg/kg/day			
7D	33.1	1692	5.112
8D	29.4	1519	5.167
9D	32.4	1669	5.151
10D	29.8	1437	4.822
11D	32	1436	4.488
12D	33.2	1716	5.169
Average	**31.65**	**1578.17**	**4.98**
SD	**1.65**	**129.50**	**0.28**
1.0 mg/kg/day			
13D	30.7	1493	4.863
14D	27.6	1404	5.087
15D	30.7	1550	5.049
16D	30.3	1485	4.901
17D	36.6	1582	4.322
18D	34.4	1692	4.919
Average	**31.72**	**1534.33**	**4.86**
SD	**3.23**	**98.49**	**0.28**
3.0 mg/kg/day			
19D	30.9	1570	5.081
20D	33.8	1581	4.678
21D	32.3	1562	4.836
22D	31.6	1395	4.415
23D	27	1342	4.970
24D	29.8	1276	4.282
Average	**30.90**	**1454.33**	**4.71**
SD	**2.34**	**133.38**	**0.31**
30.0 mg/kg/day			
25D	32	1375	4.297
26D	29.6	1366	4.615
27D	27.5	1337	4.862
28D	28	1296	4.629
29D	29.1	1601	5.502
30D	31.7	1475	4.653
Average	**29.65**	**1408.33**	**4.76**
SD	**1.86**	**111.51**	**0.41**

90-Day IP Parameters
"D"
Organ/BW Ratio (%)

Animal	Body Weight g	Spleen Wt. mg	SW/BW (mg)%
Control			
1D	29.7	98	0.330
2D	30.3	102	0.337
3D	41.7	103	0.247
4D	25.4	88	0.346
5D	28.9	92	0.318
6D	34.3	85	0.248
Average	**31.72**	**94.67**	**0.30**
SD	**5.66**	**7.47**	**0.05**
0.1 mg/kg/day			
7D	33.1	97	0.293
8D	29.4	99	0.337
9D	32.4	99	0.306
10D	29.8	98	0.329
11D	32	83	0.259
12D	33.2	114	0.343
Average	**31.65**	**98.33**	**0.31**
SD	**1.65**	**9.83**	**0.03**
1.0 mg/kg/day			
13D	30.7	99	0.322
14D	27.6	103	0.373
15D	30.7	97	0.316
16D	30.3	100	0.330
17D	36.6	92	0.251
18D	34.4	97	0.282
Average	**31.72**	**98.00**	**0.31**
SD	**3.23**	**3.69**	**0.04**
3.0 mg/kg/day			
19D	30.9	105	0.340
20D	33.8	130	0.385
21D	32.3	105	0.325
22D	31.6	79	0.250
23D	27	88	0.326
24D	29.8	100	0.336
Average	**30.90**	**101.17**	**0.33**
SD	**2.34**	**17.47**	**0.04**
30.0 mg/kg/day			
25D	32	88	0.275
26D	29.6	99	0.334
27D	27.5	104	0.378
28D	28	98	0.350
29D	29.1	121	0.416
30D	31.7	98	0.309
Average	**29.65**	**101.33**	**0.34**
SD	**1.86**	**10.95**	**0.05**

90-Day IP Parameters
"D"
Organ/BW Ratio (%)

Animal	Body Weight g	Kidney Wt. mg	KW/BW (mg)%
Control			
1D	29.7	334	1.125
2D	30.3	343	1.132
3D	41.7	334	0.801
4D	25.4	332	1.307
5D	28.9	360	1.246
6D	34.3	331	0.965
Average	**31.72**	**339.00**	**1.10**
SD	**5.66**	**11.14**	**0.19**
0.1 mg/kg/day			
7D	33.1	357	1.079
8D	29.4	353	1.201
9D	32.4	370	1.142
10D	29.8	330	1.107
11D	32	335	1.047
12D	33.2	364	1.096
Average	**31.65**	**351.50**	**1.11**
SD	**1.65**	**15.91**	**0.05**
1.0 mg/kg/day			
13D	30.7	396	1.290
14D	27.6	369	1.337
15D	30.7	398	1.296
16D	30.3	354	1.168
17D	36.6	356	0.973
18D	34.4	362	1.052
Average	**31.72**	**372.50**	**1.19**
SD	**3.23**	**19.70**	**0.15**
3.0 mg/kg/day			
19D	30.9	354	1.146
20D	33.8	398	1.178
21D	32.3	408	1.263
22D	31.6	339	1.073
23D	27	353	1.307
24D	29.8	357	1.198
Average	**30.90**	**368.17**	**1.19**
SD	**2.34**	**27.87**	**0.08**
30.0 mg/kg/day			
25D	32	381	1.191
26D	29.6	351	1.186
27D	27.5	397	1.444
28D	28	325	1.161
29D	29.1	413	1.419
30D	31.7	344	1.085
Average	**29.65**	**368.50**	**1.25**
SD	**1.86**	**33.90**	**0.15**

mcv,mch, mchc data 14d Range

14-day exposure to AP, Range finding study

Treatment	Mouse #	MCV	MCH	MCHC
Control	1	52	16.1	31
	2			
	3	52	15.9	30.6
	4	51	15.8	31.1
	5	50	15.6	30.9
	Average	51.3	15.9	30.9
	Std Dev	1.0	0.2	0.2
0.05	6	50.0	15.8	31.7
	7	52	17.4	33.9
	8	50	16.2	32.4
	9	49	16.1	32.6
	10	51	16.3	32.2
	Average	50.4	16.4	32.6
	Std Dev	1.1	0.6	0.8
0.1	11	50.0	15.9	31.7
	12	49.0	15.9	32.5
	13	50	16	32.3
	14	50	15.9	31.8
	15			
	Average	49.8	15.9	32.1
	Std Dev	0.5	0.1	0.4
1.0	16	49.0	16.5	33.8
	17	50.0	15.9	32.1
	18	50.0	16.1	32.3
	19	49	16	33
	20	49	16	32.8
	Average	49.4	16.1	32.8
	Std Dev	0.5	0.2	0.7
2.0	21	49.0	16.1	33.1
	22	51.0	16.1	31.8
	23	49.0	15.9	32.5
	24	49.0	16.0	32.8
	25			
	Average	49.5	16.0	32.6
	Std Dev	1.0	0.1	0.6
10.0	26	50	16	32
	27	48	16	33.2
	28	50	15.9	32.2
	29			
	30	50	16.1	32.5
	Average	49.5	16.0	32.5
	Std Dev	1.0	0.1	0.5

Hematology Results Rangefinding Studies 14d AP

Trt. Group	WBC	RBC	HCT	HGB
Control				
1	2.8	9.09	47.1	14.6
2	*	*	*	*
3	1.0	8.94	46.5	14.2
4	1.7	9.18	46.3	14.5
5	1.1	9.22	46.5	14.3
Average	1.7	9.11	46.6	14.4
SD	0.83	0.12	0.35	0.18
0.05 mg/kg/day				
6	1.6	9.16	45.8	14.5
7	1.5	8.29	42.7	14.5
8	2.3	9.14	45.7	14.8
9	2.6	9.08	44.9	14.6
10	2.8	8.90	44.9	14.5
Average	2.2	8.91	44.8	14.6
SD	0.59	0.36	1.25	0.13
0.1 mg/kg/day				
11	1.9	8.98	45.0	14.3
12	2.6	9.13	44.7	14.6
13	2.6	9.27	45.9	14.8
14	0.4	8.84	44.3	14.1
15	*	*	*	*
Average	1.9	9.06	45.0	14.5
SD	1.04	0.19	0.68	0.31
1.0 mg/kg/day				
16	2.8	8.82	43.0	14.5
17	2.2	9.13	45.2	14.5
18	4.3	8.69	43.4	14.0
19	1.2	8.69	42.2	13.9
20	1.1	9.05	44.3	14.5
Average	2.3	8.88	43.6	14.3
SD	1.31	0.20	1.16	0.30
2.0 mg/kg/day				
21	4.0	8.75	42.7	14.1
22	2.3	8.35	42.3	13.5
23	2.4	9.29	45.5	14.8
24	2.7	8.97	43.9	14.4
25	*	*	*	*
Average	2.9	8.84	43.6	14.2
SD	0.79	0.39	1.44	0.55
10.0 mg/kg/day				
26	3.3	8.86	44.2	14.1
27	3.4	9.23	44.4	14.7
28	2.9	9.42	46.6	15.0
29	*	*	*	*
30	1.9	8.79	43.6	14.2
Average	2.9	9.08	44.7	14.5
SD	0.68	0.30	1.31	0.42

14d - NK assay

animal	E:T ratio (X)	avg CPM	% Spec Lysis (Y)	Y* = ln(Y/(100-Y))	mean Y*	exp	LU per 10^7 cells	LU/10^7/group
1	100	4046	33.2	-0.697	-1.190	2.738	56.9	control 79.1
	50	3108	20.8	-1.336				std dev 14.8
	25	2873	17.7	-1.537				
	10	2449	12.1					
2	100	4309	36.7	-0.544	-0.849	3.851	80.1	
	50	3828	30.4	-0.831				
	25	3322	23.6	-1.172				
	10	2770	16.3					
3	100	4166	34.8	-0.627	-0.931	3.547	73.8	
	50	3622	27.6	-0.963				
	25	3279	23.1	-1.204				
	10	2676	15.1					
4	100	4510	39.4	-0.431	-0.734	4.322	89.9	
	50	3736	29.1	-0.889				
	25	3749	29.3	-0.881				
	10	2908	18.2					
5	100	4772	42.9	-0.288	-0.629	4.800	99.8	
	50	4181	35.0	-0.618				
	25	3596	27.3	-0.981				
	10	2903	18.1					
6	100	4389	37.8	-0.499	-0.928	3.559	74.0	
	50	3380	24.4	-1.130				
	25	3346	24.0	-1.155				
	10	2827	17.1					
7	100	4412	38.1	-0.486	-0.924	3.572	74.3	0.1 mg/kg 64.3
	50	3497	26.0	-1.048				std dev 9.8
	25	3232	22.5	-1.239				
	10	2714	15.6					
8	100	4571	40.2	-0.397	-0.852	3.838	79.8	
	50	3582	27.1	-0.990				
	25	3325	23.7	-1.170				
	10	2711	15.6					
9	100	4375	37.6	-0.507	-0.717	4.396	91.4	
	50	3748	29.3	-0.881				
	25	3939	31.8	-0.762				
	10	3266	22.9					
10	100	4737	42.4	-0.307	-0.675	4.585	95.3	
	50	3961	32.1	-0.749				
	25	3614	27.5	-0.969				
	10	2748	16.0					
11	100	4158	34.7	-0.631	-0.885	3.715	77.3	
	50	3625	27.7	-0.961				
	25	3476	25.7	-1.062				
	10	2776	16.4					
12	100	4432	38.4	-0.475	-0.717	4.396	91.4	
	50	3896	31.3	-0.788				
	25	3739	29.2	-0.887				
	10	2948	18.7					
13	100	3832	30.4	-0.828	-1.075	3.071	63.9	1.0 mg/kg 81.8
	50	3403	24.7	-1.114				std dev 30.3
	25	3174	21.7	-1.284				
	10	2752	16.1					
14	100	3784	29.8	-0.858	-1.075	3.073	63.9	
	50	3368	24.3	-1.139				
	25	3248	22.7	-1.227				
	10	2741	16.0					
15	100	4116	34.2	-0.656	-0.890	3.697	76.9	
	50	3656	28.1	-0.941				
	25	3461	25.5	-1.073				
	10	2867	17.6					
16	100	5297	49.8	-0.007	-0.271	6.862	142.7	
	50	4445	38.5	-0.467				
	25	4677	41.6	-0.339				
	10	3812	30.1					
17	100	4249	35.9	-0.578	-0.929	3.554	73.9	
	50	3495	25.9	-1.049				
	25	3338	23.9	-1.160				
	10	3025	19.7					
18	100	3837	30.5	-0.825	-0.993	3.333	69.3	
	50	3410	24.8	-1.109				
	25	3499	26.0	-1.046				
	10	3142	21.3					
19	100	2941	18.6	-1.476	-1.662	1.707	35.5	3.0 mg/kg 53.0
	50	2726	15.8	-1.677				std dev 19.5
	25	2577	13.8	-1.834				
	10	2531	13.2					
20	100	2977	19.1	-1.445	-1.584	1.645	38.4	
	50	2701	15.4	-1.702				
	25	2798	16.7	-1.607				
	10	2560	13.6					
21	100	3748	29.3	-0.881	-1.011	3.273	68.1	
	50	3552	26.7	-1.010				

	25	3362	24.2	-1.143				
	10	2991	19.3					
22	100	3551	26.7	-1.011	-1.083	3.047	63.4	
	50	3416	24.9	-1.104				
	25	3374	24.3	-1.134				
	10	2800	16.7					
23	100	2783	16.5	-1.621	-1.711	1.626	33.8	
	50	2584	13.9	-1.826				
	25	2717	15.6	-1.686				
	10	2260	9.6					
24	100	4298	36.6	-0.550	-0.863	3.798	79.0	
	50	3628	27.7	-0.959				
	25	3452	25.4	-1.079				
	10	3122	21.0					
25	100	3741	29.2	-0.886	-1.258	2.558	53.2	30 mg/kg 45.5
	50	3276	23.0	-1.206				std dev 12.8
	25	2721	15.7	-1.682				
	10	2067	7.0					
26	100	3337	23.8	-1.161	-1.564	1.884	39.2	
	50	2750	16.1	-1.653				
	25	2539	13.3	-1.877				
	10	3005	19.4					
27	100	3546	26.6	-1.014	-1.619	1.783	37.1	
	50	2596	14.0	-1.813				
	25	2414	11.6	-2.029				
	10	2999	19.4					
28	100	3363	24.2	-1.142	-1.482	2.045	42.5	
	50	2808	16.8	-1.597				
	25	2697	15.4	-1.706				
	10	3385	24.5					
29	100	2599	14.1	-1.809	-2.130	1.070	22.3	
	50	2311	10.3	-2.169				
	25	2159	8.2	-2.410				
	10	3337	23.8					
30	100	2571	13.7	-1.841	-2.302	0.901	18.7	
	50	2118	7.7	-2.484				
	25	2068	7.0	-2.581				
	10	3625	27.7					

Experiment "C" 14d Ammonium Perchlorate

Spleen CD4/CD8 Subpopulations

Trt. Group	CD8+/CD4-	CD8+/CD4+	CD8-/CD4-	CD8-/CD4+
Control				
1C	11.1	0.1	69.2	19.5
2C	13.1	0.1	63.4	23.3
3C	15.5	0.1	60.2	24.2
4C	12.6	0.2	64.4	22.8
5C	11.1	0.2	69.4	19.3
6C	12.9	0.1	65.5	21.6
Average	*12.7*	*0.1*	*65.4*	*21.8*
SD	*1.62*	*0.05*	*3.53*	*2.03*
0.1 mg/kg/day				
7C	11.1	0.1	69.7	19.0
8C	12.6	0.2	64.7	22.5
9C	13.2	0.3	61.0	25.5
10C	13.2	0.1	62.9	23.7
11C	14.7	0.2	60.8	24.3
12C	14.3	0.3	58.6	26.8
Average	*13.2*	*0.2*	*63.0*	*23.6*
SD	*1.28*	*0.09*	*3.90*	*2.71*
1.0 mg/kg/day				
13C	12.2	0.1	64.8	22.9
14C	10.7	0.1	67.8	21.3
15C	12.3	0.1	66.8	20.8
16C	10.8	0.2	66.7	22.4
17C	11.8	0.2	67.2	20.8
18C	10.4	0.1	68.7	20.8
Average	11.4	0.1	67.0	21.5
SD	0.83	0.05	1.31	0.93
3.0 mg/kg/day				
19C	11.9	0.3	65.7	22.1
20C	10.7	0.1	68.6	20.6
21C	13.3	0.1	62.9	23.7
22C	11.4	0.2	67.9	20.4
23C	15.0	0.1	60.7	24.2
24C	11.3	0.1	66.5	22.0
Average	*12.3*	*0.2*	*65.4*	*22.2*
SD	*1.60*	*0.08*	*3.04*	*1.56*
30.0 mg/kg/day				
25C	12.6	0.2	65.0	22.2
26C	14.4	0.3	60.9	24.4
27C	10.3	0.2	69.1	20.4
28C	13.5	0.1	60.6	25.8
29C	15.1	0.2	55.5	29.2
30C	11.6	0.1	64.9	23.4
Average	12.9	0.2	62.7	24.2
SD	1.79	0.08	4.70	3.06

Experiment "C" 14d Ammonium Perchlorate

Thymus CD4/CD8 Subpopulations

Trt. Group	CD8+/CD4-	CD8+/CD4+	CD8-/CD4-	CD8-/CD4+
Control				
1C	3.0	84.4	2.7	9.9
2C	1.8	72.0	4.3	21.9
3C	1.9	83.5	3.3	11.3
4C	3.0	85.4	2.8	8.8
5C	2.3	80.0	3.8	14.0
6C	2.7	85.4	2.8	9.1
Average	*2.5*	*81.8*	*3.3*	*12.5*
SD	*0.53*	*5.19*	*0.65*	*4.98*
0.1 mg/kg/day				
7C	2.8	88.9	1.7	6.6
8C	3.5	86.4	2.4	7.7
9C	5.5	80.1	3.5	10.9
10C	2.8	89.5	1.8	5.9
11C	3.1	88.0	1.8	7.1
12C	4.2	85.1	2.7	8.0
Average	*3.7*	*86.3*	*2.3*	*7.7*
SD	*1.05*	*3.46*	*0.70*	*1.74*
1.0 mg/kg/day				
13C	3.9	84.2	2.6	9.3
14C	3.1	86.9	1.9	8.1
15C	3.9	85.3	2.5	8.3
16C	3.3	84.1	2.4	10.1
17C	3.8	86.8	2.2	7.2
18C	3.5	83.6	2.9	10.0
Average	*3.6*	*85.2*	*2.4*	*8.8*
SD	*0.34*	*1.43*	*0.34*	*1.16*
3.0 mg/kg/day				
19C	2.1	81.2	3.0	13.6
20C	2.4	82.1	2.6	12.9
21C	3.2	88.0	2.1	6.6
22C	2.1	83.5	3.5	10.9
23C	2.7	81.0	4.4	11.9
24C	3.1	82.8	4.6	9.5
Average	*2.6*	*83.1*	*3.4*	*10.9*
SD	*0.48*	*2.58*	*0.99*	*2.56*
30.0 mg/kg/day				
25C	2.5	82.9	2.9	11.7
26C	4.0	84.0	3.0	8.9
27C	3.4	87.2	2.1	7.3
28C	4.2	83.3	3.3	9.2
29C	3.9	84.0	2.7	9.5
30C	3.5	86.1	2.2	8.2
Average	*3.6*	*84.6*	*2.7*	*9.1*
SD	*0.61*	*1.69*	*0.47*	*1.48*

Phagocytosis 14 day "C"

	control					0.1 mg/kg						
	mean avg for group		21	std dev:	2	mean avg for group		18	std dev:	5		
Mouse:	1	2	3	4	5	6	7	8	9	10	11	12
avg	18	24	21	18	22	16	28	21	12	15	17	16
sd	9	11	9	13	8	9	70	14	7	6	9	11
	19	28	15	16	26	49	0	18	8	18	29	30
	8	20	14	23	15	20	23	15	15	7	31	21
	18	12	25	12	30	24	21	8	17	16	22	23
	22	23	24	15	27	17	16	34	30	14	31	15
	24	13	12	23	29	22	18	13	9	10	13	17
	22	16	25	17	16	46	22	5	13	8	48	20
	22	32	22	64	13	9	7	13	4	17	9	11
	19	20	25	40	37	13	24	26	22	13	33	19
	16	19	13	10	20	16	19	9	20	18	21	37
	12	16	28	27	24	15	0	49	14	10	35	16
	13	24	22	16	19	10	41	12	24	8	43	24
	25	18	26	7	20	15	38	16	14	15	17	15
	17	13	23	9	33	12	34	23	5	17	19	9
	11	22	31	8	41	26	11	12	16	20	29	8
	32	19	33	12	23	13	27	29	13	12	24	6
	41	41	38	11	26	3	526	12	10	10	12	32
	30	36	11	10	18	4	0	8	0	19	15	19
	33	27	23	21	27	20	0	20	1	9	14	10
	25	11	35	27	12	6	38	22	7	8	2	16
	18	22	31	21	20	13	15	52	7	21	21	13
	31	14	27		18	12	5	43	14	13	12	22
	15	23	12		19	7	7	48	29	11	29	23
	14	21	27		19	12	28	8	14	9	14	48
	7	35	10		11	5	5	0	15	11	12	19
	13	13	16		15	12	4	23	12	13	15	21
	9	36	13		30	25	6	10	7	23	8	56
	9	16	31		17	10	2	32	18	17	15	22
	17	18	28		15	7	34	23	15	18	16	15
	10	17	27		14	4	11	5	12	4	12	0
	41	19	29		15	23	7	6	4	16	10	4
	7	14	18			11	5	15	6	18	7	3
	17	45	10			15	15	18	21	19	17	12
	3	34	19			15	5	35	3	16	19	5
	11	27	12			9	32	22	28	27	12	39
	13	16	26			8	2	0	13	12	18	15
	12	27	28			26	31	24	5	13	21	10
	15	14	29			16	7	16	17	24	13	12
	8	14	20			33	4	24	14	9	14	16
	18	24	13			17	13	48	17	10	11	6
	25	24	19			28	0	24	0	16	10	16
	12	16	15			8	4	56	4	20	8	7
	12	25	30			10	33	1	29	19	17	6
	28	32	12			11	32	40	7	15	10	15
	14	25	8			13	43	2	0	13	24	2
	9	28	10			15	30	22	4	10	12	14
	32	63	0			7	16	23	7	13	11	13
	12	45	38			13	9	22	14	17	13	8
	36	51	24			18	9	30	15	41	15	9
	15	21				22	21	19	10	9	5	15
						13	16	9	14	19	7	0
						11	18	14	13	20	10	25
						8	16		8	15	13	
						11	10		3	7	20	
						19	7		12	14		
						15			10	10		
						16						
						23						
						9						
						6						

1 mg/kg

mean avg for group 16 std dev: 3

13	14	15	16	17	18
28	10	28	14	16	12
12	10	10	10	6	6
28	0	8	17	29	11
29	5	16	52	20	8
35	14	20	10	22	23
27	22	15	11	23	7
41	16	0	9	18	13
15	27	21	19	11	9
4	6	15	12	16	12
40	12	27	15	8	16
12	3	19	18	14	15
25	32	13	13	11	6
27	54	17	32	22	7
20	20	14	5	13	9
28	11	6	6	18	11
9	24	17	12	13	9
11	5	25	13	19	13
0	20	37	14	20	28
24	0	35	18	15	18
45	3	26	41	11	7
5	13	20	21	13	7
31	29	27	40	26	9
38	16	15	13	13	12
51	2	17	11	17	11
23	10	44	0	26	5
13	4	14	14	8	10
21	4	47	10	19	9
8	13	27	14	17	8
24	1	26	12	19	11
30	8	13	14	11	7
28	2	9	17	23	10
17	8	14	11	12	9
21	5	41	30	21	15
30	0	9	18	24	18
24	12	22	21	11	26
11	7	25	12	13	9
5	0	17	4	16	6
20	6	10	26	5	15
10	5	28	15	14	7
0	2	40	26	7	8
31	8	10	17	17	11
10	19	17	24	26	4
9	0	21	9	13	36
15	6	16	8	8	21
41	9	6	10	16	8
8	3	10	15	19	14
20	20	7	0	14	19
7	3	23	15	22	13
29	4	27	10	14	7
16	0	16	2	21	16
19	5	19	9	18	12
12	11	20	10	24	13
6	5	13	8	16	4
7		17	0	6	16
3		5	3	11	8
12		6	11	13	3
4			14	25	7
			11	13	5
			4	19	17
			11	9	10
			10	15	9
				21	14

3 mg/kg

mean avg for group 12 std dev: 2

19	20	21	22	23	24
16	12	12	10	43	12
8	6	6	6	16	8
14	13	23	7	4	17
22	6	8	14	5	9
11	8	18	4	42	22
17	7	7	11	6	38
6	10	12	6	3	7
8	4	7	8	8	27
26	15	10	4	0	9
14	11	8	21	16	17
9	17	3	2	3	12
5	6	19	1	13	9
7	7	14	3	3	14
17	9	10	6	8	34
11	14	8	0	2	16
13	13	9	19	7	20
44	11	13	9	26	6
19	10	10	15	19	9
15	18	12	5	9	8
15	19	15	20	16	19
16	13	17	8	10	14
18	9	6	12	2	29
11	12	11	2	19	10
6	20	9	1	11	31
7	10	21	4	6	8
5	13	12	13	31	17
13	14	10	11	4	7
18	11	7	18	7	11
33	8	10	9	38	2
11	12	16	3	9	16
26	19	6	8	12	18
24	4	11	15	15	12
17	8	4	10	2	23
9	10	8	21	4	10
27	20	15	3	20	0
12	22	5	9	15	11
15	13	14	13	3	3
7	11	6	7	10	7
10	5	15	22	2	9
4	6	18	6	5	12
21	14	13	5	18	1
21	3	6	10	4	15
13	23	9	18	7	6
26	8	22	10	15	9
17	9	10	5	9	3
8	11	11	14	12	8
21	22	16	1	19	7
8	13	3	8	13	16
15	10	13	10	20	5
19	14	25	13	17	7
5	24	7	15	5	2
14	8	4	7	4	9
24	5	11	26	6	12
11	18	25	9	7	14
21	12	9	13	13	4
27	2	22	6	36	10
6	9	8	4	3	11
19	16	21	16	5	7
6	14	18	7	116	21
17	6	6	11	4	18
9	17	10	7	19	9
15	5	13	18	8	
				12	

30 mg/kg

mean avg for group 13 std dev: 1

25	26	27	28	29	30
11	12	12	14	12	14
6	7	6	6	8	8
6	3	8	27	2	5
13	6	14	13	11	2
19	10	3	8	1	7
7	8	11	10	9	6
5	5	19	19	21	18
19	11	6	7	12	8
8	18	13	3	4	11
14	21	17	9	7	5
4	7	20	5	1	15
5	9	11	8	9	17
16	13	3	15	7	24
10	5	10	19	14	21
14	11	12	13	18	16
8	4	27	11	24	24
18	17	15	9	5	2
7	26	8	25	2	8
4	23	9	12	13	8
2	5	3	14	14	24
28	14	19	21	12	10
10	3	6	27	9	19
17	19	2	15	19	11
11	8	22	6	44	8
3	21	13	12	14	13
8	24	16	20	3	27
10	18	11	10	18	23
5	13	19	9	8	17
13	10	4	7	11	14
12	28	12	13	10	35
2	9	10	8	7	8
4	3	17	16	23	19
10	7	15	29	12	11
8	17	9	9	18	29
5	5	7	14	10	5
11	10	21	11	13	1
9	23	12	11	5	3
7	18	16	17	19	26
11	11	9	10	9	5
26	13	6	19	23	19
10	6	16	9	12	17
21	3	8	19	10	16
6	4	12	18	5	12
11	9	10	11	14	3
15	8	5	12	6	27
13	17	13	24	28	29
18	17	8	10	7	9
8	24	18	13	16	10
5	16	10	23	15	14
28	12	24	27	13	22
10	11	4	14	5	12
9	7	11	17	19	11
16	5	7	8	24	6
19	3	21	10	6	24
8	6	10	13	19	10
9	20	25	9		13
12		13	5		
17		6	14		
6			19		

Experiment "C" 14d Ammonium Perchlorate

Macrophage Cell Count

Animal	Coulter Count	Total Cells
Control	(calibration factor included)	
1C	223	4.46E+06
2C	205	4.10E+06
3C	316	6.32E+06
4C	220	4.40E+06
5C	307	6.14E+06
6C	347	6.94E+06
Average	270	5.39E+06
SD	61	1.21E+06
0.1 mg/kg/day		
7C	272	5.44E+06
8C	301	6.02E+06
9C	181	3.62E+06
10C	257	5.14E+06
11C	252	5.04E+06
12C	262	5.24E+06
Average	254	5.08E+06
SD	40	7.97E+05
1.0 mg/kg/day		
13C	376	7.52E+06
14C	167	3.34E+06
15C	234	4.68E+06
16C	271	5.42E+06
17C	336	6.72E+06
18C	406	8.12E+06
Average	298	5.97E+06
SD	91	1.81E+06
3.0 mg/kg/day		
19C	326	6.52E+06
20C	340	6.80E+06
21C	241	4.82E+06
22C	425	8.50E+06
23C	278	5.56E+06
24C	277	5.54E+06
Average	315	6.29E+06
SD	65	1.30E+06
30.0 mg/kg/day		
25C	221	4.42E+06
26C	*	technical error
27C	*	technical error
28C	255	5.10E+06
29C	249	4.98E+06
30C	405	8.10E+06
Average	283	5.65E+06
SD	83	1.66E+06

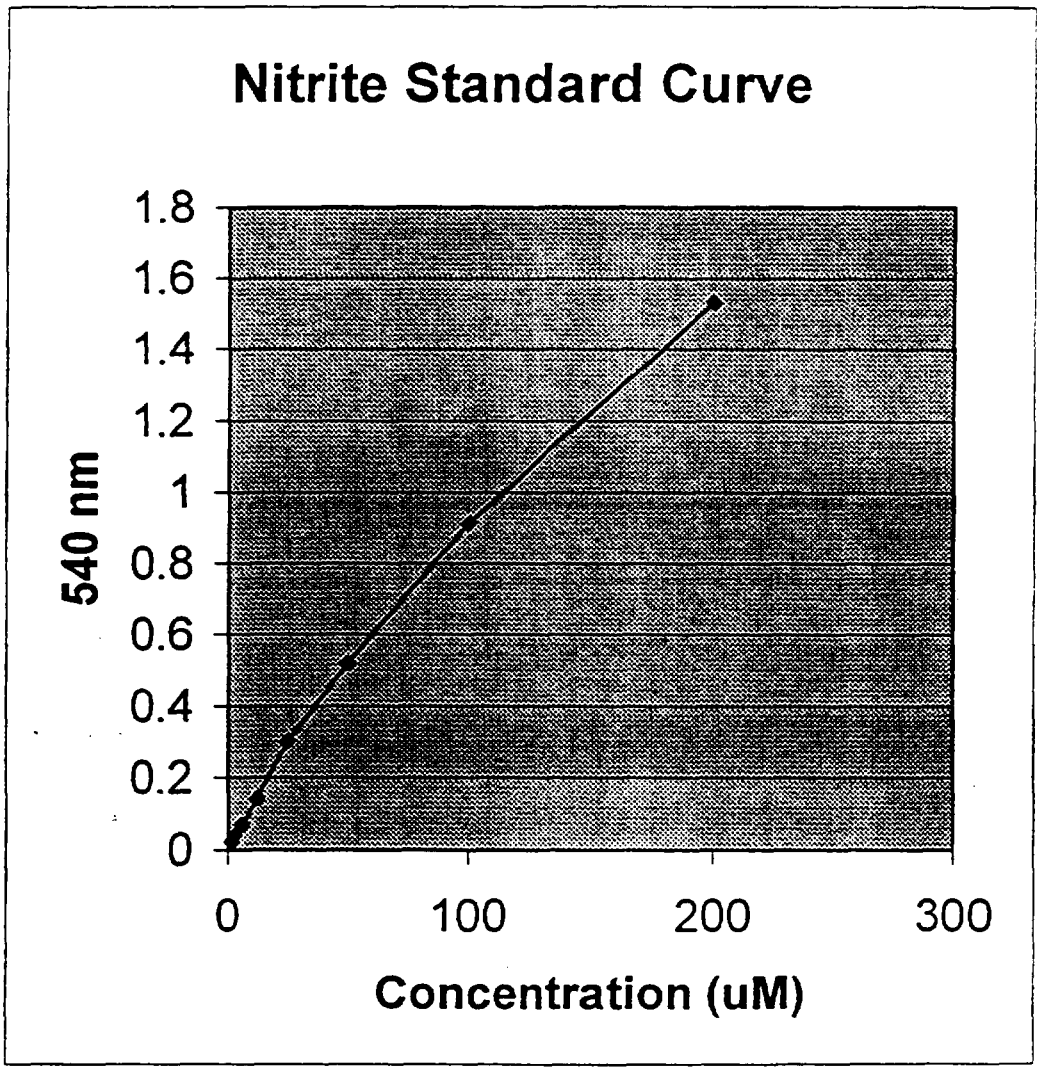
Experiment "C": Nitrite Production by Peritoneal Macrophages
14d ammonium perchlorate

	SpectraCount Readings @ 540nm (minus Greiss Blan				Macrophage Nitrite Production (uM)			
Animal	Control	INF-y	LPS	IFN-y/LPS	Control	INF-y	LPS	IFN-y/LPS
Control								
1C	0.057	0.344	0.934	1.093	0.963	37.934	113.936	134.418
2C	0.049	0.141	0.594	0.733	-0.067	11.784	70.138	88.044
3C	0.049	0.176	0.593	0.728	-0.067	16.293	70.009	87.400
4C	0.052	0.333	0.745	0.949	0.319	36.517	89.590	115.868
5C	0.055	0.575	0.690	0.883	0.706	67.691	82.505	107.366
6C	0.049	0.226	0.546	0.667	-0.067	22.733	63.955	79.542
Average	0.052	0.299	0.684	0.842	0.295	32.159	81.689	102.106
SD	0.003	0.158	0.143	0.162	0.449	20.350	18.370	20.901
0.1 mg/kg/day								
7C	0.050	0.502	0.661	0.825	0.062	58.287	78.769	99.895
8C	0.049	0.227	0.734	0.906	-0.067	22.862	88.173	110.329
9C	0.052	0.215	0.700	0.892	0.319	21.316	83.793	108.526
10C	0.050	0.321	0.675	0.815	0.062	34.971	80.572	98.607
11C	0.048	0.345	0.697	0.831	-0.196	38.063	83.406	100.668
12C	0.050	0.213	0.575	0.828	0.062	21.059	67.691	100.281
Average	0.050	0.304	0.674	0.850	0.040	32.760	80.401	103.051
SD	0.001	0.113	0.054	0.039	0.171	14.495	7.003	5.020
1.0 mg/kg/day								
13C	0.050	0.231	0.525	0.719	0.062	23.378	61.250	86.240
14C	0.047	0.295	0.551	0.730	-0.325	31.622	64.599	87.657
15C	0.047	0.254	0.748	0.836	-0.325	26.340	89.976	101.312
16C	0.046	0.311	0.647	0.897	-0.454	33.683	76.965	109.170
17C	0.064	0.162	0.596	0.718	1.865	14.489	70.396	86.111
18C	0.058	0.186	0.493	0.523	1.092	17.581	57.128	60.992
Average	0.052	0.240	0.593	0.737	0.319	24.515	70.052	88.580
SD	0.007	0.059	0.093	0.128	0.947	7.587	11.993	16.490
3.0 mg/kg/day								
19C	0.053	0.209	0.575	0.767	0.448	20.544	67.691	92.424
20C	0.048	0.211	0.629	0.784	-0.196	20.801	74.647	94.613
21C	0.063	0.355	0.678	0.739	1.736	39.351	80.959	88.817
22C	0.060	0.273	0.529	0.697	1.350	28.788	61.765	83.406
23C	0.051	0.199	0.646	0.757	0.190	19.255	76.837	91.135
24C	0.047	0.235	0.616	0.692	-0.325	23.893	72.972	82.762
Average	0.054	0.247	0.612	0.739	0.534	25.438	72.478	88.860
SD	0.007	0.059	0.053	0.038	0.837	7.627	8.835	4.856
30.0 mg/kg/day								
25C	0.059	0.386	0.804	0.975	1.221	43.344	97.190	119.217
26C	*	*	*	*	*	*	*	*
27C	*	*	*	*	*	*	*	*
28C	0.048	0.265	0.628	0.869	-0.196	27.757	74.518	105.563
29C	0.066	0.696	0.545	0.801	2.123	83.278	63.826	96.803
30C	0.048	0.215	0.517	0.674	-0.196	21.316	60.219	80.444
Average	0.055	0.391	0.624	0.830	0.738	43.924	73.938	100.507
SD	0.009	0.218	0.129	0.126	1.140	27.818	16.648	16.247

Greiss Blank = 0.05
*Rows appear to have been skipped.
See raw data.

Conc.	Standard			
uM	Rep 1	Rep 2	Rep 3	Average
200	1.561	1.532	1.608	1.53
100	0.913	0.966	0.974	0.914
50	0.562	0.52	0.585	0.519
25	0.339	0.321	0.358	0.302
12.5	0.176	0.186	0.182	0.144
6.25	0.114	0.099	0.113	0.072
3.125	0.078	0.076	0.087	0.043
1.56	0.055	0.061	0.063	0.023

Slope	Intercept
128.8171	0.061673



14 day AP experiment "C" 4/3/98

Mouse #	Neutrophils	Lymphocytes	Monocytes	Eosinophils	Bands	Basophil
1	15.9	73.8	6.55	3	1	0
2	8	85.5	5.5	1	0	0
3	14	81.5	4.5	4.5	0	0
4	13.5	73.35	11.5	1	1	0
5	15	77.5	2	5	1	0
6	17	79	3.5	1	0	0
mean	**13.9**	**78.4**	**5.6**	**2.6**	**0.5**	**0.0**
std dev	**2.9**	**4.2**	**3.0**	**1.7**	**0.5**	**0.0**
Mouse #	Neutrophils	Lymphocytes	Monocytes	Eosinophils	Bands	Basophil
7	8	88.5	3	1	0	0
8	9.5	86.5	3	1	0	0
9	17	77	3	3	0	0
10	6.5	91.5	2.5	0	1	0
11	5	89	4.5	2	0	0
12	14.5	81.5	3	1	0	0
mean	**10.1**	**85.7**	**3.2**	**1.3**	**0.2**	**0.0**
std dev	**4.3**	**4.9**	**0.6**	**0.9**	**0.4**	**0.0**
Mouse #	Neutrophils	Lymphocytes	Monocytes	Eosinophils	Bands	Basophil
13	14	82	3.5	1	0	0
14	11.05	85.15	4	0	0	0
15	13	85	1.5	0	1	0
16	8.5	86.5	4	0	1	0
17	20.5	75.5	3.5	0	0	0
18	12.5	85	1.5	0	1	0
mean	**13.3**	**83.2**	**3.0**	**0.2**	**0.5**	**0.0**
std dev	**3.7**	**3.7**	**1.1**	**0.4**	**0.5**	**0.0**
Mouse #	Neutrophils	Lymphocytes	Monocytes	Eosinophils	Bands	Basophil
19	8	87.5	4.5	0	0	0
20	11.25	87.75	1	0	1	0
21	11.5	85.5	2	0	1	0
22	9	87	3.5	0	1	0
23	14	85	1	0	1	0
24	9.5	87.5	3	0	0	0
mean	**10.5**	**86.7**	**2.5**	**0.0**	**0.7**	**0.0**
std dev	**2.0**	**1.1**	**1.3**	**0.0**	**0.5**	**0.0**
Mouse #	Neutrophils	Lymphocytes	Monocytes	Eosinophils	Bands	Basophil
25	14	82	2.5	0	1	0
26						
27	13	85	1	1	1	0
28	8.5	86.05	5.35	0	0	0
29	20	79	1	0	0	0
30						
mean	13.9	83.0	2.5	0.3	0.5	0.0
std dev	4.1	2.8	1.8	0.4	0.5	0.0

14-Day IP Parameters
"C"
Organ/BW Ratio (%)

Animal	Body Weight gr	Liver Wt. mg	LW/BW (mg)%
Control			
1C	24.2	1288	5.322
2C	25.9	1216	4.695
3C	21.7	1116	5.143
4C	21.9	1098	5.014
5C	23.8	1350	5.672
6C	22.5	1155	5.133
Average	23.33	1203.83	5.16
SD	1.61	99.90	0.32
0.1 mg/kg/day			
7C	23.2	1326	5.716
8C	22.4	1125	5.022
9C	21.1	1033	4.896
10C	24	1282	5.342
11C	21.9	1112	5.078
12C	22.2	1109	4.995
Average	22.47	1164.50	5.17
SD	1.02	113.65	0.30
1.0 mg/kg/day			
13C	22.1	1063	4.810
14C	21.2	1193	5.627
15C	22.4	1156	5.161
16C	19.5	1119	5.738
17C	22.5	1270	5.644
18C	24.5	1404	5.731
Average	22.03	1200.83	5.45
SD	1.65	121.51	0.38
3.0 mg/kg/day			
19C	21.7	1105	5.092
20C	23.1	1271	5.502
21C	23.7	1221	5.152
22C	25.5	1349	5.290
23C	24.9	1075	4.317
24C	22.5	1108	4.924
Average	23.57	1188.17	5.05
SD	1.44	109.51	0.41
30.0 mg/kg/day			
25C	22.2	1206	5.432
26C	21.7	1104	5.088
27C	23.5	1264	5.379
28C	24.1	1086	4.506
29C	21.1	1006	4.768
30C	21.3	1050	4.930
Average	22.32	1119.33	5.02
SD	1.22	97.40	0.36

14-Day IP Parameters
"C"
Organ/BW Ratio (%)

Animal	Body Weight gr	Kidney Wt. mg	KW/BW (mg)%
Control			
1C	24.2	357	1.475
2C	25.9	322	1.243
3C	21.7	282	1.300
4C	21.9	290	1.324
5C	23.8	321	1.349
6C	22.5	285	1.267
Average	**23.33**	**309.50**	**1.33**
SD	**1.61**	**29.26**	**0.08**
0.1 mg/kg/day			
7C	23.2	316	1.362
8C	22.4	293	1.308
9C	21.1	253	1.199
10C	24	318	1.325
11C	21.9	277	1.265
12C	22.2	314	1.414
Average	**22.47**	**295.17**	**1.31**
SD	**1.02**	**26.16**	**0.08**
1.0 mg/kg/day			
13C	22.1	294	1.330
14C	21.2	285	1.344
15C	22.4	294	1.313
16C	19.5	293	1.503
17C	22.5	279	1.240
18C	24.5	355	1.449
Average	**22.03**	**300.00**	**1.36**
SD	**1.65**	**27.61**	**0.10**
3.0 mg/kg/day			
19C	21.7	301	1.387
20C	23.1	304	1.316
21C	23.7	316	1.333
22C	25.5	340	1.333
23C	24.9	293	1.177
24C	22.5	315	1.400
Average	**23.57**	**311.50**	**1.32**
SD	**1.44**	**16.45**	**0.08**
30.0 mg/kg/day			
25C	22.2	317	1.428
26C	21.7	280	1.290
27C	23.5	338	1.438
28C	24.1	298	1.237
29C	21.1	301	1.427
30C	21.3	284	1.333
Average	**22.32**	**303.00**	**1.36**
SD	**1.22**	**21.63**	**0.08**

14-Day IP Parameters
"C"
Organ/BW Ratio (%)

Animal	Body Weight gr	Spleen Wt. mg	SW/BW (mg)%
Control			
1C	24.2	90	0.372
2C	25.9	78	0.301
3C	21.7	79	0.364
4C	21.9	68	0.311
5C	23.8	87	0.366
6C	22.5	82	0.364
Average	23.33	80.67	0.35
SD	1.61	7.74	0.03
0.1 mg/kg/day			
7C	23.2	96	0.414
8C	22.4	76	0.339
9C	21.1	54	0.256
10C	24	92	0.383
11C	21.9	63	0.288
12C	22.2	58	0.261
Average	22.47	73.17	0.32
SD	1.02	17.80	0.07
1.0 mg/kg/day			
13C	22.1	92	0.416
14C	21.2	72	0.340
15C	22.4	68	0.304
16C	19.5	82	0.421
17C	22.5	86	0.382
18C	24.5	93	0.380
Average	22.03	82.17	0.37
SD	1.65	10.32	0.05
3.0 mg/kg/day			
19C	21.7	67	0.309
20C	23.1	88	0.381
21C	23.7	77	0.325
22C	25.5	80	0.314
23C	24.9	62	0.249
24C	22.5	91	0.404
Average	23.57	77.50	0.33
SD	1.44	11.40	0.06
30.0 mg/kg/day			
25C	22.2	80	0.360
26C	21.7	64	0.295
27C	23.5	85	0.362
28C	24.1	52	0.216
29C	21.1	51	0.242
30C	21.3	58	0.272
Average	22.32	65.00	0.29
SD	1.22	14.42	0.06

14-Day IP Parameters
"C"
Organ/BW Ratio (%)

Animal	Body Weight gr	Thymus Wt. mg	TW/BW (mg)%
Control			
1C	24.2	72	0.298
2C	25.9	79	0.305
3C	21.7	85	0.392
4C	21.9	67	0.306
5C	23.8	63	0.265
6C	22.5	69	0.307
Average	23.33	72.50	0.31
SD	1.61	8.14	0.04
0.1 mg/kg/day			
7C	23.2	60	0.259
8C	22.4	70	0.313
9C	21.1	68	0.322
10C	24	64	0.267
11C	21.9	64	0.292
12C	22.2	74	0.333
Average	22.47	66.67	0.30
SD	1.02	5.01	0.03
1.0 mg/kg/day			
13C	22.1	62	0.281
14C	21.2	69	0.325
15C	22.4	63	0.281
16C	19.5	65	0.333
17C	22.5	60	0.267
18C	24.5	62	0.253
Average	22.03	63.50	0.29
SD	1.65	3.15	0.03
3.0 mg/kg/day			
19C	21.7	75	0.346
20C	23.1	70	0.303
21C	23.7	70	0.295
22C	25.5	79	0.310
23C	24.9	68	0.273
24C	22.5	74	0.329
Average	23.57	72.67	0.31
SD	1.44	4.08	0.03
30.0 mg/kg/day			
25C	22.2	64	0.288
26C	21.7	63	0.290
27C	23.5	77	0.328
28C	24.1	63	0.261
29C	21.1	68	0.322
30C	21.3	58	0.272
Average	22.32	65.50	0.29
SD	1.22	6.47	0.03

14-Day IP Parameters #1
"C"
Organ Weights

Animal	Body Weight gr	Thymus Wt. mg	Spleen Wt. mg	Kidney Wt. mg	Liver Wt. mg
Control					
1C	24.2	72	90	357	1288
2C	25.9	79	78	322	1216
3C	21.7	85	79	282	1116
4C	21.9	67	68	290	1098
5C	23.8	63	87	321	1350
6C	22.5	69	82	285	1155
Average	23.33	72.50	80.67	309.50	1203.83
SD	1.61	8.14	7.74	29.26	99.90
0.1 mg/kg/day					
7C	23.2	60	96	316	1326
8C	22.4	70	76	293	1125
9C	21.1	68	54	253	1033
10C	24	64	92	318	1282
11C	21.9	64	63	277	1112
12C	22.2	74	58	314	1109
Average	22.47	66.67	73.17	295.17	1164.50
SD	1.02	5.01	17.60	26.16	113.65
1.0 mg/kg/day					
13C	22.1	62	92	294	1063
14C	21.2	69	72	285	1193
15C	22.4	63	68	294	1156
16C	19.5	65	82	293	1119
17C	22.5	60	86	279	1270
18C	24.5	62	93	355	1404
Average	22.03	63.50	82.17	300.00	1200.83
SD	1.65	3.15	10.32	27.61	121.51
3.0 mg/kg/day					
19C	21.7	75	67	301	1105
20C	23.1	70	88	304	1271
21C	23.7	70	77	316	1221
22C	25.5	79	80	340	1349
23C	24.9	68	62	293	1075
24C	22.5	74	91	315	1108
Average	23.57	72.67	77.50	311.50	1188.17
SD	1.44	4.08	11.40	16.45	109.51
30.0 mg/kg/day					
25C	22.2	64	80	317	1206
26C	21.7	63	64	280	1104
27C	23.5	77	85	338	1264
28C	24.1	63	52	298	1086
29C	21.1	68	51	301	1006
30C	21.3	58	58	284	1050
Average	22.32	65.50	65.00	303.00	1119.33
SD	1.22	6.47	14.42	21.63	97.40

Experiment "C" 14d Ammonium Perchlorate

Thymus Cell Count

Animal	Coulter Count	Total Cells
Control		
1C	2519	3.78E+07
2C	3164	4.75E+07
3C	2769	4.15E+07
4C	2996	4.49E+07
5C	2768	4.15E+07
6C	4397	6.60E+07
Average	3102	4.65E+07
SD	671	1.01E+07
0.1 mg/kg/day		
7C	2094	3.14E+07
8C	1661	2.49E+07
9C	895	1.34E+07
10C	1479	2.22E+07
11C	2070	3.11E+07
12C	1402	2.10E+07
Average	1600	2.40E+07
SD	452	6.77E+06
1.0 mg/kg/day		
13C	1611	2.42E+07
14C	1306	1.96E+07
15C	1605	2.41E+07
16C	2595	3.89E+07
17C	2101	3.15E+07
18C	2458	3.69E+07
Average	1946	2.92E+07
SD	519	7.78E+06
3.0 mg/kg/day		
19C	3608	5.41E+07
20C	3156	4.73E+07
21C	4033	6.05E+07
22C	3966	5.95E+07
23C	2896	4.34E+07
24C	3080	4.62E+07
Average	3457	5.18E+07
SD	482	7.23E+06
30.0 mg/kg/day		
25C	3374	5.06E+07
26C	2120	3.18E+07
27C	3541	5.31E+07
28C	1464	2.20E+07
29C	2570	3.86E+07
30C	3242	4.86E+07
Average	2719	4.08E+07
SD	817	1.22E+07

Experiment "C" 14d Ammonium Perchlorate

Spleen Cell Count

Animal	Coulter Count	Total Cells
Control	(calibration factor included)	
1C	896	5.38E+07
2C	1046	6.28E+07
3C	627	3.76E+07
4C	711	4.27E+07
5C	1233	7.40E+07
6C	1144	6.86E+07
Average	943	5.66E+07
SD	241	1.45E+07
0.1 mg/kg/day		
7C	1208	7.25E+07
8C	1098	6.59E+07
9C	966	5.80E+07
10C	927	5.56E+07
11C	1498	8.99E+07
12C	1405	8.43E+07
Average	1184	7.10E+07
SD	232	1.39E+07
1.0 mg/kg/day		
13C	1617	9.70E+07
14C	2190	1.31E+08
15C	1744	1.05E+08
16C	2756	1.65E+08
17C	3303	1.98E+08
18C	2624	1.57E+08
Average	2372	1.42E+08
SD	644	3.87E+07
3.0 mg/kg/day		
19C	2128	1.28E+08
20C	4394	2.64E+08
21C	2641	1.58E+08
22C	2315	1.39E+08
23C	1736	1.04E+08
24C	2556	1.53E+08
Average	2628	1.58E+08
SD	924	5.54E+07
30.0 mg/kg/day		
25C	2378	1.43E+08
26C	1325	7.95E+07
27C	1648	9.89E+07
28C	1456	8.74E+07
29C	1501	9.01E+07
30C	1766	1.06E+08
Average	1679	1.01E+08
SD	375	2.25E+07

T4 Quantitation 14-Day "C"

Mouse	CPM (ave)	Log (cpm)	T4 ug/dL
1C	14097	4.15	3.3
2C	12328	4.09	4.3
3C	13318	4.12	3.7
4C	13008	4.11	3.8
5C	15047	4.18	2.8
6C	14668	4.17	3
Average	13744	4.14	3.48
SD	1040	0.03	0.56
7C	15780	4.20	2.5
8C	14572	4.16	3.2
9C	16892	4.23	2.2
10C	14436	4.16	3.2
11C	14235	4.15	3.3
12C	13685	4.14	3.5
Average	14933	4.17	2.98
SD	1181	0.03	0.51
13C	16964	4.23	2.1
14C	14927	4.17	3
15C	14627	4.17	3
16C	14520	4.16	3.2
17C	15247	4.18	2.8
18C	15919	4.20	2.5
Average	15367	4.19	2.77
SD	930	0.03	0.40
19C	16117	4.21	2.4
20C	15223	4.18	2.8
21C	15006	4.18	2.8
22C	14531	4.16	3.2
23C	17060	4.23	2.2
24C	16207	4.21	2.4
Average	15691	4.20	2.63
SD	933	0.03	0.37
25C	15600	4.19	2.7
26C	17575	4.24	2
27C	15966	4.20	2.5
28C	14705	4.17	3
29C	15261	4.18	2.8
30C	14001	4.15	3.3
Average	15518	4.19	2.72
SD	1222	0.03	0.44

Trt. Group	Ave T4 (ug/dL	SD
Control	3.48	0.56
0.1 mg/kg	2.98	0.51
1.0 mg/kg	2.77	0.4
3.0 mg/kg	2.63	0.37
30.0 mg/kg	2.72	0.44

Hematology Results

"G" 14d tp

Trt. Group	WBC	RBC	HCT	HGB
Control				
1G	1.6	7.47	39.4	12.4
2G	4.4	8.75	44.9	14.0
3G	0.5	8.45	45.7	14.0
4G	3.9	8.53	45.0	13.5
5G	1.9	7.29	37.2	12.6
6G	1.5	8.82	47.4	14.2
Average	2.3	8.22	43.3	13.5
SD	1.52	0.67	4.01	0.77
0.1 mg/kg/day				
7G	4.6	8.41	44.7	13.7
8G	3.3	8.13	42.9	13.2
9G	2.1	8.37	43.2	13.5
10G	3.2	8.93	46.1	14.3
11G	3.4	8.57	43.6	13.8
12G	2.2	8.58	44.7	13.7
Average	3.1	8.50	44.2	13.7
SD	0.92	0.27	1.20	0.36
1.0 mg/kg/day				
13G	3.2	8.39	44.1	13.4
14G	2.8	8.76	44.2	13.8
15G	2.6	9.19	~~33.3~~	14.4
16G	2.6	8.84	45.2	14.2
17G	2.1	8.69	45.2	13.9
18G	2.7	8.50	43.9	14.0
Average	2.7	8.73	51.0 44.5	14.0
SD	0.36	0.28	15.84	0.34
3.0 mg/kg/day				
19G	2.7	8.71	45.5	13.8
20G	1.7	8.37	44.1	13.5
21G	2.4	8.88	47.9	14.2
22G	3.8	9.32	45.0	14.6
23G	2.1	6.53	35.1	13.4
24G	2.5	8.61	44.5	14.0
Average	2.5	8.40	43.7	13.9
SD	0.71	0.97	4.41	0.45
30.0 mg/kg/day				
25G	3.6	8.70	44.7	14.2
26G	2.0	8.92	45.6	14.2
27G	3.3	8.95	47.0	14.4
28G	2.6	8.67	45.8	13.9
29G	3.1	8.95	45.7	14.4
30G	*	*	*	*
Average	2.9	8.84	45.8	14.2
SD	0.63	0.14	0.82	0.20

Bone Marrow Cell Count

Animal	Coulter Count	Cell Count
Control		
1J	703	3.52E+06
2J	664	3.32E+06
3J	462	2.31E+06
4J	865	4.33E+06
5J	*	*
6J	*	*
Average	**674**	**3.37E+06**
SD	**166**	**8.28E+05**
0.1 mg/kg/day		
7J	796	3.98E+06
8J	717	3.59E+06
9J	988	4.94E+06
10J	429	2.15E+06
11J	*	*
12J	*	*
Average	**733**	**3.66E+06**
SD	**232**	**1.16E+06**
1.0 mg/kg/day		
13J	928	4.64E+06
14J	694	3.47E+06
15J	734	3.67E+06
16J	653	3.27E+06
17J	*	*
18J	*	*
Average	**752**	**3.76E+06**
SD	**122**	**6.09E+05**
3.0 mg/kg/day		
19J	603	3.02E+06
20J	455	2.28E+06
21J	567	2.84E+06
22J	541	2.71E+06
23J	*	*
24J	*	*
Average	**542**	**2.71E+06**
SD	**63**	**3.15E+05**
30.0 mg/kg/day		
25J	668	3.34E+06
26J	690	3.45E+06
27J	497	2.49E+06
28J	700	3.50E+06
29J	*	*
30J	*	*
Average	**639**	**3.19E+06**
SD	**95**	**4.77E+05**

*Only 4 replicates were performed.

"G"

IP#2 hematology results

Antech: account number is 150022, 4-25-98, XDA1480741

control				
Mouse #	HGB	HCT	WBC	RBC
1	12.4	39.4	1.6	7.47
2	14	44.9	4.4	8.75
3	14	45.7	0.5	8.45
4	13.5	45	3.9	8.53
5	12.6	37.2	1.9	7.29
6	14.2	47.4	1.5	8.82
mean:	13.5	43.3	2.3	8.2
std dev:	0.8	4.0	1.5	0.7
0.1 mg/kg				
Mouse #	HGB	HCT	WBC	RBC
7	13.7	44.7	4.6	8.41
8	13.2	42.9	3.3	8.13
9	13.5	43.2	2.1	8.37
10	14.3	46.1	3.2	8.93
11	13.8	43.6	3.4	8.57
12				
mean:	13.7	44.1	3.3	8.6
std dev:	0.4	1.3	0.9	0.3
1 mg/kg				
Mouse #	HGB	HCT	WBC	RBC
13	13.4	44.1	3.2	8.39
14	13.8	44.2	2.8	8.76
15	14.4	43.3	2.6	9.19
16	14.2	45.2	2.6	8.84
17	13.9	45.2	2.1	8.69
18	14	43.9	2.7	8.5
mean:	14.0	44.3	2.7	8.8
std dev:	0.3	0.8	0.4	0.3
3 mg/kg				
Mouse #	HGB	HCT	WBC	RBC
19	13.8	45.5	2.7	8.71
20	13.5	44.1	1.7	8.37
21	14.2	47.9	2.4	8.88
22	14.6	45	3.8	9.32
23	13.4	35.1	2.1	6.53
24	14	44.5	2.5	8.61
mean:	13.9	43.7	2.5	8.4
std dev:	0.4	4.4	0.7	1.0
30 mg/kg				
Mouse #	HGB	HCT	WBC	RBC
25				
26	14.2	45.6	2	8.92
27	14.4	47	3.3	8.95
28	13.9	45.8	2.6	8.67
29	14.4	45.7	3.1	8.95
30				
mean:	14.2	46.0	2.8	8.9
std dev:	0.2	0.7	0.6	0.1

mcv,mch, mchc data 14 day "G"

Treatment	Mouse #	MCV	MCH	MCHC
Control	1	53	16.6	31.5
	2	51	16	31.2
	3	54	16.6	30.6
	4	53	15.8	30
	5	51	17.3	33.9
	6	54	16.1	30
	Average	52.7	16.4	31.2
	Std Dev	1.4	0.5	1.5
0.1	7	53	16.3	30.6
	8	53	16.2	30.8
	9	52	16.1	31.3
	10	52	16	31
	11	51	16.1	31.7
	12	52	16	30.6
	Average	52.2	16.1	31.0
	Std Dev	0.8	0.1	0.4
1.0	13	53	16	30.4
	14	50	15.8	31.2
	15			
	16	51	16.1	31.4
	17	52	16	30.8
	18	52	16.5	31.9
3.0	Average	51.6	16.1	31.1
	Std Dev	1.1	0.3	0.6
	19	52	15.8	30.3
	20	53	16.1	30.6
	21	54	16	29.6
	22	48	15.7	32.4
	23	54	20.5	38.2
	24	52	16.3	31.5
	Average	52.2	16.7	32.1
	Std Dev	2.2	1.9	3.1
30.0	25	51	16.3	31.8
	26	51	15.9	31.1
	27	53	16.1	30.6
	28	53	16	30.3
	29	51	16.1	31.5
	30			
	Average	51.8	16.1	31.1
	Std Dev	1.1	0.1	0.6

14d -"G" NK assay

animal	E:T ratio (X)	avg CPM	% Spec. Lysis (Y)	Y* = ln(Y/(100-Y))	mean Y*	exp	LU per 10^7 cells	LU/10^7/group
1	100	1099	22.4	-1.241	-1.630	1.763	36.7	control 34.0
	50	961	17.0	-1.583				std dev 3.8
	25	813	11.3	-2.065				
	10		-20.5					
2	100	1042	20.2	-1.374	-1.646	1.736	36.1	
	50	993	18.3	-1.497				
	25	813	11.3	-2.065				
	10		-20.5					
3	100	1077	21.6	-1.291	-1.622	1.778	37.0	
	50	969	17.3	-1.561				
	25	827	11.8	-2.012				
	10		-20.5					
4	100	1030	19.7	-1.403	-1.656	1.719	35.7	
	50	967	17.3	-1.567				
	25	831	12.0	-1.997				
	10		-20.5					
5	100	964	17.1	-1.575	-1.848	1.417	29.5	
	50	866	13.3	-1.873				
	25	805	10.9	-2.097				
	10		-20.5					
6	100	914	15.2	-1.719	-1.870	1.387	28.8	
	50	872	13.6	-1.853				
	25	820	11.5	-2.038				
	10		-20.5					
7	100	1125	23.4	-1.184	-1.683	1.673	34.8	0.1 mg/kg [illegible]
	50	886	14.1	-1.807				std dev [illegible]
	25	815	11.3	-2.058				
	10		-20.5					
8	100	951	16.6	-1.611	-1.969	1.256	26.1	
	50	856	12.9	-1.907				
	25	740	8.4	-2.389				
	10		-20.5					
9	100	878	13.8	-1.833	-2.149	1.049	21.8	
	50	860	13.1	-1.893				
	25	683	6.2	-2.721				
	10		-20.5					
10	100	920	15.4	-1.701	-1.811	1.471	30.6	
	50	915	15.2	-1.716				
	25	826	11.8	-2.016				
	10		-20.5					
11	100	898	14.6	-1.769	-2.008	1.208	25.1	
	50	825	11.7	-2.019				
	25	772	9.6	-2.237				
	10		-20.5					
12	100	1002	18.6	-1.474	-1.750	1.564	32.5	
	50	917	15.3	-1.710				
	25	813	11.3	-2.065				
	10		-20.5					
13	100	1011	19.0	-1.451	-1.694	1.654	34.4	1.0 mg/kg [illegible]
	50	929	15.8	-1.675				std dev [illegible]
	25	842	12.4	-1.957				
	10		-20.5					
14	100	989	18.1	-1.508	-1.853	1.411	29.3	
	50	898	14.6	-1.769				
	25	762	9.3	-2.283				
	10		-20.5					
15	100	1050	20.5	-1.355	-1.522	1.965	40.9	
	50	972	17.5	-1.553				
	25	935	16.0	-1.657				
	10		-20.5					
16	100	845	12.5	-1.946	-2.252	0.947	19.7	
	50	796	10.6	-2.134				
	25	690	6.4	-2.675				
	10		-20.5					
17	100	868	13.4	-1.866	-1.954	1.275	26.5	
	50	890	14.3	-1.794				
	25	780	10.0	-2.202				
	10		-20.5					
18	100	894	14.4	-1.781	-1.857	1.405	29.2	
	50	902	14.7	-1.756				
	25	821	11.6	-2.035				
	10		-20.5					
19	100	976	17.6	-1.543	-1.802	1.484	30.9	3.0 mg/kg [illegible]
	50	930	15.8	-1.672				std dev [illegible]
	25	782	10.0	-2.193				
	10		-20.5					
20	100	1010	18.9	-1.454	-1.568	1.877	39.0	
	50	1002	18.6	-1.474				
	25	896	14.5	-1.775				
	10		-20.5					
21	100	911	15.1	-1.728	-1.786	1.508	31.4	
	50	933	15.9	-1.663				

	25	839	12.3	-1.968				
	10		-20.5					
22	100	883	14.0	-1.817	-1.658	1.715	35.7	
	50	981	17.8	-1.529				
	25	945	16.4	-1.628				
	10		-20.5					
23	100	989	18.1	-1.508	-1.524	1.960	40.8	
	50	1026	19.6	-1.413				
	25	937	16.1	-1.651				
	10		-20.5					
24	100	996	18.4	-1.490	-1.740	1.580	32.9	
	50	891	14.3	-1.791				
	25	847	12.6	-1.939				
	10		-20.5					
25	100	1016	19.2	-1.438	-1.404	2.211	46.0	30 mg/kg 34.0
	50	1078	21.6	-1.289				std dev 5.8
	25	998	18.5	-1.484				
	10		-20.5					
26	100	970	17.4	-1.559	-1.826	1.450	30.2	
	50	939	16.2	-1.645				
	25	764	9.3	-2.273				
	10		-20.5					
27	100	708	7.1	-2.564	-2.106	1.095	22.8	
	50	880	13.9	-1.826				
	25	850	12.7	-1.928				
	10		-20.5					
28	100	910	15.0	-1.732	-1.918	1.322	27.5	
	50	861	13.1	-1.890				
	25	796	10.6	-2.134				
	10		-20.5					
29	100	958	16.9	-1.592	-1.669	1.697	35.3	
	50	938	16.1	-1.648				
	25	899	14.6	-1.766				
	10		-20.5					
30	100	1041	20.2	-1.377	-1.488	2.033	42.3	
	50	1035	19.9	-1.391				
	25	922	15.5	-1.695				
	10		-20.5					

Experiment "G"

Spleen CD4/CD8 Subpopulations

Trt. Group	CD8+/CD4-	CD8+/CD4+	CD8-/CD4-	CD8-/CD4+
Control				
1G	10.1	0.1	71.3	18.5
2G	10.4	0.1	70.3	19.2
3G	10.8	0.2	68.2	20.9
4G	11.2	0.1	68.5	20.2
5G	11.3	0.2	66.6	21.9
6G	10.8	0.1	64.6	24.6
Average	10.8	0.1	68.3	20.9
SD	0.46	0.05	2.43	2.18
0.1 mg/kg/day				
7G	10.8	0.1	68.2	20.8
8G	10.8	0.1	67.7	21.4
9G	11.4	0.1	68.4	20.1
10G	11.5	0.1	66.1	22.3
11G	14.4	0.1	63.0	22.5
12G	11.0	0.1	67.9	21.0
Average	11.7	0.1	66.9	21.4
SD	1.38	0.00	2.07	0.92
1.0 mg/kg/day				
13G	10.9	0.1	69.3	19.8
14G	11.7	0.1	65.9	22.4
15G	10.5	0.1	71.6	17.8
16G	13.0	0.1	62.6	24.3
17G	11.7	0.1	68.8	19.4
18G	10.1	0.1	72.6	17.2
Average	11.3	0.1	68.5	20.2
SD	1.04	0.00	3.71	2.73
3.0 mg/kg/day				
19G	12.0	0.3	68.1	19.6
20G	11.2	0.1	72.8	16.0
21G	10.5	0.1	70.4	19.0
22G	10.7	0.0	69.9	19.3
23G	10.4	0.1	70.6	19.0
24G	13.6	0.1	60.7	25.6
Average	11.4	0.1	68.8	19.8
SD	1.23	0.10	4.22	3.15
30.0 mg/kg/day				
25G	12.5	0.1	65.2	22.3
26G	14.4	0.2	60.9	24.8
27G	9.9	0.1	72.0	17.9
28G	13.8	0.1	65.0	21.0
29G	10.3	0.1	71.2	18.3
30G	12.2	0.0	66.9	20.9
Average	12.2	0.1	66.9	20.9
SD	1.81	0.06	4.17	2.57

Experiment "G"

Thymus CD4/CD8 Subpopulations

Trt. Group	CD8+/CD4-	CD8+/CD4+	CD8-/CD4-	CD8-/CD4+
Control				
1G	3.5	76.7	4.0	15.8
2G	3.2	79.7	3.4	13.7
3G	3.1	78.7	4.3	13.8
4G	3.1	79.6	3.6	13.8
5G	2.8	82.1	2.5	12.6
6G	3.0	81.8	2.9	12.3
Average	3.1	79.8	3.5	13.7
SD	0.23	2.01	0.67	1.23
0.1 mg/kg/day				
7G	3.4	78.5	3.9	14.2
8G	3.4	77.5	4.2	14.9
9G	3.5	78.0	3.8	14.6
10G	3.3	79.0	3.7	14.0
11G	4.6	73.8	4.1	17.5
12G	3.4	79.0	3.8	13.8
Average	3.6	77.6	3.9	14.8
SD	0.49	1.97	0.19	1.37
1.0 mg/kg/day				
13G	3.1	78.8	3.6	14.5
14G	3.5	78.9	3.4	14.2
15G	3.3	80.8	3.6	12.3
16G	5.1	72.9	4.5	17.4
17G	3.8	78.0	3.2	15.0
18G	3.5	79.6	4.1	12.8
Average	3.7	78.2	3.7	14.4
SD	0.72	2.75	0.48	1.81
3.0 mg/kg/day				
19G	3.8	78.1	3.5	14.6
20G	3.7	79.7	3.5	13.2
21G	3.2	80.8	3.5	12.6
22G	3.3	79.3	3.0	14.4
23G	3.2	81.0	3.2	12.6
24G	3.1	81.7	2.6	12.6
Average	3.4	80.1	3.2	13.3
SD	0.29	1.32	0.37	0.94
30.0 mg/kg/day				
25G	4.3	77.8	3.6	14.3
26G	3.6	78.3	3.9	14.2
27G	2.8	81.6	3.2	12.4
28G	3.0	78.5	3.5	14.9
29G	2.5	82.7	2.8	12.0
30G	3.3	83.4	3.2	10.0
Average	3.3	80.4	3.4	13.0
SD	0.64	2.47	0.38	1.85

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
19	31	31	46	8	16	10	5	24	28	7	4	8	31	8	4	9	17	2	23	30
20	6	36	31	18	20	14	6	20	22	18	36	10	12	5	6	16	15	23	38	66
27	40	66	10	9	3	22	8	12	16	44	40	18	36	0	15	19	11	11	15	28
16	16	1	16	12	23	13	4	30	15	15	8	13	1	3	2	16	6	13	21	57
10	18	20	17	2	19	8	10	40	27	6	20	8	8	15	12	11	12	6	27	33
22	66	18	16	16	0	16	8	3	21	26	24	14	10	10	8	21	0	2	28	19
28	14	18	8	12	16	13	1	10	6	15	6	3	0	16	16	22	41	0	13	18
24	22	42	10	8	16	8	8	13	5	18	8	26	12	18	25	17	28	18	20	30
25	61	32	8	1	2	18	15	36	6	36	20	19	3	10	6	7	0	22	8	25
23	18	47	18	16	16	4	3	20	18	5	0	18	8	5	8	7	31	18	15	24
10	43	28	17	8	11	7	6	18	4	17	30	25	13	20	8	4	23	31	18	21
13	38	14	30	2	1	12	10	8	23	31	27	2	15	3	1	13	5	19	10	4
8	16	16	32	18	3	6	10	18	25	3	1	18	12	14	5	15	3	16	8	48
8	8	7	36	11	8	10	7	12	3	18	31	30	10	16	30	15	30	12	8	4
12	3	11	12	8	5	10	11	3	26	48	36	25	17	8	10	8	8	26	4	58
32	16	13	20	18	8	4	11	13	25	8	3	8	0	10	2	8	4	4	44	46
8	6	23	10	10	5	16	2	17	7	10	13	32	8	4	26	22	24	14	10	27
24	8	31	18	14	13	30	22	4	30	28	13	30	18	5	17	26	2	10	27	34
15	56	24	14	1	12	5	12	14	18	46	2	11	25	10	3	10	6	8	13	10
17	18	22	17	8	6	11	6	20	45	25	40	28	47	6	20	8	26	6	17	17
13	7	16	12	18	8	10	8	5	38	14	25	2	7	12	15	8	6	10	25	13
12	17	20	22	16	16	11	8	30	21	8	6	12	8	16	6	16	11	22	15	30
20	83	10	15	13	16	12	6	20	22	43	40	45	13	12	6	11	30	7	19	6
24	28	17	11	10	9	6	15	8	14	4	13	7	18	38	12	8	2	7	15	30
16	18	16	6	8	8	10	7	21	33	36	4	16	12	8	6	7	6	16	8	8
7	60	66	16	8	17	20	2	29	30	3	28	12	27	8	11	5	0	5	19	43
16	46	38	10	7	7	22	6	1	28	8	28	3	3	8	8	16	20	15	8	15
13	14	6	8	0	25	8	6	11	17	5	15	9	11	8	6	8	3	6	9	44
16	16	24	10	14	36	18	2	19	15	16	20	5	22	16	8	2	6	32	19	10
22		28	32	7	10	10	16	28	6	12	10	8	11	13	5	20	11	6	20	
26		24	12	18	28	10	7	10	10	14	23	20	36	18	6	7	0	14	12	
24		28	11	12	11	12	3	31	16	12	18	28	12	15	10	8	7	2	11	
16		32	8	8	12	8	7	45	36		31	6	19	8	12	8	6	7	4	
12		13	17	18	15	6	8	13	10		10	33	10	14	2	6	11	1	11	
16		28	12	8	18	15	6	18	15		32	7	9	2	25	1	16	1	8	
17		12	7	18	8	6	6	11	4		8	12	3	15	15	6	8	12	30	
8		8	10	18	21	4	18	14	8		33	11	7	34	11	26	25	11	9	
12		16	12	12	15	13	3	6	18		2	7	12	38	16	16	5	41	28	
24		13	11	6	8	16	6	43	8		28	8	14	7	7	13	18	5	11	
8		16	8	13	8	12	12	7	11		11	8	12	22	16	14	11	8	16	
8		9	11	100	10	20	5	27	25		28	2	10	12	15	8	3	4	6	
13		19	6	12	11	13	6	17	5		3	2	20	8	8	11	16	13	1	
24		10	13	17	21	8	8	22	3			15	23	5	4	23	0	13	30	
8			10	14	1	26	3	42	3			5	12	8	11	11	2	5	13	
20		16	8	8	13	12	8	13	6			10	40	8	10	4	41	10	13	
18		17	10	15	8	0	14	28	16			2	8	56	11	17	0	3	16	
8		66	13	22	6	6	8	13				13	0	7	8	12	10	27	5	
13		12	8	16	8	18	7	18				7	30	0	13	8	7	16	30	
12		8	20	10	7	0	8	18				18	10	18	13	4	4	8	17	
11		17	16	13	1	10	8	22				16	6	10	8	10	23	6	3	
18		18	17	7	36	7	20	8				13	33	6	34	8	6	12	10	
23		10	13	20	8	0	10	20					4	19	14	22	0	2	23	
16		15	23	13	2	20	4	15						8	11	4	18	2	8	
21		8	11	5	21	12	8	17						11	22	6	12	6	10	
8		8	10	22	18	8	6							30	20	12	2	0	13	
10		12	12	14	10	36	8							2	12	6	19	4	32	
28		10	10	15	21	28	4							8	16	11	16	5		
11		18	13	14	18	14	7							8	11	7	0	3		
8		16	41	8	4	22	6							2	13		18	3		
14		18	18	18	4	18	13							18				8		
16		16	6	28	11	18	16							1				7		
20		16	11	8	6	10	2							4				2		
32		10	10	30	18	8	12											13		
17		17	20	14	5	18	2											3		
15		10	11	20	6	4	1											8		
20		21	15	18	8	8	4											25		
15		8	15	18	7	8	4											15		
26		33	12	8	4	9	13											8		
10		16	23	14	6	6	2											13		
27		12	11	8	8	8	11											6		
20		46	10	16	3	7	4											7		
16		22	16	8	6	12	10											13		
18		28	11	10	2	10	8											6		
8		15	8	7	3	15												9		
12		20	10	11	10	18	18													
18		6	13	18	4	8	12													
20		11	13	11	2	15	8													
27		10	10	27	22	40	7													
11		6	12	5	3	10	2													
18		13	17	15	1	11	6													
8		20	13	6	15	15	8													
12		16	38	6	1	8	1													
6		7	68	10	2	7	13													
8		20	66	7	15	10	5													
8		30	17	8	7	4	4													
26		20	82	10	3	11	5													
36		56	36	8	10	10	5													
20		12	38	8	6	8	6													
27		17	32	21	2	11	4													
16		10	34	10	8	12	5													
12		16	11	14	3	13	10													
11			11	5	6	15	4													
			4	15	3	14	7													
			8	5	8	18														
			10	8	4	15														
			8	7	7	11														
			36	15	10	16														
			36	13	12															
				8	25															
				16	11															
				2	3															
					13															
					1															
					7															
					5															
					13															

[illegible]								
22	23	24	25	26	27	28	29	30
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8	15	39	34	13	6	11	11	16
18	8	16	0	12	15	13	8	20
2	6	6	9	20	16	0	2	7
43	17	21	6	8	13	3	0	20
24	8	30	41	9	12	19	6	0
25	8	11	7	9	27	7	2	25
40	14	16	11	2	16	0	2	7
24	9	11	13	8	9	10	11	12
11	7	6	67	13	10	11	9	15
7	22	16	6	19	26	11	4	6
20	9	17	1	9	6	13	0	12
12	3	15	7	8	0	8	6	7
0	23	20	3	18	14	17	7	8
10	31	16	2	16	13	4	0	6
13	2	18	8	6	12	11	0	19
9	38	22	64	11	0	3	0	9
6	9	14	9	15	9	8	0	14
16	6	4	3	16	27	6	4	14
13	18	24	6	6	6	9	3	13
25	7	18	30	18	10	33	2	9
28	4	13	2	6	20	8	10	3
20	19	22	3	42	18	1	2	8
19	16	18	2	11	17	3	7	16
13	0	13	44	21	6	6	18	12
53	31	9	7	0	6	30	12	24
18	8	13	4	22	15	6	0	3
22	2	10	4	1	9	14	3	10
8	38	19	32	20	6	4	3	18
12	13	16	8	4	10	9	0	6
31	2	7	11	2	11	13	8	13
14	23	20	3	1	3	9	2	28
38	16	6	9	11	40	6	13	15
19	2	18	4	6	4	7	4	38
7	17	26	24	8	18	6	3	11
30	3	6	6	13	19	3	6	4
14	14	12	1	9	6	6	11	4
11	11	7	4	6	38	6	10	12
37	28	9	4	9	8	8	3	19
19	9	18	30	0	16	10	4	7
2	31	6	4	7	13	3	28	6
56	8	16	2	28	8	4	8	21
89	11	6	7	7	20	2	0	6
13	8	6	6	1	19	7	45	3
25	9	4	18	16	25	5	2	8
33	8	6	10	6	8	3	0	6
15	10	8	23	12	8	0	20	20
9	7	14	3	0.16	16	3	2	10
20	9	5	13	15	18	3	8	11
8	12	28	7	6	2	4	10	10
15		25	38	7	7	2	13	11
1		11	6	7	10	10	2	11
38		36	13	24	11	3	2	11
16		13	7	5	1	10	4	7
5		2	3	6	50	4	3	12
20		30	6	9	10	3	10	7
23		30	16	50	7	5	6	10
20		7	4	15	15	3	2	
10		7	11	6	20	0	6	
6		35	7	25	10	7	8	
6		8	9	10	6	3	1	
2		8	8	36			8	
16		13	7	24			4	
		10	0	8			1	
		2	12	6			0	
		4	6					
		9	0					
		20	0					
		6	3					
			14					
			7					
			4					

14 day AP experiment "G" 4/24/98

Mouse #	Neutrophils	Lymphocytes	Monocytes	Eosinophils	Bands	Basophil
1	16	74	9	2	1	0
2	16	75	6	3	0	0
3	14	72	8	6	0	0
4	14	71	12	2	1	0
5	25	66	8	1	0	0
6	11	81	6	2	0	0
mean	**16.0**	**73.2**	**8.2**	**2.7**	**0.3**	**0.0**
std dev	**4.4**	**4.5**	**2.0**	**1.6**	**0.5**	**0.0**
Mouse #	Neutrophils	Lymphocytes	Monocytes	Eosinophils	Bands	Basophil
7	28	63	7	2	0	0
8	18	67	13	1	0	1
9	18	76	2	4	0	0
10	19	66	11	3	1	0
11	13	84	0	2	1	0
12	15	79	4	2	0	0
mean	**18.5**	**72.5**	**6.2**	**2.3**	**0.3**	**0.2**
std dev	**4.7**	**7.6**	**4.7**	**0.9**	**0.5**	**0.4**
Mouse #	Neutrophils	Lymphocytes	Monocytes	Eosinophils	Bands	Basophil
13	13	80	4	2	1	0
14	18	72	7	3	0	0
15	15	80	4	1	0	0
16	13	83	3	1	0	0
17	14	79	4	3	0	0
18	11	81	8	0	0	0
mean	**14.0**	**79.2**	**5.0**	**1.7**	**0.2**	**0.0**
std dev	**2.2**	**3.4**	**1.8**	**1.1**	**0.4**	**0.0**
Mouse #	Neutrophils	Lymphocytes	Monocytes	Eosinophils	Bands	Basophil
19	14	80	4	1	0	1
20	11	82	2	5	0	0
21	7	86	4	3	0	0
22	15	81	2	2	0	0
23	18	70	7	5	0	0
24	15	78	4	3	0	0
mean	**13.3**	**79.5**	**3.8**	**3.2**	**0.0**	**0.2**
std dev	**3.5**	**4.9**	**1.7**	**1.5**	**0.0**	**0.4**
Mouse #	Neutrophils	Lymphocytes	Monocytes	Eosinophils	Bands	Basophil
25	21	72	4	3	0	0
26	10	82	5	3	0	0
27	7	87	4	2	0	0
28	19	66	4	3	0	0
29	13	80	4	3	0	0
30	19	75	3	3	0	0
mean	**14.8**	**77.0**	**4.0**	**2.8**	**0.0**	**0.0**
std dev	**5.2**	**6.9**	**0.6**	**0.4**	**0.0**	**0.0**

14-Day Immune Parameters
"G"
Organ/BW Ratio (%)

Animal	Body Weight gr	Spleen Wt. mg	SW/BW (mg)%
Control			
1G	23.6	105	0.445
2G	21.9	94	0.429
3G	22.4	83	0.371
4G	21.9	90	0.411
5G	20.7	106	0.512
6G	20.3	77	0.379
Average	21.80	92.50	0.42
SD	1.19	11.64	0.05
0.1 mg/kg/day			
7G	25.3	88	0.348
8G	23	83	0.361
9G	21	80	0.381
10G	22.5	78	0.347
11G	21.8	65	0.298
12G	22.2	80	0.360
Average	22.63	79.00	0.35
SD	1.47	7.69	0.03
1.0 mg/kg/day			
13G	21.8	88	0.404
14G	23	74	0.322
15G	22.4	92	0.411
16G	23.9	66	0.276
17G	21.5	92	0.428
18G	22.6	120	0.531
Average	22.53	88.67	0.40
SD	0.86	18.62	0.09
3.0 mg/kg/day			
19G	21.4	85	0.397
20G	23.5	94	0.400
21G	22.6	104	0.460
22G	22.4	97	0.433
23G	22	96	0.436
24G	21.7	97	0.447
Average	22.27	95.50	0.43
SD	0.75	6.16	0.03
30.0 mg/kg/day			
25G	20.2	77	0.381
26G	21.7	64	0.295
27G	22.2	96	0.432
28G	21.9	68	0.311
29G	22.9	108	0.472
30G	21.1	68	0.322
Average	21.67	80.17	0.37
SD	0.93	17.85	0.07

Date: 04/24/98

14-Day Immune Parameters #2
Organ Weights
"G"

Animal	Body Weight gr	Thymus Wt. mg	Spleen Wt. mg	Kidney Wt. mg	Liver Wt. mg
Control					
1G	23.6	76	105	324	1346
2G	21.9	68	94	313	1227
3G	22.4	67	83	279	1308
4G	21.9	76	90	304	1232
5G	20.7	93	106	257	1242
6G	20.3	57	77	269	1090
Average	21.80	72.83	92.50	291.00	1240.83
SD	1.19	12.12	11.64	26.56	87.86
0.1 mg/kg/day					
7G	25.3	73	88	340	1548
8G	23	67	83	304	1272
9G	21	64	80	286	1192
10G	22.5	65	78	333	1224
11G	21.8	51	65	277	1174
12G	22.2	65	80	279	1236
Average	22.63	64.17	79.00	303.17	1274.33
SD	1.47	7.22	7.69	27.61	138.38
1.0 mg/kg/day					
13G	21.8	70	88	296	1200
14G	23	60	74	293	1322
15G	22.4	65	92	310	1188
16G	23.9	56	66	308	1216
17G	21.5	70	92	300	1258
18G	22.6	61	120	308	1324
Average	22.53	63.67	88.67	302.50	1251.33
SD	0.86	5.68	18.62	7.15	60.35
3.0 mg/kg/day					
19G	21.4	69	85	302	1159
20G	23.5	72	94	309	1355
21G	22.6	71	104	314	1323
22G	22.4	72	97	314	1189
23G	22	66	96	306	1260
24G	21.7	59	97	308	1189
Average	22.27	68.17	95.50	308.83	1245.83
SD	0.75	5.04	6.16	4.67	80.09
30.0 mg/kg/day					
25G	20.2	62	77	307	1086
26G	21.7	53	64	301	1074
27G	22.2	68	96	297	1227
28G	21.9	60	68	297	1070
29G	22.9	78	108	337	1275
30G	21.1	54	68	267	1041

14-Day Immune Parameters
"G"
Organ/BW Ratio (%)

Animal	ody Weight g	Thymus Wt. mg	TW/BW (mg)%
Control			
1G	23.6	76	0.322
2G	21.9	68	0.311
3G	22.4	67	0.299
4G	21.9	76	0.347
5G	20.7	93	0.449
6G	20.3	57	0.281
Average	21.80	72.83	0.33
SD	1.19	12.12	0.06
7G	25.3	73	0.289
8G	23	67	0.291
9G	21	64	0.305
10G	22.5	65	0.289
11G	21.8	51	0.234
12G	22.2	65	0.293
Average	22.63	64.17	0.28
SD	1.47	7.22	0.02
1.0 mg/kg/day			
13G	21.8	70	0.321
14G	23	60	0.261
15G	22.4	65	0.290
16G	23.9	56	0.234
17G	21.5	70	0.326
18G	22.6	61	0.270
Average	22.53	63.67	0.28
SD	0.86	5.68	0.04
3.0 mg/kg/day			
19G	21.4	69	0.322
20G	23.5	72	0.306
21G	22.6	71	0.314
22G	22.4	72	0.321
23G	22	66	0.300
24G	21.7	59	0.272
Average	22.27	68.17	0.31
SD	0.75	5.04	0.02
30.0 mg/kg/day			
25G	20.2	62	0.307
26G	21.7	53	0.244
27G	22.2	68	0.306
28G	21.9	60	0.274
29G	22.9	78	0.341
30G	21.1	54	0.256
Average	21.67	62.50	0.29
SD	0.93	9.38	0.04

14-Day Immune Parameters
"G"
Organ/BW Ratio (%)

Animal	Body Weight gr	Kidney Wt. mg	KW/BW (mg)%
Control			
1G	23.6	324	1.373
2G	21.9	313	1.429
3G	22.4	279	1.246
4G	21.9	304	1.388
5G	20.7	257	1.242
6G	20.3	269	1.325
Average	21.80	291.00	1.33
SD	1.19	26.56	0.08
0.1 mg/kg/day			
7G	25.3	340	1.344
8G	23	304	1.322
9G	21	286	1.362
10G	22.5	333	1.480
11G	21.8	277	1.271
12G	22.2	279	1.257
Average	22.63	303.17	1.34
SD	1.47	27.61	0.08
1.0 mg/kg/day			
13G	21.8	296	1.358
14G	23	293	1.274
15G	22.4	310	1.384
16G	23.9	308	1.289
17G	21.5	300	1.395
18G	22.6	308	1.363
Average	22.53	302.50	1.34
SD	0.86	7.15	0.05
3.0 mg/kg/day			
19G	21.4	302	1.411
20G	23.5	309	1.315
21G	22.6	314	1.389
22G	22.4	314	1.402
23G	22	306	1.391
24G	21.7	308	1.419
Average	22.27	308.83	1.39
SD	0.75	4.67	0.04
30.0 mg/kg/day			
25G	20.2	307	1.520
26G	21.7	301	1.387
27G	22.2	297	1.338
28G	21.9	297	1.356
29G	22.9	337	1.472
30G	21.1	267	1.265
Average	21.67	301.00	1.39
SD	0.93	22.45	0.09

14-Day Immune Parameters
"G"
Organ/BW Ratio (%)

Animal	Body Weight gr	Liver Wt. mg	LW/BW (mg)%
Control			
1G	23.6	1346	5.703
2G	21.9	1227	5.603
3G	22.4	1308	5.839
4G	21.9	1232	5.626
5G	20.7	1242	6.000
6G	20.3	1090	5.369
Average	21.80	1240.83	5.69
SD	1.19	87.86	0.22
0.1 mg/kg/day			
7G	25.3	1548	6.119
8G	23	1272	5.530
9G	21	1192	5.676
10G	22.5	1224	5.440
11G	21.8	1174	5.385
12G	22.2	1236	5.568
Average	22.63	1274.33	5.62
SD	1.47	138.38	0.26
1.0 mg/kg/day			
13G	21.8	1200	5.505
14G	23	1322	5.748
15G	22.4	1188	5.304
16G	23.9	1216	5.088
17G	21.5	1258	5.851
18G	22.6	1324	5.858
Average	22.53	1251.33	5.56
SD	0.86	60.35	0.32
3.0 mg/kg/day			
19G	21.4	1159	5.416
20G	23.5	1355	5.766
21G	22.6	1323	5.854
22G	22.4	1189	5.308
23G	22	1260	5.727
24G	21.7	1189	5.479
Average	22.27	1245.83	5.59
SD	0.75	80.09	0.22
30.0 mg/kg/day			
25G	20.2	1086	5.376
26G	21.7	1074	4.949
27G	22.2	1227	5.527
28G	21.9	1070	4.886
29G	22.9	1275	5.568
30G	21.1	1041	4.934
Average	21.67	1128.83	5.21
SD	0.93	96.97	0.32

Thymus Cell Count Experiment 14d "G"

Animal	Coulter Count	Cell Count
Control		
1C	2866	4.30E+07
2C	2216	3.32E+07
3C	2935	4.40E+07
4C	1943	2.91E+07
5C	3601	5.40E+07
6C	2177	3.27E+07
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
0.1 mg/kg/day		
7C	2506	3.76E+07
8C	2767	4.15E+07
9C	2310	3.47E+07
10C	2264	3.40E+07
11C	1625	2.44E+07
12C	2509	3.76E+07
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
1.0 mg/kg/day		
13C	3159	4.74E+07
14C	2364	3.55E+07
15C	2884	4.33E+07
16C	1767	2.65E+07
17C	2660	3.99E+07
18C	2776	4.16E+07
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
3.0 mg/kg/day		
19C	2933	4.40E+07
20C	3067	4.60E+07
21C	2481	3.72E+07
22C	2467	3.70E+07
23C	2825	4.24E+07
24C	1984	2.98E+07
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
30.0 mg/kg/day		
25C	2327	3.49E+07
26C	2301	3.45E+07
27C	3404	5.11E+07
28C	2555	3.83E+07
29C	3722	5.58E+07
30C	3344	5.02E+07
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]

T4 Quantitation 14-Day "G" * [illegible] be repeat [illegible]

Mouse	CPM (ave)	Log (cpm)	T4 ug/dL
1G	15561	4.19	2.7
2G	14853	4.17	3
3G	15161	4.18	2.8
4G	14957	4.17	3
5G	13793	4.14	3.5
6G	16256	4.21	2.4
Average	15097	4.18	2.90
SD	818	0.02	0.37
7G	17073	4.23	2.2
8G	15427	4.19	2.7
9G	14875	4.17	3
10G	13588	4.13	3.6
11G	15088	4.18	2.8
12G	16142	4.21	2.4
Average	15366	4.19	2.78
SD	1183	0.03	0.49
13G	14143	4.15	3.3
14G	14685	4.17	3
15G	12709	4.10	4.1
16G	13117	4.12	3.7
17G	13931	4.14	3.5
18G	12955	4.11	3.9
Average	13590	4.13	3.58
SD	778	0.02	0.40
19G	13969	4.15	3.3
20G	14110	4.15	3.3
21G	14928	4.17	3
22G	13013	4.11	3.9
23G	13837	4.14	3.5
24G	14929	4.17	3
Average	14131	4.15	3.33
SD	726	0.02	0.34
25G	15158	4.18	2.8
26G	14122	4.15	3.3
27G	14072	4.15	3.3
28G	17193	4.24	2
29G	14980	4.18	2.8
30G	15758	4.20	2.5
Average	15214	4.18	2.78
SD	1163	0.03	0.50

Trt. Group	Ave T4 (ug/dL	SD
Control	2.9	0.37
0.1 mg/kg	2.78	0.49
1.0 mg/kg	3.58	0.4
3.0 mg/kg	3.33	0.34
30.0 mg/kg	2.78	0.5

Spleen Cell Count 14day "J"

Animal	Coulter Count	Cell Count
Control		
1	3121	4.68E+07
2	2747	4.12E+07
3	2438	3.66E+07
4	2133	3.20E+07
5	2399	3.60E+07
6	3243	4.86E+07
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
0.1 mg/kg/day		
7	3155	4.73E+07
8	1771	2.66E+07
9	1602	2.40E+07
10	1912	2.87E+07
11	2991	4.49E+07
12	1730	2.60E+07
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
13	2033	3.05E+07
14	3258	4.89E+07
15	2094	3.14E+07
16	1901	2.85E+07
17	2429	3.64E+07
18	2351	3.53E+07
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
3.0 mg/kg/day		
19	1873	2.81E+07
20	1283	1.92E+07
21	1729	2.59E+07
22	1820	2.73E+07
23	1941	2.91E+07
24	1284	1.93E+07
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
30.0 mg/kg/day		
25	1660	2.49E+07
26	1816	2.72E+07
27	2004	3.01E+07
28	2218	3.33E+07
29	1939	2.91E+07
30	2385	3.58E+07
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]

Date: 06/02/98

14-Day Immune Parameters
"J"
Body/Organ Weights

Animal	Body Weight gr.	Spleen Wt. mg	SW/BW (mg)%
Control			
1J	22.4	95.4	0.426
2J	22.1	88	0.398
3J	22.1	64.3	0.291
4J	21.8	67.8	0.311
5J	21.5	86.3	0.401
6J	22.8	94.6	0.415
Average	22.12	82.73	0.37
SD	0.45	13.45	0.06
0.1 mg/kg/day			
7J	24.1	107.4	0.446
8J	24.3	95.8	0.394
9J	22.6	88	0.389
10J	19.1	75	0.393
11J	23.2	60.9	0.263
12J	23.2	82.8	0.357
Average	22.75	84.98	0.37
SD	1.90	16.21	0.06
1.0 mg/kg/day			
13J	21.2	81.5	0.384
14J	24.6	94.8	0.385
15J	21.6	108.7	0.503
16J	23.9	82.7	0.346
17J	20.8	85.3	0.410
18J	21.1	95.2	0.451
Average	22.20	91.37	0.41
SD	1.62	10.36	0.06
3.0 mg/kg/day			
19J	22.9	84.8	0.370
20J	21.6	81.9	0.379
21J	21	73.9	0.352
22J	20.6	85.7	0.416
23J	22.2	87.1	0.392
24J	22.9	87	0.380
Average	21.87	83.40	0.38
SD	0.97	5.03	0.02
30.0 mg/kg/day			
25J	22.7	86.2	0.380
26J	21.6	83.2	0.385
27J	22.6	90.6	0.401
28J	21.4	85.4	0.399
29J	19.7	74.5	0.378
30J	22.2	78.2	0.352
Average	21.70	83.02	0.38
SD	1.11	5.82	0.02

14d "JJ" NK assay

animal	E:T ratio (X)	avg CPM	% Spec. Lysis (Y)	Y* = ln(Y/(100-Y))	mean Y*	exp	LU per 10^7 cells	LU/10^7/group
1	100	2998	34.5	-0.639	-0.851	3.844	79.9	control 66.0
	50	2861	31.9	-0.756				std dev 16.4
	25	2435	23.9	-1.157				
	10	2239	20.2					
2	100	2643	27.8	-0.953	-1.134	2.895	60.2	
	50	2620	27.4	-0.974				
	25	2153	18.6	-1.476				
	10	1889	13.6					
3	100	2852	31.8	-0.764	-1.039	3.183	66.2	
	50	2616	27.3	-0.978				
	25	2235	20.2	-1.377				
	10	1900	13.8					
4	100	2483	24.8	-1.108	-1.634	1.757	36.5	
	50	2107	17.7	-1.534				
	25	1669	9.5	-2.258				
	10	1566	7.5					
5	100	3052	35.6	-0.594	-0.944	3.502	72.8	
	50	2813	31.1	-0.798				
	25	2183	19.2	-1.440				
	10	1882	13.5					
6	100	3177	37.9	-0.493	-0.845	3.867	80.4	
	50	3017	34.9	-0.623				
	25	2201	19.5	-1.418				
	10	1963	15.0					
7	100	2759	30.0	-0.846	-1.053	3.139	65.3	0.5 mg/kg 68.7
	50	2761	30.1	-0.844				std dev 13.9
	25	2158	18.7	-1.470				
	10	1916	14.1					
8	100	2940	33.4	-0.688	-0.818	3.972	82.6	
	50	3112	36.7	-0.545				
	25	2375	22.8	-1.220				
	10	2186	19.2					
9	100	2419	23.6	-1.174	-1.271	2.524	52.5	
	50	2340	22.1	-1.258				
	25	2231	20.1	-1.382				
	10	1932	14.4					
10	100	2719	29.3	-0.882	-1.099	2.998	62.4	
	50	2642	27.8	-0.953				
	25	2164	18.8	-1.463				
	10	2007	15.8					
11	100	2470	24.6	-1.121	-1.126	2.920	60.7	
	50	2567	26.4	-1.025				
	25	2365	22.6	-1.231				
	10	2029	16.3					
12	100	3052	35.6	-0.595	-0.748	4.262	88.6	
	50	2985	34.3	-0.650				
	25	2595	26.9	-0.998				
	10	2218	19.8					
13	100	2995	34.5	-0.642	-0.887	3.708	77.1	1.0 mg/kg 98.8
	50	2914	33.0	-0.710				std dev 30.0
	25	2295	21.3	-1.308				
	10	1854	13.0					
14	100	3103	36.5	-0.553	-0.751	4.246	88.3	
	50	3098	36.4	-0.557				
	25	2448	24.2	-1.144				
	10	1928	14.4					
15	100	3846	50.5	0.021	-0.165	7.630	158.7	—
	50	3902	51.6	0.064				
	25	3069	35.9	-0.581				
	10	2421	23.7					
16	100	3456	43.2	-0.274	-0.715	4.403	91.6	
	50	3056	35.6	-0.591				
	25	2321	21.8	-1.279				
	10	1838	12.7					
17	100	3222	38.8	-0.457	-0.807	4.017	83.5	
	50	2832	31.4	-0.781				
	25	2411	23.5	-1.182				
	10	1923	14.3					
18	100	3295	40.1	-0.399	-0.704	4.452	92.6	
	50	2927	33.2	-0.699				
	25	2579	26.6	-1.013				
	10	2028	16.2					
19	100	3314	40.5	-0.384	-0.196	7.381	153.5	3.0 mg/kg 128.5
	50	3893	51.4	0.057				std dev 17.2
	25	3465	43.4	-0.268				
	10	2171	18.9					
20	100	3130	37.0	-0.531	-0.301	6.659	138.5	
	50	3533	44.6	-0.216				
	25	3609	46.1	-0.158				
	10	1981	15.4					
21	100	3338	41.0	-0.366	-0.585	5.016	104.3	
	50	3312	40.5	-0.386				

	25	2591	26.9	-1.002				
	10	2008	15.9					
22	100	3186	38.1	-0.486	-0.477	5.586	116.2	
	50	3486	43.7	-0.251				
	25	2934	33.3	-0.693				
	10	2313	21.6					
23	100	3590	45.7	-0.172	-0.394	6.067	126.2	
	50	3482	43.7	-0.255				
	25	2860	31.9	-0.757				
	10	2137	18.3					
24	100	3552	45.0	-0.201	-0.345	6.373	132.5	
	50	3608	46.0	-0.158				
	25	2954	33.7	-0.676				
	10	2208	19.6					
25	100	3733	48.4	-0.064	-0.361	6.272	130.4	30 mg/kg 133.3
	50	3523	44.4	-0.223				std dev 57.6
	25	2815	31.1	-0.796				
	10	2145	18.4					
26	100	3818	50.0	0.001	-0.238	7.093	147.5	
	50	3745	48.6	-0.054				
	25	2973	34.1	-0.660				
	10	2275	20.9					
27	100	3585	45.6	-0.176	-0.292	6.722	139.8	
	50	3604	46.0	-0.161				
	25	3121	36.9	-0.538				
	10	2349	22.3					
28	100	3633	46.5	-0.140	-0.243	7.058	146.8	
	50	3737	48.5	-0.061				
	25	3133	37.1	-0.529				
	10	2331	22.0					
29	100	3538	44.7	-0.212	-0.626	4.811	100.1	
	50	3092	36.3	-0.562				
	25	2486	24.9	-1.105				
	10	1919	14.2					
30	100	3669	47.2	-0.112	-0.334	6.443	134.0	
	50	3582	45.6	-0.178				
	25	2911	32.9	-0.713				
	10	2195	19.4					

Date: 05/14/98

14-Day Immune Parameters
"K"
Cell Counts

Animal	Bone Marrow	total cellularity
Control		
1	476	2380000
2	831	4155000
3	505	2525000
4	886	4430000
5	735	3675000
6	814	4070000
Average	**754**	**3539167**
SD	**149**	**876957**
0.1 mg/kg/day		
7	1067	2880000
8	576	4005000
9	801	2395000
10	479	3350000
11	670	3285000
12	657	3183000
Average	**637**	**3183000**
SD	**119**	**534178**
1.0 mg/kg/day		
13	405	2025000
14	413	2065000
15	377	1885000
16	982	4910000
17	493	2465000
18	1080	5400000
Average	**625**	**3125000**
SD	**318**	**1591769**
3.0 mg/kg/day		
19	473	2365000
20	1084	5420000
21	899	4495000
22	440	2200000
23	994	4970000
24	723	3615000
Average	**769**	**3844167**
SD	**270**	**1350413**
30.0 mg/kg/day		
25	462	2310000
26	385	1925000
27	521	2605000
28	344	1720000
29	357	1785000
30	364	1820000
Average	406	2027500
SD	70	352204

T4 Quantitation 14-Day "K" * [illegible] be repeated [illegible]

Mouse	CPM (ave)	Log (cpm)	T4 ug/dL
1K	14783	4.17	3.7
2K	13132	4.12	4.8
3K	14018	4.15	4.1
4K	15022	4.18	3.5
5K	15198	4.18	3.5
6K	15674	4.20	3.1
Average	14638	4.16	3.78
SD	917	0.03	0.59
7K	16014	4.20	3.1
8K	13221	4.12	4.8
9K	15011	4.18	3.5
10K	14646	4.17	3.7
11K	13354	4.13	4.5
12K	14059	4.15	4.1
Average	14384	4.16	3.95
SD	1062	0.03	0.64
13K	13387	4.13	4.5
14K	14094	4.15	4.1
15K	13477	4.13	4.5
16K	13581	4.13	4.5
17K	13845	4.14	4.3
18K	15030	4.18	3.5
Average	13902	4.14	4.23
SD	610	0.02	0.39
19K	14080	4.15	4.1
20K	14083	4.15	4.1
21K	14184	4.15	4.1
22K	13906	4.14	4.3
23K	15209	4.18	3.5
24K	15051	4.18	3.5
Average	14419	4.16	3.93
SD	560	0.02	0.34
25K	17017	4.23	2.5
26K	16230	4.21	2.9
27K	15459	4.19	3.3
28K	15831	4.20	3.1
29K	15921	4.20	3.1
30K	14752	4.17	3.7
Average	15868	4.20	3.10
SD	757	0.02	0.40

Trt. Group	Ave T4 (ug/dL	SD
Control	3.78	0.59
0.1 mg/kg	3.95	0.64
1.0 mg/kg	4.23	0.39
3.0 mg/kg	3.93	0.34
30.0 mg/kg	3.1	0.4

Bone marrow assay

14 day Experiment "K"

no replication available

14 day Experiment "K" 3 - 1ml samples				avg x 2 to account for 1 ml sample	CFU/10e5 cells
mouse #	rep #1	rep #2	rep #3		
1	5	4	5	**9.3**	9.3.E+05
2	2	4	6	**8.0**	8.0.E+05
3	2	1	2	**3.3**	3.3.E+05
4	4	3	5	**8.0**	8.0.E+05
5	4	1	3	**5.3**	5.3.E+05
6	5	3	3	**7.3**	7.3.E+05
	group average			**6.9**	**6.9E+05**
	std error			**0.9**	**8.9E+04**
7	2	2	4	**5.3**	5.3.E+05
8	4	4	5	**8.7**	8.7.E+05
9	5	6	contamin.	**11.0**	1.1.E+06
10	2	1	3	**4.0**	4.0.E+05
11	5	6	6	**11.3**	1.1.E+06
12	7	5	7	**12.7**	1.3.E+06
	group average			**8.8**	**8.8E+05**
	std error			**1.4**	**1.4E+05**
13	2	3	2	**4.7**	4.7.E+05
14	7	6	6	**12.7**	1.3.E+06
15	6	3	3	**8.0**	8.0.E+05
16	4	4	3	**7.3**	7.3.E+05
17	9	4	8	**14.0**	1.4.E+06
18	4	6	2	**8.0**	8.0.E+05
	group average			**9.1**	**9.1E+05**
	std error			**1.4**	**1.4E+05**
19	6	3	6	**10.0**	1.0.E+06
20	6	4	4	**9.3**	9.3.E+05
21	8	3	8	**12.7**	1.3.E+06
22	6	4	8	**12.0**	1.2.E+06
23	5	7	8	**13.3**	1.3.E+06
24	6	8	8	**14.7**	1.5.E+06
	group average			**12.0**	**1.2E+06**
	std error			**0.8**	**8.3E+04**
25	9	6	7	**14.7**	1.5.E+06
26	10	7	7	**16.0**	1.6.E+06
27	9	6	6	**14.0**	1.4.E+06
28	6	9	10	**16.7**	1.7.E+06
29	2	3	7	**8.0**	8.0.E+05
30	10	8	9	**18.0**	1.8.E+06
	group average			**14.6**	**1.5E+06**
	std error			**1.4**	**1.4E+05**

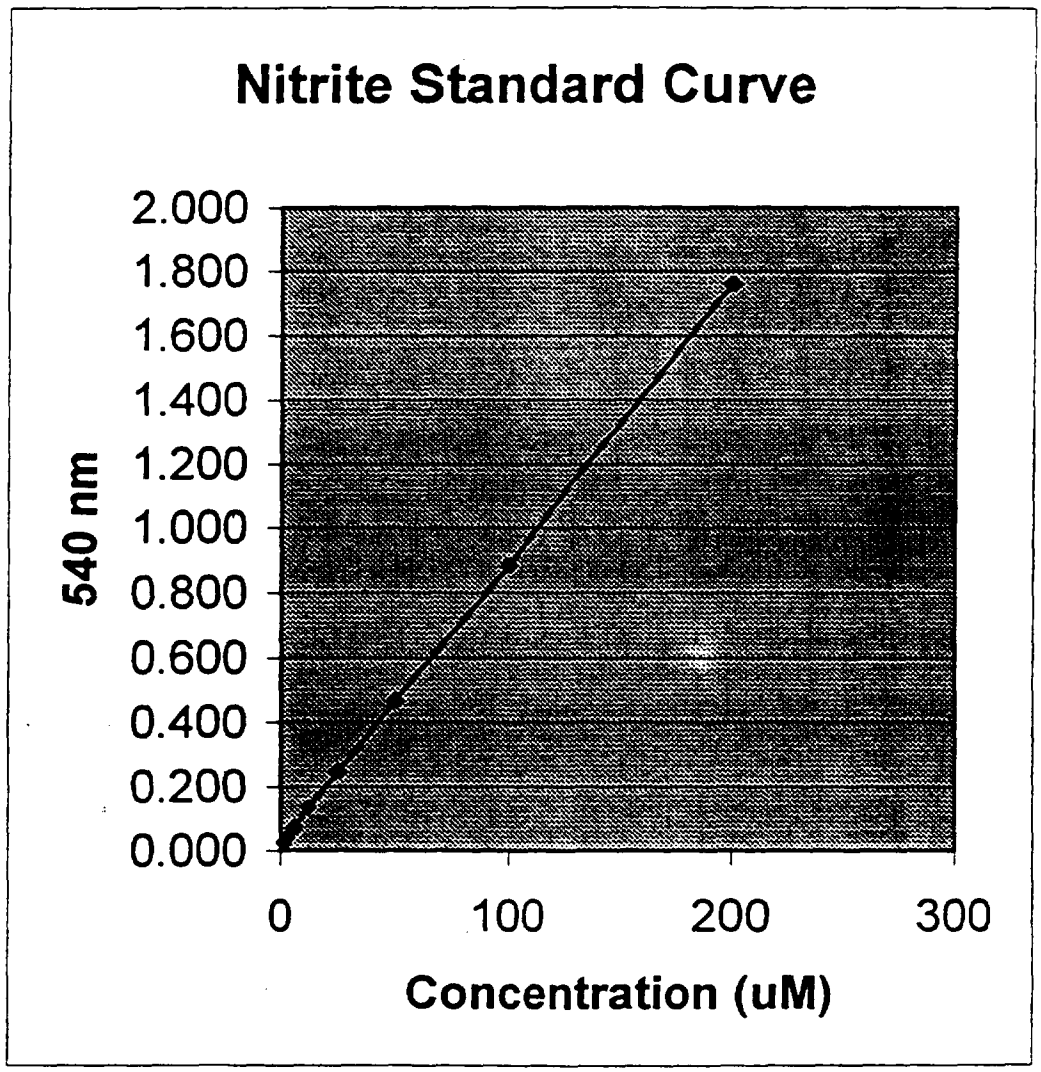
Experiment "I": Nitrite Production by Peritoneal Macrophages
14d ammonium perchlorate

	SpectraCount Readings @ 540nm (minus Greiss Bla				Macrophage Nitrite Production (uM)			
Animal	Control	INF-y	LPS	IFN-y/LPS	Control	INF-y	LPS	FN-y/LPS
Control								
1I	0.046	0.272	0.571	0.698	1.3	27.2	61.6	76.2
2I	0.045	0.222	0.608	0.718	1.2	21.5	65.8	78.5
3I	0.045	0.462	0.703	0.769	1.2	49.1	76.7	84.3
4I	0.047	0.396	0.809	0.908	1.4	41.5	88.9	100.3
5I	0.045	0.558	0.924	1.043	1.2	60.1	102.1	115.8
6I	0.051	0.507	0.941	1.029	1.9	54.2	104.1	114.2
Average	0.047	0.403	0.759	0.861	1.3	42.3	83.2	94.9
SD	0.002	0.133	0.158	0.154	0.3	15.3	18.1	17.7
0.1 mg/kg/day								
7I	0.046	0.383	0.835	0.888	1.3	40.0	91.9	98.0
8I	0.046	0.216	0.592	0.764	1.3	20.8	64.0	83.8
9I	0.050	0.407	0.842	0.953	1.7	42.7	92.7	105.5
10I	0.045	0.338	0.726	0.791	1.2	34.8	79.4	86.9
11I	0.044	0.281	0.705	0.804	1.1	28.3	77.0	88.3
12I	0.046	0.249	0.595	0.728	1.3	24.6	64.3	79.6
Average	0.046	0.312	0.716	0.821	1.3	31.9	78.2	90.3
SD	0.002	0.076	0.110	0.084	0.2	8.7	12.6	9.6
1.0 mg/kg/day								
13I	0.045	0.372	0.633	0.781	1.2	38.7	68.7	85.7
14I	0.045	0.346	0.730	0.774	1.2	35.7	79.8	84.9
15I	0.046	0.356	0.747	0.851	1.3	36.9	81.8	93.7
16I	0.046	0.298	0.664	0.791	1.3	30.2	72.3	86.9
17I	0.048	0.437	0.894	0.988	1.5	46.2	98.7	109.5
18I	0.046	0.583	0.872	1.008	1.3	63.0	96.2	111.8
Average	0.046	0.399	0.757	0.868	1.3	41.8	82.9	95.4
SD	0.001	0.101	0.107	0.106	0.1	11.6	12.2	12.2
3.0 mg/kg/day								
19I	0.046	0.403	0.727	0.849	1.3	42.3	79.5	93.5
20I	0.047	0.596	0.938	1.050	1.4	64.5	103.7	116.6
21I	0.048	0.384	0.846	0.946	1.5	40.1	93.2	104.7
22I	0.050	0.651	1.122	1.122	1.7	70.8	124.9	124.9
23I	0.048	0.429	0.843	0.936	1.5	45.3	92.8	103.5
24I	0.068	0.944	0.864	1.281	3.8	104.4	95.2	143.1
Average	0.051	0.568	0.890	1.031	1.8	61.2	98.2	114.4
SD	0.008	0.214	0.132	0.155	1.0	24.6	15.2	17.8
30.0 mg/kg/day								
25I	0.053	0.684	0.986	1.111	2.1	74.6	109.3	123.6
26I	0.046	0.364	0.793	0.927	1.3	37.8	87.1	102.5
27I	0.052	0.474	0.900	1.020	2.0	50.4	99.4	113.2
28I	0.052	0.771	1.154	*	2.0	84.6	128.5	*
29I	0.049	0.572	0.841	0.929	1.6	61.7	92.6	102.7
30I	0.068	0.560	0.798	1.028	3.8	60.3	87.7	114.1
Average	0.053	0.571	0.912	1.003	2.1	61.6	100.8	111.2
SD	0.008	0.145	0.139	0.077	0.9	16.7	15.9	8.9

*Well appears to have been skipped.
Spectracount reading=0.083
Greiss Blank = 0.035

Conc.	Standard			
uM	Rep 1	Rep 2	Rep 3	Average
200	1.838	1.74	1.81	1.762
100	0.917	0.935	0.902	0.884
50	0.52	0.514	0.474	0.469
25	0.285	0.279	0.278	0.247
12.5	0.17	0.167	0.171	0.135
6.25	0.108	0.105	0.109	0.073
3.125	0.077	0.076	0.075	0.042
1.56	0.061	0.06	0.06	0.026

Slope	Intercept
114.8584	0.021247



Experiment "I"

Macrophage Cell Count

Animal	Coulter Count	Total Cell Count
Control		
1I	283	5.66E+06
2I	366	7.32E+06
3I	274	5.48E+06
4I	245	4.90E+06
5I	256	5.12E+06
6I	192	3.84E+06
Average	269	5.39E+06
SD	57	1.14E+06
0.1 mg/kg/day		
7I	215	4.30E+06
8I	296	5.92E+06
9I	214	4.28E+06
10I	265	5.30E+06
11I	276	5.52E+06
12I	407	8.14E+06
Average	279	5.58E+06
SD	71	1.42E+06
1.0 mg/kg/day		
13I	322	6.44E+06
14I	292	5.84E+06
15I	245	4.90E+06
16I	286	5.72E+06
17I	201	4.02E+06
18I	173	3.46E+06
Average	253	5.06E+06
SD	58	1.15E+06
3.0 mg/kg/day		
19I	238	4.76E+06
20I	209	4.18E+06
21I	290	5.80E+06
22I	199	3.98E+06
23I	218	4.36E+06
24I	159	3.18E+06
Average	219	4.38E+06
SD	44	8.72E+05
0.0 mg/kg/day		
25I	220	4.40E+06
26I	255	5.10E+06
27I	220	4.40E+06
28I	127	2.54E+06
29I	163	3.26E+06
30I	156	3.12E+06
Average	190	3.80E+06
SD	49	9.75E+05

Date: 05/14/98

14-Day Immune Parameters
Body/Organ Weights
Experiment "I"

Animal	Body Weight (g)	Spleen Wt. (mg)	Thymus Wt. (mg)
Control			
1I	21.1	84	86
2I	22.8	78	69
3I	20.5	79	60
4I	21.4	79	75
5I	19.6	74	57
6I	24	86	75
Average	21.57	80.00	70.33
SD	1.59	4.34	10.73
0.1 mg/kg/day			
7I	21.8	78	65
8I	23.2	81	82
9I	21.7	68	70
10I	22	80	60
11I	21.9	65	77
12I	21	78	80
Average	21.93	75.00	72.33
SD	0.71	6.75	8.78
1.0 mg/kg/day			
13I	21.3	97	71
14I	22.5	62	65
15I	23.4	76	89
16I	23.2	76	79
17I	20.9	81	76
18I	20.7	84	72
Average	22.00	79.33	75.33
SD	1.19	11.48	6.21
3.0 mg/kg/day			
19I	21.8	77	63
20I	20.6	79	68
21I	22	85	70
22I	21.7	70	67
23I	20	75	54
24I	21.4	81	60
Average	21.25	77.83	63.67
SD	0.78	5.15	5.96
30.0 mg/kg/day			
25I	21.5	94	74
26I	23.1	99	71
27I	20.4	87	57
28I	20.4	79	48
29I	19.1	82	58
30I	22.3	75	56
Average	21.13	86.00	60.67
SD	1.45	9.17	9.87

14-Day AP Immune Parameters
"I"
Organ/Body Ratio (%)

Animal	Body Wt. gr	Spleen Wt. mg	SW/BW (mg)%
Control			
1I	21.1	84	0.40
2I	22.8	78	0.34
3I	20.5	79	0.39
4I	21.4	79	0.37
5I	19.6	74	0.38
6I	24	86	0.36
Average	21.57	80.00	0.37
SD	1.59	4.34	0.02
0.1 mg/kg/day			
7I	21.8	78	0.36
8I	23.2	81	0.35
9I	21.7	68	0.31
10I	22	80	0.36
11I	21.9	65	0.30
12I	21	78	0.37
Average	22.12	75.00	0.34
SD	0.61	6.75	0.03
1.0 mg/kg/day			
13I	21.3	97	0.46
14I	22.5	62	0.28
15I	23.4	76	0.32
16I	23.2	76	0.33
17I	20.9	81	0.39
18I	20.7	84	0.41
Average	22.26	79.33	0.35
SD	1.12	11.48	0.07
3.0 mg/kg/day			
19I	21.8	77	0.35
20I	20.6	79	0.38
21I	22	85	0.39
22I	21.7	70	0.32
23I	20	75	0.38
24I	21.4	81	0.38
Average	21.22	77.83	0.36
SD	0.87	5.15	0.03
30.0 mg/kg/day			
25I	21.5	94	0.44
26I	23.1	99	0.43
27I	20.4	87	0.43
28I	20.4	79	0.39
29I	19.1	82	0.43
30I	22.3	75	0.34
Average	20.90	86.00	0.42
SD	1.49	9.17	0.02

Spleen Cell Count "I"

Animal	Coulter Count	Total Cells
Control		
1I	2821	4.23E+07
2I	1687	2.53E+07
3I	1170	1.76E+07
4I	1518	2.28E+07
5I	1144	1.72E+07
6I	2477	3.72E+07
Average	1803	2.70E+07
SD	696	1.04E+07
0.1 mg/kg/day		
7I	1964	2.95E+07
8I	1640	2.46E+07
9I	1018	1.53E+07
10I	1985	2.98E+07
11I	1597	2.40E+07
12I	1789	2.68E+07
Average	1666	2.50E+07
SD	355	5.33E+06
1.0 mg/kg/day		
13I	2124	3.19E+07
14I	1791	2.69E+07
15I	1581	2.37E+07
16I	1222	1.83E+07
17I	2891	4.34E+07
18I	2135	3.20E+07
Average	1957	2.94E+07
SD	573	8.59E+06
3.0 mg/kg/day		
19I	2523	3.78E+07
20I	2245	3.37E+07
21I	2204	3.31E+07
22I	2095	3.14E+07
23I	2505	3.76E+07
24I	3105	4.66E+07
Average	2446	3.67E+07
SD	365	5.47E+06
30.0 mg/kg/day		
25I	2047	3.07E+07
26I	2500	3.75E+07
27I	2343	3.51E+07
28I	1521	2.28E+07
29I	2508	3.76E+07
30I	1812	2.72E+07
Average	2122	3.18E+07
SD	401	6.01E+06

Results Obtained Prior to August 1, 1998

14, 90, and 120-Day AP Studies Statistics

Worksheet size: 100000 cells

Descriptive Statistics Exp 90d "A"
Differentials

Neutrophils

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.00	6	12.42	12.75	12.42	3.17	1.29
0.1	6	14.33	13.25	14.33	4.34	1.77
1.0	6	13.83	14.00	13.83	3.04	1.24
3.0	6	13.92	12.75	13.92	4.91	2.01
30.0	6	13.67	14.75	13.67	3.19	1.30

Variable	Minimum	Maximum	Q1	Q3
0.00	8.00	17.00	9.50	14.75
0.1	9.00	20.50	10.88	19.00
1.0	9.50	17.00	11.00	17.00
3.0	9.50	23.00	10.25	17.00
30.0	9.50	17.00	9.87	16.25

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	12.6	3.1	0.22	0.927
Error	25	362.4	14.5		
Total	29	375.0			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ----+---------+---------+---------+--
 0.0        6    12.417     3.169   (------------*-----------)
 0.1        6    14.333     4.344           (-----------*------------)
 1.0        6    13.833     3.044         (-----------*------------)
 3.0        6    13.917     4.913         (------------*-----------)
30.0        6    13.667     3.189        (------------*-----------)
                                   ----+---------+---------+---------+--
Pooled StDev =    3.807             10.0      12.5      15.0      17.5
```

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	12.6	3.1	0.22	0.927
Error	25	362.4	14.5		
Total	29	375.0			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ----+---------+---------+---------+--
 0.0        6    12.417     3.169   (------------*-----------)
 0.1        6    14.333     4.344           (-----------*------------)
 1.0        6    13.833     3.044         (-----------*------------)
 3.0        6    13.917     4.913         (------------*-----------)
30.0        6    13.667     3.189        (------------*-----------)
                                   ----+---------+---------+---------+--
Pooled StDev =    3.807             10.0      12.5      15.0      17.5
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-8.367 4.534			
1.0	-7.867 5.034	-5.951 6.951		
3.0	-7.951 4.951	-6.034 6.867	-6.534 6.367	
30.0	-7.701 5.201	-5.784 7.117	-6.284 6.617	-6.201 6.701

Current worksheet: Worksheet 2

Descriptive Statistics
90 Day experiment "A"
Lymphocytes

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	82.83	82.75	82.83	6.00	2.45
0.1	6	82.00	83.00	82.00	3.46	1.41
1.0	6	83.50	82.50	83.50	2.98	1.22
3.0	6	83.08	84.00	83.08	4.69	1.92
30.0	6	83.42	82.00	83.42	3.50	1.43

Variable	Minimum	Maximum	Q1	Q3
0.0	72.50	89.00	79.25	88.62
0.1	77.50	85.50	77.88	85.12
1.0	80.50	88.50	81.25	86.25
3.0	74.00	87.50	81.12	86.00
30.0	79.50	88.00	81.00	87.62

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	8.7	2.2	0.12	0.974
Error	25	455.8	18.2		
Total	29	464.5			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  -------+---------+---------+---------
 0.0        6    82.833     5.997      (-------------*-------------)
 0.1        6    82.000     3.464   (-------------*-------------)
 1.0        6    83.500     2.983         (-------------*-------------)
 3.0        6    83.083     4.695       (-------------*-------------)
30.0        6    83.417     3.499         (-------------*-------------)
                                   -------+---------+---------+---------
Pooled StDev =    4.270                 80.0      82.5      85.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-6.400 8.067			
1.0	-7.900 6.567	-8.734 5.734		
3.0	-7.484 6.984	-8.317 6.150	-6.817 7.650	
30.0	-7.817 6.650	-8.650 5.817	-7.150 7.317	-7.567 6.900

Current worksheet: Worksheet 3

Descriptive Statistics
90 Day experiment "A"
Monocytes

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	4.25	3.25	4.25	2.68	1.09
0.1	6	4.167	3.750	4.167	2.422	0.989
1.0	6	2.667	2.750	2.667	1.506	0.615
3.0	6	3.167	3.000	3.167	1.751	0.715
30.0	6	2.750	2.500	2.750	1.084	0.443

Variable	Minimum	Maximum	Q1	Q3
0.0	2.50	9.50	2.50	5.75
0.1	2.000	8.500	2.000	5.875
1.0	0.500	4.500	1.250	4.125
3.0	0.500	6.000	2.375	4.125
30.0	1.500	4.000	1.875	4.000

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	13.95	3.49	0.89	0.483
Error	25	97.75	3.91		
Total	29	111.70			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ----+---------+---------+---------+--
 0.0        6     4.250     2.679            (----------*----------)
 0.1        6     4.167     2.422            (----------*----------)
 1.0        6     2.667     1.506  (----------*----------)
 3.0        6     3.167     1.751    (----------*----------)
30.0        6     2.750     1.084  (----------*----------)
                                   ----+---------+---------+---------+--
Pooled StDev =    1.977              1.5       3.0       4.5       6.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500

Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-3.267 3.433			
1.0	-1.767 4.933	-1.850 4.850		
3.0	-2.267 4.433	-2.350 4.350	-3.850 2.850	
30.0	-1.850 4.850	-1.933 4.767	-3.433 3.267	-2.933 3.767

Current worksheet: Worksheet 4

Descriptive Statistics
90 Day experiment "A"
Bands

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	0.417	0.500	0.417	0.376	0.154
0.1	6	0.00000	0.00000	0.00000	0.00000	0.00000
1.0	6	0.00000	0.00000	0.00000	0.00000	0.00000
3.0	6	0.00000	0.00000	0.00000	0.00000	0.00000
30.0	6	0.250	0.250	0.250	0.274	0.112

Variable	Minimum	Maximum	Q1	Q3
0.0	0.000	1.000	0.000	0.625
0.1	0.00000	0.00000	0.00000	0.00000
1.0	0.00000	0.00000	0.00000	0.00000
3.0	0.00000	0.00000	0.00000	0.00000
30.0	0.000	0.500	0.000	0.500

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	0.8833	0.2208	5.10	0.004
Error	25	1.0833	0.0433		
Total	29	1.9667			

```
                                  Individual 95% CIs For Mean
                                  Based on Pooled StDev
Level       N      Mean     StDev --------+---------+---------+--------
 0.0        6    0.4167    0.3764                    (------*------)
 0.1        6    0.0000    0.0000  (------*------)
 1.0        6    0.0000    0.0000  (------*------)
 3.0        6    0.0000    0.0000  (------*------)
30.0        6    0.2500    0.2739            (------*------)
                                  --------+---------+---------+--------
Pooled StDev =   0.2082                 0.00      0.25      0.50
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	0.0640 0.7693			
1.0	0.0640 0.7693	-0.3527 0.3527		
3.0	0.0640 0.7693	-0.3527 0.3527	-0.3527 0.3527	
30.0	-0.1860 0.5193	-0.6027 0.1027	-0.6027 0.1027	-0.6027 0.1027

Worksheet size: 100000 cells
Retrieving project from file: C:\My Documents\AP Study 90-day IP A\AP.90A.Diff stats

Worksheet size: 100000 cells

Current worksheet: Worksheet 1

Descriptive Statistics Macrophage Nitrite Production
Control NO2 (ug/dL)

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	-0.04500	-0.04500	-0.04500	0.00000	0.00000
0.1	6	0.2057	0.2440	0.2057	0.1703	0.0695
1.0	6	0.167	0.013	0.167	0.362	0.148
3.0	6	-0.0257	-0.0450	-0.0257	0.0873	0.0356
30.0	6	0.2058	0.1285	0.2058	0.1854	0.0757

Variable	Minimum	Maximum	Q1	Q3
0.0	-0.04500	-0.04500	-0.04500	-0.04500
0.1	-0.0450	0.4180	0.0420	0.3310
1.0	-0.045	0.881	-0.045	0.360
3.0	-0.1610	0.0710	-0.0740	0.0710
30.0	0.0710	0.5340	0.0710	0.3600

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	0.3821	0.0955	2.37	0.080
Error	25	1.0092	0.0404		
Total	29	1.3913			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ----+---------+---------+---------+--
 0.0        6   -0.0450    0.0000   (---------*----------)
 0.1        6    0.2057    0.1703                  (----------*---------)
 1.0        6    0.1672    0.3617                (---------*----------)
 3.0        6   -0.0257    0.0873    (---------*----------)
30.0        6    0.2058    0.1854                  (----------*---------)
```

```
                                        ----+---------+---------+---------+--
Pooled StDev =    0.2009                 -0.16      0.00      0.16      0.32

Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

              0.0         0.1         1.0         3.0

     0.1     -0.5911
              0.0897

     1.0     -0.5526     -0.3019
              0.1282      0.3789

     3.0     -0.3597     -0.1091     -0.1476
              0.3211      0.5717      0.5332

    30.0     -0.5912     -0.3406     -0.3791     -0.5719
              0.0896      0.3402      0.3017      0.1089
```

Current worksheet: Worksheet 2

Descriptive Statistics
IFN-y NO2 (ug/dL)

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	12.03	10.77	12.03	3.94	1.61
0.1	6	11.89	13.32	11.89	4.00	1.63
1.0	6	10.85	10.77	10.85	3.46	1.41
3.0	6	10.041	10.369	10.041	2.354	0.961
30.0	6	12.55	13.55	12.55	5.61	2.29

Variable	Minimum	Maximum	Q1	Q3
0.0	7.36	17.31	9.10	16.53
0.1	4.58	15.11	8.84	14.85
1.0	6.09	16.27	8.00	13.49
3.0	6.203	12.683	8.373	11.815
30.0	4.24	20.55	7.45	16.30

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	24.5	6.1	0.38	0.821
Error	25	402.5	16.1		
Total	29	426.9			

```
                                        Individual 95% CIs For Mean
                                        Based on Pooled StDev
Level       N      Mean     StDev  --------+---------+---------+--------
 0.0        6    12.028     3.937          (----------*----------)
 0.1        6    11.892     3.999         (-----------*----------)
 1.0        6    10.851     3.462     (----------*----------)
 3.0        6    10.041     2.354  (----------*-----------)
30.0        6    12.548     5.610            (----------*----------)
```

```
                                        --------+---------+---------+--------
Pooled StDev =    4.012                       9.0       12.0      15.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-6.663 6.933			
1.0	-5.621 7.975	-5.757 7.839		
3.0	-4.811 8.785	-4.947 8.649	-5.988 7.608	
30.0	-7.318 6.277	-7.454 6.142	-8.495 5.101	-9.305 4.291

Current worksheet: Worksheet 3

Descriptive Statistics
LPS NO2 (ug/dL)

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	37.56	38.02	37.56	16.10	6.57
0.1	6	38.70	39.53	38.70	8.14	3.32
1.0	6	31.54	32.70	31.54	8.96	3.66
3.0	6	24.16	25.12	24.16	5.14	2.10
30.0	6	31.70	30.56	31.70	13.23	5.40

Variable	Minimum	Maximum	Q1	Q3
0.0	14.53	61.28	25.30	48.78
0.1	25.76	48.09	32.27	45.66
1.0	20.78	44.62	21.91	38.28
3.0	14.65	29.69	21.25	27.61
30.0	13.61	54.45	24.02	38.75

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	809	202	1.67	0.189
Error	25	3037	121		
Total	29	3846			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level      N     Mean     StDev   ------+---------+---------+---------+
 0.0       6    37.56     16.10                  (---------*--------)
 0.1       6    38.70      8.14                   (---------*--------)
 1.0       6    31.54      8.96            (---------*--------)
 3.0       6    24.16      5.14     (--------*--------)
30.0       6    31.70     13.23            (---------*--------)
```

```
                                        ------+---------+---------+---------+
Pooled StDev =    11.02                      20        30        40        50
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-19.81 17.53			
1.0	-12.66 24.69	-11.52 25.83		
3.0	-5.27 32.08	-4.13 33.21	-11.29 26.06	
30.0	-12.81 24.53	-11.67 25.67	-18.83 18.52	-26.21 11.13

Current worksheet: Worksheet 4

Descriptive Statistics
IFN-y/LPS NO2 (ug/dL)

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	59.01	61.22	59.01	9.93	4.05
0.1	6	55.21	55.96	55.21	10.12	4.13
1.0	6	56.63	57.75	56.63	7.72	3.15
3.0	6	47.92	49.54	47.92	6.54	2.67
30.0	6	63.04	64.41	63.04	14.43	5.89

Variable	Minimum	Maximum	Q1	Q3
0.0	44.39	72.27	49.42	65.94
0.1	38.37	66.26	47.40	64.78
1.0	47.05	68.57	48.87	61.54
3.0	39.87	54.57	40.14	53.96
30.0	43.12	86.39	51.19	71.12

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	746	186	1.82	0.156
Error	25	2558	102		
Total	29	3303			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  -+---------+---------+---------+-----
 0.0        6     59.01      9.93              (-------*--------)
 0.1        6     55.21     10.12          (-------*--------)
 1.0        6     56.63      7.72           (--------*-------)
 3.0        6     47.92      6.54  (--------*-------)
30.0        6     63.04     14.43                   (-------*--------)
```

```
                                        -+---------+---------+---------+-----
Pooled StDev =    10.11                 40        50        60        70

Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

               0.0         0.1         1.0         3.0

     0.1      -13.34
               20.94

     1.0      -14.76      -18.56
               19.51       15.71

     3.0       -6.05       -9.85       -8.42
               28.23       24.43       25.85

    30.0      -21.17      -24.97      -23.54      -32.26
               13.11        9.31       10.73        2.02
```

Current worksheet: Worksheet 4

Power and Sample Size
90-Day Experiment "A"
Nitirite production with IFN-y stimulation
One-way ANOVA

Sigma = 1 Alpha = 0.05 Number of Levels = 5
Corrected Sum of Squares of Means = 4.08282
Means = 12.03, 11.89, 10.85, 10.041, 12.55

Sample Size	Power
6	0.9658

Power and Sample Size
90-Day Experiment "A"
Nitrite production LPS stimulation
One-way ANOVA

Sigma = 1 Alpha = 0.05 Number of Levels = 5
Corrected Sum of Squares of Means = 132.992
Means = 37.36, 38.7, 31.54, 24.16, 31.7

Sample Size	Power
6	1.0000

Power and Sample Size
90-Day Experiment "A"
Nitrite production with IFN-y and LPS stimulation
One-way ANOVA

Sigma = 1 Alpha = 0.05 Number of Levels = 5
Corrected Sum of Squares of Means = 124.274
Means = 59.01, 55.21, 56.63, 47.92, 63.04

Sample Size	Power
6	1.0000

Worksheet size: 100000 cells
Retrieving project from file: C:\My Documents\AP Study 90-day IP A\AP.90A.nitrite stats

Worksheet size: 100000 cells

Descriptive Statistics
90 Day Experiment "A"
Spleen weight/Body weight Ratio

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	0.3557	0.3605	0.3557	0.0437	0.0179
0.1	6	0.3438	0.3350	0.3438	0.0526	0.0215
1.0	6	0.37550	0.36350	0.37550	0.02416	0.00986
3.0	6	0.3633	0.3695	0.3633	0.0266	0.0108
30.0	6	0.3587	0.3320	0.3587	0.0522	0.0213

Variable	Minimum	Maximum	Q1	Q3
0.0	0.2880	0.4020	0.3158	0.3990
0.1	0.2950	0.4300	0.2980	0.3842
1.0	0.35600	0.41200	0.35750	0.40300
3.0	0.3190	0.3960	0.3415	0.3818
30.0	0.3170	0.4300	0.3193	0.4233

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	0.00319	0.00080	0.46	0.766
Error	25	0.04350	0.00174		
Total	29	0.04669			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  --------+---------+---------+--------
 0.0        6   0.35567   0.04374       (-----------*----------)
 0.1        6   0.34383   0.05265   (-----------*----------)
 1.0        6   0.37550   0.02416             (-----------*-----------)
 3.0        6   0.36333   0.02655          (-----------*-----------)
30.0        6   0.35867   0.05221        (-----------*----------)
                                   --------+---------+---------+--------
Pooled StDev =  0.04171                  0.330     0.360     0.390
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-0.05884			

	0.08250			
1.0	-0.09050	-0.10234		
	0.05084	0.03900		
3.0	-0.07834	-0.09017	-0.05850	
	0.06300	0.05117	0.08284	
30.0	-0.07367	-0.08550	-0.05384	-0.06600
	0.06767	0.05584	0.08750	0.07534

Current worksheet: Worksheet 2

Descriptive Statistics
90 Day Experiment "A"
Kidney weight/Body weight Ratio

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	1.2745	1.2730	1.2745	0.1377	0.0562
0.1	6	1.2398	1.2520	1.2398	0.0356	0.0145
1.0	6	1.2398	1.2470	1.2398	0.0710	0.0290
3.0	6	1.3032	1.2865	1.3032	0.0794	0.0324
30.0	6	1.2725	1.2780	1.2725	0.0233	0.0095

Variable	Minimum	Maximum	Q1	Q3
0.0	1.1080	1.5190	1.1695	1.3427
0.1	1.1940	1.2810	1.1978	1.2660
1.0	1.1470	1.3400	1.1673	1.2980
3.0	1.2180	1.4390	1.2405	1.3655
30.0	1.2340	1.2960	1.2520	1.2923

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	0.01719	0.00430	0.67	0.619
Error	25	0.16053	0.00642		
Total	29	0.17772			

```
                                  Individual 95% CIs For Mean
                                  Based on Pooled StDev
Level       N      Mean     StDev -----+---------+---------+---------+-
 0.0        6    1.2745    0.1377        (----------*-----------)
 0.1        6    1.2398    0.0356  (-----------*----------)
 1.0        6    1.2398    0.0710  (-----------*----------)
 3.0        6    1.3032    0.0794            (----------*----------)
30.0        6    1.2725    0.0233        (----------*----------)
                                  -----+---------+---------+---------+-
Pooled StDev =   0.0801              1.200     1.260     1.320     1.380
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

```
               0.0         0.1         1.0         3.0
```

0.1	-0.10110			
	0.17043			
1.0	-0.10110	-0.13576		
	0.17043	0.13576		
3.0	-0.16443	-0.19910	-0.19910	
	0.10710	0.07243	0.07243	
30.0	-0.13376	-0.16843	-0.16843	-0.10510
	0.13776	0.10310	0.10310	0.16643

Worksheet size: 100000 cells
Retrieving project from file: C:\My Documents\AP Study 90-day IP A\AP.90A.organ weight stats

Worksheet size: 100000 cells

Descriptive Statistics
90 Day Experiment "A"
Phagocytosis

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	10.83	10.50	10.83	2.48	1.01
0.1	6	11.333	12.000	11.333	1.506	0.615
1.0	6	10.833	11.000	10.833	1.602	0.654
3.0	6	7.500	7.500	7.500	1.049	0.428
30.0	6	6.667	6.500	6.667	0.816	0.333

Variable	Minimum	Maximum	Q1	Q3
0.0	8.00	15.00	8.75	12.75
0.1	9.000	13.000	9.750	12.250
1.0	9.000	13.000	9.000	12.250
3.0	6.000	9.000	6.750	8.250
30.0	6.000	8.000	6.000	7.250

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	113.53	28.38	11.12	0.000
Error	25	63.83	2.55		
Total	29	177.37			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ----+---------+---------+---------+--
 0.0        6    10.833     2.483                      (------*------)
 0.1        6    11.333     1.506                         (------*-----)
 1.0        6    10.833     1.602                      (------*------)
 3.0        6     7.500     1.049       (------*-----)
30.0        6     6.667     0.816   (-----*------)
                                   ----+---------+---------+---------+--
Pooled StDev =    1.598              6.0       8.0      10.0      12.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-3.207 2.207			
1.0	-2.707 2.707	-2.207 3.207		
3.0	0.626 6.041	1.126 6.541	0.626 6.041	
30.0	1.459 6.874	1.959 7.374	1.459 6.874	-1.874 3.541

Current worksheet: Worksheet 1

Power and Sample Size
90-Day Experiment "A"
Phagocytosis assay
One-way ANOVA

Sigma = 1 Alpha = 0.05 Number of Levels = 5
Corrected Sum of Squares of Means = 18.9172
Means = 10.833, 11.333, 10.833, 7.5, 6.667

Sample Size	Power
6	1.0000

Worksheet size: 100000 cells
Retrieving project from file: C:\My Documents\AP Study 90-day IP A\AP.90A.phago stats

Worksheet size: 100000 cells

Descriptive Statistics
90-Day Experiment "A"
T4 Quantitation second run

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	3.550	3.400	3.550	0.809	0.330
0.1	6	3.067	3.050	3.067	0.509	0.208
1.0	6	3.100	3.050	3.100	0.363	0.148
3.0	6	2.917	2.800	2.917	0.343	0.140
30.0	6	2.550	2.450	2.550	0.695	0.284

Variable	Minimum	Maximum	Q1	Q3
0.0	2.700	5.000	3.000	4.025
0.1	2.400	3.700	2.625	3.550
1.0	2.700	3.700	2.775	3.400
3.0	2.500	3.500	2.725	3.200
30.0	1.800	3.700	2.025	3.025

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	3.118	0.780	2.37	0.080
Error	25	8.232	0.329		
Total	29	11.350			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ------+---------+---------+---------+
 0.0        6    3.5500    0.8093                   (-------*-------)
 0.1        6    3.0667    0.5086           (-------*-------)
 1.0        6    3.1000    0.3633            (-------*-------)
 3.0        6    2.9167    0.3430         (-------*-------)
30.0        6    2.5500    0.6950  (--------*-------)
                                   ------+---------+---------+---------+
Pooled StDev =   0.5738                 2.40      3.00      3.60      4.20
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-0.4888 1.4555			
1.0	-0.5222 1.4222	-1.0055 0.9388		
3.0	-0.3388 1.6055	-0.8222 1.1222	-0.7888 1.1555	
30.0	0.0278 1.9722	-0.4555 1.4888	-0.4222 1.5222	-0.6055 1.3388

Descriptive Statistics
90-Day Experiment "A"
TSH Quantitation

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	8.833	9.000	8.833	1.329	0.543
0.1	6	7.667	8.000	7.667	0.516	0.211
1.0	6	7.000	7.000	7.000	1.414	0.577
3.0	6	6.500	6.500	6.500	1.517	0.619
30.0	6	7.500	7.500	7.500	1.871	0.764

Variable	Minimum	Maximum	Q1	Q3
0.0	7.000	11.000	7.750	9.500
0.1	7.000	8.000	7.000	8.000
1.0	5.000	9.000	5.750	8.250
3.0	5.000	9.000	5.000	7.500
30.0	5.000	10.000	5.750	9.250

One-way Analysis of Variance

Analysis of Variance for C2

```
Source      DF        SS        MS        F        P
C1           4     18.33      4.58     2.33    0.084
Error       25     49.17      1.97
Total       29     67.50
                                     Individual 95% CIs For Mean
                                     Based on Pooled StDev
Level        N      Mean     StDev  -----+---------+---------+---------+-
 0.0         6     8.833     1.329                  (-------*-------)
 0.1         6     7.667     0.516          (-------*-------)
 1.0         6     7.000     1.414      (-------*-------)
 3.0         6     6.500     1.517  (-------*-------)
30.0         6     7.500     1.871         (-------*-------)
                                     -----+---------+---------+---------+-
Pooled StDev =    1.402                 6.0       7.5       9.0      10.5

Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

              0.0         0.1         1.0         3.0

     0.1     -1.209
              3.543

     1.0     -0.543      -1.709
              4.209       3.043

     3.0     -0.043      -1.209      -1.876
              4.709       3.543       2.876

    30.0     -1.043      -2.209      -2.876      -3.376
              3.709       2.543       1.876       1.376
```

Worksheet size: 100000 cells
Retrieving project from file: C:\My Documents\AP Study 90-day IP A\AP.90A.TSH stats

One-way Analysis of Variance Bone marrow cellularity 90d "A"

```
Analysis of Variance for C2
Source      DF        SS        MS        F        P
C1           4 9.273E+12 2.318E+12     0.74    0.573
Error       25 7.823E+13 3.129E+12
Total       29 8.750E+13
                                     Individual 95% CIs For Mean
                                     Based on Pooled StDev
Level        N      Mean     StDev  -+---------+---------+---------+-----
0.1          6   6762500   1848896        (---------*---------)
1.0          6   5847500   1112811  (---------*---------)
3.0          6   7482500   1728308             (---------*---------)
30           6   6885000   2326848          (---------*---------)
control      6   6275000   1608589     (---------*---------)
                                     -+---------+---------+---------+-----
Pooled StDev =  1768931       4499999   5999999   7499999   8999999

Tukey's pairwise comparisons
```

```
    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

           0.1          1.0          3.0          30

 1.0        -2081977
             3911977

 3.0        -3716977    -4631977
             2276977     1361977

 30         -3119477    -4034477    -2399477
             2874477     1959477     3594477

 control    -2509477    -3424477    -1789477    -2386977
             3484477     2569477     4204477     3606977
```

One-way Analysis of Variance CD4/8 Thymocytes 90D "A"

```
Analysis of Variance for thym CD4-CD8+
Source      DF        SS        MS        F        P
C1           4     0.672     0.168     1.04    0.405
Error       25     4.027     0.161
Total       29     4.699
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level        N      Mean     StDev ----+---------+---------+---------+--
0.1          6    2.1333    0.5007      (----------*----------)
1            6    2.0333    0.3011   (----------*----------)
3            6    2.3667    0.4274              (----------*----------)
30           6    2.1667    0.4457       (----------*----------)
control      6    2.4333    0.2875                (----------*----------)
                                   ----+---------+---------+---------+--
Pooled StDev =    0.4013             1.80      2.10      2.40      2.70
```

Tukey's pairwise comparisons

```
    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

           0.1          1            3            30

 1          -0.5799
             0.7799

 3          -0.9133     -1.0133
             0.4466      0.3466

 30         -0.7133     -0.8133     -0.4799
             0.6466      0.5466      0.8799

 control    -0.9799     -1.0799     -0.7466     -0.9466
             0.3799      0.2799      0.6133      0.4133
```

One-way Analysis of Variance

```
Analysis of Variance for thym CD4+CD8+
Source      DF        SS        MS        F        P
C1           4     354.8      88.7     2.54    0.065
Error       25     872.4      34.9
Total       29    1227.2
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level        N      Mean     StDev  --------+---------+---------+--------
0.1          6    76.050    11.325  (---------*---------)
1            6    83.783     2.290                 (---------*---------)
3            6    77.050     4.970    (---------*---------)
30           6    84.150     2.682                 (---------*---------)
control      6    82.367     3.014              (---------*---------)
                                   --------+---------+---------+--------
Pooled StDev =    5.907                  75.0      80.0      85.0

Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

           0.1         1           3           30

 1          -17.742
              2.275

 3          -11.008      -3.275
              9.008      16.742

 30         -18.108     -10.375     -17.108
              1.908       9.642       2.908

 control    -16.325      -8.592     -15.325      -8.225
              3.692      11.425       4.692      11.792
```

One-way Analysis of Variance

```
Analysis of Variance for thym CD4+CD8-
Source      DF        SS        MS        F        P
C1           4     270.4      67.6     2.68    0.055
Error       25     630.6      25.2
Total       29     900.9
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level        N      Mean     StDev  ----------+---------+---------+------
0.1          6    16.883    10.088                 (--------*-------)
1            6     9.767     1.347   (--------*-------)
3            6    14.833     3.549             (--------*-------)
30           6     9.367     2.063  (--------*-------)
control      6    10.683     2.384     (-------*--------)
                                   ----------+---------+---------+------
Pooled StDev =    5.022                   10.0      15.0      20.0

Tukey's pairwise comparisons
```

```
    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

           0.1          1            3            30

 1           -1.392
             15.626

 3           -6.459     -13.576
             10.559       3.442

 30          -0.992      -8.109      -3.042
             16.026       8.909      13.976

 control     -2.309      -9.426      -4.359      -9.826
             14.709       7.592      12.659       7.192
```

One-way Analysis of Variance

```
Analysis of Variance for thym CD4-CD8-
Source      DF        SS        MS         F         P
C1           4      7.95      1.99      1.57     0.214
Error       25     31.76      1.27
Total       29     39.71
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level        N      Mean     StDev -------+---------+---------+---------
0.1          6     4.950     1.693         (---------*--------)
1            6     4.400     0.827    (--------*--------)
3            6     5.733     1.213                 (--------*---------)
30           6     4.333     0.528   (--------*---------)
control      6     4.567     1.025     (---------*--------)
                                   -------+---------+---------+---------
Pooled StDev =     1.127                 4.0       5.0       6.0
```

Tukey's pairwise comparisons

```
    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

           0.1          1            3            30

 1           -1.359
              2.459

 3           -2.693      -3.243
              1.126       0.576

 30          -1.293      -1.843      -0.509
              2.526       1.976       3.309

 control     -1.526      -2.076      -0.743      -2.143
              2.293       1.743       3.076       1.676
```

Descriptive Statistics
90 Day Experiment "A"
Phagocytosis

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	10.83	10.50	10.83	2.48	1.01
0.1	6	11.333	12.000	11.333	1.506	0.615
1.0	6	10.833	11.000	10.833	1.602	0.654
3.0	6	7.500	7.500	7.500	1.049	0.428
30.0	6	6.667	6.500	6.667	0.816	0.333

Variable	Minimum	Maximum	Q1	Q3
0.0	8.00	15.00	8.75	12.75
0.1	9.000	13.000	9.750	12.250
1.0	9.000	13.000	9.000	12.250
3.0	6.000	9.000	6.750	8.250
30.0	6.000	8.000	6.000	7.250

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	113.53	28.38	11.12	0.000
Error	25	63.83	2.55		
Total	29	177.37			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ----+---------+---------+---------+--
 0.0        6    10.833     2.483                      (------*------)
 0.1        6    11.333     1.506                         (------*-----)
 1.0        6    10.833     1.602                      (------*------)
 3.0        6     7.500     1.049        (------*-----)
30.0        6     6.667     0.816   (-----*------)
                                   ----+---------+---------+---------+--
Pooled StDev =    1.598              6.0       8.0      10.0      12.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-3.207 2.207			
1.0	-2.707 2.707	-2.207 3.207		
3.0	0.626 6.041	1.126 6.541	0.626 6.041	
30.0	1.459 6.874	1.959 7.374	1.459 6.874	-1.874 3.541

Current worksheet: Worksheet 1

Power and Sample Size
90-Day Experiment "A"
Phagocytosis assay
One-way ANOVA

Sigma = 1 Alpha = 0.05 Number of Levels = 5
Corrected Sum of Squares of Means = 18.9172
Means = 10.833, 11.333, 10.833, 7.5, 6.667

Sample Size	Power
6	1.0000

Worksheet size: 100000 cells
Retrieving project from file: C:\C Drive Files\AP working documents\AP Study 90-day IP A\AP.90A.phago stats.pha

Worksheet size: 100000 cells

One-way Analysis of Variance Thymus cellularity 90d "A"

Analysis of Variance for thym cel

Source	DF	SS	MS	F	P
C1	4	2.438E+14	6.096E+13	1.94	0.136
Error	25	7.872E+14	3.149E+13		
Total	29	1.031E+15			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ------+---------+---------+---------+
 0.0        6  29320000   8659695                 (---------*--------)
 0.1        6  22730000   3518997    (--------*---------)
 1.0        6  21727500   3351401  (--------*---------)
 3.0        6  22847500   6377053    (---------*--------)
30.0        6  26482500   4261793            (--------*--------)
                                   ------+---------+---------+---------+
Pooled StDev =  5611332            19999997  24999996  29999995  34999995
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-2916889 16096889			
1.0	-1914389 17099389	-8504389 10509389		
3.0	-3034389 15979389	-9624389 9389389	-10626889 8386889	
30.0	-6669389	-13259389	-14261889	-13141889

12344389 5754389 4751889 5871889

Saving file as: C:\C Drive Files\AP working documents\AP Study 90-day IP A\thymus cell stats 9.29.98

Descriptive Statistics Spleen Cellularity 14d "C"

Variable	N	Mean	Median	TrMean	StDev	SE Mean
control	6	56570000	58260000	56570000	14474777	5909303
0.1 mg/k	6	16991667	6257500	16991667	27208282	11107734
1.0 mg/k	6	26684167	13450000	26684167	34558127	14108296
3.0 mg/k	6	32648333	12992500	32648333	46768375	19093109
30 mg/kg	6	30193333	7872500	30193333	55112319	22499510

Variable	Minimum	Maximum	Q1	Q3
control	37620000	73980000	41400000	69975000
0.1 mg/k	4635000	72480000	4781250	23737500
1.0 mg/k	8720000	97020000	10392500	36641250
3.0 mg/k	8680000	127680000	10851250	48397500
30 mg/kg	6625000	142680000	7116250	42292500

One-way Analysis of Variance

Analysis of Variance

Source	DF	SS	MS	F	P
Factor	4	5.154E+15	1.288E+15	0.87	0.493
Error	25	3.684E+16	1.474E+15		
Total	29	4.200E+16			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ------+---------+---------+---------+
control     6  56570000  14474777                 (----------*----------)
0.1 mg/k    6  16991667  27208282   (----------*---------)
1.0 mg/k    6  26684167  34558127      (----------*----------)
3.0 mg/k    6  32648333  46768375        (----------*----------)
30 mg/kg    6  30193333  55112319       (----------*----------)
                                   ------+---------+---------+---------+
Pooled StDev = 38389380                  0  29999993  59999987  89999980
```

Descriptive Statistics Thymus Cellularity 14d "C"

Variable	N	Mean	Median	TrMean	StDev	SE Mean
control	6	46533333	43200000	46533333	10094487	4121057
0.1 mg/k	6	24000000	23550000	24000000	6790876	2772364
1.0 mg/k	6	29200000	27850000	29200000	7769685	3171960
3.0 mg/k	6	51833333	50700000	51833333	7244768	2957664
30 mg/kg	6	40783333	43600000	40783333	12226597	4991487

Variable	Minimum	Maximum	Q1	Q3
control	37800000	66000000	40575000	52125000
0.1 mg/k	13400000	31400000	19100000	31175000
1.0 mg/k	19600000	38900000	22975000	37400000
3.0 mg/k	43400000	60500000	45500000	59750000
30 mg/kg	22000000	53100000	29350000	51225000

One-way Analysis of Variance

Analysis of Variance

Source	DF	SS	MS	F	P
Factor	4	3.266E+15	8.164E+14	9.95	0.000
Error	25	2.052E+15	8.207E+13		
Total	29	5.317E+15			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  -------+---------+---------+---------
control     6  46533333  10094487                     (------*-----)
0.1 mg/k    6  24000000   6790876   (-----*-----)
1.0 mg/k    6  29200000   7769685       (-----*------)
3.0 mg/k    6  51833333   7244768                         (-----*------)
30 mg/kg    6  40783333  12226597                 (-----*-----)
                                   -------+---------+---------+---------
Pooled StDev =  9059349            23999996  35999993  47999991
```

Worksheet size: 100000 cells
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Descriptive Statistics Peritoneal Cellularity 14d "C"

Variable	N	Mean	Median	TrMean	StDev	SE Mean
control	6	5393333	5300000	5393333	1211522	494602
0.1 mg/k	6	5083333	5190000	5083333	796936	325348
1.0 mg/k	6	5966667	6070000	5966667	1814989	740966
3.0 mg/k	6	6290000	6040000	6290000	1300262	530830
30 mg/kg	6	3935000	4700000	3935000	2953085	1205592

Variable	Minimum	Maximum	Q1	Q3
control	4100000	6940000	4325000	6475000
0.1 mg/k	3620000	6020000	4685000	5585000
1.0 mg/k	3340000	8120000	4345000	7670000
3.0 mg/k	4820000	8500000	5360000	7225000
30 mg/kg	360000	8100000	577500	5850000

One-way Analysis of Variance

Analysis of Variance

Source	DF	SS	MS	F	P
Factor	4	2.003E+13	5.007E+12	1.58	0.210
Error	25	7.904E+13	3.162E+12		
Total	29	9.907E+13			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level        N      Mean     StDev  ----+---------+---------+---------+--
control      6   5393333   1211522            (---------*---------)
0.1 mg/k     6   5083333    796936          (---------*---------)
1.0 mg/k     6   5966667   1814989                (---------*---------)
3.0 mg/k     6   6290000   1300262                  (---------*---------)
30 mg/kg     6   3935000   2953085  (---------*---------)
                                    ----+---------+---------+---------+--
Pooled StDev =  1778115           3000000   4499999   5999999   7499999
```

Experiment "C"
Peripheral Blood Differentials
14d ammonium perchlorate

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Current worksheet: Worksheet 2

One-way Analysis of Variance

Analysis of Variance for Neutroph

Source	DF	SS	MS	F	P
treatmen	4	78.7	19.7	1.36	0.278
Error	23	332.2	14.4		
Total	27	410.8			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  --------+---------+---------+--------
 0.0        6    13.900     3.156                (---------*----------)
 0.1        6    10.083     4.705   (----------*---------)
 1.0        6    13.258     4.029            (----------*----------)
 3.0        6    10.542     2.159    (----------*----------)
30.0        4    13.875     4.732            (------------*------------)
                                   --------+---------+---------+--------
Pooled StDev =    3.800                   9.0      12.0      15.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00709

Critical value = 4.18

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-2.668 10.302			
1.0	-5.843 7.127	-9.660 3.310		
3.0	-3.127 9.843	-6.943 6.027	-3.768 9.202	
30.0	-7.225 7.275	-11.042 3.459	-7.867 6.634	-10.584 3.917

One-way Analysis of Variance

Analysis of Variance for Lymphocy

Source	DF	SS	MS	F	P
treatmen	4	244.8	61.2	3.77	0.017
Error	23	373.2	16.2		
Total	27	618.0			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ----------+---------+---------+------
 0.0        6    78.442     4.644  (------*------)
 0.1        6    85.667     5.410                 (-----*------)
```

```
 1.0        6    83.192     4.047            (-----*------)
 3.0        6    86.708     1.166                   (-----*------)
30.0        4    83.013     3.178         (-------*-------)
                                        ----------+---------+---------+------
Pooled StDev =    4.028                        80.0      85.0      90.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00709

Critical value = 4.18

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-14.099 -0.351			
1.0	-11.624 2.124	-4.399 9.349		
3.0	-15.140 -1.393	-7.915 5.832	-10.390 3.357	
30.0	-12.256 3.114	-5.031 10.339	-7.506 7.864	-3.989 11.381

One-way Analysis of Variance

Analysis of Variance for Monocyte

Source	DF	SS	MS	F	P
treatmen	4	38.48	9.62	2.57	0.065
Error	23	86.25	3.75		
Total	27	124.73			

```
                                        Individual 95% CIs For Mean
                                        Based on Pooled StDev
Level       N      Mean     StDev      --------+---------+---------+--------
 0.0        6     5.592     3.296                     (-------*-------)
 0.1        6     3.167     0.683          (-------*-------)
 1.0        6     3.000     1.183         (-------*-------)
 3.0        6     2.500     1.414     (--------*-------)
30.0        4     2.463     2.051   (---------*---------)
                                        --------+---------+---------+--------
Pooled StDev =    1.937                       2.0       4.0       6.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00709

Critical value = 4.18

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-0.880 5.730			

1.0	-0.713	-3.138		
	5.896	3.471		
3.0	-0.213	-2.638	-2.805	
	6.396	3.971	3.805	
30.0	-0.566	-2.991	-3.157	-3.657
	6.824	4.399	4.232	3.732

Descriptive Statistics for Blood Differentials (neutrophils)

Variable	N	N*	Mean	Median	TrMean	StDev
control	6	0	13.90	14.50	13.90	3.16
0.1 mg/k	6	0	10.08	8.75	10.08	4.71
1 mg/kg	6	0	13.26	12.75	13.26	4.03
3 mg/kg	6	0	10.542	10.375	10.542	2.159
30 mg/kg	4	1	13.88	13.50	13.88	4.73

Variable	SE Mean	Minimum	Maximum	Q1	Q3
control	1.29	8.00	17.00	12.13	16.17
0.1 mg/k	1.92	5.00	17.00	6.12	15.13
1 mg/kg	1.64	8.50	20.50	10.41	15.63
3 mg/kg	0.881	8.000	14.000	8.750	12.125
30 mg/kg	2.37	8.50	20.00	9.63	18.50

Descriptive Statistics for Lymphocytes

Variable	N	N*	Mean	Median	TrMean	StDev
control	6	0	80.89	80.25	80.89	5.50
0.1 mg/k	6	0	85.67	87.50	85.67	5.41
1 mg/kg	6	0	83.19	85.00	83.19	4.05
3 mg/kg	6	0	86.708	87.250	86.708	1.166
30 mg/kg	4	1	83.01	83.50	83.01	3.18

Variable	SE Mean	Minimum	Maximum	Q1	Q3
control	2.25	73.35	88.50	76.46	86.25
0.1 mg/k	2.21	77.00	91.50	80.38	89.62
1 mg/kg	1.65	75.50	86.50	80.38	85.49
3 mg/kg	0.476	85.000	87.750	85.375	87.563
30 mg/kg	1.59	79.00	86.05	79.75	85.79

Descriptive Statistics for Monocytes

Variable	N	N*	Mean	Median	TrMean	StDev
control	6	0	5.59	5.00	5.59	3.30
0.1 mg/k	6	0	3.167	3.000	3.167	0.683
1 mg/kg	6	0	3.000	3.500	3.000	1.183
3 mg/kg	6	0	2.500	2.500	2.500	1.414
30 mg/kg	4	1	2.46	1.75	2.46	2.05

Variable	SE Mean	Minimum	Maximum	Q1	Q3
control	1.35	2.00	11.50	3.12	7.79
0.1 mg/k	0.279	2.500	4.500	2.875	3.375
1 mg/kg	0.483	1.500	4.000	1.500	4.000
3 mg/kg	0.577	1.000	4.500	1.000	3.750

30 mg/kg	1.03	1.00	5.35	1.00	4.64

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Experiment "C" Flow Cytometry
CD4/CD8 Thymocyte Subpopulations (units are percent of total thymocytes)

One-way Analysis of Variance

Analysis of Variance for CD8+/CD4-

Source	DF	SS	MS	F	P
Trt. Gro	4	8.492	2.123	5.05	0.004
Error	25	10.507	0.420		
Total	29	18.999			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ---+---------+---------+---------+---
 0.0        6    2.4500    0.5320  (-------*-------)
 0.1        6    3.6500    1.0483                   (-------*-------)
 1.0        6    3.5833    0.3371                  (-------*-------)
 3.0        6    2.6000    0.4817    (-------*-------)
30.0        6    3.5833    0.6113                  (-------*-------)
                                   ---+---------+---------+---------+---
Pooled StDev =   0.6483             2.10      2.80      3.50      4.20
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-2.2983 -0.1017			
1.0	-2.2317 -0.0350	-1.0317 1.1650		
3.0	-1.2483 0.9483	-0.0483 2.1483	-0.1150 2.0817	
30.0	-2.2317 -0.0350	-1.0317 1.1650	-1.0983 1.0983	-2.0817 0.1150

One-way Analysis of Variance

Analysis of Variance for CD8+/CD4+

Source	DF	SS	MS	F	P
Trt. Gro	4	75.9	19.0	1.88	0.145
Error	25	252.4	10.1		
Total	29	328.3			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  -------+---------+---------+---------
 0.0        6    81.783    5.193   (--------*--------)
 0.1        6    86.333    3.458                   (--------*--------)
 1.0        6    85.150    1.429              (--------*--------)
 3.0        6    83.100    2.580       (--------*--------)
30.0        6    84.583    1.692            (--------*--------)
                                   -------+---------+---------+---------
Pooled StDev =   3.178                 81.0      84.0      87.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-9.934 0.834			
1.0	-8.750 2.017	-4.200 6.567		
3.0	-6.700 4.067	-2.150 8.617	-3.334 7.434	
30.0	-8.184 2.584	-3.634 7.134	-4.817 5.950	-6.867 3.900

One-way Analysis of Variance

Analysis of Variance for CD8-/CD4-

Source	DF	SS	MS	F	P
Trt. Gro	4	5.663	1.416	3.16	0.031
Error	25	11.198	0.448		
Total	29	16.862			

Level	N	Mean	StDev	Individual 95% CIs For Mean Based on Pooled StDev
0.0	6	3.2833	0.6494	(---------*--------)
0.1	6	2.3167	0.7026	(---------*--------)
1.0	6	2.4167	0.3430	(--------*---------)
3.0	6	3.3667	0.9933	(--------*--------)
30.0	6	2.7000	0.4690	(--------*--------)
Pooled StDev =		0.6693		-+---------+---------+---------+----- 1.80 2.40 3.00 3.60

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-0.1672 2.1006			
1.0	-0.2672 2.0006	-1.2339 1.0339		
3.0	-1.2172 1.0506	-2.1839 0.0839	-2.0839 0.1839	

30.0	-0.5506	-1.5172	-1.4172	-0.4672
	1.7172	0.7506	0.8506	1.8006

One-way Analysis of Variance

Analysis of Variance for CD8-/CD4+

Source	DF	SS	MS	F	P
Trt. Gro	4	85.73	21.43	2.83	0.046
Error	25	189.63	7.59		
Total	29	275.35			

Level	N	Mean	StDev	Individual 95% CIs For Mean Based on Pooled StDev
0.0	6	12.500	4.981	(-------*------)
0.1	6	7.700	1.740	(-------*------)
1.0	6	8.833	1.155	(------*-------)
3.0	6	10.900	2.559	(------*-------)
30.0	6	9.133	1.484	(------*-------)
Pooled StDev =		2.754		6.0 9.0 12.0 15.0

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	0.134 9.466			
1.0	-0.999 8.333	-5.799 3.533		
3.0	-3.066 6.266	-7.866 1.466	-6.733 2.599	
30.0	-1.299 8.033	-6.099 3.233	-4.966 4.366	-2.899 6.433

Descriptive Statistics for CD8+CD4- Thymocytes

Variable	N	Mean	Median	TrMean	StDev	SE Mean
control	6	2.450	2.500	2.450	0.532	0.217
0.1 mg/k	6	3.650	3.300	3.650	1.048	0.428
1 mg/kg	6	3.583	3.650	3.583	0.337	0.138
3 mg/kg	6	2.600	2.550	2.600	0.482	0.197
30 mg/kg	6	3.583	3.700	3.583	0.611	0.250

Variable	Minimum	Maximum	Q1	Q3
control	1.800	3.000	1.875	3.000
0.1 mg/k	2.800	5.500	2.800	4.525
1 mg/kg	3.100	3.900	3.250	3.900

3 mg/kg	2.100	3.200	2.100	3.125
30 mg/kg	2.500	4.200	3.175	4.050

Descriptive Statistics for CD8+CD4+ Thymocytes

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0	6	81.78	83.95	81.78	5.19	2.12
0.1	6	86.33	87.20	86.33	3.46	1.41
1	6	85.150	84.750	85.150	1.429	0.584
3	6	83.10	82.45	83.10	2.58	1.05
30	6	84.583	84.000	84.583	1.692	0.691

Variable	Minimum	Maximum	Q1	Q3
0	72.00	85.40	78.00	85.40
0.1	80.10	89.50	83.85	89.05
1	83.600	86.900	83.975	86.825
3	81.00	88.00	81.15	84.62
30	82.900	87.200	83.200	86.375

Descriptive Statistics for CD4-CD8- Thymocytes

Variable	N	Mean	Median	TrMean	StDev	SE Mean
control	7	3.243	3.000	3.243	0.602	0.228
0.1 mg/k	7	2.386	2.400	2.386	0.667	0.252
1 mg/kg	7	2.629	2.500	2.629	0.642	0.243
3 mg/kg	7	3.186	3.000	3.186	1.025	0.388
30 mg/kg	7	2.671	2.700	2.671	0.435	0.164

Variable	Minimum	Maximum	Q1	Q3
control	2.700	4.300	2.800	3.800
0.1 mg/k	1.700	3.500	1.800	2.800
1 mg/kg	1.900	3.900	2.200	2.900
3 mg/kg	2.100	4.600	2.100	4.400
30 mg/kg	2.100	3.300	2.200	3.000

Descriptive Statistics for CD8-CD4+ Thymocytes

Variable	N	Mean	Median	TrMean	StDev	SE Mean
control	6	12.50	10.60	12.50	4.98	2.03
0.1 mg/k	6	7.700	7.400	7.700	1.740	0.710
1 mg/kg	6	8.833	8.800	8.833	1.155	0.472
3 mg/kg	6	10.90	11.40	10.90	2.56	1.04
30 mg/kg	6	9.133	9.050	9.133	1.484	0.606

Variable	Minimum	Maximum	Q1	Q3
control	8.80	21.90	9.03	15.97
0.1 mg/k	5.900	10.900	6.425	8.725
1 mg/kg	7.200	10.100	7.875	10.025
3 mg/kg	6.60	13.60	8.78	13.08
30 mg/kg	7.300	11.700	7.975	10.050

Experiment "C"
Kidney Weight (mg)
14d ammonium perchlorate

Descriptive Statistics for Kidney Weight (mg)

Variable	N	Mean	Median	TrMean	StDev	SE Mean
control	6	309.5	305.5	309.5	29.3	11.9
0.1 mg/k	6	295.2	303.5	295.2	26.2	10.7
1 mg/kg	6	300.0	293.5	300.0	27.6	11.3
3 mg/kg	6	311.50	309.50	311.50	16.45	6.72
30 mg/kg	6	303.00	299.50	303.00	21.63	8.83

Variable	Minimum	Maximum	Q1	Q3
control	282.0	357.0	284.2	330.7
0.1 mg/k	253.0	318.0	271.0	316.5
1 mg/kg	279.0	355.0	283.5	309.2
3 mg/kg	293.00	340.00	299.00	322.00
30 mg/kg	280.00	338.00	283.00	322.25

One-way Analysis of Variance

Analysis of Variance for kidney

Source	DF	SS	MS	F	P
treatmen	4	1088	272	0.45	0.773
Error	25	15210	608		
Total	29	16298			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ---------+---------+---------+-------
 0.0        6    309.50     29.26           (------------*------------)
 0.1        6    295.17     26.16   (-----------*------------)
 1.0        6    300.00     27.61      (-----------*------------)
 3.0        6    311.50     16.45             (------------*------------)
30.0        6    303.00     21.63       (------------*------------)
                                   ---------+---------+---------+-------
Pooled StDev =    24.67                   288       304       320
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-27.5 56.1			
1.0	-32.3 51.3	-46.6 37.0		
3.0	-43.8 39.8	-58.1 25.5	-53.3 30.3	
30.0	-35.3 48.3	-49.6 34.0	-44.8 38.8	-33.3 50.3

Experiment "C"
Liver Weight (mg)
14d ammonium perchlorate

Descriptive Statistics for Liver Weight (mg)

Variable	N	Mean	Median	TrMean	StDev	SE Mean
control	6	1203.8	1185.5	1203.8	99.9	40.8
0.1 mg/k	6	1164.5	1118.5	1164.5	113.6	46.4
1 mg/kg	6	1200.8	1174.5	1200.8	121.5	49.6
3 mg/kg	6	1188.2	1164.5	1188.2	109.5	44.7
30 mg/kg	6	1119.3	1095.0	1119.3	97.4	39.8

Variable	Minimum	Maximum	Q1	Q3
control	1098.0	1350.0	1111.5	1303.5
0.1 mg/k	1033.0	1326.0	1090.0	1293.0
1 mg/kg	1063.0	1404.0	1105.0	1303.5
3 mg/kg	1075.0	1349.0	1097.5	1290.5
30 mg/kg	1006.0	1264.0	1039.0	1220.5

One-way Analysis of Variance

Analysis of Variance for liver

Source	DF	SS	MS	F	P
treatmen	4	29283	7321	0.62	0.653
Error	25	295695	11828		
Total	29	324979			

```
                                  Individual 95% CIs For Mean
                                  Based on Pooled StDev
Level       N      Mean     StDev --+---------+---------+---------+----
 0.0        6    1203.8      99.9            (----------*-----------)
 0.1        6    1164.5     113.6        (-----------*----------)
 1.0        6    1200.8     121.5            (----------*-----------)
 3.0        6    1188.2     109.5          (-----------*----------)
30.0        6    1119.3      97.4  (-----------*----------)
                                  --+---------+---------+---------+----
Pooled StDev =    108.8           1040      1120      1200      1280
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-145 224			
1.0	-181 187	-221 148		
3.0	-169 200	-208 161	-172 197	
30.0	-100 269	-139 229	-103 266	-115 253

Experiment "C"
Macrophage total cellularity
14d ammonium perchlorate

Descriptive Statistics for Macrophage Total Cellularity

Variable	N	N*	Mean	Median	TrMean	StDev
control	6	0	5393333	5300000	5393333	1211522
0.1	6	0	5083333	5190000	5083333	796936
1	6	0	5966667	6070000	5966667	1814989
3	6	0	6290000	6040000	6290000	1300262
30	4	2	5650000	5040000	5650000	1660000

Variable	SE Mean	Minimum	Maximum	Q1	Q3
control	494602	4100000	6940000	4325000	6475000
0.1	325348	3620000	6020000	4685000	5585000
1	740966	3340000	8120000	4345000	7670000
3	530830	4820000	8500000	5360000	7225000
30	830000	4420000	8100000	4560000	7350000

One-way Analysis of Variance

Analysis of Variance for macropha

Source	DF	SS	MS	F	P
treatmen	4	5.358E+12	1.340E+12	0.70	0.597
Error	23	4.371E+13	1.900E+12		
Total	27	4.906E+13			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  -+---------+---------+---------+-----
 0.0        6   5393333   1211522     (-----------*-----------)
 0.1        6   5083333    796936  (-----------*----------)
 1.0        6   5966667   1814989           (-----------*----------)
 3.0        6   6290000   1300262              (-----------*-----------)
30.0        4   5650000   1660000     (--------------*-------------)
                                   -+---------+---------+---------+-----
Pooled StDev =  1378493       4000000   4999999   5999999   6999999
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00709

Critical value = 4.18

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-2042368 2662368			
1.0	-2925701 1779035	-3235701 1469035		
3.0	-3249035 1455701	-3559035 1145701	-2675701 2029035	
30.0	-2886694 2373361	-3196694 2063361	-2313361 2946694	-1990027 3270027

Experiment "C"
14d ammonium perchlorate
Nitrite assay with Peritoneal Macrophages

Worksheet size: 100000 cells

One-way Analysis of Variance

Analysis of Variance for Control

Source	DF	SS	MS	F	P
treatmen	4	1.399	0.350	0.62	0.655
Error	23	13.039	0.567		
Total	27	14.438			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level        N      Mean     StDev ----------+---------+---------+------
 0.0         6    0.2978    0.4492     (----------*----------)
 0.1         6    0.0403    0.1711 (----------*---------)
 1.0         6    0.3192    0.9466      (---------*----------)
 3.0         6    0.5338    0.8375         (----------*---------)
30.0         4    0.7380    1.1396          (------------*------------)
                                   ----------+---------+---------+------
Pooled StDev =    0.7529                   0.00      0.60      1.20
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00709

Critical value = 4.18

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-1.0274 1.5424			
1.0	-1.3062 1.2636	-1.5637 1.0061		
3.0	-1.5209 1.0489	-1.7784 0.7914	-1.4996 1.0702	
30.0	-1.8767 0.9964	-2.1342 0.7389	-1.8554 1.0177	-1.6407 1.2324

One-way Analysis of Variance

Analysis of Variance for INF-y

Source	DF	SS	MS	F	P
treatmen	4	1132	283	1.08	0.389
Error	23	6021	262		
Total	27	7154			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level        N      Mean     StDev ---+---------+---------+---------+---
 0.0         6     32.16     20.35      (--------*---------)
 0.1         6     32.76     14.49       (--------*--------)
 1.0         6     24.52      7.59 (--------*--------)
 3.0         6     25.44      7.63  (--------*--------)
```

```
30.0        4     43.92     27.82              (----------*----------)
                                     ---+---------+---------+---------+---
Pooled StDev =    16.18                15        30        45        60
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00709

Critical value = 4.18

Intervals for (column level mean) - (row level mean)

```
              0.0         0.1         1.0         3.0

     0.1     -28.21
              27.01

     1.0     -19.97      -19.37
              35.25       35.86

     3.0     -20.89      -20.29      -28.53
              34.33       34.93       26.69

    30.0     -42.64      -42.03      -50.28      -49.36
              19.10       19.71       11.46       12.38
```

One-way Analysis of Variance

Analysis of Variance for LPS

Source	DF	SS	MS	F	P
treatmen	4	613	153	0.95	0.454
Error	23	3717	162		
Total	27	4330			

```
                                     Individual 95% CIs For Mean
                                     Based on Pooled StDev
Level       N      Mean     StDev   -+---------+---------+---------+-----
 0.0        6     81.69     18.37              (----------*---------)
 0.1        6     80.40      7.00             (---------*----------)
 1.0        6     70.05     11.99   (----------*----------)
 3.0        6     72.48      6.83      (---------*----------)
30.0        4     73.94     16.65     (------------*------------)
                                     -+---------+---------+---------+-----
Pooled StDev =    12.71              60        70        80        90
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00709

Critical value = 4.18

Intervals for (column level mean) - (row level mean)

```
              0.0         0.1         1.0         3.0

     0.1     -20.40
              22.98

     1.0     -10.06      -11.34
              33.33       32.04
```

3.0	-12.48	-13.77	-24.12	
	30.90	29.61	19.27	
30.0	-16.50	-17.79	-28.14	-25.71
	32.00	30.72	20.37	22.79

One-way Analysis of Variance

Analysis of Variance for IFN-y/LP

Source	DF	SS	MS	F	P
treatmen	4	1236	309	1.55	0.221
Error	23	4580	199		
Total	27	5816			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  -------+---------+---------+---------
 0.0        6    102.11     20.90              (---------*---------)
 0.1        6    103.05      5.02               (---------*---------)
 1.0        6     88.58     16.49   (---------*---------)
 3.0        6     88.86      4.86   (---------*---------)
30.0        4    100.51     16.25           (-----------*-----------)
                                   -------+---------+---------+---------
Pooled StDev =    14.11                  84        96       108
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00709

Critical value = 4.18

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-25.02			
	23.14			
1.0	-10.55	-9.61		
	37.61	38.55		
3.0	-10.83	-9.89	-24.36	
	37.33	38.27	23.80	
30.0	-25.32	-24.38	-38.85	-38.57
	28.52	29.47	15.00	15.27

Descriptive Statistics for Control values of Nitrite assay

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0 mg/kg	6	0.298	0.126	0.298	0.449	0.183
0.1 mg/k	6	0.0403	0.0620	0.0403	0.1711	0.0699
1 mg/kg	6	0.319	-0.132	0.319	0.947	0.386
3 mg/kg	6	0.534	0.319	0.534	0.838	0.342
30 mg/kg	4	0.738	0.512	0.738	1.140	0.570

Variable	Minimum	Maximum	Q1	Q3

Experiment "C"
Spleen Total Cellularity
14d ammonium perchlorate

Descriptive Statistics for Splenocyte Total Cellularity

Variable	N	Mean	Median	TrMean	StDev	SE Mean
control	6	56570000	58260000	56570000	14474777	5909303
0.1	6	71020000	69180000	71020000	13916413	5681352
1	6	142340000	144420000	142340000	38654656	15780697
3	6	157700000	146130000	157700000	55432606	22630266
30	6	100740000	94470000	100740000	22511757	9190386

Variable	Minimum	Maximum	Q1	Q3
control	37620000	73980000	41400000	69975000
0.1	55620000	89880000	57375000	85695000
1	97020000	198180000	102735000	173565000
3	104160000	263640000	121800000	184755000
30	79500000	142680000	85395000	115140000

One-way Analysis of Variance

Analysis of Variance for spleen

Source	DF	SS	MS	F	P
treatmen	4	4.613E+16	1.153E+16	10.53	0.000
Error	25	2.738E+16	1.095E+15		
Total	29	7.351E+16			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  -----+---------+---------+---------+-
 0.0        6  56570000  14474777   (----*-----)
 0.1        6  71020000  13916413      (----*-----)
 1.0        6  1.42E+08  38654656                    (----*-----)
 3.0        6  1.58E+08  55432606                       (-----*----)
30.0        6  1.01E+08  22511757             (----*-----)
                                   -----+---------+---------+---------+-
Pooled StDev = 33096589          49999989  99999978  1.50E+08  2.00E+08
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-70523248 41623248			
1.0	-141843248 -29696752	-127393248 -15246752		
3.0	-157203248 -45056752	-142753248 -30606752	-71433248 40713248	
30.0	-100243248 11903248	-85793248 26353248	-14473248 97673248	886752 113033248

Experiment "C" 14d Ammonium Perchlorate
CD4/CD8 Splenocyte Subpopulations (units are in percent lysis)

```
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Current worksheet: spleen flow stats worksheet.MTW

One-way Analysis of Variance

Analysis of Variance for CD8+/CD4-
Source     DF        SS        MS        F        P
treatmen    4     12.16      3.04     1.42    0.258
Error      25     53.65      2.15
Total      29     65.81
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ------+---------+---------+---------+
 0.0        6    12.717     1.623              (---------*---------)
 0.1        6    13.183     1.283                  (---------*---------)
 1.0        6    11.367     0.831  (----------*---------)
 3.0        6    12.267     1.601          (---------*---------)
30.0        6    12.917     1.788               (----------*---------)
                                   ------+---------+---------+---------+
Pooled StDev =    1.465               10.8      12.0      13.2      14.4

Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

               0.0         0.1         1.0         3.0

     0.1      -2.949
               2.015

     1.0      -1.132      -0.665
               3.832       4.299

     3.0      -2.032      -1.565      -3.382
               2.932       3.399       1.582

    30.0      -2.682      -2.215      -4.032      -3.132
               2.282       2.749       0.932       1.832


One-way Analysis of Variance

Analysis of Variance for CD8+/CD4+
Source     DF        SS        MS        F        P
treatmen    4   0.02200   0.00550     1.06    0.398
Error      25   0.13000   0.00520
Total      29   0.15200
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  --------+---------+---------+--------
 0.0        6   0.13333   0.05164  (---------*---------)
 0.1        6   0.20000   0.08944            (---------*---------)
```

```
 1.0        6   0.13333   0.05164  (---------*---------)
 3.0        6   0.15000   0.08367     (---------*---------)
30.0        6   0.18333   0.07528          (---------*---------)
                                   --------+---------+---------+--------
Pooled StDev =  0.07211                  0.120     0.180     0.240
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-0.18884 0.05551			
1.0	-0.12217 0.12217	-0.05551 0.18884		
3.0	-0.13884 0.10551	-0.07217 0.17217	-0.13884 0.10551	
30.0	-0.17217 0.07217	-0.10551 0.13884	-0.17217 0.07217	-0.15551 0.08884

One-way Analysis of Variance

Analysis of Variance for CD8-/CD4-

Source	DF	SS	MS	F	P
treatmen	4	80.2	20.1	1.65	0.193
Error	25	303.7	12.1		
Total	29	383.9			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  -+---------+---------+---------+-----
 0.0        6    65.350     3.535           (---------*---------)
 0.1        6    62.950     3.898   (---------*---------)
 1.0        6    67.000     1.307                  (--------*---------)
 3.0        6    65.383     3.037           (---------*---------)
30.0        6    62.667     4.703  (---------*---------)
                                   -+---------+---------+---------+-----
Pooled StDev =    3.485          60.0      63.0      66.0      69.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-3.505 8.305			

1.0	-7.555	-9.955		
	4.255	1.855		
3.0	-5.938	-8.338	-4.288	
	5.872	3.472	7.522	
30.0	-3.222	-5.622	-1.572	-3.188
	8.588	6.188	10.238	8.622

One-way Analysis of Variance

Analysis of Variance for CD8-/CD4+

Source	DF	SS	MS	F	P
treatmen	4	34.68	8.67	1.80	0.160
Error	25	120.35	4.81		
Total	29	155.03			

Level	N	Mean	StDev	Individual 95% CIs For Mean Based on Pooled StDev
0.0	6	21.783	2.029	(--------*--------)
0.1	6	23.633	2.710	(--------*--------)
1.0	6	21.500	0.925	(---------*--------)
3.0	6	22.167	1.555	(--------*--------)
30.0	6	24.233	3.055	(--------*--------)

Pooled StDev = 2.194

```
--+---------+---------+---------+----
20.0      22.0      24.0      26.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-5.567			
	1.867			
1.0	-3.434	-1.584		
	4.001	5.851		
3.0	-4.101	-2.251	-4.384	
	3.334	5.184	3.051	
30.0	-6.167	-4.317	-6.451	-5.784
	1.267	3.117	0.984	1.651

Descriptive Statistics for CD8+CD4- Splenocytes

Variable	N	Mean	Median	TrMean	StDev	SE Mean
control	6	12.717	12.750	12.717	1.623	0.663
0.1 mg/k	6	13.183	13.200	13.183	1.283	0.524
1 mg/kg	6	11.367	11.300	11.367	0.831	0.339
3 mg/kg	6	12.267	11.650	12.267	1.601	0.654
30 mg/kg	6	12.917	13.050	12.917	1.788	0.730

Variable	Minimum	Maximum	Q1	Q3
control	11.100	15.500	11.100	13.700
0.1 mg/k	11.100	14.700	12.225	14.400
1 mg/kg	10.400	12.300	10.625	12.225
3 mg/kg	10.700	15.000	11.150	13.725
30 mg/kg	10.300	15.100	11.275	14.575

Descriptive Statistics for CD8+CD4+ Splenocytes

Variable	N	Mean	Median	TrMean	StDev	SE Mean
control	6	0.1333	0.1000	0.1333	0.0516	0.0211
0.1 mg/k	6	0.2000	0.2000	0.2000	0.0894	0.0365
1 mg/kg	6	0.1333	0.1000	0.1333	0.0516	0.0211
3 mg/kg	6	0.1500	0.1000	0.1500	0.0837	0.0342
30 mg/kg	6	0.1833	0.2000	0.1833	0.0753	0.0307

Variable	Minimum	Maximum	Q1	Q3
control	0.1000	0.2000	0.1000	0.2000
0.1 mg/k	0.1000	0.3000	0.1000	0.3000
1 mg/kg	0.1000	0.2000	0.1000	0.2000
3 mg/kg	0.1000	0.3000	0.1000	0.2250
30 mg/kg	0.1000	0.3000	0.1000	0.2250

Descriptive Statistics for CD8-CD4- Splenocytes

Variable	N	Mean	Median	TrMean	StDev	SE Mean
control	6	65.35	64.95	65.35	3.53	1.44
0.1 mg/k	6	62.95	61.95	62.95	3.90	1.59
1 mg/kg	6	67.000	67.000	67.000	1.307	0.534
3 mg/kg	6	65.38	66.10	65.38	3.04	1.24
30 mg/kg	6	62.67	62.90	62.67	4.70	1.92

Variable	Minimum	Maximum	Q1	Q3
control	60.20	69.40	62.60	69.25
0.1 mg/k	58.60	69.70	60.25	65.95
1 mg/kg	64.800	68.700	66.225	68.025
3 mg/kg	60.70	68.60	62.35	68.08
30 mg/kg	55.50	69.10	59.33	66.03

Descriptive Statistics for CD8-CD4+ Splenocytes

Variable	N	Mean	Median	TrMean	StDev	SE Mean
control	6	21.783	22.200	21.783	2.029	0.828
0.1 mg/k	6	23.63	24.00	23.63	2.71	1.11
1 mg/kg	6	21.500	21.050	21.500	0.925	0.378
3 mg/kg	6	22.167	22.050	22.167	1.555	0.635
30 mg/kg	6	24.23	23.90	24.23	3.06	1.25

Variable	Minimum	Maximum	Q1	Q3
control	19.300	24.200	19.450	23.525
0.1 mg/k	19.00	26.80	21.62	25.82
1 mg/kg	20.800	22.900	20.800	22.525
3 mg/kg	20.400	24.200	20.550	23.825
30 mg/kg	20.40	29.20	21.75	26.65

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* NOTE  * Existing file replaced.
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Experiment "C"
Spleen Weight (mg)
14d ammonium perchlorate

Descriptive Statistics for Spleen Weight (mg)

Variable	N	Mean	Median	TrMean	StDev	SE Mean
control	6	80.67	80.50	80.67	7.74	3.16
0.1 mg/k	6	73.17	69.50	73.17	17.80	7.27
1 mg/kg	6	82.17	84.00	82.17	10.32	4.21
3 mg/kg	6	77.50	78.50	77.50	11.40	4.65
30 mg/kg	6	65.00	61.00	65.00	14.42	5.89

Variable	Minimum	Maximum	Q1	Q3
control	68.00	90.00	75.50	87.75
0.1 mg/k	54.00	96.00	57.00	93.00
1 mg/kg	68.00	93.00	71.00	92.25
3 mg/kg	62.00	91.00	65.75	88.75
30 mg/kg	51.00	85.00	51.75	81.25

One-way Analysis of Variance

Analysis of Variance for spleen weight

Source	DF	SS	MS	F	P
treatmen	4	1144	286	1.74	0.173
Error	25	4106	164		
Total	29	5250			

Level	N	Mean	StDev
0.0	6	80.67	7.74
0.1	6	73.17	17.80
1.0	6	82.17	10.32
3.0	6	77.50	11.40
30.0	6	65.00	14.42

Pooled StDev = 12.82

```
Individual 95% CIs For Mean
Based on Pooled StDev
-----+---------+---------+---------+-
                (--------*--------)
          (--------*--------)
                 (--------*--------)
              (--------*--------)
(--------*--------)
-----+---------+---------+---------+-
    60        72        84        96
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-14.21 29.21			
1.0	-23.21 20.21	-30.71 12.71		
3.0	-18.55 24.88	-26.05 17.38	-17.05 26.38	
30.0	-6.05 37.38	-13.55 29.88	-4.55 38.88	-9.21 34.21

Experiment "C"
Thymus Weight (mg)
14 day ammonium perchlorate

Descriptive Statistics for Thymus Weight

Variable	N	Mean	Median	TrMean	StDev	SE Mean
control	6	72.50	70.50	72.50	8.14	3.32
0.1 mg/k	6	66.67	66.00	66.67	5.01	2.04
1 mg/kg	6	63.50	62.50	63.50	3.15	1.28
3 mg/kg	6	72.67	72.00	72.67	4.08	1.67
30 mg/kg	6	65.50	63.50	65.50	6.47	2.64

Variable	Minimum	Maximum	Q1	Q3
control	63.00	85.00	66.00	80.50
0.1 mg/k	60.00	74.00	63.00	71.00
1 mg/kg	60.00	69.00	61.50	66.00
3 mg/kg	68.00	79.00	69.50	76.00
30 mg/kg	58.00	77.00	61.75	70.25

One-way Analysis of Variance

Analysis of Variance for thymus

Source	DF	SS	MS	F	P
treatmen	4	421.0	105.2	3.29	0.027
Error	25	799.2	32.0		
Total	29	1220.2			

Level	N	Mean	StDev
0.0	6	72.500	8.142
0.1	6	66.667	5.007
1.0	6	63.500	3.146
3.0	6	72.667	4.082
30.0	6	65.500	6.473

Pooled StDev = 5.654

```
Individual 95% CIs For Mean
Based on Pooled StDev
---+---------+---------+---------+---
                  (-------*-------)
        (-------*-------)
  (-------*-------)
                  (-------*-------)
     (-------*-------)
---+---------+---------+---------+---
60.0      66.0      72.0      78.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-3.746 15.412			
1.0	-0.579 18.579	-6.412 12.746		
3.0	-9.746 9.412	-15.579 3.579	-18.746 0.412	
30.0	-2.579	-8.412	-11.579	-2.412

16.579	10.746	7.579	16.746

Descriptive Statistics
14-Day Experiment C
Phagocytosis Assay

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	20.03	20.45	20.03	3.15	1.28
0.1	6	17.77	16.90	17.77	4.66	1.90
1.0	6	15.20	15.35	15.20	3.86	1.58
3.0	6	12.283	12.150	12.283	1.767	0.721
30.0	6	12.583	12.300	12.583	1.157	0.472

Variable	Minimum	Maximum	Q1	Q3
0.0	15.20	24.30	17.45	22.27
0.1	12.10	25.30	14.05	21.85
1.0	10.10	19.60	11.30	19.23
3.0	9.700	15.100	11.200	13.450
30.0	11.100	14.100	11.700	13.875

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	267.6	66.9	6.55	0.001
Error	25	255.2	10.2		
Total	29	522.8			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  -------+---------+---------+---------
 0.0        6    20.033     3.147                      (------*------)
 0.1        6    17.767     4.662                 (-----*------)
 1.0        6    15.200     3.865          (------*------)
 3.0        6    12.283     1.767   (------*-----)
30.0        6    12.583     1.157    (-----*------)
                                   -------+---------+---------+---------
Pooled StDev =    3.195                 12.0      16.0      20.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-3.146 7.680			
1.0	-0.580 10.246	-2.846 7.980		
3.0	2.337 13.163	0.070 10.896	-2.496 8.330	
30.0	2.037 12.863	-0.230 10.596	-2.796 8.030	-5.713 5.113

One-way Analysis of Variance 14d C spl/bw ratio

```
Analysis of Variance for C
Source      DF        SS        MS        F        P
Cl           4   0.02241   0.00560     2.01    0.124
Error       25   0.06961   0.00278
Total       29   0.09202
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level        N      Mean     StDev -+---------+---------+---------+-----
0.1          6   0.32350   0.06587        (--------*--------)
1            6   0.37383   0.04501                  (--------*--------)
3            6   0.33033   0.05542         (--------*--------)
30           6   0.29117   0.06034 (--------*--------)
control      6   0.34783   0.02907             (--------*-------)
                                   -+---------+---------+---------+-----
Pooled StDev =  0.05277           0.250     0.300     0.350     0.400
```

Tukey's pairwise comparisons

```
    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

           0.1          1           3           30

 1        -0.13973
           0.03907

 3        -0.09623    -0.04590
           0.08257     0.13290

 30       -0.05707    -0.00673    -0.05023
           0.12173     0.17207     0.12857

 control  -0.11373    -0.06340    -0.10690    -0.14607
           0.06507     0.11540     0.07190     0.03273
```

Descriptive Statistics
90 Day experiment "D"
Phagocytosis assay

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	4	19.75	19.00	19.75	4.57	2.29
0.1	6	15.50	16.00	15.50	3.78	1.54
1.0	5	15.400	16.000	15.400	1.949	0.872
3.0	6	21.00	21.00	21.00	4.15	1.69
30.0	6	18.33	19.00	18.33	2.50	1.02

Variable	Minimum	Maximum	Q1	Q3
0.0	15.00	26.00	16.00	24.25
0.1	9.00	20.00	12.75	18.50
1.0	13.000	18.000	13.500	17.000
3.0	16.00	27.00	16.75	24.75
30.0	15.00	22.00	15.75	19.75

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	138.2	34.5	2.85	0.048
Error	22	266.8	12.1		
Total	26	405.0			

Level	N	Mean	StDev
0.0	4	19.750	4.573
0.1	6	15.500	3.782
1.0	5	15.400	1.949
3.0	6	21.000	4.147
30.0	6	18.333	2.503

Pooled StDev = 3.482

```
                    Individual 95% CIs For Mean
                    Based on Pooled StDev
------+---------+---------+---------+
            (---------*----------)
  (-------*--------)
 (--------*--------)
                    (-------*-------)
          (-------*--------)
------+---------+---------+---------+
   14.0      17.5      21.0      24.5
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00707

Critical value = 4.20

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-2.426 10.926			
1.0	-2.588 11.288	-6.162 6.362		
3.0	-7.926 5.426	-11.471 0.471	-11.862 0.662	
30.0	-5.259 8.092	-8.804 3.138	-9.196 3.329	-3.304 8.638

Power and Sample Size
90-Day Experiment "D"
Phagocytosis assay

One-way ANOVA

Sigma = 1 Alpha = 0.05 Number of Levels = 5
Corrected Sum of Squares of Means = 25.1813
Means = 19.75, 15.5, 15.4, 21, 18.33

Sample Size	Power
6	1.0000

Worksheet size: 100000 cells
Retrieving project from file: C:\C Drive Files\AP working documents\AP Study 90-day IP D\AP.90D.phago stats.pha

One-way Analysis of Variance Bone Marrow Cellularity 90d "D"

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	6.882E+12	1.721E+12	0.40	0.810
Error	25	1.087E+14	4.349E+12		
Total	29	1.156E+14			

Level	N	Mean	StDev	Individual 95% CIs For Mean Based on Pooled StDev
0.1	6	8112500	2167899	(----------*----------)
1.0	6	8553333	2092431	(----------*----------)
3.0	6	8840833	2432701	(----------*----------)
30	6	7579167	2476000	(----------*----------)
control	6	7725000	786778	(----------*----------)
Pooled StDev =		2085458		5999999 7499999 8999999 10499998

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.1	1.0	3.0	30
1.0	-3974080 3092414			
3.0	-4261580 2804914	-3820747 3245747		
30	-2999914 4066580	-2559080 4507414	-2271580 4794914	
control	-3145747 3920747	-2704914 4361580	-2417414 4649080	-3679080 3387414

One-way Analysis of Variance Stem cell assay 90d "D"

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	6.897E+11	1.724E+11	3.31	0.028
Error	23	1.199E+12	5.213E+10		
Total	27	1.889E+12			

Level	N	Mean	StDev	Individual 95% CIs For Mean Based on Pooled StDev
0.1	6	955556	234442	(------*-------)
1	5	520000	269361	(--------*-------)
3	6	597222	295600	(-------*-------)
30	6	577778	161475	(-------*-------)
control	5	633333	129099	(-------*--------)

Pooled StDev = 228318

```
--------+---------+---------+--------
      500000    750000   1000000
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00709

Critical value = 4.18

Intervals for (column level mean) - (row level mean)

	0.1	1	3	30
1	26919 844193			
3	-31286 747954	-485859 331415		
30	-11842 767398	-466415 350859	-370176 409064	
control	-86415 730859	-540141 313474	-444748 372526	-464193 353081

Experiment "G"
14d ammonium perchlorate
WBC differential

One-way Analysis of Variance

Analysis of Variance for Neutrophils

Source	DF	SS	MS	F	P
treatmen	4	99.0	24.7	1.21	0.330
Error	25	509.7	20.4		
Total	29	608.7			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level        N      Mean     StDev ---+---------+---------+---------+--
-
 0.0         6    16.000     4.775          (----------*----------)
 0.1         6    18.500     5.167                   (----------*---------
-)
 1.0         6    14.000     2.366    (----------*----------)
 3.0         6    13.333     3.830  (----------*----------)
30.0         6    14.833     5.672       (---------*----------)
                                   ---+---------+---------+---------+--
-
Pooled StDev =    4.515             10.5      14.0      17.5      21.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-10.150 5.150			
1.0	-5.650 9.650	-3.150 12.150		
3.0	-4.983 10.316	-2.483 12.816	-6.983 8.316	
30.0	-6.483 8.816	-3.983 11.316	-8.483 6.816	-9.150 6.150

One-way Analysis of Variance

Analysis of Variance for Lymphocy

Source	DF	SS	MS	F	P
treatmen	4	259.2	64.8	1.67	0.189
Error	25	970.7	38.8		
Total	29	1229.9			

```
                                        Individual 95% CIs For Mean
                                        Based on Pooled StDev
Level        N      Mean     StDev  ------+---------+---------+---------
+
 0.0         6    73.167     4.956    (---------*----------)
 0.1         6    72.500     8.361   (---------*---------)
 1.0         6    79.167     3.764                (---------*----------)
 3.0         6    79.500     5.357                 (---------*---------)
30.0         6    77.000     7.537           (---------*---------)
                                        ------+---------+---------+---------
+
Pooled StDev =    6.231                   70.0      75.0      80.0
85.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-9.890 11.224			
1.0	-16.557 4.557	-17.224 3.890		
3.0	-16.890 4.224	-17.557 3.557	-10.890 10.224	
30.0	-14.390 6.724	-15.057 6.057	-8.390 12.724	-8.057 13.057

One-way Analysis of Variance

Analysis of Variance for Monocyte

Source	DF	SS	MS	F	P
treatmen	4	76.87	19.22	2.47	0.071
Error	25	194.50	7.78		
Total	29	271.37			

```
                                        Individual 95% CIs For Mean
                                        Based on Pooled StDev
Level        N      Mean     StDev  -----+---------+---------+---------
+-
 0.0         6     8.167     2.229                    (---------*-------
-)
 0.1         6     6.167     5.115            (---------*--------)
 1.0         6     5.000     2.000        (--------*--------)
 3.0         6     3.833     1.835   (--------*---------)
30.0         6     4.000     0.632    (--------*--------)
```

```
                                        -----+---------+---------+---------
+-
Pooled StDev =    2.789                   2.5       5.0       7.5      10.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-2.726 6.726			
1.0	-1.559 7.892	-3.559 5.892		
3.0	-0.392 9.059	-2.392 7.059	-3.559 5.892	
30.0	-0.559 8.892	-2.559 6.892	-3.726 5.726	-4.892 4.559

Descriptive Statistics for Neutrophil Differential

Variable	N	Mean	Median	TrMean	StDev	SE Mean
control	6	16.00	15.00	16.00	4.77	1.95
0.1 mg/k	6	18.50	18.00	18.50	5.17	2.11
1 mg/kg	6	14.000	13.500	14.000	2.366	0.966
3 mg/kg	6	13.33	14.50	13.33	3.83	1.56
30 mg/kg	6	14.83	16.00	14.83	5.67	2.32

Variable	Minimum	Maximum	Q1	Q3
control	11.00	25.00	13.25	18.25
0.1 mg/k	13.00	28.00	14.50	21.25
1 mg/kg	11.000	18.000	12.500	15.750
3 mg/kg	7.00	18.00	10.00	15.75
30 mg/kg	7.00	21.00	9.25	19.50

Descriptive Statistics for Lymphocyte Differentials

Variable	N	Mean	Median	TrMean	StDev	SE Mean
control	6	16.00	15.00	16.00	4.77	1.95
0.1 mg/k	6	18.50	18.00	18.50	5.17	2.11
1 mg/kg	6	14.000	13.500	14.000	2.366	0.966
3 mg/kg	6	13.33	14.50	13.33	3.83	1.56
30 mg/kg	6	14.83	16.00	14.83	5.67	2.32

Variable	Minimum	Maximum	Q1	Q3
control	11.00	25.00	13.25	18.25
0.1 mg/k	13.00	28.00	14.50	21.25
1 mg/kg	11.000	18.000	12.500	15.750
3 mg/kg	7.00	18.00	10.00	15.75
30 mg/kg	7.00	21.00	9.25	19.50

Descriptive Statistics for Monocyte Differentials

Variable	N	Mean	Median	TrMean	StDev	SE Mean
control	6	8.167	8.000	8.167	2.229	0.910
0.1 mg/k	6	6.17	5.50	6.17	5.12	2.09
1 mg/kg	6	5.000	4.000	5.000	2.000	0.816
3 mg/kg	6	3.833	4.000	3.833	1.835	0.749
30 mg/kg	6	4.000	4.000	4.000	0.632	0.258

Variable	Minimum	Maximum	Q1	Q3
control	6.000	12.000	6.000	9.750
0.1 mg/k	0.00	13.00	1.50	11.50
1 mg/kg	3.000	8.000	3.750	7.250
3 mg/kg	2.000	7.000	2.000	4.750
30 mg/kg	3.000	5.000	3.750	4.250

Experiment "G"
Flow cytometry - CD4/8
thymocytes and splenocytes
14d ammonium perchlorate

One-way Analysis of Variance

Analysis of Variance for CD8+/CD4- Thymocytes

Source	DF	SS	MS	F	P
Trt. Gro	4	1.455	0.364	1.39	0.266
Error	25	6.540	0.262		

```
Total       29     7.995
                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level        N      Mean     StDev   ---+---------+---------+---------+--
-
 0.0         6    3.1167    0.2317   (----------*----------)
 0.1         6    3.6000    0.4940              (----------*----------)
 1.0         6    3.7167    0.7167                 (----------*---------
-)
 3.0         6    3.3833    0.2927         (----------*---------)
30.0         6    3.2500    0.6411     (----------*----------)
                                      ---+---------+---------+---------+--
-
Pooled StDev =   0.5115               2.80      3.20      3.60      4.00
```

Tukey's pairwise comparisons

```
    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15
```

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-1.3499 0.3832			
1.0	-1.4665 0.2665	-0.9832 0.7499		
3.0	-1.1332 0.5999	-0.6499 1.0832	-0.5332 1.1999	
30.0	-0.9999 0.7332	-0.5165 1.2165	-0.3999 1.3332	-0.7332 0.9999

One-way Analysis of Variance

Analysis of Variance for CD8+/CD4+ Thymocytes

Source	DF	SS	MS	F	P
Trt. Gro	4	36.32	9.08	1.95	0.133
Error	25	116.35	4.65		
Total	29	152.67			

```
                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level        N      Mean     StDev   -+---------+---------+---------+----
-
 0.0         6    79.767     2.008              (--------*--------)
 0.1         6    77.633     1.966   (--------*--------)
 1.0         6    78.167     2.746      (--------*--------)
 3.0         6    80.100     1.316              (--------*---------)
30.0         6    80.383     2.470                (--------*--------)
```

```
                                        -+---------+---------+---------+----
-
Pooled StDev =    2.157              76.0      78.0      80.0      82.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-1.522 5.788			
1.0	-2.055 5.255	-4.188 3.122		
3.0	-3.988 3.322	-6.122 1.188	-5.588 1.722	
30.0	-4.272 3.038	-6.405 0.905	-5.872 1.438	-3.938 3.372

One-way Analysis of Variance

Analysis of Variance for CD8-/CD4- Thymocytes

Source	DF	SS	MS	F	P
Trt. Gro	4	1.931	0.483	2.41	0.076
Error	25	4.998	0.200		
Total	29	6.930			

```
                                        Individual 95% CIs For Mean
                                        Based on Pooled StDev
Level       N      Mean     StDev  ---------+---------+---------+------
-
 0.0        6    3.4500    0.6716        (--------*---------)
 0.1        6    3.9167    0.1941                     (--------*--------
)
 1.0        6    3.7333    0.4803              (--------*---------)
 3.0        6    3.2167    0.3656  (--------*---------)
30.0        6    3.3667    0.3830     (--------*---------)
                                        ---------+---------+---------+------
-
Pooled StDev =   0.4471                      3.20      3.60      4.00
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-1.2242 0.2909			
1.0	-1.0409 0.4742	-0.5742 0.9409		
3.0	-0.5242 0.9909	-0.0576 1.4576	-0.2409 1.2742	
30.0	-0.6742 0.8409	-0.2076 1.3076	-0.3909 1.1242	-0.9076 0.6076

One-way Analysis of Variance

Analysis of Variance for CD8-/CD4+ Thymocytes

Source	DF	SS	MS	F	P
Trt. Gro	4	13.88	3.47	1.58	0.209
Error	25	54.77	2.19		
Total	29	68.65			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ---+---------+---------+---------+--
-
 0.0        6    13.667     1.232         (---------*---------)
 0.1        6    14.833     1.366                  (----------*--------
-)
 1.0        6    14.367     1.810              (----------*---------)
 3.0        6    13.333     0.935      (---------*---------)
30.0        6    12.967     1.849   (---------*---------)
                                   ---+---------+---------+---------+--
-
Pooled StDev =    1.480             12.0      13.2      14.4      15.6
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-3.674 1.341			
1.0	-3.208 1.808	-2.041 2.974		
3.0	-2.174	-1.008	-1.474	

	2.841	4.008	3.541	
30.0	-1.808	-0.641	-1.108	-2.141
	3.208	4.374	3.908	2.874

Descriptive Statistics for CD8+ CD4- Thymocytes

Variable	N	Mean	Median	TrMean	StDev	SE Mean
control	6	3.1167	3.1000	3.1167	0.2317	0.0946
0.1 mg/k	6	3.600	3.400	3.600	0.494	0.202
1 mg/kg	6	3.717	3.500	3.717	0.717	0.293
3 mg/kg	6	3.383	3.250	3.383	0.293	0.119
30 mg/kg	6	3.250	3.150	3.250	0.641	0.262

Variable	Minimum	Maximum	Q1	Q3
control	2.8000	3.5000	2.9500	3.2750
0.1 mg/k	3.300	4.600	3.375	3.775
1 mg/kg	3.100	5.100	3.250	4.125
3 mg/kg	3.100	3.800	3.175	3.725
30 mg/kg	2.500	4.300	2.725	3.775

Descriptive Statistics for CD8+ CD4+ Thymocytes

Variable	N	Mean	Median	TrMean	StDev	SE Mean
control	6	79.767	79.650	79.767	2.008	0.820
0.1 mg/k	6	77.633	78.250	77.633	1.966	0.803
1 mg/kg	6	78.17	78.85	78.17	2.75	1.12
3 mg/kg	6	80.100	80.250	80.100	1.316	0.537
30 mg/kg	6	80.38	80.05	80.38	2.47	1.01

Variable	Minimum	Maximum	Q1	Q3
control	76.700	82.100	78.200	81.875
0.1 mg/k	73.800	79.000	76.575	79.000
1 mg/kg	72.90	80.80	76.72	79.90
3 mg/kg	78.100	81.700	79.000	81.175
30 mg/kg	77.80	83.40	78.17	82.88

Descriptive Statistics for CD8- CD4- Thymocytes

Variable	N	Mean	Median	TrMean	StDev	SE Mean
control	6	3.450	3.500	3.450	0.672	0.274
0.1 mg/k	6	3.9167	3.8500	3.9167	0.1941	0.0792
1 mg/kg	6	3.733	3.600	3.733	0.480	0.196
3 mg/kg	6	3.217	3.350	3.217	0.366	0.149
30 mg/kg	6	3.367	3.350	3.367	0.383	0.156

Variable	Minimum	Maximum	Q1	Q3
control	2.500	4.300	2.800	4.075
0.1 mg/k	3.7000	4.2000	3.7750	4.1250
1 mg/kg	3.200	4.500	3.350	4.200
3 mg/kg	2.600	3.500	2.900	3.500
30 mg/kg	2.800	3.900	3.100	3.675

Descriptive Statistics for CD8-CD4+ Thymocytes

Variable	N	Mean	Median	TrMean	StDev	SE Mean
control	6	13.667	13.750	13.667	1.232	0.503
0.1 mg/k	6	14.833	14.400	14.833	1.366	0.558
1 mg/kg	6	14.367	14.350	14.367	1.810	0.739
3 mg/kg	6	13.333	12.900	13.333	0.935	0.382
30 mg/kg	6	12.967	13.300	12.967	1.849	0.755

Variable	Minimum	Maximum	Q1	Q3
control	12.300	15.800	12.525	14.300
0.1 mg/k	13.800	17.500	13.950	15.550
1 mg/kg	12.300	17.400	12.675	15.600
3 mg/kg	12.600	14.600	12.600	14.450
30 mg/kg	10.000	14.900	11.500	14.450

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One-way Analysis of Variance Spleen

Analysis of Variance for CD8+/CD4- Spleen

Source	DF	SS	MS	F	P
Trt. Gro	4	6.38	1.60	1.00	0.427
Error	25	39.94	1.60		
Total	29	46.33			

Individual 95% CIs For Mean

```
                                        Based on Pooled StDev
Level        N      Mean     StDev  ---+---------+---------+---------+--
-
 0.0         6    10.767     0.459  (----------*---------)
 0.1         6    11.650     1.379           (----------*---------)
 1.0         6    11.317     1.044        (---------*----------)
 3.0         6    11.400     1.228        (----------*----------)
30.0         6    12.183     1.810                (----------*---------)
                                     ---+---------+---------+---------+--
-
Pooled StDev =    1.264             10.0      11.0      12.0      13.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-3.025 1.258			
1.0	-2.692 1.592	-1.808 2.475		
3.0	-2.775 1.508	-1.892 2.392	-2.225 2.058	
30.0	-3.558 0.725	-2.675 1.608	-3.008 1.275	-2.925 1.358

One-way Analysis of Variance

Analysis of Variance for CD8+/CD4+ Spleen

Source	DF	SS	MS	F	P
Trt. Gro	4	0.00533	0.00133	0.41	0.801
Error	25	0.08167	0.00327		
Total	29	0.08700			

```
                                        Individual 95% CIs For Mean
                                        Based on Pooled StDev
Level        N      Mean     StDev  ------+---------+---------+---------
+
 0.0         6   0.13333   0.05164            (-------------*-----------
--)
 0.1         6   0.10000   0.00000   (-------------*------------)
 1.0         6   0.10000   0.00000   (-------------*------------)
 3.0         6   0.11667   0.09832        (------------*-------------)
30.0         6   0.10000   0.06325   (-------------*------------)
                                     ------+---------+---------+---------
+
```

```
Pooled StDev =  0.05715                  0.070     0.105     0.140
0.175

Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

                0.0         0.1         1.0         3.0

     0.1     -0.06350
              0.13017

     1.0     -0.06350    -0.09683
              0.13017     0.09683

     3.0     -0.08017    -0.11350    -0.11350
              0.11350     0.08017     0.08017

    30.0     -0.06350    -0.09683    -0.09683    -0.08017
              0.13017     0.09683     0.09683     0.11350


One-way Analysis of Variance

Analysis of Variance for CD8-/CD4- Spleen
Source      DF        SS        MS        F        P
Trt. Gro     4      19.5       4.9     0.41    0.798
Error       25     295.8      11.8
Total       29     315.4
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level        N      Mean     StDev  -----+---------+---------+---------
+-
 0.0         6    68.250     2.434        (-----------*-----------)
 0.1         6    66.883     2.070   (-----------*----------)
 1.0         6    68.467     3.707        (-----------*----------)
 3.0         6    68.750     4.221         (-----------*-----------)
30.0         6    66.867     4.171   (----------*-----------)
                                   -----+---------+---------+---------
+-
Pooled StDev =    3.440                65.0      67.5      70.0      72.5

Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)
```

	0.0	0.1	1.0	3.0
0.1	-4.462 7.195			
1.0	-6.045 5.612	-7.412 4.245		
3.0	-6.328 5.328	-7.695 3.962	-6.112 5.545	
30.0	-4.445 7.212	-5.812 5.845	-4.228 7.428	-3.945 7.712

One-way Analysis of Variance

Analysis of Variance for CD8-/CD4+ Spleen

Source	DF	SS	MS	F	P
Trt. Gro	4	9.83	2.46	0.42	0.796
Error	25	147.81	5.91		
Total	29	157.64			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ----------+---------+---------+-----
-
 0.0        6    20.883     2.183          (------------*-----------)
 0.1        6    21.350     0.918             (-----------*------------
)
 1.0        6    20.150     2.727     (------------*------------)
 3.0        6    19.750     3.151   (-----------*------------)
30.0        6    20.867     2.566          (-----------*------------)
                                   ----------+---------+---------+-----
-
Pooled StDev =    2.432                     19.2      20.8      22.4
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-4.586 3.653			
1.0	-3.386 4.853	-2.920 5.320		
3.0	-2.986 5.253	-2.520 5.720	-3.720 4.520	

30.0	-4.103	-3.636	-4.836	-5.236
	4.136	4.603	3.403	3.003

Descriptive Statistics for CD8+CD4- splenocytes

Variable	N	Mean	Median	TrMean	StDev	SE Mean
control	6	10.767	10.800	10.767	0.459	0.187
0.1 mg/k	6	11.650	11.200	11.650	1.379	0.563
1 mg/kg	6	11.317	11.300	11.317	1.044	0.426
3 mg/kg	6	11.400	10.950	11.400	1.228	0.501
30 mg/kg	6	12.183	12.350	12.183	1.810	0.739

Variable	Minimum	Maximum	Q1	Q3
control	10.100	11.300	10.325	11.225
0.1 mg/k	10.800	14.400	10.800	12.225
1 mg/kg	10.100	13.000	10.400	12.025
3 mg/kg	10.400	13.600	10.475	12.400
30 mg/kg	9.900	14.400	10.200	13.950

Descriptive Statistics for CD8+CD4+ splenocytes

Variable	N	Mean	Median	TrMean	StDev	SE Mean
control	6	0.1333	0.1000	0.1333	0.0516	0.0211
0.1 mg/k	6	0.10000	0.10000	0.10000	0.00000	0.00000
1 mg/kg	6	0.10000	0.10000	0.10000	0.00000	0.00000
3 mg/kg	6	0.1167	0.1000	0.1167	0.0983	0.0401
30 mg/kg	6	0.1000	0.1000	0.1000	0.0632	0.0258

Variable	Minimum	Maximum	Q1	Q3
control	0.1000	0.2000	0.1000	0.2000
0.1 mg/k	0.10000	0.10000	0.10000	0.10000
1 mg/kg	0.10000	0.10000	0.10000	0.10000
3 mg/kg	0.0000	0.3000	0.0750	0.1500
30 mg/kg	0.0000	0.2000	0.0750	0.1250

Descriptive Statistics for CD8-CD4- splenocytes

Variable	N	Mean	Median	TrMean	StDev	SE Mean
control	6	68.250	68.350	68.250	2.434	0.994
0.1 mg/k	6	66.883	67.800	66.883	2.070	0.845
1 mg/kg	6	68.47	69.05	68.47	3.71	1.51
3 mg/kg	6	68.75	70.15	68.75	4.22	1.72
30 mg/kg	6	66.87	66.05	66.87	4.17	1.70

Variable	Minimum	Maximum	Q1	Q3
control	64.600	71.300	66.100	70.550
0.1 mg/k	63.000	68.400	65.325	68.250
1 mg/kg	62.60	72.60	65.08	71.85
3 mg/kg	60.70	72.80	66.25	71.15
30 mg/kg	60.90	72.00	63.98	71.40

Descriptive Statistics for CD8-CD4+ splenocytes

Variable	N	Mean	Median	TrMean	StDev	SE Mean
control	6	20.883	20.550	20.883	2.183	0.891
0.1 mg/k	6	21.350	21.200	21.350	0.918	0.375
1 mg/kg	6	20.15	19.60	20.15	2.73	1.11
3 mg/kg	6	19.75	19.15	19.75	3.15	1.29
30 mg/kg	6	20.87	20.95	20.87	2.57	1.05

Variable	Minimum	Maximum	Q1	Q3
control	18.500	24.600	19.025	22.575
0.1 mg/k	20.100	22.500	20.625	22.350
1 mg/kg	17.20	24.30	17.65	22.87
3 mg/kg	16.00	25.60	18.25	21.10
30 mg/kg	17.90	24.80	18.20	22.93

Descriptive Statistics
14-Day Experiment "G"
Nitrite Production (IFN-y)

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	52.62	48.16	52.62	17.44	7.12
0.1	6	45.62	39.70	45.62	11.37	4.64
1.0	5	61.2	72.0	61.2	34.8	15.5

3.0	6	32.63	29.38	32.63	17.49
7.14					
30.0	6	55.4	61.6	55.4	27.1
11.1					

Variable	Minimum	Maximum	Q1	Q3
0.0	27.87	73.22	41.41	72.59
0.1	35.86	63.15	37.89	58.33
1.0	16.8	100.0	25.3	91.6
3.0	11.58	54.95	18.27	51.22
30.0	13.8	81.3	31.2	78.0

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	2738	685	1.35	0.282
Error	24	12207	509		
Total	28	14945			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ----+---------+---------+---------+-
-
 0.0        6     52.62     17.44            (--------*---------)
 0.1        6     45.62     11.37        (---------*--------)
 1.0        5     61.16     34.76                (----------*---------)
 3.0        6     32.63     17.49  (--------*---------)
30.0        6     55.37     27.12             (---------*--------)
                                   ----+---------+---------+---------+-
-
Pooled StDev =    22.55               20        40        60        80
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00701

Critical value = 4.17

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-31.39 45.40			
1.0	-48.81 31.73	-55.81 24.72		
3.0	-18.40 58.39	-25.41 51.38	-11.74 68.80	
30.0	-41.14 35.64	-48.15 28.64	-34.48 46.06	-61.14 15.65

Current worksheet: Worksheet 2

Descriptive Statistics
14-Day Experiment "G"
Nitrite Production (LPS)

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	47.62	40.32	47.62	16.55	6.76
0.1	6	43.61	45.20	43.61	14.04	5.73
1.0	6	50.49	47.22	50.49	24.28	9.91
3.0	6	43.75	47.74	43.75	18.32	7.48
30.0	5	58.23	49.97	58.23	14.20	6.35

Variable	Minimum	Maximum	Q1	Q3
0.0	30.88	70.42	35.71	67.46
0.1	26.11	61.28	29.38	55.37
1.0	12.62	79.86	34.72	75.42
3.0	10.86	61.70	31.87	57.11
30.0	46.13	76.23	47.02	73.58

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	781	195	0.60	0.665
Error	24	7789	325		
Total	28	8570			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  --+---------+---------+---------+---
-
 0.0        6     47.62     16.55      (---------*---------)
 0.1        6     43.61     14.04   (---------*---------)
 1.0        6     50.49     24.28        (---------*---------)
 3.0        6     43.75     18.32   (---------*---------)
30.0        5     58.23     14.20            (----------*----------)
                                   --+---------+---------+---------+---
-
Pooled StDev =    18.02              30        45        60        75
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00701

Critical value = 4.17

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-26.66 34.68			
1.0	-33.54 27.80	-37.55 23.79		
3.0	-26.80 34.54	-30.81 30.53	-23.92 37.41	
30.0	-42.78 21.55	-46.79 17.54	-39.91 24.43	-46.65 17.68

Current worksheet: Worksheet 3

Descriptive Statistics
14-Day Experiment "G"
Nitrite Production (IFN-y & LPS)

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	67.30	63.67	67.30	8.68	3.54
0.1	6	71.04	73.06	71.04	6.53	2.67
1.0	6	71.9	76.2	71.9	29.1	11.9
3.0	6	70.81	74.88	70.81	8.53	3.48
30.0	6	82.54	83.80	82.54	12.52	5.11

Variable	Minimum	Maximum	Q1	Q3
0.0	58.90	82.45	61.70	74.98
0.1	62.53	78.51	63.31	76.25
1.0	17.7	102.2	56.3	93.1
3.0	57.76	78.72	61.34	76.77
30.0	65.01	99.47	70.93	92.54

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	797	199	0.84	0.516
Error	25	5965	239		
Total	29	6762			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level      N     Mean     StDev   -----+---------+---------+---------
+-
 0.0       6    67.30      8.68   (----------*----------)
 0.1       6    71.04      6.53      (----------*----------)
 1.0       6    71.92     29.08       (----------*----------)
```

```
 3.0        6     70.81      8.53     (----------*----------)
30.0        6     82.54     12.52                (----------*----------)
                                     -----+---------+---------+---------
+-
Pooled StDev =    15.45                 60        72        84        96
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-29.90 22.43			
1.0	-30.79 21.55	-27.05 25.29		
3.0	-29.68 22.66	-25.94 26.39	-25.06 27.28	
30.0	-41.40 10.94	-37.67 14.67	-36.79 15.55	-37.89 14.45

Worksheet size: 100000 cells
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Descriptive Statistics
14-Day Experiment G
Phagocytosis Assay

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	16.92	16.80	16.92	5.30	2.17
0.1	6	15.37	17.70	15.37	4.61	1.88
1.0	6	12.417	11.800	12.417	1.230	0.502
3.0	6	16.60	15.20	16.60	5.98	2.44
30.0	6	10.22	11.25	10.22	2.87	1.17

Variable	Minimum	Maximum	Q1	Q3
0.0	10.00	25.30	12.25	21.03
0.1	7.40	18.70	11.00	18.55
1.0	11.400	14.400	11.550	13.725
3.0	10.40	27.40	12.20	20.80

30.0	6.00	13.30	7.05	12.40

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	201.0	50.2	2.65	0.057
Error	25	474.3	19.0		
Total	29	675.3			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ----+---------+---------+---------+-
-
 0.0        6    16.917     5.305                   (--------*--------)
 0.1        6    15.367     4.605                (--------*---------)
 1.0        6    12.417     1.230         (--------*--------)
 3.0        6    16.600     5.979                   (---------*--------)
30.0        6    10.217     2.874  (---------*--------)
                                   ----+---------+---------+---------+-
-
Pooled StDev =    4.356               8.0       12.0      16.0      20.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-5.830 8.930			
1.0	-2.880 11.880	-4.430 10.330		
3.0	-7.063 7.697	-8.613 6.147	-11.563 3.197	
30.0	-0.680 14.080	-2.230 12.530	-5.180 9.580	-0.997 13.763

Worksheet size: 100000 cells
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One-way Analysis of Variance Thymus cellularity 14d "G"

Analysis of Variance for C2

```
Source      DF        SS        MS        F        P
C1           4 2.539E+14 6.347E+13     1.07    0.391
Error       25 1.481E+15 5.924E+13
Total       29 1.735E+15
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level        N      Mean     StDev ---+---------+---------+---------+--
-
0.1          6  34952500   5831767 (----------*----------)
1            6  39025000   7278575        (----------*----------)
3            6  39392500   5950297         (----------*---------)
30           6  44132500   9300781                 (----------*--------
-)
control      6  39345000   9343066         (----------*---------)
                                   ---+---------+---------+---------+--
-
Pooled StDev =  7696631        29999995  35999994  41999993  47999992

Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

           0.1          1           3           30

 1        -17112366
           8967366

 3        -17479866   -13407366
           8599866    12672366

 30       -22219866   -18147366   -17779866
           3859866     7932366     8299866

 control  -17432366   -13359866   -12992366    -8252366
           8647366    12719866    13087366    17827366
```

One-way Analysis of Variance 14d G spl/bw ratio

```
Analysis of Variance for G
Source      DF        SS        MS        F        P
C1           4   0.02897   0.00724     2.10    0.111
Error       25   0.08626   0.00345
Total       29   0.11523
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level        N      Mean     StDev -+---------+---------+--------
-+-----
```

```
0.1          6   0.34917   0.02791   (---------*---------)
1            6   0.39533   0.08878             (---------*---------
)
3            6   0.42883   0.02536                     (---------*--
-------)
30           6   0.36800   0.07284        (---------*--------)
control      6   0.42450   0.05140                   (---------*---
------)
                                       -+---------+---------+--------
-+-----
Pooled StDev =  0.05874            0.300     0.350     0.400
0.450
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.1	1	3	30
1	-0.14569 0.05335			
3	-0.17919 0.01985	-0.13302 0.06602		
30	-0.11835 0.08069	-0.07219 0.12685	-0.03869 0.16035	
control	-0.17485 0.02419	-0.12869 0.07035	-0.09519 0.10385	-0.15602 0.04302

Experiment "i"
Spleen Total Cellularity
14 d ammonium perchlorate

One-way Analysis of Variance

Analysis of Variance for spleen c

Source	DF	SS	MS	F	P
treatmen	4	7.916E+15	1.979E+15	2.23	0.095
Error	25	2.218E+16	8.873E+14		
Total	29	3.010E+16			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ------+---------+---------+---------+
 0.0        6  1.08E+08  41744228      (-------*-------)
 0.1        6  99930000  21315349    (-------*--------)
 1.0        6  1.17E+08  34374139          (-------*-------)
 3.0        6  1.47E+08  21895591                    (-------*-------)
30.0        6  1.27E+08  24054640             (-------*--------)
                                   ------+---------+---------+---------+
Pooled StDev = 29787745            89999980  1.20E+08  1.50E+08  1.80E+08
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-42227304 58707304			
1.0	-59737304 41197304	-67977304 32957304		
3.0	-89067304 11867304	-97307304 3627304	-79797304 21137304	
30.0	-69607304 31327304	-77847304 23087304	-60337304 40597304	-31007304 69927304

Descriptive Statistics

Variable	N	Mean	Median	TrMean	StDev	SE Mean

0 mg/kg	6	108170000	96150000	108170000	41744228	17042010
0.1 mg/k	6	99930000	102870000	99930000	21315349	8701955
1 mg/kg	6	117440000	117450000	117440000	34374139	14033184
3 mg/kg	6	146770000	142500000	146770000	21895591	8938838
30 mg/kg	6	127310000	131700000	127310000	24054640	9820266

Variable	Minimum	Maximum	Q1	Q3
0 mg/kg	68640000	169260000	69810000	153780000
0.1 mg/k	61080000	119100000	87135000	118155000
1 mg/kg	73320000	173460000	89475000	139440000
3 mg/kg	125700000	186300000	130605000	160110000
30 mg/kg	91260000	150480000	104355000	150120000

Experiment "i"
Thymus and Spleen Weight
14 d ammonium perchlorate

One-way Analysis of Variance for Spleen weight

Analysis of Variance for Spleen W

Source	DF	SS	MS	F	P
treatmen	4	392.8	98.2	1.60	0.205
Error	25	1534.2	61.4		
Total	29	1927.0			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ---+---------+---------+---------+---
 0.0        6    80.000     4.336          (--------*---------)
 0.1        6    75.000     6.753   (--------*---------)
 1.0        6    79.333    11.483         (--------*---------)
 3.0        6    77.833     5.154       (--------*---------)
30.0        6    86.000     9.165                   (---------*--------)
                                   ---+---------+---------+---------+---
Pooled StDev =    7.834            70.0      77.0      84.0      91.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-8.27 18.27			
1.0	-12.61 13.94	-17.61 8.94		

3.0	-11.11	-16.11	-11.77	
	15.44	10.44	14.77	
30.0	-19.27	-24.27	-19.94	-21.44
	7.27	2.27	6.61	5.11

One-way Analysis of Variance Thymus Weight

Analysis of Variance for Thymus W

Source	DF	SS	MS	F	P
treatmen	4	896.8	224.2	2.86	0.045
Error	25	1962.7	78.5		
Total	29	2859.5			

Level	N	Mean	StDev
0.0	6	70.333	10.727
0.1	6	72.333	8.779
1.0	6	75.333	8.214
3.0	6	63.667	5.955
30.0	6	60.667	9.873

Pooled StDev = 8.860

```
                    Individual 95% CIs For Mean
                    Based on Pooled StDev
                    ----+---------+---------+---------+--
                              (--------*--------)
                                (--------*---------)
                                    (--------*--------)
                      (---------*--------)
                    (--------*--------)
                    ----+---------+---------+---------+--
                     56.0      64.0      72.0      80.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-17.01 13.01			
1.0	-20.01 10.01	-18.01 12.01		
3.0	-8.34 21.68	-6.34 23.68	-3.34 26.68	
30.0	-5.34 24.68	-3.34 26.68	-0.34 29.68	-12.01 18.01

Descriptive Statistics for Spleen Weight

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0 mg/kg	6	80.00	79.00	80.00	4.34	1.77
0.1 mg/k	6	75.00	78.00	75.00	6.75	2.76
1 mg/kg	6	79.33	78.50	79.33	11.48	4.69
3 mg/kg	6	77.83	78.00	77.83	5.15	2.10
30 mg/kg	6	86.00	84.50	86.00	9.17	3.74

Variable	Minimum	Maximum	Q1	Q3
0 mg/kg	74.00	86.00	77.00	84.50
0.1 mg/k	65.00	81.00	67.25	80.25
1 mg/kg	62.00	97.00	72.50	87.25
3 mg/kg	70.00	85.00	73.75	82.00
30 mg/kg	75.00	99.00	78.00	95.25

Descriptive Statistics for Thymus Weight

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0	6	70.33	72.00	70.33	10.73	4.38
0.1	6	72.33	73.50	72.33	8.78	3.58
1	6	75.33	74.00	75.33	8.21	3.35
3	6	63.67	65.00	63.67	5.96	2.43
30	6	60.67	57.50	60.67	9.87	4.03

Variable	Minimum	Maximum	Q1	Q3
0	57.00	86.00	59.25	77.75
0.1	60.00	82.00	63.75	80.50
1	65.00	89.00	69.50	81.50
3	54.00	70.00	58.50	68.50
30	48.00	74.00	54.00	71.75

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One-way Analysis of Variance for Final Body Weight

Analysis of Variance for body wt

Source	DF	SS	MS	F	P
treatmen	4	3.66	0.91	0.64	0.641
Error	25	35.93	1.44		
Total	29	39.59			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level      N      Mean     StDev  ---------+---------+---------+-------
 0.0       6    21.567     1.593        (------------*-----------)
 0.1       6    21.933     0.715              (-----------*------------)
 1.0       6    22.000     1.187              (------------*------------)
 3.0       6    21.250     0.784    (------------*-----------)
```

```
30.0        6    21.133     1.454   (-----------*------------)
                                     ---------+---------+---------+-------
Pooled StDev =    1.199                   20.80     21.60     22.40
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-2.398 1.665			
1.0	-2.465 1.598	-2.098 1.965		
3.0	-1.715 2.348	-1.348 2.715	-1.281 2.781	
30.0	-1.598 2.465	-1.231 2.831	-1.165 2.898	-1.915 2.148

Descriptive Statistics for Final Body Weight

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	21.567	21.250	21.567	1.593	0.650
0.10	6	21.933	21.850	21.933	0.715	0.292
1.0	6	22.000	21.900	22.000	1.187	0.484
3.0	6	21.250	21.550	21.250	0.784	0.320
30.0	6	21.133	20.950	21.133	1.454	0.594

Variable	Minimum	Maximum	Q1	Q3
0.0	19.600	24.000	20.275	23.100
0.10	21.000	23.200	21.525	22.300
1.0	20.700	23.400	20.850	23.250
3.0	20.000	22.000	20.450	21.850
30.0	19.100	23.100	20.075	22.500

Experiment "i"
Peritoneal Macrophage Nitrite Production
after stimulation with LPS, IFN-g, or LPS + IFN-g
14 d ammonium perchlorate

One-way Analysis of Variance

Analysis of Variance for Control

Source	DF	SS	MS	F	P
treatmen	4	3.481	0.870	2.42	0.075
Error	25	9.008	0.360		
Total	29	12.490			

Level	N	Mean	StDev
0.0	6	1.3667	0.2733
0.1	6	1.3167	0.2041
1.0	6	1.3000	0.1095
3.0	6	1.8667	0.9564
30.0	6	2.1333	0.8710

Pooled StDev = 0.6003

```
                    Individual 95% CIs For Mean
                    Based on Pooled StDev
-----+---------+---------+---------+-
  (---------*---------)
 (---------*---------)
 (---------*---------)
            (---------*---------)
                 (---------*---------)
-----+---------+---------+---------+-
   1.00      1.50      2.00      2.50
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-0.9670 1.0670			
1.0	-0.9503 1.0837	-1.0003 1.0337		
3.0	-1.5170 0.5170	-1.5670 0.4670	-1.5837 0.4503	
30.0	-1.7837 0.2503	-1.8337 0.2003	-1.8503 0.1837	-1.2837 0.7503

One-way Analysis of Variance

Analysis of Variance for INF-y

Source	DF	SS	MS	F	P
treatmen	4	4144	1036	3.90	0.013
Error	25	6636	265		
Total	29	10780			

Individual 95% CIs For Mean

```
                                        Based on Pooled StDev
Level        N      Mean     StDev  ---------+---------+---------+-------
 0.0         6     42.27     15.27         (-------*--------)
 0.1         6     31.87      8.72  (--------*-------)
 1.0         6     41.78     11.61         (-------*--------)
 3.0         6     61.23     24.59                     (-------*--------)
30.0         6     61.57     16.68                     (-------*--------)
                                     ---------+---------+---------+-------
Pooled StDev =    16.29                      32        48        64
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-17.20 38.00			
1.0	-27.12 28.09	-37.52 17.69		
3.0	-46.57 8.64	-56.97 -1.76	-47.05 8.15	
30.0	-46.90 8.30	-57.30 -2.10	-47.39 7.82	-27.94 27.27

One-way Analysis of Variance

Analysis of Variance for LPS

Source	DF	SS	MS	F	P
treatmen	4	2459	615	2.74	0.051
Error	25	5609	224		
Total	29	8068			

```
                                        Individual 95% CIs For Mean
                                        Based on Pooled StDev
Level        N      Mean     StDev  -------+---------+---------+---------
 0.0         6     83.20     18.10      (-------*--------)
 0.1         6     78.22     12.61   (-------*--------)
 1.0         6     82.92     12.26      (-------*--------)
 3.0         6     98.22     15.21                (-------*--------)
30.0         6    100.77     15.93                  (-------*--------)
                                     -------+---------+---------+---------
Pooled StDev =    14.98                     75        90       105
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-20.39 30.36			
1.0	-25.09 25.66	-30.08 20.68		
3.0	-40.39 10.36	-45.38 5.38	-40.68 10.08	
30.0	-42.94 7.81	-47.93 2.83	-43.23 7.53	-27.93 22.83

One-way Analysis of Variance

Analysis of Variance for IFN-y/LP

Source	DF	SS	MS	F	P
treatmen	4	2689	672	3.45	0.023
Error	24	4682	195		
Total	28	7371			

Level	N	Mean	StDev
0.0	6	94.88	17.72
0.1	6	90.35	9.62
1.0	6	95.42	12.22
3.0	6	114.38	17.82
30.0	5	111.22	8.86

Pooled StDev = 13.97

```
Individual 95% CIs For Mean
Based on Pooled StDev
--------+---------+---------+--------
   (-------*-------)
(-------*-------)
    (-------*------)
                (-------*-------)
              (-------*--------)
--------+---------+---------+--------
        90       105       120
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00701

Critical value = 4.17

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-19.24 28.31			
1.0	-24.31 23.24	-28.84 18.71		
3.0	-43.28 4.28	-47.81 -0.26	-42.74 4.81	
30.0	-41.27 8.60	-45.81 4.07	-40.74 9.13	-21.77 28.10

Descriptive Statistics for Nitrite Control (uM)

Variable	N	N*	Mean	Median	TrMean	StDev
0 mg/kg	12	12	1.3667	1.2500	1.3300	0.2605
0.1 mg/k	12	12	1.3167	1.3000	1.3000	0.1946
1 mg/kg	12	12	1.3000	1.3000	1.2900	0.1044
3 mg/kg	12	12	1.867	1.500	1.730	0.912
30 mg/kg	12	12	2.133	2.000	2.050	0.830

Variable	SE Mean	Minimum	Maximum	Q1	Q3
0 mg/kg	0.0752	1.2000	1.9000	1.2000	1.4000
0.1 mg/k	0.0562	1.1000	1.7000	1.2000	1.3000
1 mg/kg	0.0302	1.2000	1.5000	1.2000	1.3000
3 mg/kg	0.263	1.300	3.800	1.400	1.700
30 mg/kg	0.240	1.300	3.800	1.600	2.100

Descriptive Statistics for IFN-g only (uM)

Variable	N	N*	Mean	Median	TrMean	StDev
0 mg/kg	12	12	21.82	11.70	20.05	23.71
0.1 mg/k	12	12	16.59	11.25	15.53	17.00
1 mg/kg	12	12	21.54	15.85	19.43	22.54
3 mg/kg	12	12	31.6	21.9	27.3	35.2
30 mg/kg	12	12	31.85	20.80	29.63	33.02

Variable	SE Mean	Minimum	Maximum	Q1	Q3
0 mg/kg	6.85	1.20	60.10	1.23	47.20
0.1 mg/k	4.91	1.10	42.70	1.30	33.17
1 mg/kg	6.51	1.20	63.00	1.30	38.25
3 mg/kg	10.2	1.3	104.4	1.5	59.7
30 mg/kg	9.53	1.30	84.60	2.00	61.35

Descriptive Statistics for LPS only (uM)

Variable	N	N*	Mean	Median	TrMean	StDev
0 mg/kg	12	12	42.3	31.8	40.2	44.4
0.1 mg/k	12	12	39.8	32.8	38.3	41.1
1 mg/kg	12	12	42.1	35.1	40.5	43.4
3 mg/kg	12	12	50.0	41.6	47.4	51.4
30 mg/kg	12	12	51.5	45.4	48.8	52.6

Variable	SE Mean	Minimum	Maximum	Q1	Q3
0 mg/kg	12.8	1.2	104.1	1.2	85.8
0.1 mg/k	11.9	1.1	92.7	1.3	78.8
1 mg/kg	12.5	1.2	98.7	1.3	81.3
3 mg/kg	14.8	1.3	124.9	1.5	94.7
30 mg/kg	15.2	1.3	128.5	2.0	97.7

Descriptive Statistics for LPS + IFN-g (uM)

Variable	N	N*	Mean	Median	TrMean	StDev
0 mg/kg	12	12	48.1	39.1	46.0	50.3
0.1 mg/k	12	12	45.8	40.7	44.3	46.9
1 mg/kg	12	12	48.4	43.2	46.7	49.8
3 mg/kg	12	12	58.1	48.6	55.3	60.0
30 mg/kg	11	13	51.7	3.8	49.3	57.2

Variable	SE Mean	Minimum	Maximum	Q1	Q3
0 mg/kg	14.5	1.2	115.8	1.2	96.3
0.1 mg/k	13.6	1.1	105.5	1.3	87.9
1 mg/kg	14.4	1.2	111.8	1.3	92.0
3 mg/kg	17.3	1.3	143.1	1.5	113.6
30 mg/kg	17.3	1.3	123.6	2.0	113.2

Worksheet size: 100000 cells

Descriptive Statistics T4 level repeated testing

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	3.308	3.325	3.308	0.397	0.162
0.1	6	3.467	3.475	3.467	0.324	0.132
1.0	6	3.3500	3.3250	3.3500	0.2049	0.0837
3.0	6	3.092	3.025	3.092	0.263	0.108
30.0	6	2.725	2.775	2.725	0.515	0.210

Variable	Minimum	Maximum	Q1	Q3
0.0	2.750	3.950	3.012	3.538
0.1	2.950	3.950	3.287	3.650

1.0	3.1000	3.7000	3.2125	3.4750
3.0	2.750	3.400	2.900	3.400
30.0	2.150	3.400	2.150	3.175

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	2.052	0.513	4.02	0.012
Error	25	3.191	0.128		
Total	29	5.243			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ----------+---------+---------+------
 0.0        6    3.3083    0.3968                 (-------*------)
 0.1        6    3.4667    0.3235                     (-------*------)
 1.0        6    3.3500    0.2049                  (-------*------)
 3.0        6    3.0917    0.2635            (------*-------)
30.0        6    2.7250    0.5145   (------*-------)
                                   ----------+---------+---------+------
Pooled StDev =   0.3573                     2.80      3.20      3.60
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-0.7637 0.4470			
1.0	-0.6470 0.5637	-0.4887 0.7220		
3.0	-0.3887 0.8220	-0.2303 0.9803	-0.3470 0.8637	
30.0	-0.0220 1.1887	0.1363 1.3470	0.0197 1.2303	-0.2387 0.9720

Worksheet size: 100000 cells
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```
Worksheet size: 100000 cells
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stats
```

One-way Analysis of Variance 14d I spl/bw ratio

```
Analysis of Variance for I
Source      DF        SS        MS        F        P
C1           4   0.01465   0.00366     2.31    0.086
Error       25   0.03970   0.00159
Total       29   0.05435
                                     Individual 95% CIs For Mean
                                     Based on Pooled StDev
Level        N      Mean     StDev   ---+---------+---------+---------+---
0.1          6   0.34167   0.02927   (-------*--------)
1            6   0.36500   0.06656         (-------*--------)
3            6   0.36667   0.02658         (--------*-------)
30           6   0.41000   0.03847                   (--------*-------)
control      6   0.37333   0.02160           (-------*--------)
                                     ---+---------+---------+---------+---
Pooled StDev =  0.03985               0.320     0.360     0.400     0.440

Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

           0.1          1            3            30

 1          -0.09085
             0.04418

 3          -0.09251    -0.06918
             0.04251     0.06585

 30         -0.13585    -0.11251    -0.11085
            -0.00082     0.02251     0.02418

 control    -0.09918    -0.07585    -0.07418    -0.03085
             0.03585     0.05918     0.06085     0.10418
```

Descriptive Statistics
14-Day Experiment "J"
T4 Quantitation

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	3.467	3.650	3.467	0.519	0.212
0.1	6	3.458	3.400	3.458	0.323	0.132
1.0	6	3.383	3.325	3.383	0.386	0.157
3.0	6	3.508	3.475	3.508	0.260	0.106
30.0	6	3.1750	3.2500	3.1750	0.1837	0.0750

Variable	Minimum	Maximum	Q1	Q3
0.0	2.750	3.900	2.900	3.900
0.1	2.950	3.900	3.287	3.750
1.0	2.950	3.900	3.063	3.750
3.0	3.250	3.900	3.250	3.750
30.0	2.9500	3.4000	2.9500	3.2875

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	0.423	0.106	0.85	0.509
Error	25	3.120	0.125		
Total	29	3.542			

Level	N	Mean	StDev
0.0	6	3.4667	0.5193
0.1	6	3.4583	0.3231
1.0	6	3.3833	0.3856
3.0	6	3.5083	0.2596
30.0	6	3.1750	0.1837

Pooled StDev = 0.3532

```
Individual 95% CIs For Mean
Based on Pooled StDev
-----+---------+---------+---------+-
           (---------*--------)
          (---------*---------)
       (---------*---------)
          (---------*---------)
 (---------*---------)
-----+---------+---------+---------+-
   3.00      3.30      3.60      3.90
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-0.5901 0.6068			
1.0	-0.5151 0.6818	-0.5235 0.6735		
3.0	-0.6401 0.5568	-0.6485 0.5485	-0.7235 0.4735	
30.0	-0.3068 0.8901	-0.3151 0.8818	-0.3901 0.8068	-0.2651 0.9318

Worksheet size: 100000 cells

Retrieving project from file: C:\C Drive Files\AP working documents\AP STATS\AP.14J.T4 stats.T4

One-way Analysis of Variance Bone marrow cellularity 14d "J"

```
Analysis of Variance for C2
Source      DF        SS        MS        F        P
C1           4 2.815E+12 7.036E+11     1.29    0.319
Error       15 8.193E+12 5.462E+11
Total       19 1.101E+13
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level        N      Mean     StDev -------+---------+---------+---------
0.1          4   3662500   1160693              (---------*---------)
1.0          4   3761250    608720               (---------*---------)
3.0          4   2707500    315106   (---------*---------)
30           4   3193750    477203         (---------*---------)
control      4   3367500    828478           (---------*---------)
                                   -------+---------+---------+---------
Pooled StDev =   739072             2400000   3200000   4000000

Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00747

Critical value = 4.37

Intervals for (column level mean) - (row level mean)

           0.1         1.0         3.0         30

 1.0       -1713622
            1516122

 3.0        -659872     -561122
           2569872     2668622

 30        -1146122    -1047372    -2101122
           2083622     2182372     1128622

 control   -1319872    -1221122    -2274872    -1788622
           1909872     2008622      954872     1441122
```

One-way Analysis of Variance 14d "J" spleen cellularity

```
Analysis of Variance for C2
Source      DF        SS        MS        F        P
C1           4 7.884E+14 1.971E+14     4.12    0.011
Error       25 1.197E+15 4.789E+13
Total       29 1.986E+15
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level        N      Mean     StDev -------+---------+---------+---------
0.1          6  32902500  10355306             (------*------)
1            6  35165000   7342770               (------*------)
3            6  24825000   4439828   (------*------)
30           6  30055000   3962166         (-------*------)
control      6  40202500   6547540                      (------*-------)
                                   -------+---------+---------+---------
Pooled StDev =  6919967            23999996  31999995  39999994
```

```
Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

           0.1          1            3            30

 1        -13986519
            9461519

 3         -3646519    -1384019
         19801519    22064019

 30        -8876519    -6614019   -16954019
         14571519    16834019     6494019

 control  -19024019   -16761519   -27101519   -21871519
            4424019     6686519    -3653481     1576519
```

One-way Analysis of Variance 14d J spl/bw ratio

```
Analysis of Variance for J 14d
Source      DF        SS        MS         F        P
C1           4   0.00641   0.00160      0.73    0.580
Error       25   0.05488   0.00220
Total       29   0.06129
                                     Individual 95% CIs For Mean
                                     Based on Pooled StDev
Level        N      Mean     StDev   -----+---------+---------+---------+-
0.1          6   0.37367   0.06129    (----------*----------)
1            6   0.41317   0.05598                (----------*----------)
3            6   0.38150   0.02150      (----------*----------)
30           6   0.38250   0.01776      (----------*----------)
control      6   0.37367   0.05753    (----------*----------)
                                     -----+---------+---------+---------+-
Pooled StDev =  0.04685                 0.350     0.385     0.420     0.455

Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

           0.1          1            3            30

 1         -0.11888
            0.03988

 3         -0.08721    -0.04771
            0.07155     0.11105

 30        -0.08821    -0.04871    -0.08038
            0.07055     0.11005     0.07838
```

control	-0.07938	-0.03988	-0.07155	-0.07055
	0.07938	0.11888	0.08721	0.08821

One-way Analysis of Variance Bone Marrow Cellularity 14d "K"

```
Analysis of Variance for C2
Source     DF        SS        MS        F        P
C1          4 1.137E+13 2.842E+12     2.57    0.063
Error      25 2.768E+13 1.107E+12
Total      29 3.905E+13
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ---------+---------+---------+-------
0.1         6   3183000    534178              (--------*--------)
1.0         6   3125000   1591769             (--------*--------)
3.0         6   3844167   1350413                     (-------*--------)
30          6   2027500    352204  (--------*--------)
control     6   3539167    876957                  (-------*--------)
                                   ---------+---------+---------+-------
Pooled StDev =  1052216               2000000   3000000   4000000

Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

           0.1         1.0         3.0         30

 1.0        -1724696
             1840696

 3.0        -2443863    -2501863
             1121530     1063530

 30          -627196     -685196       33970
             2938196     2880196     3599363

 control    -2138863    -2196863    -1477696    -3294363
             1426530     1368530     2087696      271030
```

One-way Analysis of Variance Stem cell assay 14d "K"

```
Analysis of Variance for C2
Source     DF        SS        MS        F        P
C1          4 2.172E+12 5.430E+11     5.93    0.002
Error      25 2.291E+12 9.162E+10
Total      29 4.462E+12
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  --------+---------+---------+--------
0.1         6    883333    350079        (------*-------)
1           6    911111    351926         (------*------)
3           6   1200000    202210                (------*-------)
30          6   1455556    351294                       (-------*------)
control     6    688889    217732  (-------*------)
                                   --------+---------+---------+--------
Pooled StDev =   302692               700000   1050000   1400000
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.1	1	3	30
1	-540607 485052			
3	-829496 196163	-801718 223940		
30	-1085052 -59393	-1057274 -31615	-768385 257274	
control	-318385 707274	-290607 735052	-1718 1023940	253837 1279496

Experiment "N" 90day AP exposure

One-way Analysis of Variance 90d expt "N" thymus CD4-CD8+ flow cytometry

```
Analysis of Variance for thy CD4-
Source     DF        SS        MS        F        P
Cl          4     0.211     0.053     0.24    0.911
Error      25     5.443     0.218
Total      29     5.655
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  -+---------+---------+---------+-----
 0.0        6    2.9333    0.4761        (------------*------------)
 0.1        6    2.7667    0.2582  (------------*------------)
 1.0        6    2.8500    0.7064     (------------*------------)
 3.0        6    2.8667    0.4082     (-------------*------------)
30.0        6    3.0167    0.3601          (-------------*------------)
                                   -+---------+---------+---------+-----
Pooled StDev =   0.4666           2.40      2.70      3.00      3.30
```

Tukey's pairwise comparisons

```
    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

               0.0         0.1         1.0         3.0

     0.1     -0.6239
              0.9572

     1.0     -0.7072     -0.8739
              0.8739      0.7072

     3.0     -0.7239     -0.8906     -0.8072
              0.8572      0.6906      0.7739

    30.0     -0.8739     -1.0406     -0.9572     -0.9406
              0.7072      0.5406      0.6239      0.6406
```

One-way Analysis of Variance 90d expt "N" thymus CD4+CD8+ flow cytometry

```
Analysis of Variance for thy CD4+
Source     DF        SS        MS        F        P
Cl          4      7.05      1.76     0.50    0.737
Error      25     88.38      3.54
Total      29     95.43
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ----+---------+---------+---------+--
 0.0        6    85.050     2.738  (----------*----------)
 0.1        6    85.950     1.013        (----------*----------)
 1.0        6    86.367     2.370           (----------*---------)
 3.0        6    85.400     1.545     (---------*----------)
30.0        6    85.250     1.069    (---------*----------)
                                   ----+---------+---------+---------+--
Pooled StDev =    1.880             84.0      85.5      87.0      88.5
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-4.085 2.285			
1.0	-4.502 1.869	-3.602 2.769		
3.0	-3.535 2.835	-2.635 3.735	-2.219 4.152	
30.0	-3.385 2.985	-2.485 3.885	-2.069 4.302	-3.035 3.335

One-way Analysis of Variance 90d expt "N" thymus CD4-CD8- flow cytometry

Analysis of Variance for thy CD4-

Source	DF	SS	MS	F	P
Cl	4	5.10	1.27	0.92	0.467
Error	25	34.58	1.38		
Total	29	39.68			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  -------+---------+---------+---------
 0.0        6     4.467     2.155              (---------*---------)
 0.1        6     3.467     0.622    (---------*---------)
 1.0        6     3.317     1.028  (---------*---------)
 3.0        6     3.450     0.575    (---------*--------)
30.0        6     3.667     0.706      (---------*---------)
                                   -------+---------+---------+---------
Pooled StDev =    1.176                 3.0       4.0       5.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-0.993 2.993			
1.0	-0.843 3.143	-1.843 2.143		
3.0	-0.976 3.009	-1.976 2.009	-2.126 1.859	

30.0	-1.193	-2.193	-2.343	-2.209
	2.793	1.793	1.643	1.776

One-way Analysis of Variance 90d expt "N" thymus CD4+CD8- flow cytometry

Analysis of Variance for thy CD4+

Source	DF	SS	MS	F	P
Cl	4	2.989	0.747	1.09	0.383
Error	25	17.130	0.685		
Total	29	20.119			

Level	N	Mean	StDev
0.0	6	7.5500	0.6442
0.1	6	7.8000	0.5404
1.0	6	7.4333	1.2785
3.0	6	8.2833	0.8727
30.0	6	8.0667	0.5680

Pooled StDev = 0.8278

```
                    Individual 95% CIs For Mean
                    Based on Pooled StDev
----+---------+---------+---------+--
  (---------*---------)
     (---------*---------)
(---------*---------)
             (---------*---------)
          (---------*---------)
----+---------+---------+---------+--
  7.00      7.70      8.40      9.10
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-1.6524 1.1524			
1.0	-1.2858 1.5191	-1.0358 1.7691		
3.0	-2.1358 0.6691	-1.8858 0.9191	-2.2524 0.5524	
30.0	-1.9191 0.8858	-1.6691 1.1358	-2.0358 0.7691	-1.1858 1.6191

One-way Analysis of Variance 90d expt "N" spleen CD4-CD8+ flow cytometry

Analysis of Variance for spl CD4-

Source	DF	SS	MS	F	P
Cl	4	4.63	1.16	0.78	0.549
Error	25	37.14	1.49		
Total	29	41.77			

Level	N	Mean	StDev
0.0	6	11.317	1.439
0.1	6	10.350	0.901
1.0	6	10.650	0.935
3.0	6	10.717	1.162

```
                    Individual 95% CIs For Mean
                    Based on Pooled StDev
-------+---------+---------+---------
            (---------*---------)
(---------*----------)
   (----------*---------)
    (---------*---------)
```

```
30.0        6    11.350     1.524            (---------*----------)
                                       -------+---------+---------+---------
Pooled StDev =    1.219                   10.0      11.0      12.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-1.098 3.032			
1.0	-1.398 2.732	-2.365 1.765		
3.0	-1.465 2.665	-2.432 1.698	-2.132 1.998	
30.0	-2.098 2.032	-3.065 1.065	-2.765 1.365	-2.698 1.432

One-way Analysis of Variance 90d expt "N" spleen CD4+CD8+ flow cytometry

Analysis of Variance for spl CD4+

Source	DF	SS	MS	F	P
C1	4	17.53	4.38	0.81	0.528
Error	25	134.47	5.38		
Total	29	152.01			

```
                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev    ----------+---------+---------+------
 0.0        6     2.400     5.047                 (-----------*-----------)
 0.1        6     0.483     0.458     (-----------*-----------)
 1.0        6     0.917     1.030        (-----------*-----------)
 3.0        6     0.383     0.172    (-----------*-----------)
30.0        6     0.417     0.354    (-----------*-----------)
                                      ----------+---------+---------+------
Pooled StDev =    2.319                       0.0       1.6       3.2
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-2.013 5.846			
1.0	-2.446 5.413	-4.363 3.496		

3.0	-1.913	-3.829	-3.396	
	5.946	4.029	4.463	
30.0	-1.946	-3.863	-3.429	-3.963
	5.913	3.996	4.429	3.896

One-way Analysis of Variance 90d expt "N" spleen CD4-CD8- flow cytometry

```
Analysis of Variance for spl CD4-
Source      DF        SS        MS        F        P
Cl           4      47.7      11.9     0.91    0.476
Error       25     329.4      13.2
Total       29     377.2
                                     Individual 95% CIs For Mean
                                     Based on Pooled StDev
Level        N      Mean     StDev  -------+---------+---------+---------
 0.0         6    67.167     4.914   (---------*---------)
 0.1         6    71.083     1.958                (---------*---------)
 1.0         6    68.500     3.407       (---------*----------)
 3.0         6    69.050     3.354         (---------*---------)
30.0         6    68.833     3.879        (---------*----------)
                                     -------+---------+---------+---------
Pooled StDev =    3.630                 66.0      69.0      72.0
```

Tukey's pairwise comparisons

```
    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)
```

	0.0	0.1	1.0	3.0
0.1	-10.067			
	2.233			
1.0	-7.483	-3.567		
	4.817	8.733		
3.0	-8.033	-4.117	-6.700	
	4.267	8.183	5.600	
30.0	-7.817	-3.900	-6.483	-5.933
	4.483	8.400	5.817	6.367

One-way Analysis of Variance 90d expt "N" spleen CD4+CD8- flow cytometry

```
Analysis of Variance for spl CD4+
Source      DF        SS        MS        F        P
Cl           4     13.23      3.31     0.63    0.646
Error       25    131.34      5.25
Total       29    144.57
                                     Individual 95% CIs For Mean
                                     Based on Pooled StDev
Level        N      Mean     StDev  ---------+---------+---------+-------
 0.0         6    19.100     1.637        (-----------*-----------)
```

```
 0.1        6    18.100     1.035  (-----------*-----------)
 1.0        6    19.933     3.433              (-----------*-----------)
 3.0        6    19.850     2.298             (-----------*-----------)
30.0        6    19.450     2.335           (-----------*-----------)
                                     ---------+---------+---------+-------
Pooled StDev =    2.292                    17.6      19.2      20.8

Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

               0.0         0.1         1.0         3.0

     0.1      -2.883
               4.883

     1.0      -4.717      -5.717
               3.050       2.050

     3.0      -4.633      -5.633      -3.800
               3.133       2.133       3.967

    30.0      -4.233      -5.233      -3.400      -3.483
               3.533       2.533       4.367       4.283


Saving file as: C:\C Drive Files\AP working documents\AP STATS\flow expt N spl & thy.MPJ
```

One-way Analysis of Variance spleen CD4+CD8+ Expt "N" 90d AP

```
without outlier in control group #6 = 12.7
note: does not change statistics, still not significant changes as compared to controls
Analysis of Variance for spl CD4+
Source     DF        SS        MS        F        P
Cl          4     1.289     0.322     1.08    0.389
Error      24     7.165     0.299
Total      28     8.454
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ----+---------+---------+---------+--
 0.0        5    0.3400    0.0894   (---------*---------)
 0.1        6    0.4833    0.4579      (---------*--------)
 1.0        6    0.9167    1.0304               (--------*---------)
 3.0        6    0.3833    0.1722    (---------*--------)
30.0        6    0.4167    0.3545     (--------*---------)
                                   ----+---------+---------+---------+--
Pooled StDev =   0.5464              0.00      0.50      1.00      1.50

Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00701

Critical value = 4.17

Intervals for (column level mean) - (row level mean)

               0.0         0.1         1.0         3.0
```

0.1	-1.1189			
	0.8323			
1.0	-1.5523	-1.3635		
	0.3989	0.4969		
3.0	-1.0189	-0.8302	-0.3969	
	0.9323	1.0302	1.4635	
30.0	-1.0523	-0.8635	-0.4302	-0.9635
	0.8989	0.9969	1.4302	0.8969

One-way Analysis of Variance NK assay for 90day AP exposure, Exp. "N"

Analysis of Variance for 100:1 ratio (% lysis)

Source	DF	SS	MS	F	P
treatmen	4	415.9	104.0	4.57	0.007
Error	25	568.9	22.8		
Total	29	984.8			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ----------+---------+---------+------
 0.0        6    14.338     2.290   (-------*-------)
 0.1        6    19.177     6.606            (-------*-------)
 1.0        6    14.990     4.154    (-------*-------)
 3.0        6    19.787     5.994              (-------*-------)
30.0        6    24.632     3.424                       (-------*-------)
                                   ----------+---------+---------+------
Pooled StDev =    4.770                    15.0      20.0      25.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-12.921			
	3.244			
1.0	-8.734	-3.896		
	7.431	12.269		
3.0	-13.531	-8.692	-12.879	
	2.634	7.472	3.286	
30.0	-18.376	-13.537	-17.724	-12.927
	-2.211	2.627	-1.559	3.237

One-way Analysis of Variance NK exp. "N", 90d

Analysis of Variance for 50:1 ratio (% lysis)

Source	DF	SS	MS	F	P
treatmen	4	348.3	87.1	6.58	0.001
Error	25	330.7	13.2		
Total	29	679.0			

```
                                        Individual 95% CIs For Mean
                                        Based on Pooled StDev
Level        N      Mean     StDev  ----+---------+---------+---------+--
 0.0         6     6.332     0.805   (-----*-----)
 0.1         6    10.460     5.128           (-----*-----)
 1.0         6     7.910     2.452      (-----*-----)
 3.0         6    11.443     4.972             (-----*-----)
30.0         6    16.252     2.907                      (------*-----)
                                       ----+---------+---------+---------+--
Pooled StDev =    3.637                 5.0       10.0      15.0      20.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-10.290 2.033			
1.0	-7.740 4.583	-3.612 8.712		
3.0	-11.273 1.050	-7.145 5.178	-9.695 2.628	
30.0	-16.082 -3.758	-11.953 0.370	-14.503 -2.180	-10.970 1.353

One-way Analysis of Variance NK, exp. "N", 90d

Analysis of Variance for 25:1 ratio (% lysis)

Source	DF	SS	MS	F	P
treatmen	4	188.03	47.01	10.18	0.000
Error	25	115.46	4.62		
Total	29	303.49			

```
                                        Individual 95% CIs For Mean
                                        Based on Pooled StDev
Level        N      Mean     StDev  ------+---------+---------+---------+
 0.0         6     3.307     0.988  (----*-----)
 0.1         6     6.170     2.747          (-----*----)
 1.0         6     5.092     1.004       (-----*----)
 3.0         6     6.500     2.825           (-----*----)
30.0         6    10.872     2.363                       (----*----)
                                       ------+---------+---------+---------+
Pooled StDev =    2.149                   3.5       7.0      10.5      14.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-6.504 0.778			
1.0	-5.426 1.856	-2.563 4.719		
3.0	-6.834 0.448	-3.971 3.311	-5.049 2.233	
30.0	-11.206 -3.924	-8.343 -1.061	-9.421 -2.139	-8.013 -0.731

Worksheet size: 100000 cells

One-way Analysis of Variance NK "N" 90d AP exposure - lytic units stats

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	1895.7	473.9	7.19	0.001
Error	25	1647.3	65.9		
Total	29	3543.1			

Level	N	Mean	StDev	Individual 95% CIs For Mean Based on Pooled StDev
0.0	6	13.600	2.761	(------*-----)
0.1	6	23.350	11.796	(-----*------)
1.0	6	17.533	4.865	(------*-----)
3.0	6	24.817	11.113	(------*------)
30.0	6	36.950	5.961	(------*------)

```
----+---------+---------+---------+--
    10        20        30        40
```

Pooled StDev = 8.117

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-23.50 4.00			
1.0	-17.69 9.82	-7.94 19.57		
3.0	-24.97 2.54	-15.22 12.29	-21.04 6.47	
30.0	-37.10 -9.60	-27.35 0.15	-33.17 -5.66	-25.89 1.62

Worksheet size: 100000 cells

One-way Analysis of Variance Expt "N" 90d AP, Final Body Weight

Analysis of Variance for final body weight

Source	DF	SS	MS	F	P
group	4	21.79	5.45	0.86	0.503
Error	25	159.01	6.36		
Total	29	180.79			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ---------+---------+---------+-------
 0.0        6    27.817     4.280         (----------*----------)
 0.1        6    28.500     1.318             (---------*----------)
 1.0        6    28.067     1.948           (---------*----------)
 3.0        6    26.533     2.514   (----------*---------)
30.0        6    26.367     1.277  (----------*---------)
                                   ---------+---------+---------+-------
Pooled StDev =    2.522                  26.0      28.0      30.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-4.956 3.589			
1.0	-4.523 4.023	-3.839 4.706		
3.0	-2.989 5.556	-2.306 6.239	-2.739 5.806	
30.0	-2.823 5.723	-2.139 6.406	-2.573 5.973	-4.106 4.439

One-way Analysis of Variance Expt "N" 90d AP, thymus weight

Analysis of Variance for thymus weight

Source	DF	SS	MS	F	P
group	4	190.7	47.7	1.54	0.221
Error	25	774.2	31.0		
Total	29	964.9			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  --------+---------+---------+--------
 0.0        6    41.100     5.182   (--------*---------)
 0.1        6    42.483     2.729      (--------*--------)
 1.0        6    48.367     4.885                (---------*--------)
 3.0        6    45.533     4.623            (--------*--------)
30.0        6    43.867     8.679        (---------*--------)
                                   --------+---------+---------+--------
Pooled StDev =    5.565                  40.0      45.0      50.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-10.812 8.045			
1.0	-16.695 2.162	-15.312 3.545		
3.0	-13.862 4.995	-12.479 6.379	-6.595 12.262	
30.0	-12.195 6.662	-10.812 8.045	-4.929 13.929	-7.762 11.095

One-way Analysis of Variance Expt "N" 90d AP, spleen weight

Analysis of Variance for spleen weight

Source	DF	SS	MS	F	P
group	4	614	153	0.55	0.699
Error	25	6944	278		
Total	29	7558			

Level	N	Mean	StDev
0.0	6	86.62	7.82
0.1	6	100.78	30.81
1.0	6	94.15	9.53
3.0	6	95.42	13.05
30.0	6	94.18	10.84

Pooled StDev = 16.67

```
Individual 95% CIs For Mean
Based on Pooled StDev
----------+---------+---------+------
 (----------*----------)
             (----------*----------)
        (----------*----------)
         (----------*----------)
        (----------*----------)
----------+---------+---------+------
          84        96       108
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-42.40 14.07			
1.0	-35.77 20.70	-21.60 34.87		
3.0	-37.04 19.44	-22.87 33.60	-29.50 26.97	

30.0	-35.80	-21.64	-28.27	-27.00
	20.67	34.84	28.20	29.47

One-way Analysis of Variance Expt "N" 90d AP, thymus/Body weight ratio

Analysis of Variance for Thy/BW %

Source	DF	SS	MS	F	P
group	4	0.003093	0.000773	1.31	0.292
Error	25	0.014706	0.000588		
Total	29	0.017799			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ------+---------+---------+---------+
 0.0        6   0.15117   0.03012   (----------*---------)
 0.1        6   0.14967   0.01677   (---------*---------)
 1.0        6   0.17283   0.01866             (---------*----------)
 3.0        6   0.17267   0.02364             (---------*----------)
30.0        6   0.16600   0.02909          (---------*---------)
                                   ------+---------+---------+---------+
Pooled StDev =  0.02425                 0.140     0.160     0.180     0.200
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-0.03959 0.04259			
1.0	-0.06276 0.01943	-0.06426 0.01793		
3.0	-0.06259 0.01959	-0.06409 0.01809	-0.04093 0.04126	
30.0	-0.05593 0.02626	-0.05743 0.02476	-0.03426 0.04793	-0.03443 0.04776

One-way Analysis of Variance Expt "N" 90d AP, spleen/Body weight ratio

Analysis of Variance for spl/BW %

Source	DF	SS	MS	F	P
group	4	0.00868	0.00217	0.75	0.568
Error	25	0.07238	0.00290		
Total	29	0.08105			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ---+---------+---------+---------+---
 0.0        6   0.31467   0.03379  (-----------*----------)
 0.1        6   0.35267   0.09989            (----------*----------)
 1.0        6   0.33500   0.01948        (-----------*----------)
 3.0        6   0.36000   0.04109              (----------*----------)
30.0        6   0.35717   0.03588             (----------*-----------)
```

```
                                   ---+---------+---------+---------+---
Pooled StDev =  0.05381             0.280     0.320     0.360     0.400

Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

               0.0         0.1         1.0         3.0

     0.1    -0.12916
             0.05316

     1.0    -0.11149    -0.07349
             0.07083     0.10883

     3.0    -0.13649    -0.09849    -0.11616
             0.04583     0.08383     0.06616

    30.0    -0.13366    -0.09566    -0.11333    -0.08833
             0.04866     0.08666     0.06899     0.09399
```

One-way Analysis of Variance Expt "N" 90d AP, thymus cellularity

```
Analysis of Variance for thym cellularity
Source     DF        SS        MS         F        P
group       4 8.891E+14 2.223E+14      0.91    0.472
Error      25 6.086E+15 2.434E+14
Total      29 6.975E+15
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  -----+---------+---------+---------+-
 0.0        6  69687500  16666876              (----------*----------)
 0.1        6  55977500  12148746   (----------*----------)
 1.0        6  61860000  21137266        (----------*---------)
 3.0        6  70835000   5825152               (----------*----------)
30.0        6  63187500  17637208         (----------*----------)
                                   -----+---------+---------+---------+-
Pooled StDev = 15602335          47999991  59999989  71999987  83999984

Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

               0.0         0.1         1.0         3.0

     0.1   -12723951
            40143951

     1.0   -18606451   -32316451
            34261451    20551451
```

```
     3.0   -27581451   -41291451   -35408951
            25286451    11576451    17458951

    30.0   -19933951   -33643951   -27761451   -18786451
            32933951    19223951    25106451    34081451
```

One-way Analysis of Variance Expt "N" 90d AP, spleen cellularity

```
Analysis of Variance for spleen cellularity
Source     DF        SS        MS        F        P
group       4 1.411E+16 3.528E+15     6.66    0.001
Error      25 1.324E+16 5.298E+14
Total      29 2.736E+16
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  --+---------+---------+---------+----
 0.0        6  1.41E+08  10858492                        (-----*------)
 0.1        6  1.11E+08  23994171                 (-----*-----)
 1.0        6  1.14E+08  21791172                  (-----*------)
 3.0        6  1.04E+08  24731847              (------*-----)
30.0        6  73777500  29475333  (------*-----)
                                   --+---------+---------+---------+----
Pooled StDev = 23017132       59999987  89999980  1.20E+08  1.50E+08
```

Tukey's pairwise comparisons

```
    Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

               0.0         0.1         1.0         3.0

     0.1    -8633824
            69358824

     1.0   -11866324   -42228824
            66126324    35763824

     3.0    -1498824   -31861324   -28628824
            76493824    46131324    49363824

    30.0    28676176    -1686324     1546176    -8821324
           106668824    76306324    79538824    69171324
```

One-way Analysis of Variance Expt "N" 90d AP, peritoneal macrophage cellularity

```
Analysis of Variance for mac cell
Source     DF        SS        MS        F        P
group       4 2.857E+12 7.143E+11     0.17    0.950
Error      25 1.032E+14 4.126E+12
Total      29 1.060E+14
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  -+---------+---------+---------+-----
 0.0        6   8301667   1782691        (-------------*-------------)
 0.1        6   7682500   1906221   (-------------*-------------)
 1.0        6   8387500   1799602         (-------------*-------------)
```

```
 3.0         6   8365000   2649908        (--------------*-------------)
30.0         6   8597500   1886480          (--------------*-------------)
                                       -+---------+---------+---------+-----
Pooled StDev =  2031307        5999999   7199999   8399999   9599999
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-2822336 4060669			
1.0	-3527336 3355669	-4146503 2736503		
3.0	-3504836 3378169	-4124003 2759003	-3419003 3464003	
30.0	-3737336 3145669	-4356503 2526503	-3651503 3231503	-3674003 3209003

One-way Analysis of Variance Expt "N" 90d AP, bone marrow cellularity

Analysis of Variance for bone mar

Source	DF	SS	MS	F	P
group	4	1.147E+14	2.867E+13	2.45	0.073
Error	25	2.928E+14	1.171E+13		
Total	29	4.075E+14			

```
                                     Individual 95% CIs For Mean
                                     Based on Pooled StDev
Level        N      Mean     StDev  ----+---------+---------+---------+--
 0.0         6  10965833   2435156   (---------*--------)
 0.1         6  11381667   2660362    (---------*---------)
 1.0         6  12342500   2859120        (--------*---------)
 3.0         6  11305833   2204177    (---------*--------)
30.0         6  16250833   5702928                      (--------*---------)
                                     ----+---------+---------+---------+--
Pooled StDev =  3422393          8999999  11999998  14999998  17999997
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-6214155 5382488			
1.0	-7174988 4421655	-6759155 4837488		

3.0	-6138322	-5722488	-4761655	
	5458322	5874155	6834988	
30.0	-11083322	-10667488	-9706655	-10743322
	513322	929155	1889988	853322

Saving file as: C:\C Drive Files\AP working documents\AP Study 90-day IP N\organ wt.cell.exp N. 90d
* NOTE * Existing file replaced.

Worksheet size: 100000 cells

One-way Analysis of Variance Peritoneal Mac Nitrite Production- Controls

Analysis of Variance for control

Source	DF	SS	MS	F	P
group	4	0.4838	0.1209	1.77	0.167
Error	25	1.7092	0.0684		
Total	29	2.1930			

```
                                  Individual 95% CIs For Mean
                                  Based on Pooled StDev
Level       N      Mean     StDev -----+---------+---------+---------+-
 0.0        6    0.6488    0.2920              (--------*--------)
 0.1        6    0.4438    0.1470      (--------*--------)
 1.0        6    0.3560    0.1363  (--------*--------)
 3.0        6    0.4787    0.4571       (--------*--------)
30.0        6    0.6923    0.0865                (--------*-------)
                                  -----+---------+---------+---------+-
Pooled StDev =   0.2615               0.25      0.50      0.75      1.00
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-0.2380 0.6480			
1.0	-0.1502 0.7358	-0.3552 0.5308		
3.0	-0.2728 0.6132	-0.4778 0.4082	-0.5657 0.3203	
30.0	-0.4865 0.3995	-0.6915 0.1945	-0.7793 0.1067	-0.6567 0.2293

One-way Analysis of Variance Peritoneal Mac Nitrite Production- Interferon only

Analysis of Variance for Interfer

Source	DF	SS	MS	F	P
group	4	1064.6	266.2	18.53	0.000
Error	25	359.0	14.4		
Total	29	1423.6			

```
                                        Individual 95% CIs For Mean
                                        Based on Pooled StDev
Level        N      Mean     StDev  ---+---------+---------+---------+---
 0.0         6     2.668     4.331     (----*---)
 0.1         6     1.336     0.548  (----*---)
 1.0         6     7.173     6.004           (---*----)
 3.0         6    17.268     4.044                          (----*---)
30.0         6     1.965     0.581   (----*---)
                                     ---+---------+---------+---------+---
Pooled StDev =    3.789              0.0       7.0      14.0      21.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-5.089 7.751			
1.0	-10.926 1.914	-12.257 0.583		
3.0	-21.020 -8.180	-22.352 -9.511	-16.515 -3.674	
30.0	-5.718 7.123	-7.049 5.791	-1.212 11.628	8.882 21.723

One-way Analysis of Variance Peritoneal Mac Nitrite Production- LPS only

Analysis of Variance for LPS

Source	DF	SS	MS	F	P
group	4	58.79	14.70	3.69	0.017
Error	25	99.60	3.98		
Total	29	158.39			

```
                                        Individual 95% CIs For Mean
                                        Based on Pooled StDev
Level        N      Mean     StDev  -----+---------+---------+---------+-
 0.0         6     3.194     1.976             (------*-----)
 0.1         6     4.876     3.369                     (------*-----)
 1.0         6     2.419     1.901          (------*-----)
 3.0         6     0.532     0.096  (------*------)
30.0         6     3.004     1.021            (------*------)
                                     -----+---------+---------+---------+-
Pooled StDev =    1.996                0.0       2.5       5.0       7.5
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-5.064 1.699			
1.0	-2.606 4.157	-0.924 5.839		
3.0	-0.720 6.044	0.963 7.726	-1.495 5.268	
30.0	-3.192 3.572	-1.509 5.254	-3.967 2.796	-5.854 0.910

One-way Analysis of Variance Peritoneal Mac Nitrite Production- Interferon + LPS

Analysis of Variance for IFN + LP

Source	DF	SS	MS	F	P
group	4	52.8	13.2	1.10	0.377
Error	25	299.3	12.0		
Total	29	352.2			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ----------+---------+---------+------
 0.0        6    15.819     2.652     (---------*--------)
 0.1        6    18.569     5.304               (---------*---------)
 1.0        6    15.000     4.152  (---------*---------)
 3.0        6    15.980     1.880      (--------*---------)
30.0        6    14.912     1.982  (---------*--------)
                                   ----------+---------+---------+------
Pooled StDev =    3.460                   15.0      18.0      21.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-8.613 3.112			
1.0	-5.043 6.682	-2.293 9.432		
3.0	-6.023 5.701	-3.273 8.452	-6.843 4.882	
30.0	-4.956 6.769	-2.205 9.520	-5.775 5.950	-4.795 6.930

Worksheet size: 100000 cells

Descriptive Statistics Reticulocytes (%) in peripheral blood - 90d AP exposure Expt. N

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0	6	0.667	0.500	0.667	0.731	0.299
0.1	6	3.183	3.100	3.183	1.503	0.613
1.0	6	3.57	3.75	3.57	2.51	1.03
3.0	6	4.38	4.10	4.38	3.15	1.28
30.0	6	3.333	3.600	3.333	1.341	0.548

Variable	Minimum	Maximum	Q1	Q3
0	0.100	2.100	0.175	0.975
0.1	0.800	5.400	2.300	4.275
1.0	0.40	6.90	1.08	5.70
3.0	0.10	9.90	2.80	5.78
30.0	0.900	4.500	2.475	4.425

One-way Analysis of Variance Reticulocytes (%) in peripheral blood - 90d AP exposure Expt. N

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	46.92	11.73	2.82	0.046
Error	25	104.00	4.16		
Total	29	150.92			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ------+---------+---------+---------+
 0.0        6     0.667     0.731   (-------*--------)
 0.1        6     3.183     1.503              (--------*-------)
 1.0        6     3.567     2.512                (--------*-------)
 3.0        6     4.383     3.146                    (--------*-------)
30.0        6     3.333     1.341               (--------*-------)
                                   ------+---------+---------+---------+
Pooled StDev =    2.040                 0.0       2.0       4.0       6.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-5.972 0.939			
1.0	-6.356 0.556	-3.839 3.072		
3.0	-7.172 -0.261	-4.656 2.256	-4.272 2.639	
30.0	-6.122 0.789	-3.606 3.306	-3.222 3.689	-2.406 4.506

Worksheet size: 100000 cells
Retrieving project from file: C:\C Drive Files\AP working documents\AP Study 90-day IP N\AP.90N.reticulocyte stats.ret

Worksheet size: 100000 cells

One-way Analysis of Variance NK "T" 14d

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	334.7	83.7	4.51	0.007
Error	25	463.6	18.5		
Total	29	798.3			

Level	N	Mean	StDev
0.0	6	20.800	4.740
0.1	6	17.600	2.272
1.0	6	22.000	6.552
3.0	6	27.450	4.109
30.0	6	24.533	2.298

Pooled StDev = 4.306

```
Individual 95% CIs For Mean
Based on Pooled StDev
---+---------+---------+---------+---
       (-------*------)
 (------*------)
          (------*------)
                     (------*------)
               (------*------)
---+---------+---------+---------+---
15.0      20.0      25.0      30.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-4.096 10.496			
1.0	-8.496 6.096	-11.696 2.896		
3.0	-13.946 0.646	-17.146 -2.554	-12.746 1.846	
30.0	-11.029 3.563	-14.229 0.363	-9.829 4.763	-4.379 10.213

Worksheet size: 100000 cells

Descriptive Statistics Platelet Counts for 14 day AP exposure Exp. T

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	4	1037.0	1038.5	1037.0	74.5	37.3
0.1	5	1023.8	1005.0	1023.8	67.7	30.3
1.0	5	1134.2	1149.0	1134.2	64.0	28.6
3.0	3	1249	1166	1249	340	196
30.0	5	1060.0	1017.0	1060.0	127.0	56.8

Variable	Minimum	Maximum	Q1	Q3
0.0	945.0	1126.0	965.5	1107.0
0.1	952.0	1124.0	967.0	1090.0
1.0	1031.0	1200.0	1077.5	1183.5
3.0	958	1622	958	1622
30.0	933.0	1201.0	946.5	1195.0

One-way Analysis of Variance Platelet Counts for 14 day AP exposure Exp. T

```
Analysis of Variance for C2
Source     DF        SS        MS        F        P
C1          4    122941     30735     1.51    0.244
Error      17    346564     20386
Total      21    469505
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  -+---------+---------+---------+-----
 0.0        4    1037.0      74.5  (---------*---------)
 0.1        5    1023.8      67.7  (--------*--------)
 1.0        5    1134.2      64.0          (--------*--------)
 3.0        3    1248.7     339.6               (----------*----------)
30.0        5    1060.0     127.0     (--------*--------)
                                   -+---------+---------+---------+-----
Pooled StDev =    142.8            900       1050      1200      1350
```

Tukey's pairwise comparisons

```
    Family error rate = 0.0500
Individual error rate = 0.00739

Critical value = 4.30

Intervals for (column level mean) - (row level mean)

              0.0         0.1         1.0         3.0

     0.1       -278
                304

     1.0       -388        -385
               194         164

     3.0       -543        -542        -432
               120          92         203

    30.0       -314        -311        -200        -128
               268         238         349         506
```

Worksheet size: 100000 cells
Retrieving project from file: C:\C Drive Files\AP working documents\AP Study 14-day IP T\AP.14T.platelet stats.pla

Drinking Water Consumption Tables 120-Day AP Studies

Date: 03/26/98

120-Day IP Parameters #1
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1B	20.15	112.5	22	N/A
2B	21	111.5	23	N/A
3B	20.35	104	30.5	N/A
4B	20.4	97	37.5	N/A
5B	21	110	24.5	N/A
6B	21.5	106	28.5	N/A
Average	20.73	106.83	27.67	N/A
SD	0.52	5.82	5.82	N/A
0.1 mg/kg/day				
7B	21.9	111.5	23	0.07
8B	21.35	106	28.5	0.08
9B	22.85	100	34.5	0.10
10B	20.15	105.5	29	0.08
11B	20.4	109.5	25	0.07
12B	18.9	113	21.5	0.06
Average	20.93	107.58	26.92	0.08
SD	1.40	4.75	4.75	0.01
1.0 mg/kg/day				
13B	19.2	111	23.5	0.67
14B	19.85	108	26.5	0.76
15B	21.3	103.5	31	0.89
16B	22.4	124.5	13	0.87
17B	19.55	102.5	32	0.91
18B	21.05	108	26.5	0.76
Average	20.56	109.58	25.42	0.81
SD	1.23	7.96	6.85	0.09
3.0 mg/kg/day				
19B	19.6	108.5	26	2.23
20B	21.55	112.5	25	5.00
21B	21.45	123	14.5	2.90
22B	19.25	103	31.5	2.70
23B	23.55	127	10.5	2.10
24B	19.05	127	10.5	2.10
Average	20.74	116.83	19.67	2.84
SD	1.76	10.24	8.98	1.11
30.0 mg/kg/day				
25B	20.45	125	12.5	25.00
26B	21.4	129.5	8	16.00
27B	21.45	123.5	14	28.00
28B	22.7	125.5	12	24.00
29B	22.7	101.5	33	28.29
30B	22.15	97	37.5	32.14
Average	21.81	117.00	19.50	25.57
SD	0.88	13.96	12.44	5.49

Date: 04/02/98

120-Day IP Parameters #1
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1B	20.5	104.5	29.83	N/A
2B	21.45	110	24.33	N/A
3B	21.45	97.5	36.83	N/A
4B	21.5	99	35.33	N/A
5B	21.7	110	24.33	N/A
6B	21.85	106	28.33	N/A
Average	21.41	104.50	29.83	N/A
SD	0.47	5.33	5.33	N/A
0.1 mg/kg/day				
7B	21.95	111.5	22.83	0.07
8B	22.15	106.5	27.83	0.08
9B	23.7	102	32.33	0.09
10B	21.95	107.5	26.83	0.08
11B	20.95	111	23.33	0.07
12B	18.85	117.5	16.83	0.05
Average	21.59	109.33	25.00	0.07
SD	1.61	5.28	5.28	0.02
1.0 mg/kg/day				
13B	19.95	112.5	21.83	0.62
14B	20.75	110.5	23.83	0.68
15B	22.25	105	29.33	0.84
16B	23	105.5	28.83	0.82
17B	20.4	107.5	26.83	0.77
18B	22.85	108	26.33	0.75
Average	21.53	108.17	26.16	0.75
SD	1.33	2.89	2.89	0.08
3.0 mg/kg/day				
19B	20.35	105	29.33	2.51
20B	22.3	104	30.33	2.60
21B	21.7	114	20.33	1.74
22B	20.25	106	28.33	2.43
23B	23.7	111.5	22.83	1.96
24B	19.8	108.5	25.83	2.21
Average	21.35	108.17	26.16	2.24
SD	1.49	3.93	3.93	0.34
30.0 mg/kg/day				
25B	23.05	105.5	28.83	24.71
26B	21.8	111.5	22.83	19.57
27B	22.35	109	25.33	21.71
28B	22.7	108.5	25.83	22.14
29B	22.95	104	30.33	26.00
30B	22.75	100	34.33	29.43
Average	22.60	106.42	27.91	23.93
SD	0.46	4.12	4.12	3.53

Date: 04/09/98

120-Day IP Parameters #1
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1B	20.95	105	27	N/A
2B	22.25	107.5	24.5	N/A
3B	22.55	101	31	N/A
4B	22.5	96	36	N/A
5B	22.4	106	26	N/A
6B	22.5	103	29	N/A
Average	22.19	103.08	28.92	N/A
SD	0.62	4.15	4.15	N/A
0.1 mg/kg/day				
7B	22.6	103	29	0.08
8B	22.9	104.5	27.5	0.08
9B	23.6	102.5	29.5	0.08
10B	22.75	103.5	28.5	0.08
11B	21.3	105.5	26.5	0.08
12B	18.55	111.5	20.5	0.06
Average	21.95	105.08	26.92	0.08
SD	1.83	3.32	3.32	0.01
1.0 mg/kg/day				
13B	20.35	108	24	0.69
14B	21.55	92	40	1.14
15B	23.05	101.5	30.5	0.87
16B	24.15	76	56	1.60
17B	21.05	103.5	28.5	0.81
18B	23.25	107.5	24.5	0.70
Average	22.23	98.08	33.92	0.97
SD	1.47	12.27	12.27	0.35
3.0 mg/kg/day				
19B	21.7	102	30	2.57
20B	23.95	100	32	2.74
21B	22.5	111.5	20.5	1.76
22B	21.4	101.5	30.5	2.61
23B	23.6	106	26	2.23
24B	20.45	110	22	1.89
Average	22.27	105.17	26.83	2.30
SD	1.34	4.78	4.78	0.41
30.0 mg/kg/day				
25B	24.35	102	30	25.71
26B	22.2	108	24	20.57
27B	22.9	106.5	25.5	21.86
28B	23.4	104	28	24.00
29B	23.85	102.5	29.5	25.29
30B	23.1	104.5	27.5	23.57
Average	23.30	104.58	27.42	23.50
SD	0.75	2.31	2.31	1.98

Date: 04/16/98

120-Day IP Parameters #1
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1B	21.5	106	24.67	N/A
2B	23.15	107	23.67	N/A
3B	23.15	102	28.67	N/A
4B	23.3	96.5	34.17	N/A
5B	22.95	106.5	24.17	N/A
6B	23.95	103.5	27.17	N/A
Average	23.00	103.58	27.09	N/A
SD	0.81	3.97	3.97	N/A
0.1 mg/kg/day				
7B	23.7	102	28.67	0.09
8B	24.05	105	25.67	0.08
9B	23.85	101.5	29.17	0.09
10B	22.9	103.5	27.17	0.09
11B	21.9	104.5	26.17	0.09
12B	18.8	114	16.67	0.06
Average	22.53	105.08	25.59	0.08
SD	1.99	4.58	4.58	0.01
1.0 mg/kg/day				
13B	20.95	109	21.67	0.78
14B	22.25	103	27.67	0.93
15B	23.7	106	24.67	0.78
16B	24.7	102.5	28.17	0.86
17B	22.35	105.5	25.17	0.84
18B	24.05	110.5	20.17	0.63
Average	23.00	106.08	24.59	0.80
SD	1.39	3.18	3.18	0.10
3.0 mg/kg/day				
19B	22.5	107.5	23.17	2.24
20B	25.1	104	26.67	2.31
21B	23	110.5	20.17	1.91
22B	21.7	105	25.67	2.57
23B	23.8	110	20.67	1.89
24B	20.9	113	17.67	1.84
Average	22.83	108.33	22.34	2.13
SD	1.50	3.46	3.46	0.29
30.0 mg/kg/day				
25B	26.05	104	26.67	23.32
26B	22.75	110	20.67	20.69
27B	23.75	108	22.67	21.74
28B	24.35	107	23.67	22.14
29B	25.25	101.5	29.17	26.31
30B	23.35	104	26.67	26.01
Average	24.25	105.75	24.92	23.37
SD	1.23	3.13	3.13	2.32

Date: 04/23/98

120-Day IP Parameters #1
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1B	23.45	104	27.33	N/A
2B	24.25	108	23.33	N/A
3B	23.85	102	29.33	N/A
4B	24.5	101	30.33	N/A
5B	23.9	107	24.33	N/A
6B	24.65	108	23.33	N/A
Average	24.10	105.00	26.33	N/A
SD	0.45	3.10	3.10	N/A
0.1 mg/kg/day				
7B	25.2	100	31.33	0.10
8B	25.2	106	25.33	0.08
9B	24.7	103	28.33	0.09
10B	23.25	105	26.33	0.09
11B	23	107	24.33	0.09
12B	19.3	108	23.33	0.10
Average	23.44	104.83	26.50	0.09
SD	2.24	2.93	2.93	0.01
1.0 mg/kg/day				
13B	21.95	110	21.33	0.82
14B	22.6	103	28.33	1.05
15B	24.25	105	26.33	0.91
16B	24.75	104	27.33	0.93
17B	22.7	107	24.33	0.90
18B	24.3	112	19.33	0.67
Average	23.43	106.83	24.50	0.88
SD	1.15	3.54	3.54	0.13
3.0 mg/kg/day				
19B	22.9	108	23.33	2.50
20B	25.75	105	26.33	2.51
21B	23.4	108	23.33	2.45
22B	22.1	107	24.33	2.70
23B	24.7	109	22.33	2.22
24B	21.25	110	21.33	2.46
Average	23.35	107.83	23.50	2.47
SD	1.66	1.72	1.72	0.15
30.0 mg/kg/day				
25B	27.15	106	25.33	24.09
26B	23.25	108	23.33	25.91
27B	24.55	106	25.33	26.64
28B	25.55	104	27.33	27.62
29B	26.55	100	31.33	30.47
30B	23.9	104	27.33	29.53
Average	25.16	104.67	26.66	27.38
SD	1.53	2.73	2.73	2.36

Date: 04/30/98

120-Day IP Parameters #1
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1B	23.25	109	26.67	N/A
2B	24.95	110.5	25.17	N/A
3B	24.75	105	30.67	N/A
4B	24.5	127	8.67	N/A
5B	25.1	107	28.67	N/A
6B	25	107	28.67	N/A
Average	24.59	110.92	24.75	N/A
SD	0.69	8.10	8.10	N/A
0.1 mg/kg/day				
7B	26.85	105	30.67	0.10
8B	25.25	107	28.67	0.10
9B	25.25	105	30.67	0.10
10B	24.5	107.5	28.17	0.10
11B	23.95	106	29.67	0.10
12B	20.1	111.5	24.17	0.10
Average	24.32	107.00	28.67	0.10
SD	2.29	2.43	2.43	0.00
1.0 mg/kg/day				
13B	22.3	113	22.67	0.87
14B	23.1	102.5	33.17	1.23
15B	24.7	108.5	27.17	0.94
16B	26	105	30.67	1.01
17B	23	110	25.67	0.95
18B	24.4	110.5	25.17	0.88
Average	23.92	108.25	27.42	0.98
SD	1.36	3.86	3.86	0.13
3.0 mg/kg/day				
19B	23.65	109	26.67	2.94
20B	26.55	106.5	29.17	2.86
21B	24.1	109	26.67	2.88
22B	22.65	109.5	26.17	3.01
23B	26.15	110.5	25.17	2.51
24B	22.05	114	21.67	2.56
Average	24.19	109.75	25.92	2.79
SD	1.83	2.46	2.46	0.21
30.0 mg/kg/day				
25B	27.85	104.5	31.17	29.62
26B	24.1	110	25.67	28.19
27B	25.05	108	27.67	29.23
28B	25.85	110	25.67	26.28
29B	27.5	104	31.67	30.48
30B	25.1	106	29.67	31.28
Average	25.91	107.08	28.59	29.18
SD	1.48	2.65	2.65	1.77

Date: 05/07/98

120-Day IP Parameters #1
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1B	24.15	108.5	27.17	N/A
2B	25.4	110	25.67	N/A
3B	24.9	109	26.67	N/A
4B	24.05	96	39.67	N/A
5B	26.3	107.5	28.17	N/A
6B	26.25	104	31.67	N/A
Average	25.18	105.83	29.84	N/A
SD	0.99	5.24	5.24	N/A
0.1 mg/kg/day				
7B	28.05	104	31.67	0.10
8B	25.4	106.5	29.17	0.10
9B	25.65	105.5	30.17	0.10
10B	25.45	105	30.67	0.10
11B	25.05	105	30.67	0.11
12B	20.7	114	21.67	0.09
Average	25.05	106.67	29.00	0.10
SD	2.39	3.68	3.68	0.01
1.0 mg/kg/day				
13B	22.35	113	22.67	0.89
14B	24	103.5	32.17	1.18
15B	25.55	109	26.67	0.92
16B	27.05	105.5	30.17	0.98
17B	24.1	110	25.67	0.94
18B	25.25	110	25.67	0.89
Average	24.72	108.50	27.17	0.97
SD	1.61	3.44	3.44	0.11
3.0 mg/kg/day				
19B	24.55	110.5	25.17	2.71
20B	27.25	106.5	29.17	2.83
21B	25.25	106	29.67	3.11
22B	23.1	108.5	27.17	3.11
23B	26.75	109	26.67	2.64
24B	22.75	112	23.67	2.75
Average	24.94	108.75	26.92	2.86
SD	1.85	2.30	2.30	0.20
30.0 mg/kg/day				
25B	28.7	105	30.67	29.20
26B	25.05	112.5	23.17	25.27
27B	25.65	105.5	30.17	32.14
28B	25.5	106.5	29.17	31.25
29B	28.15	102.5	33.17	32.19
30B	26.75	105	30.67	31.33
Average	26.63	106.17	29.50	30.23
SD	1.51	3.37	3.37	2.66

Date: 05/14/98

120-Day IP Parameters #1
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1B	24.6	109.5	26.17	N/A
2B	25.4	109.5	26.17	N/A
3B	24.6	106.5	29.17	N/A
4B	24.95	101	34.67	N/A
5B	26.3	101	34.67	N/A
6B	26.6	109	26.67	N/A
Average	25.41	106.08	29.59	N/A
SD	0.86	4.09	4.09	N/A
0.1 mg/kg/day				
7B	28.85	102	33.67	0.10
8B	25.8	104.5	31.17	0.11
9B	26.35	124.5	14.5	***
10B	25.5	104	31.67	0.11
11B	25.35	107	28.67	0.10
12B	21	110.5	25.17	0.11
Average	25.48	108.75	27.48	0.11
SD	2.54	8.25	7.00	0.00
1.0 mg/kg/day				
13B	22.75	108.5	27.17	1.08
14B	24.35	104.5	31.17	1.16
15B	25.75	108	27.67	0.97
16B	27.25	106.5	29.17	0.97
17B	24.55	108	27.67	1.02
18B	26.85	107	28.67	0.96
Average	25.25	107.08	28.59	1.03
SD	1.69	1.46	1.46	0.08
3.0 mg/kg/day				
19B	25.05	108.5	27.17	2.93
20B	27.75	104	31.67	3.08
21B	25.3	108.5	27.17	2.90
22B	23.45	103.5	32.17	3.70
23B	26.55	108.5	27.17	2.76
24B	23.05	108	27.67	3.24
Average	25.19	106.83	28.84	3.10
SD	1.79	2.40	2.40	0.34
30.0 mg/kg/day				
25B	29.25	101	34.67	33.27
26B	25.3	110.5	25.17	27.93
27B	25.85	107	28.67	31.13
28B	26.1	105	30.67	32.99
29B	28.6	102.5	33.17	32.56
30B	27.6	104	31.67	32.21
Average	27.12	105.00	30.67	31.68
SD	1.61	3.39	3.39	1.98

Date: 05/21/98

120-Day IP Parameters #1
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1B	25.05	107	29	N/A
2B	26	108	28	N/A
3B	24.9	104.5	31.5	N/A
4B	25.8	105.5	30.5	N/A
5B	26.7	99	37	N/A
6B	26.7	107	29	N/A
Average	25.86	105.17	30.83	N/A
SD	0.78	3.27	3.27	N/A
0.1 mg/kg/day				
7B	30.5	102	34	0.10
8B	26	107	29	0.10
9B	27.15	132	8	0.09
10B	25.85	105	31	0.11
11B	25.7	105	31	0.11
12B	21.15	107.5	28.5	0.12
Average	26.06	109.75	26.92	0.11
SD	3.01	11.07	9.47	0.01
1.0 mg/kg/day				
13B	23.55	107.5	28.5	1.11
14B	24.6	104.5	31.5	1.18
15B	25.25	107.5	28.5	1.04
16B	27.5	103.5	32.5	1.08
17B	25.2	110	26	0.95
18B	28.05	110	26	0.85
Average	25.69	107.17	28.83	1.03
SD	1.73	2.71	2.71	0.12
3.0 mg/kg/day				
19B	25.1	108	28	3.04
20B	28.45	103.5	32.5	3.11
21B	25.9	105.5	30.5	3.20
22B	23.95	106.5	29.5	3.35
23B	26.9	108	28	2.83
24B	23.6	111.5	24.5	2.83
Average	25.65	107.17	28.83	3.06
SD	1.84	2.71	2.71	0.21
30.0 mg/kg/day				
25B	30.05	101.5	34.5	32.35
26B	25.35	110	26	28.90
27B	26.25	108.5	27.5	29.52
28B	27.05	107	29	30.21
29B	29.55	103	33	31.47
30B	28.55	96	40	39.48
Average	27.80	104.33	31.67	31.99
SD	1.88	5.21	5.21	3.88

Date: 05/28/98

120-Day IP Parameters #1
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1B	26.75	105.5	31.17	N/A
2B	26.55	108	28.67	N/A
3B	25.9	103.5	33.17	N/A
4B	25.9	103.5	33.17	N/A
5B	28.3	102.5	34.17	N/A
6B	27.9	106	30.67	N/A
Average	26.88	104.83	31.84	N/A
SD	1.01	2.04	2.04	N/A
0.1 mg/kg/day				
7B	33.05	100.5	36.17	0.10
8B	26.7	101.5	35.17	0.12
9B	27.1	107	29.67	0.10
10B	26.75	105	31.67	0.11
11B	26.7	102.5	34.17	0.12
12B	21.6	108	28.67	0.12
Average	26.98	104.08	32.59	0.11
SD	3.63	3.06	3.06	0.01
1.0 mg/kg/day				
13B	23.9	110	26.67	1.06
14B	24.8	101.5	35.17	1.34
15B	25.55	108	28.67	1.06
16B	28.7	101	35.67	1.18
17B	26.05	109	27.67	1.01
18B	28.7	108.5	28.17	0.93
Average	26.28	106.33	30.34	1.10
SD	2.01	4.00	4.00	0.15
3.0 mg/kg/day				
19B	25.15	110.5	26.17	2.95
20B	30.05	102	34.67	3.28
21B	27.85	106.5	30.17	3.08
22B	25.1	106	30.67	3.47
23B	28.35	107	29.67	2.97
24B	24.1	112	24.67	2.91
Average	26.77	107.33	29.34	3.11
SD	2.32	3.54	3.54	0.22
30.0 mg/kg/day				
25B	31.45	101.5	35.17	34.03
26B	26.15	110	26.67	31.03
27B	27.1	107	29.67	33.31
28B	27.25	105.5	31.17	34.81
29B	30.45	97.5	39.17	39.14
30B	30.05	99	37.67	38.14
Average	28.74	103.42	33.25	35.08
SD	2.17	4.87	4.87	3.05

Date: 06/04/98

120-Day IP Parameters #1
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1B	28.75	107	27.75	N/A
2B	26.85	104.5	30.25	N/A
3B	26.65	105.5	29.25	N/A
4B	25.9	101	33.75	N/A
5B	29.3	102.5	32.25	N/A
6B	28.65	100	34.75	N/A
Average	27.68	103.42	31.33	N/A
SD	1.39	2.71	2.71	N/A
0.1 mg/kg/day				
7B	34.6	104.5	30.25	0.09
8B	28.55	102.5	32.25	0.11
9B	27.7	104.5	30.25	0.11
10B	27.95	102	32.75	0.11
11B	27.95	104	30.75	0.11
12B	22.1	110.5	24.25	0.11
Average	28.14	104.67	30.08	0.11
SD	3.97	3.04	3.04	0.01
1.0 mg/kg/day				
13B	23.75	106.5	28.25	1.13
14B	24.2	22	112.75	***
15B	27.2	105.5	29.25	1.02
16B	29.45	105.5	29.25	0.94
17B	27.1	108.5	26.25	0.92
18B	29.95	106.5	28.25	0.89
Average	26.94	92.42	42.33	0.98
SD	2.57	34.51	34.51	0.09
3.0 mg/kg/day				
19B	26	109	25.75	2.90
20B	32	103.5	31.25	2.86
21B	28.75	108	26.75	2.72
22B	26.35	109.5	25.25	2.80
23B	29.95	107	27.75	2.71
24B	24.4	115	19.75	2.37
Average	27.91	108.67	26.08	2.73
SD	2.83	3.76	3.76	0.19
30.0 mg/kg/day				
25B	33.65	100	34.75	32.20
26B	27.25	108	26.75	30.61
27B	28.2	106	28.75	31.79
28B	27.3	107.5	27.25	31.12
29B	31.1	104.5	30.25	30.33
30B	30.3	106.5	28.25	29.07
Average	29.63	105.42	29.33	30.85
SD	2.53	2.92	2.92	1.12

Date: 06/11/98

120-Day IP Parameters #1
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1B	30.9	111.5	27.5	N/A
2B	27.95	109	30	N/A
3B	26.5	110.5	28.5	N/A
4B	26.35	107.5	31.5	N/A
5B	30.1	106	33	N/A
6B	29	111	28	N/A
Average	28.47	109.25	29.75	N/A
SD	1.87	2.16	2.16	N/A
0.1 mg/kg/day				
7B	36.5	107	32	0.09
8B	30.95	106.5	32.5	0.10
9B	29.7	108	31	0.10
10B	29.05	106.5	32.5	0.11
11B	29.8	106.5	32.5	0.11
12B	22.6	114.5	24.5	0.11
Average	29.77	108.17	30.83	0.10
SD	4.44	3.16	3.16	0.01
1.0 mg/kg/day				
13B	24.45	110	29	1.16
14B	25.2	106.5	32.5	1.26
15B	29.1	107	32	1.08
16B	29.5	108.5	30.5	1.01
17B	28.5	110.5	28.5	0.98
18B	31.2	110.5	28.5	0.89
Average	27.99	108.83	30.17	1.06
SD	2.62	1.78	1.78	0.13
3.0 mg/kg/day				
19B	26.75	113	26	2.97
20B	33.3	107	32	2.93
21B	29.45	109	30	3.11
22B	27.35	108	31	3.46
23B	30.65	110	29	2.89
24B	24.6	113.5	25.5	3.17
Average	28.68	110.08	28.92	3.09
SD	3.10	2.65	2.65	0.21
30.0 mg/kg/day				
25B	35.85	102.5	36.5	32.94
26B	27.15	111	28	33.37
27B	29.4	108	31	34.12
28B	27.7	110	29	33.88
29B	32.45	105.5	33.5	33.40
30B	31.35	108.5	30.5	31.48
Average	30.65	107.58	31.42	33.20
SD	3.26	3.12	3.12	0.94

Date: 06/18/98

120-Day IP Parameters #1
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1B	30.65	115	19	N/A
2B	28.45	107.5	26.5	N/A
3B	26.8	107.5	26.5	N/A
4B	27.05	108	26	N/A
5B	31.3	105	29	N/A
6B	29.25	111	23	N/A
Average	28.92	109.00	25.00	N/A
SD	1.84	3.51	3.51	N/A
0.1 mg/kg/day				
7B	38.3	109	25	0.07
8B	32.05	108.5	25.5	0.09
9B	31.1	108.5	25.5	0.09
10B	29.7	107.5	26.5	0.10
11B	30.85	109.5	24.5	0.09
12B	23.3	106.5	27.5	0.13
Average	30.88	108.25	25.75	0.09
SD	4.80	1.08	1.08	0.02
1.0 mg/kg/day				
13B	25.65	110	24	0.96
14B	26.4	107.5	26.5	1.03
15B	30.2	108	26	0.88
16B	30.6	104	30	1.00
17B	29.35	110.5	23.5	0.82
18B	31.4	112	22	0.72
Average	28.93	108.67	25.33	0.90
SD	2.36	2.82	2.82	0.12
3.0 mg/kg/day				
19B	26.75	111	23	2.66
20B	34.45	105.5	28.5	2.56
21B	30.2	110	24	2.46
22B	28.7	104.5	29.5	3.18
23B	31.45	110	24	2.36
24B	24.45	113	21	2.66
Average	29.33	109.00	25.00	2.65
SD	3.53	3.30	3.30	0.29
30.0 mg/kg/day				
25B	37.05	107	27	24.36
26B	27	111	23	28.48
27B	30	105.5	28.5	31.76
28B	29.55	102	32	36.20
29B	34.15	106.5	27.5	26.92
30B	33.7	103	31	30.75
Average	31.91	105.83	28.17	29.74
SD	3.69	3.20	3.20	4.13

Date: 4/01/98

120-Day IP Parameters #2
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1E	21	108	21.83	N/A
2E	19.3	110.5	19.33	N/A
3E	20.9	106.5	23.33	N/A
4E	20.7	102	27.83	N/A
5E	19.95	107.5	22.33	N/A
6E	21.5	108.5	21.33	N/A
Average	20.56	107.17	22.66	N/A
SD	0.80	2.86	2.86	N/A
0.1 mg/kg/day				
7E	20.25	106.5	23.33	0.07
8E	20.55	108.5	21.33	0.06
9E	20.2	108	21.83	0.06
10E	19.7	106	23.83	0.07
11E	20.6	107.5	22.33	0.06
12E	19.9	107.5	22.33	0.06
Average	20.20	107.33	22.50	0.06
SD	0.35	0.93	0.93	0.00
1.0 mg/kg/day				
13E	20.4	107	22.83	0.65
14E	20.1	104	25.83	0.74
15E	21.05	109	20.83	0.60
16E	22.1	106.5	23.33	0.67
17E	19.9	102.5	27.33	0.78
18E	19.95	106	23.83	0.68
Average	20.58	105.83	24.00	0.69
SD	0.85	2.29	2.29	0.07
3.0 mg/kg/day				
19E	20.05	104.5	25.33	2.17
20E	20.45	107	22.83	1.96
21E	20.1	109	20.83	1.79
22E	22.4	111	18.83	1.61
23E	20.8	108	21.83	1.87
24E	21.05	108.5	21.33	1.83
Average	20.81	108.00	21.83	1.87
SD	0.87	2.17	2.17	0.19
30.0 mg/kg/day				
25E	20.5	107	22.83	19.57
26E	21.1	110.5	19.33	16.57
27E	21.55	105	24.83	21.28
28E	20.15	106.5	23.33	20.00
29E	21.2	134	***	***
30E	20.9	100	29.83	25.57
Average	20.90	110.50	24.03	20.60
SD	0.50	12.01	3.82	3.27

Date: 4/8/98

120-Day IP Parameters #2
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1E	21.45	106.5	28.33	N/A
2E	20	110	24.83	N/A
3E	22.9	108	26.83	N/A
4E	21.3	106.5	28.33	N/A
5E	20.75	110	24.83	N/A
6E	23.35	106.5	28.33	N/A
Average	21.63	107.92	26.91	N/A
SD	1.28	1.72	1.72	N/A
0.1 mg/kg/day				
7E	20.7	108	26.83	0.08
8E	21.05	112	22.83	0.07
9E	21.15	107	27.83	0.08
10E	20.8	110	24.83	0.07
11E	21.55	112	22.83	0.07
12E	21.1	108.5	26.33	0.08
Average	21.06	109.58	25.25	0.07
SD	0.30	2.11	2.11	0.01
1.0 mg/kg/day				
13E	20.6	111	23.83	0.68
14E	21.25	103.5	31.33	0.90
15E	22.55	110	24.83	0.71
16E	23.45	111	23.83	0.68
17E	20.45	107.5	27.33	0.78
18E	20.7	108.5	26.33	0.75
Average	21.50	108.58	26.25	0.75
SD	1.23	2.85	2.85	0.08
3.0 mg/kg/day				
19E	21.15	107	27.83	2.39
20E	21.85	107.5	27.33	2.34
21E	21.15	104	30.83	2.64
22E	23.75	18	***	***
23E	21.65	109.5	25.33	2.17
24E	21.55	107	27.83	2.39
Average	21.85	92.17	27.83	2.39
SD	0.97	36.38	1.97	0.17
30.0 mg/kg/day				
25E	20.95	115	19.83	17.00
26E	21.85	110	24.83	21.28
27E	22.05	107.5	27.33	23.43
28E	21.4	107	27.83	23.85
29E	22	110	24.83	21.28
30E	21.55	101	33.83	29.00
Average	21.63	108.42	26.41	22.64
SD	0.42	4.61	4.61	3.95

Date: 4/15/98

120-Day IP Parameters #2
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1E	22.05	102	28	N/A
2E	20.5	102.5	27.5	N/A
3E	23.25	105.5	24.5	N/A
4E	21.7	104	26	N/A
5E	21.15	102	28	N/A
6E	24.95	102	28	N/A
Average	22.27	103.00	27.00	N/A
SD	1.61	1.45	1.45	N/A
0.1 mg/kg/day				
7E	21.35	100	30	0.11
8E	22.2	106.5	23.5	0.08
9E	21.65	86	44	0.16
10E	21.25	95	35	0.13
11E	21.4	109	21	0.08
12E	21.15	70	60	0.22
Average	21.50	94.42	35.58	0.13
SD	0.38	14.54	14.54	0.05
1.0 mg/kg/day				
13E	21.25	110.5	19.5	0.72
14E	22.15	102	28	0.99
15E	22.8	106.5	23.5	0.81
16E	24.2	106	24	0.78
17E	21	102	28	1.05
18E	21	105	25	0.94
Average	22.07	105.33	24.67	0.88
SD	1.27	3.19	3.19	0.13
3.0 mg/kg/day				
19E	21.65	104	26	2.90
20E	22.1	107.5	22.5	2.45
21E	21.75	102.5	27.5	3.05
22E	23.7	104	26	2.64
23E	22.55	108	22	2.35
24E	22.05	90	40	4.37
Average	22.30	102.67	27.33	2.96
SD	0.75	6.57	6.57	0.74
30.0 mg/kg/day				
25E	21.15	109	21	23.40
26E	22.35	106	24	25.31
27E	22.95	104	26	26.70
28E	22.25	102	28	29.66
29E	22.5	107.5	22.5	23.57
30E	22.85	99.5	30.5	31.46
Average	22.34	104.67	25.33	26.69
SD	0.65	3.54	3.54	3.29

Date: 4/22/98

120-Day IP Parameters #2
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1E	22.5	107.5	26.17	N/A
2E	21.25	109	24.67	N/A
3E	23.2	110	23.67	N/A
4E	22.85	104.5	29.17	N/A
5E	22.15	104	29.67	N/A
6E	26.25	102.5	31.17	N/A
Average	23.03	106.25	27.42	N/A
SD	1.71	3.01	3.01	N/A
0.1 mg/kg/day				
7E	22	105	28.67	0.10
8E	23.15	107.5	26.17	0.09
9E	21.9	103.5	30.17	0.10
10E	21.4	106	27.67	0.10
11E	21.7	110	23.67	0.08
12E	21.55	105.5	28.17	0.10
Average	21.95	106.25	27.42	0.10
SD	0.63	2.25	2.25	0.01
1.0 mg/kg/day				
13E	22.3	105	28.67	1.01
14E	22.4	99.5	34.17	1.20
15E	22.8	107	26.67	0.92
16E	24.1	110	23.67	0.78
17E	21.7	101	32.67	1.19
18E	21.3	107.5	26.17	0.97
Average	22.43	105.00	28.67	1.01
SD	0.98	4.04	4.04	0.16
3.0 mg/kg/day				
19E	22	105	28.67	3.09
20E	21.95	107.5	26.17	2.82
21E	22.15	103.5	30.17	3.23
22E	23.65	107.5	26.17	2.62
23E	23.05	109	24.67	2.53
24E	22.95	105	28.67	2.96
Average	22.63	106.25	27.42	2.87
SD	0.69	2.07	2.07	0.27
30.0 mg/kg/day				
25E	22.1	110.5	23.17	25.50
26E	23.6	106.5	27.17	28.00
27E	23.85	109.5	24.17	24.65
28E	23	107	26.67	28.20
29E	23.35	106.5	27.17	28.30
30E	23.45	104	29.67	30.77
Average	23.23	107.33	26.34	27.57
SD	0.62	2.34	2.34	2.20

Date: 4/29/98

120-Day IP Parameters #2
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1E	23.15	98	40.83	N/A
2E	22.15	107.5	31.33	N/A
3E	23.65	103	35.83	N/A
4E	24.15	N/A	N/A	N/A
5E	23.1	N/A	N/A	N/A
6E	27.35	104.5	34.33	N/A
Average	23.93	103.25	35.58	N/A
SD	1.80	3.97	3.97	N/A
0.1 mg/kg/day				
7E	23	107	31.83	0.11
8E	24.1	110.5	28.33	0.10
9E	23.15	105	33.83	0.12
10E	22.65	108.5	30.33	0.11
11E	23.6	110	28.83	0.10
12E	22.6	108	30.83	0.11
Average	23.18	108.17	30.66	0.11
SD	0.58	2.02	2.02	0.01
1.0 mg/kg/day				
13E	23.25	109	29.83	1.06
14E	22.9	98	40.83	1.48
15E	23.65	108	30.83	1.08
16E	24.55	110	28.83	0.97
17E	22.9	102	36.83	1.33
18E	22.25	107.5	31.33	1.17
Average	23.25	105.75	33.08	1.18
SD	0.79	4.71	4.71	0.19
3.0 mg/kg/day				
19E	23.2	103	35.83	3.87
20E	23	110	28.83	3.14
21E	23.1	105	33.83	3.67
22E	24.65	108.5	30.33	3.08
23E	23.95	108.5	30.33	3.18
24E	23.7	107	31.83	3.37
Average	23.60	107.00	31.83	3.39
SD	0.63	2.59	2.59	0.32
30.0 mg/kg/day				
25E	23.45	111	27.83	29.75
26E	25.05	106.5	32.33	32.36
27E	24.4	108.5	30.33	31.16
28E	23.85	110	28.83	30.31
29E	25.1	109.5	29.33	29.30
30E	23.65	105	33.83	35.86
Average	24.25	108.42	30.41	31.46
SD	0.71	2.27	2.27	2.42

Date: 5/13/98

120-Day IP Parameters #2
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1E	24.05	104	28.33	N/A
2E	23.95	102	30.33	N/A
3E	23.35	107.5	24.83	N/A
4E	25.1	102.5	29.83	N/A
5E	24.75	105.5	26.83	N/A
6E	30.95	103.5	28.83	N/A
Average	25.36	104.17	28.16	N/A
SD	2.81	2.04	2.04	N/A
0.1 mg/kg/day				
7E	23.9	101	31.33	0.12
8E	24.2	107.5	24.83	0.09
9E	24.15	102	30.33	0.11
10E	22.3	106.5	25.83	0.10
11E	24.9	109	23.33	0.08
12E	23.55	102	30.33	0.11
Average	23.83	104.67	27.66	0.10
SD	0.87	3.40	3.40	0.01
1.0 mg/kg/day				
13E	23.8	104	28.33	1.07
14E	24.55	97	35.33	1.29
15E	24.8	106	26.33	0.95
16E	25.85	106	26.33	0.91
17E	23.55	103	29.33	1.12
18E	22.95	106.5	25.83	1.01
Average	24.25	103.75	28.58	1.06
SD	1.03	3.57	3.57	0.14
3.0 mg/kg/day				
19E	24.8	97	35.33	3.82
20E	24.25	106	26.33	2.91
21E	23.7	106	26.33	2.98
22E	25.2	107	25.33	2.69
23E	24.9	107	25.33	2.72
24E	24.95	106.5	25.83	2.77
Average	24.63	104.92	27.41	2.98
SD	0.55	3.90	3.90	0.42
30.0 mg/kg/day				
25E	24	108.5	23.83	26.92
26E	24.85	106	26.33	28.72
27E	26.3	106.5	25.83	26.62
28E	24.75	108.5	23.83	26.10
29E	24.95	104.5	27.83	30.24
30E	25.15	99	33.33	35.92
Average	25.00	105.50	26.83	29.09
SD	0.75	3.54	3.54	3.69

Date: 5/20/98

120-Day IP Parameters #2
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1E	23.55	105	29	N/A
2E	24.6	103.5	30.5	N/A
3E	23.6	104	30	N/A
4E	25.5	101	33	N/A
5E	24.2	103.5	30.5	N/A
6E	30.85	103.5	30.5	N/A
Average	25.08	103.42	30.58	N/A
SD	2.77	1.32	1.32	N/A
0.1 mg/kg/day				
7E	24.8	103	31	0.11
8E	24.85	106	28	0.10
9E	24.45	102.5	31.5	0.11
10E	22.8	105.5	28.5	0.11
11E	25.35	109.5	24.5	0.08
12E	23.7	104	30	0.11
Average	24.33	105.08	28.92	0.10
SD	0.93	2.56	2.56	0.01
1.0 mg/kg/day				
13E	24.05	104.5	29.5	1.10
14E	24.85	100	34	1.22
15E	24.85	103.5	30.5	1.10
16E	26.5	105	29	0.98
17E	24	100	34	1.26
18E	23.15	107.5	26.5	1.02
Average	24.57	103.42	30.58	1.11
SD	1.14	2.96	2.96	0.11
3.0 mg/kg/day				
19E	25.7	97	37	3.84
20E	24.05	104.5	29.5	3.27
21E	23.95	104	30	3.34
22E	25.2	106	28	2.96
23E	25.35	103	31	3.26
24E	25.55	104.5	29.5	3.08
Average	24.97	103.17	30.83	3.29
SD	0.77	3.17	3.17	0.30
30.0 mg/kg/day				
25E	24.15	106	28	30.68
26E	25	102.5	31.5	33.35
27E	26.2	107	27	27.27
28E	24.4	104.5	29.5	32.00
29E	24.7	103	31	33.21
30E	25.6	102.5	31.5	32.56
Average	25.01	104.25	29.75	31.51
SD	0.77	1.92	1.92	2.29

Date: 5/27/98

120-Day IP Parameters #2
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1E	23.9	108	25.17	N/A
2E	25.9	101.5	31.67	N/A
3E	24.4	107	26.17	N/A
4E	27.3	104	29.17	N/A
5E	25.05	106	27.17	N/A
6E	32.45	101.5	31.67	N/A
Average	26.50	104.67	28.50	N/A
SD	3.15	2.79	2.79	N/A
0.1 mg/kg/day				
7E	26.7	105.5	27.67	0.09
8E	26.4	106.5	26.67	0.09
9E	25.9	104	29.17	0.10
10E	23.8	109	24.17	0.09
11E	26.75	105.5	27.67	0.09
12E	24.6	105.5	27.67	0.10
Average	25.69	106.00	27.17	0.09
SD	1.22	1.67	1.67	0.00
1.0 mg/kg/day				
13E	24.85	105	28.17	1.01
14E	26.05	100	33.17	1.14
15E	26.15	91.5	41.67	1.42
16E	27.25	105.5	27.67	0.91
17E	25.95	103	30.17	1.04
18E	24.75	104.5	28.67	1.03
Average	25.83	101.58	31.59	1.09
SD	0.93	5.32	5.32	0.18
3.0 mg/kg/day				
19E	27.2	96	37.17	3.81
20E	25.8	104	29.17	3.15
21E	24.9	107.5	25.67	2.87
22E	26.75	104	29.17	3.04
23E	26.85	104.5	28.67	2.97
24E	26.2	109	24.17	2.57
Average	26.28	104.17	29.00	3.07
SD	0.84	4.50	4.50	0.41
30.0 mg/kg/day				
25E	25.45	109.5	23.67	25.51
26E	26.05	106	27.17	28.61
27E	26.7	111.5	21.67	22.26
28E	25.9	109	24.17	25.60
29E	26.65	107	26.17	26.93
30E	26.75	103	30.17	30.94
Average	26.25	107.67	25.50	26.64
SD	0.53	2.99	2.99	2.96

Date: 6/3/98

120-Day IP Parameters #2
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1E	24.8	109.5	24	N/A
2E	27	110	23.5	N/A
3E	24.15	110	23.5	N/A
4E	28.65	108.5	25	N/A
5E	25.4	108	25.5	N/A
6E	35.3	110	23.5	N/A
Average	27.55	109.33	24.17	N/A
SD	4.13	0.88	0.88	N/A
0.1 mg/kg/day				
7E	28.25	105.5	28	0.09
8E	27.2	110	23.5	0.08
9E	27.7	106	27.5	0.09
10E	24.2	110.5	23	0.09
11E	28.2	109.5	24	0.08
12E	25.3	108	25.5	0.10
Average	26.81	108.25	25.25	0.09
SD	1.68	2.12	2.12	0.01
1.0 mg/kg/day				
13E	25.55	109	24.5	0.91
14E	26.55	100	33.5	1.20
15E	27	105.5	28	0.99
16E	27.6	109.5	24	0.83
17E	27.35	103.5	30	1.05
18E	25.15	107	26.5	1.00
Average	26.53	105.75	27.75	1.00
SD	0.99	3.59	3.59	0.13
3.0 mg/kg/day				
19E	28.6	99	34.5	3.52
20E	28	109.5	24	2.50
21E	25.45	105.5	28	3.21
22E	28.3	110	23.5	2.42
23E	28.25	108.5	25	2.58
24E	26.85	108	25.5	2.77
Average	27.58	106.75	26.75	2.83
SD	1.20	4.11	4.11	0.44
30.0 mg/kg/day				
25E	26.45	109	24.5	26.90
26E	26.65	107	26.5	28.87
27E	27.5	102.5	31	32.73
28E	26.95	110.5	23	24.78
29E	28.6	104.5	29	29.44
30E	29.75	31	102.5	***
Average	27.65	94.08	39.42	28.54
SD	1.29	31.04	31.04	2.97

Date: 05/08/98

14-Day "I"
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1I	21	109.5	23.83	N/A
2I	21.8	105.5	27.83	N/A
3I	20.1	101	32.33	N/A
4I	19.9	110.5	22.83	N/A
5I	19.6	110	23.33	N/A
6I	22.2	108	25.33	N/A
Average	20.77	107.42	25.91	N/A
SD	1.07	3.63	3.63	N/A
0.1 mg/kg/day				
7I	21.8	110	23.33	0.08
8I	20.9	109	24.33	0.08
9I	21.5	107	26.33	0.09
10I	21.5	112	21.33	0.07
11I	20.4	127	11	0.13
12I	20.7	109	24.33	0.08
Average	21.13	112.33	21.78	0.09
SD	0.55	7.37	5.52	0.02
1.0 mg/kg/day				
13I	21.2	95	38.33	1.32
14I	21.2	107	26.33	0.90
15I	21.8	110.5	22.83	0.76
16I	20.2	106	27.33	0.99
17I	20	108	25.33	0.92
18I	20.8	114.5	18.83	0.66
Average	20.87	106.83	26.50	0.93
SD	0.68	6.55	6.55	0.23
3.0 mg/kg/day				
19I	19.8	115	18.33	1.95
20I	20.8	108	25.33	2.57
21I	21.6	109	24.33	2.38
22I	20.5	108.5	24.83	2.56
23I	19.7	113.5	19.83	2.12
24I	20.1	109.5	23.83	2.50
Average	20.42	110.58	22.75	2.35
SD	0.71	2.92	2.92	0.25
30.0 mg/kg/day				
25I	20.9	110	23.33	23.32
26I	22.7	103	30.33	27.92
27I	19.8	109.5	23.83	25.15
28I	20.7	109	24.33	24.56
29I	17.1	112	21.33	26.06
30I	21.1	103	30.33	30.03
Average	20.38	107.75	25.58	26.17
SD	1.86	3.82	3.82	2.44

Total volume consumed is calculated as the amount of drinking water consumed in a seven day period minus the average amount of water loss due to cage handling and evaporation.

Date: 05/15/98

14-Day "I"
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1I	21.1	110	27.83	N/A
2I	22.8	107.5	30.33	N/A
3I	20.5	104.5	33.33	N/A
4I	21.4	109	28.83	N/A
5I	19.6	111.5	26.33	N/A
6I	24	111	26.83	N/A
Average	21.57	108.92	28.91	N/A
SD	1.59	2.60	2.60	N/A
0.1 mg/kg/day				
7I	21.8	115	22.83	0.08
8I	23.2	107	30.83	0.10
9I	21.7	109.5	28.33	0.10
10I	22	109.5	28.33	0.10
11I	21.9	111	26.83	0.09
12I	21	111.5	26.33	0.09
Average	21.83	110.58	27.25	0.09
SD	0.71	2.67	2.67	0.01
1.0 mg/kg/day				
13I	21.3	97.5	40.33	1.41
14I	22.5	110.5	27.33	0.90
15I	23.4	111.5	26.33	0.84
16I	23.2	107	30.83	0.99
17I	20.9	112	25.83	0.92
18I	20.7	111	26.83	0.96
Average	22.00	106.25	29.58	1.00
SD	1.19	5.58	5.58	0.20
3.0 mg/kg/day				
19I	21.8	116.5	21.33	2.14
20I	20.6	112	25.83	2.74
21I	22	110	27.83	2.76
22I	21.7	111	26.83	2.70
23I	20	116.5	21.33	2.33
24I	21.4	106.5	31.33	3.20
Average	21.25	112.08	25.75	2.65
SD	0.78	3.89	3.89	0.37
30.0 mg/kg/day				
25I	21.5	109.5	28.33	28.66
26I	23.1	105	32.83	30.91
27I	20.4	110	27.83	29.67
28I	20.4	109	28.83	30.74
29I	19.1	114	23.83	27.14
30I	22.3	112	25.83	25.19
Average	21.13	109.92	27.91	28.72
SD	1.45	3.04	3.04	2.22

Total volume consumed is calculated as the amount of drinking water consumed in a seven day period minus the average amount of water loss due to cage handling and evaporation.

Date: 05/26/98

14-Day "J"
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1J	21.8	103	29	N/A
2J	21.5	106	26	N/A
3J	21.1	110	22	N/A
4J	21.3	107	25	N/A
5J	21.4	106.5	25.5	N/A
6J	22.4	107	25	N/A
Average	21.58	106.58	25.42	N/A
SD	0.46	2.25	2.25	N/A
0.1 mg/kg/day				
7J	22.5	103.5	28.5	0.10
8J	23.5	107	25	0.08
9J	21.5	108.5	23.5	0.08
10J	17.5	109.5	22.5	0.10
11J	21.9	108.5	23.5	0.08
12J	21.6	103	29	0.10
Average	21.42	106.67	25.33	0.09
SD	2.06	2.77	2.77	0.01
1.0 mg/kg/day				
13J	20.6	112.5	19.5	0.70
14J	23	100.5	31.5	1.01
15J	21.6	70	62	*
16J	23.4	101	31	0.98
17J	21.4	106	26	0.90
18J	20.1	107.5	24.5	0.90
Average	21.68	99.58	32.42	0.90
SD	1.30	15.16	15.16	0.12
3.0 mg/kg/day				
19J	22.1	100	32	3.21
20J	20	107	25	2.77
21J	20.4	112	20	2.17
22J	20.2	111.5	20.5	2.25
23J	20.6	114	18	1.94
24J	22.4	105.5	26.5	2.62
Average	20.95	106.33	23.67	2.50
SD	1.03	5.19	5.19	0.45
30.0 mg/kg/day				
25J	21.2	113	19	19.59
26J	20.3	107	25	26.92
27J	21.5	108.5	23.5	23.89
28J	20.4	105.5	26.5	28.39
29J	19.3	111	21	23.78
30J	21.1	111	21	21.75
Average	20.63	109.33	22.67	24.05
SD	0.80	2.82	2.82	3.24

Total volume consumed is calculated as the amount of drinking water consumed in seven days minus the average amount of water loss due to cage handling and evaporation.

Date: 06/02/98

14-Day "J" Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1J	22.4	106.5	28.5	N/A
2J	22.1	107	28	N/A
3J	22.1	111	24	N/A
4J	21.8	113	22	N/A
5J	21.5	110	25	N/A
6J	22.8	107.5	27.5	N/A
Average	22.12	109.17	25.83	N/A
SD	0.45	2.58	2.58	N/A
0.1 mg/kg/day				
7J	24.1	103	32	0.10
8J	24.3	108	27	0.08
9J	22.6	111.5	23.5	0.08
10J	19.1	111	24	0.10
11J	23.2	108.5	26.5	0.09
12J	23.2	106	29	0.10
Average	22.75	108.00	27.00	0.09
SD	1.90	3.18	3.18	0.01
1.0 mg/kg/day				
13J	21.2	113	22	0.80
14J	24.6	110.5	24.5	0.77
15J	21.6	70	65	*
16J	23.9	111	24	0.78
17J	20.8	112	23	0.86
18J	21.1	111	24	0.88
Average	22.20	104.58	30.42	0.82
SD	1.62	16.97	16.97	0.05
3.0 mg/kg/day				
19J	22.9	104.5	30.5	3.00
20J	21.6	111.5	23.5	2.45
21J	21	113	22	2.36
22J	20.6	113	22	2.40
23J	22.2	114.5	20.5	2.08
24J	22.9	105.5	29.5	2.90
Average	21.87	110.33	24.67	2.53
SD	0.97	4.25	4.25	0.35
30.0 mg/kg/day				
25J	22.7	114	21	20.42
26J	21.6	109	26	26.57
27J	22.6	110	25	24.42
28J	21.4	107	28	28.88
29J	19.7	111	24	26.89
30J	22.2	109	26	25.85
Average	21.70	110.00	25.00	25.50
SD	1.11	2.37	2.37	2.88

Total volume consumed is calculated as the amount of drinking water consumed in seven days minus the average amount of water loss due to cage handling and evaporation.

Date: 06/22/98

14-Day CTL "M"
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1M	21.2	115.5	17.83	N/A
2M	21.4	105.5	27.83	N/A
3M	19.1	109.5	23.83	N/A
4M	20.1	109	24.33	N/A
5M	20	110	23.33	N/A
6M	19.7	107	26.33	N/A
Average	20.25	109.42	23.91	N/A
SD	0.89	3.43	3.43	N/A
0.1 mg/kg/day				
7M	19.7	105.5	27.83	0.09
8M	21.2	108	25.33	0.08
9M	19.1	23	110.33	*
10M	20.6	110.5	22.83	0.07
11M	18.2	115.5	17.83	0.07
12M	20.1	109.5	23.83	0.08
Average	19.82	95.33	38.00	0.08
SD	1.07	35.59	35.59	0.01
1.0 mg/kg/day				
13M	19.3	105	28.33	0.95
14M	19.4	110	23.33	0.78
15M	19.4	109	24.33	0.82
16M	18.7	107.5	25.83	0.90
17M	20	105	28.33	0.92
18M	17.4	111	22.33	0.83
Average	19.03	107.92	25.41	0.87
SD	0.90	2.54	2.54	0.07
3.0 mg/kg/day				
19M	19	102.5	30.83	3.20
20M	18.2	103.5	29.83	3.23
21M	20.4	107.5	25.83	2.50
22M	19.2	105	28.33	2.91
23M	20	104.5	28.83	2.84
24M	20.6	109	24.33	2.33
Average	19.57	105.33	28.00	2.83
SD	0.92	2.45	2.46	0.37
30.0 mg/kg/day				
25M	20.6	106.5	26.83	25.26
26M	18.5	111	22.33	23.41
27M	19.5	109.5	23.83	23.70
28M	17.9	115	18.33	19.86
29M	20.8	104.5	28.83	26.88
30M	17.9	111.5	21.83	23.65
Average	19.20	109.67	23.66	23.79
SD	1.30	3.75	3.75	2.34

Total volume consumed is calculated as the amount of drinking water consumed in seven days minus the average amount of water loss due to cage handling and evaporation.

Date: 06/29/98

14-Day CTL "M"
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1M	22.1	117.5	16.5	N/A
2M	22.8	107.5	26.5	N/A
3M	19.7	110.5	23.5	N/A
4M	20.9	111.5	22.5	N/A
5M	21.3	98	36	N/A
6M	20.9	108	26	N/A
Average	21.28	108.83	25.17	N/A
SD	1.07	6.40	6.40	N/A
0.1 mg/kg/day				
7M	20.4	110	24	0.08
8M	21.8	112	22	0.07
9M	21.3	114	20	0.07
10M	22.1	112	22	0.07
11M	18.9	117	17	0.06
12M	20.8	109	25	0.08
Average	20.88	112.33	21.67	0.07
SD	1.15	2.88	2.88	0.01
1.0 mg/kg/day				
13M	19.8	110	24	0.82
14M	20.9	112	22	0.71
15M	20.6	113	21	0.69
16M	22.2	99	35	1.07
17M	22.6	109.5	24.5	0.74
18M	19.5	113.5	20.5	0.71
Average	20.93	109.50	24.50	0.79
SD	1.25	5.39	5.39	0.14
3.0 mg/kg/day				
19M	20.2	112.5	21.5	2.24
20M	19.6	109	25	2.68
21M	21.9	110	24	2.30
22M	22.3	110	24	2.26
23M	21.6	106.5	27.5	2.67
24M	21.7	110.5	23.5	2.27
Average	21.22	109.75	24.25	2.40
SD	1.06	1.97	1.97	0.21
30.0 mg/kg/day				
25M	21.5	107	27	25.83
26M	20.1	110	24	24.56
27M	20.9	112	22	21.65
28M	19.5	114	20	21.10
29M	22.3	108	26	23.98
30M	19	116	18	19.49
Average	20.55	111.17	22.83	22.77
SD	1.25	3.49	3.49	2.40

Total volume consumed is calculated as the amount of drinking water consumed in seven days minus the average amount of water loss due to cage handling and evaporation.

Date: 6/16/98

120-Day IP Parameters #2
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1E	26.05	111.5	23.17	N/A
2E	29.15	114	20.67	N/A
3E	24.35	114	20.67	N/A
4E	30.35	113.5	21.17	N/A
5E	28.3	111	23.67	N/A
6E	38.1	111.5	23.17	N/A
Average	29.38	112.58	22.09	N/A
SD	4.79	1.39	1.39	N/A
0.1 mg/kg/day				
7E	26.65	108.5	26.17	0.11
8E	29.05	109.5	25.17	0.10
9E	27.3	109	25.67	0.11
10E	26.05	111	23.67	0.10
11E	29.75	114.5	20.17	0.08
12E	25	108	26.67	0.12
Average	27.30	110.08	24.59	0.10
SD	1.81	2.40	2.40	0.01
1.0 mg/kg/day				
13E	27.85	109.5	25.17	1.04
14E	27.2	105.5	29.17	1.23
15E	27.85	111	23.67	0.98
16E	28.4	110	24.67	1.00
17E	28.65	110	24.67	0.99
18E	26.25	130	9.15	***
Average	27.70	112.67	22.75	1.05
SD	0.87	8.70	6.93	0.11
3.0 mg/kg/day				
19E	30.55	103.5	31.17	3.53
20E	27.15	110.5	24.17	3.08
21E	25.65	109.5	25.17	3.40
22E	27.15	114.5	20.17	2.57
23E	29.8	106.5	28.17	3.27
24E	27.3	106.5	28.17	3.57
Average	27.93	108.50	26.17	3.24
SD	1.85	3.85	3.85	0.37
30.0 mg/kg/day				
25E	27.2	111	23.67	30.89
26E	27.45	109.5	25.17	32.55
27E	27.9	111	23.67	30.12
28E	28.4	112	22.67	28.34
29E	29.2	112	22.67	27.56
30E	32.2	108	26.67	29.40
Average	28.73	110.58	24.09	29.81
SD	1.85	1.56	1.56	1.80

Date: 6/24/98

120-Day IP Parameters #2
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1E	26.15	104	30.83	N/A
2E	30.65	104	30.83	N/A
3E	24.7	105.5	29.33	N/A
4E	31.85	103.5	31.33	N/A
5E	27.4	101.5	33.33	N/A
6E	38.95	102	32.83	N/A
Average	29.95	103.42	31.41	N/A
SD	5.17	1.46	1.46	N/A
0.1 mg/kg/day				
7E	28.25	40	94.83	***
8E	30.1	116	18.83	0.09
9E	28.7	99	35.83	0.11
10E	27.3	104.5	30.33	0.10
11E	30.4	105.5	29.33	0.08
12E	25.2	104	30.83	0.11
Average	28.33	94.83	40.00	0.10
SD	1.92	27.43	27.43	0.01
1.0 mg/kg/day				
13E	29	103	31.83	0.95
14E	27.85	100	34.83	1.09
15E	28.35	103.5	31.33	0.96
16E	29.6	100	34.83	1.02
17E	29.45	101	33.83	1.00
18E	26	103.5	31.33	1.05
Average	28.38	101.83	33.00	1.01
SD	1.34	1.69	1.69	0.05
3.0 mg/kg/day				
19E	32	96	38.83	3.21
20E	28.45	108	26.83	2.49
21E	25.95	102.5	32.33	3.29
22E	27.8	109.5	25.33	2.41
23E	30.1	102.5	32.33	2.84
24E	29.15	97	37.83	3.43
Average	28.91	102.58	32.25	2.95
SD	2.06	5.51	5.51	0.43
30.0 mg/kg/day				
25E	29	101.5	33.33	31.35
26E	27.75	99	35.83	35.22
27E	28.75	102	32.83	31.15
28E	29.45	105	29.83	27.63
29E	30.85	103	31.83	28.15
30E	34.55	95	39.83	31.45
Average	30.06	100.92	33.91	30.83
SD	2.42	3.50	3.50	2.74

Drinking Water Consumption Tables 90-Day AP Studies

Date: 03/26/98

90-Day IP Parameters #1
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1A	20.4	106.5	33.5	N/A
2A	20.85	109	31	N/A
3A	17.35	109	31	N/A
4A	21.45	105	35	N/A
5A	20.8	109	31	N/A
6A	20.35	103.5	36.5	N/A
Average	20.20	107.00	33.00	N/A
SD	1.45	2.39	2.39	N/A
0.1 mg/kg/day				
7A	19.4	108.5	31.5	0.09
8A	17.95	111	29	0.08
9A	21.45	105	35	0.10
10A	20.75	102	38	0.11
11A	19.4	87	53	0.15
12A	21.9	103	37	0.11
Average	20.14	102.75	37.25	0.11
SD	1.49	8.42	8.42	0.02
1.0 mg/kg/day				
13A	21.15	109	31	0.89
14A	20.5	112	28	0.80
15A	21.35	109	31	0.89
16A	21.6	121	19	0.54
17A	20.1	105	35	1.00
18A	19.8	110	30	0.86
Average	20.75	111.00	29.00	0.83
SD	0.73	5.40	5.40	0.15
3.0 mg/kg/day				
19A	20.9	109.5	30.5	2.61
20A	19.35	108	32	2.74
21A	21.2	102	38	3.26
22A	20	102.5	37.5	3.21
23A	20.95	127	13	1.11
24A	21.4	102.5	37.5	3.21
Average	20.63	108.58	31.42	2.69
SD	0.79	9.57	9.57	0.82
30.0 mg/kg/day				
25A	20.15	107	33	28.29
26A	19.15	106	34	29.14
27A	20.6	106	34	29.14
28A	22.35	102.5	37.5	32.14
29A	20.9	106	34	29.14
30A	22.2	107.5	32.5	27.86
Average	20.89	105.83	34.17	29.29
SD	1.23	1.75	1.75	1.50

Date: 04/02/98

90-Day IP Parameters #1
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1A	21.15	107	33	N/A
2A	21.5	108.5	31.5	N/A
3A	17.3	112	28	N/A
4A	22.15	104	36	N/A
5A	21.6	109	31	N/A
6A	21.35	108.5	31.5	N/A
Average	20.84	108.17	31.83	N/A
SD	1.77	2.62	2.62	N/A
0.1 mg/kg/day				
7A	20.05	109.5	30.5	0.09
8A	18.5	113	27	0.08
9A	22.65	102.5	37.5	0.11
10A	22.3	105	35	0.10
11A	20.2	108	32	0.09
12A	22.95	109	31	0.09
Average	21.11	107.83	32.17	0.09
SD	1.79	3.67	3.67	0.01
1.0 mg/kg/day				
13A	22.15	107.5	32.5	0.93
14A	21.4	112	28	0.80
15A	22.35	109.5	30.5	0.87
16A	23.35	101.5	38.5	1.10
17A	22.15	108.5	31.5	0.90
18A	20.85	111	29	0.83
Average	22.04	108.33	31.67	0.90
SD	0.86	3.72	3.72	0.11
3.0 mg/kg/day				
19A	21.9	104	36	3.09
20A	20.25	106.5	33.5	2.87
21A	22.2	103	37	3.17
22A	20.65	105	35	3.00
23A	21.35	115	25	2.14
24A	22.2	104	36	3.09
Average	21.43	106.25	33.75	2.89
SD	0.83	4.45	4.45	0.38
30.0 mg/kg/day				
25A	21.1	108.5	31.5	27.00
26A	19.9	111.5	28.5	24.43
27A	22.05	109.5	30.5	26.14
28A	23.5	107	33	28.29
29A	21.3	107	33	28.29
30A	22.75	112	28	24.00
Average	21.77	109.25	30.75	26.36
SD	1.28	2.16	2.16	1.85

Date: 04/09/98

90-Day IP Parameters #1
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1A	22.05	106.5	33.5	N/A
2A	22.25	109	31	N/A
3A	17.35	104	36	N/A
4A	22.15	105	35	N/A
5A	22.05	107	33	N/A
6A	22.25	103	37	N/A
Average	21.35	105.75	34.25	N/A
SD	1.96	2.19	2.19	N/A
0.1 mg/kg/day				
7A	20.2	105	35	0.10
8A	18.65	107	33	0.09
9A	22.95	96.5	43.5	0.12
10A	23.5	104	36	0.10
11A	20.6	99.5	40.5	0.12
12A	23.1	102	38	0.11
Average	21.50	102.33	37.67	0.11
SD	1.96	3.84	3.84	0.01
1.0 mg/kg/day				
13A	23.25	107	33	0.94
14A	21.65	106	34	0.97
15A	22.85	105	35	1.00
16A	24.2	102	38	1.09
17A	23.45	106	34	0.97
18A	21.55	109.5	30.5	0.87
Average	22.83	105.92	34.08	0.97
SD	1.05	2.46	2.46	0.07
3.0 mg/kg/day				
19A	23.3	100.5	39.5	3.39
20A	20.75	104.5	35.5	3.04
21A	23.25	109.5	30.5	2.61
22A	21.6	100	40	3.43
23A	21.1	101	39	3.34
24A	22.55	105.5	34.5	2.96
Average	22.09	103.50	36.50	3.13
SD	1.10	3.70	3.70	0.32
30.0 mg/kg/day				
25A	21.5	107	33	28.29
26A	20.65	107	33	28.29
27A	22.5	107.5	32.5	27.86
28A	24.4	103	37	31.71
29A	21.8	102	38	32.57
30A	22.9	102.5	37.5	32.14
Average	22.29	104.83	35.17	30.14
SD	1.30	2.58	2.58	2.21

Date: 04/16/98

90-Day IP Parameters #1
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1A	22.75	101	39	N/A
2A	23.05	106	34	N/A
3A	17.7	100.5	39.5	N/A
4A	22.5	103	37	N/A
5A	22.85	105	35	N/A
6A	23	105	35	N/A
Average	21.98	103.42	36.58	N/A
SD	2.10	2.29	2.29	N/A
0.1 mg/kg/day				
7A	20.9	105	35	0.10
8A	19	105.5	34.5	0.10
9A	24	100	40	0.11
10A	23.5	106.5	33.5	0.10
11A	21.5	106.5	33.5	0.10
12A	23.55	104.5	35.5	0.10
Average	22.08	104.67	35.33	0.10
SD	1.95	2.42	2.42	0.01
1.0 mg/kg/day				
13A	23.9	107.5	32.5	0.93
14A	22.05	107	33	0.94
15A	23.75	105	35	1.00
16A	24.3	106	34	0.97
17A	24.1	106.5	33.5	0.96
18A	22.3	105	35	1.00
Average	23.40	106.17	33.83	0.97
SD	0.97	1.03	1.03	0.03
3.0 mg/kg/day				
19A	24.8	103.5	36.5	3.13
20A	21.3	107	33	2.83
21A	24.35	106	34	2.91
22A	23.3	103	37	3.17
23A	21.85	109.5	30.5	2.61
24A	23.1	107	33	2.83
Average	23.12	106.00	34.00	2.91
SD	1.36	2.43	2.43	0.21
30.0 mg/kg/day				
25A	22	107.5	32.5	27.86
26A	21	107.5	32.5	27.86
27A	22.75	104.5	35.5	30.43
28A	25.65	104	36	30.86
29A	23	104	36	30.86
30A	23.5	107	33	28.29
Average	22.98	105.75	34.25	29.36
SD	1.57	1.75	1.75	1.50

Date: 04/23/98

90-Day IP Parameters #1
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1A	23.65	106	25.33	N/A
2A	23.4	108	23.33	N/A
3A	18	104	27.33	N/A
4A	23.2	104	27.33	N/A
5A	23.4	110	21.33	N/A
6A	23.35	108	23.33	N/A
Average	22.50	106.67	24.66	N/A
SD	2.21	2.42	2.42	N/A
0.1 mg/kg/day				
7A	21.85	110	21.33	0.08
8A	19.7	108	23.33	0.09
9A	25.15	104	27.33	0.09
10A	23.9	94	37.33	0.12
11A	22.35	109	22.33	0.08
12A	24.45	102	29.33	0.10
Average	22.90	104.50	26.83	0.09
SD	2.01	5.99	5.99	0.02
1.0 mg/kg/day				
13A	23.9	108	23.33	0.82
14A	22.35	108	23.33	0.88
15A	24.2	105	26.33	0.92
16A	24.9	112	19.33	0.65
17A	24.55	108	23.33	0.80
18A	23.45	107	24.33	0.87
Average	23.89	108.00	23.33	0.82
SD	0.91	2.28	2.28	0.09
3.0 mg/kg/day				
19A	25.45	106	25.33	2.51
20A	22.15	106	25.33	2.88
21A	25.05	106	25.33	2.55
22A	24.4	104	27.33	2.82
23A	22.6	110	21.33	2.38
24A	24.95	100	31.33	3.16
Average	24.10	105.33	26.00	2.71
SD	1.38	3.27	3.27	0.29
30.0 mg/kg/day				
25A	22.6	110	21.33	23.66
26A	21.65	108	23.33	27.02
27A	23.4	106	25.33	27.14
28A	26	106	25.33	24.43
29A	23.9	103	28.33	29.72
30A	24.25	108	23.33	24.12
Average	23.63	106.83	24.50	26.01
SD	1.49	2.40	2.40	2.35

Date: 04/30/98

90-Day IP Parameters #1
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1A	24.55	110	30	N/A
2A	24.05	109.5	30.5	N/A
3A	18.4	103	37	N/A
4A	24.15	104	36	N/A
5A	23.45	112	28	N/A
6A	23.7	109	31	N/A
Average	23.05	107.92	32.08	N/A
SD	2.31	3.58	3.58	N/A
0.1 mg/kg/day				
7A	22.35	111.5	28.5	0.11
8A	20.6	108.5	31.5	0.13
9A	25.5	106.5	33.5	0.11
10A	25	103.5	36.5	0.12
11A	22.75	109.5	30.5	0.11
12A	25.55	105	35	0.11
Average	23.63	107.42	32.58	0.12
SD	2.03	2.97	2.97	0.01
1.0 mg/kg/day				
13A	24.35	110	30	1.06
14A	23.05	108.5	31.5	1.18
15A	24.6	112	28	0.98
16A	25.75	108	32	1.07
17A	25.25	108.5	31.5	1.08
18A	24	109	31	1.12
Average	24.50	109.33	30.67	1.08
SD	0.95	1.47	1.47	0.06
3.0 mg/kg/day				
19A	26.1	106	34	3.45
20A	23.15	106.5	33.5	3.83
21A	25.45	110.5	29.5	3.07
22A	25	106.5	33.5	3.55
23A	23.35	109.5	30.5	3.46
24A	25.6	106	34	3.51
Average	24.78	107.50	32.50	3.48
SD	1.23	1.97	1.97	0.24
30.0 mg/kg/day				
25A	23.2	109.5	30.5	33.66
26A	22.5	109.5	30.5	34.71
27A	24	107.5	32.5	34.68
28A	26.55	105.5	34.5	33.27
29A	24.15	108.5	31.5	33.40
30A	25.1	109.5	30.5	31.12
Average	24.25	108.33	31.67	33.47
SD	1.43	1.60	1.60	1.31

Date: 05/07/98

90-Day IP Parameters #1
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1A	24.95	111	24.67	N/A
2A	25.65	107.5	28.17	N/A
3A	18.5	106	29.67	N/A
4A	24.9	105.5	30.17	N/A
5A	23.65	113	22.67	N/A
6A	25.05	109	26.67	N/A
Average	23.78	108.67	27.00	N/A
SD	2.67	2.93	2.93	N/A
0.1 mg/kg/day				
7A	22.75	110	25.67	0.10
8A	21.15	109	26.67	0.11
9A	25.7	105	30.67	0.10
10A	25.45	101	34.67	0.12
11A	23.25	106.5	29.17	0.11
12A	26.75	103	32.67	0.10
Average	24.18	105.75	29.92	0.11
SD	2.13	3.46	3.46	0.01
1.0 mg/kg/day				
13A	25.4	110	25.67	0.90
14A	23.6	110.5	25.17	0.94
15A	25.45	111.5	24.17	0.84
16A	25.95	110	25.67	0.88
17A	25.9	110	25.67	0.88
18A	24.2	111.5	24.17	0.88
Average	25.08	110.58	25.09	0.89
SD	0.96	0.74	0.74	0.03
3.0 mg/kg/day				
19A	26.1	106.5	29.17	2.97
20A	23.25	108	27.67	3.16
21A	25.65	109.5	26.17	2.71
22A	25.3	107	28.67	3.01
23A	23.95	111	24.67	2.74
24A	25.55	103.5	32.17	3.35
Average	24.97	107.58	28.09	2.99
SD	1.11	2.60	2.60	0.24
30.0 mg/kg/day				
25A	23.9	109.5	26.17	28.86
26A	22.5	112	23.67	27.73
27A	25.1	105	30.67	37.57
28A	27.4	107.5	28.17	27.10
29A	24.4	104.5	31.17	33.67
30A	26.35	109.5	26.17	26.18
Average	24.94	108.00	27.67	30.18
SD	1.75	2.90	2.90	4.47

Date: 05/14/98

90-Day IP Parameters #1
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1A	25.2	109	26.67	N/A
2A	26.3	104.5	31.17	N/A
3A	18.8	103	32.67	N/A
4A	25.1	102	33.67	N/A
5A	24.2	109.5	26.17	N/A
6A	25.3	110.5	25.17	N/A
Average	24.15	106.42	29.25	N/A
SD	2.70	3.68	3.68	N/A
0.1 mg/kg/day				
7A	23.3	108	27.67	0.10
8A	21.1	107	28.67	0.12
9A	26.3	103	32.67	0.11
10A	27.75	94	41.67	0.13
11A	23.85	106	29.67	0.11
12A	27.6	103.5	32.17	0.10
Average	24.98	103.58	32.09	0.11
SD	2.68	5.08	5.08	0.01
1.0 mg/kg/day				
13A	26.65	105	30.67	1.04
14A	23.5	108.5	27.17	1.05
15A	26.1	110	25.67	0.89
16A	26.65	104.5	31.17	1.06
17A	26.4	107	28.67	0.99
18A	24.9	109.5	26.17	0.95
Average	25.70	107.42	28.25	1.00
SD	1.26	2.31	2.31	0.07
3.0 mg/kg/day				
19A	26.4	104.5	31.17	3.18
20A	23.25	102.5	33.17	3.84
21A	26.05	108.5	27.17	2.80
22A	25.35	103.5	32.17	3.41
23A	24.2	107	28.67	3.19
24A	26.85	100	35.67	3.57
Average	25.35	104.33	31.34	3.33
SD	1.38	3.08	3.08	0.36
30.0 mg/kg/day				
25A	24.3	109	26.67	29.75
26A	22.55	109	26.67	32.06
27A	25.55	106	29.67	31.48
28A	27.4	106.5	29.17	28.86
29A	24.85	104.5	31.17	34.00
30A	27	108	27.67	27.78
Average	25.28	107.17	28.50	30.65
SD	1.80	1.81	1.81	2.29

Date: 05/21/98

90-Day IP Parameters #1
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1A	25.9	107	29	N/A
2A	26.65	105	31	N/A
3A	19.35	96	40	N/A
4A	25.5	105.5	30.5	N/A
5A	25	109	27	N/A
6A	25.25	104	32	N/A
Average	24.61	104.42	31.58	N/A
SD	2.64	4.48	4.48	N/A
0.1 mg/kg/day				
7A	24.3	109.5	26.5	0.10
8A	21.05	102.5	33.5	0.14
9A	27.45	103.5	32.5	0.11
10A	28.7	99	37	0.12
11A	26.5	103.5	32.5	0.11
12A	26.15	104.5	31.5	0.11
Average	25.69	103.75	32.25	0.11
SD	2.70	3.40	3.40	0.02
1.0 mg/kg/day				
13A	27.25	105	31	1.06
14A	23.8	108	28	1.10
15A	26.8	108	28	0.97
16A	27.75	105.5	30.5	1.02
17A	27.6	106	30	1.01
18A	25.75	109.5	26.5	0.96
Average	26.49	107.00	29.00	1.02
SD	1.50	1.76	1.76	0.05
3.0 mg/kg/day				
19A	27.3	106	30	3.01
20A	23.9	107	29	3.33
21A	26.9	108.5	27.5	2.80
22A	26.15	102.5	33.5	3.51
23A	24.8	105	31	3.43
24A	27.9	101	35	3.44
Average	26.16	105.00	31.00	3.25
SD	1.54	2.81	2.81	0.28
30.0 mg/kg/day				
25A	25.4	103	33	35.22
26A	22.95	109	27	31.89
27A	25.7	107	29	30.59
28A	27.5	104.5	31.5	31.05
29A	26.15	102	34	35.24
30A	27.15	109	27	26.96
Average	25.81	105.75	30.25	31.82
SD	1.62	3.03	3.03	3.13

Date: 05/28/98

90-Day IP Parameters #1
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1A	26.9	109.5	27.17	N/A
2A	26.7	93	43.67	N/A
3A	19.45	103.5	33.17	N/A
4A	25.85	106	30.67	N/A
5A	24.95	112.5	24.17	N/A
6A	25.75	109	27.67	N/A
Average	24.93	105.58	31.09	N/A
SD	2.78	6.90	6.90	N/A
0.1 mg/kg/day				
7A	24.9	111	25.67	0.10
8A	21.4	107	29.67	0.13
9A	28.1	104.5	32.17	0.11
10A	28	97	39.67	0.13
11A	26.7	107.5	29.17	0.10
12A	27.1	105.5	31.17	0.11
Average	26.03	105.42	31.25	0.11
SD	2.55	4.68	4.68	0.01
1.0 mg/kg/day				
13A	27.1	107.5	29.17	1.03
14A	24.45	109	27.67	1.09
15A	27.35	109.5	27.17	0.95
16A	27.95	107	29.67	1.02
17A	29.05	107	29.67	0.98
18A	26.2	110.5	26.17	0.96
Average	27.02	108.42	28.25	1.01
SD	1.57	1.46	1.46	0.05
3.0 mg/kg/day				
19A	28.05	106.5	30.17	3.08
20A	24.2	104.5	32.17	3.80
21A	27.4	106	30.67	3.20
22A	26.8	103.5	33.17	3.54
23A	25.35	107.5	29.17	3.29
24A	27.35	103	33.67	3.52
Average	26.53	105.17	31.50	3.41
SD	1.46	1.78	1.78	0.27
30.0 mg/kg/day				
25A	26.45	109.5	27.17	29.06
26A	23.3	108	28.67	34.80
27A	26	105.5	31.17	33.91
28A	27.35	104	32.67	33.79
29A	26.45	103	33.67	36.01
30A	27.5	108	28.67	29.49
Average	26.18	106.33	30.34	32.84
SD	1.52	2.56	2.56	2.88

Date: 06/04/98

90-Day IP Parameters #1
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1A	27.9	109	26.25	N/A
2A	27.15	106.5	28.75	N/A
3A	19.9	101.5	33.75	N/A
4A	26.6	102	33.25	N/A
5A	25	110	25.25	N/A
6A	25.55	106.5	28.75	N/A
Average	25.35	105.92	29.33	N/A
SD	2.87	3.51	3.51	N/A
0.1 mg/kg/day				
7A	24.95	109.5	25.75	0.10
8A	22	105.5	29.75	0.13
9A	28.45	100	35.25	0.12
10A	29.25	98	37.25	0.12
11A	24.6	106	29.25	0.11
12A	30.5	104.5	30.75	0.09
Average	26.63	103.92	31.33	0.11
SD	3.27	4.21	4.21	0.01
1.0 mg/kg/day				
13A	28.15	106.5	28.75	0.99
14A	25.15	109.5	25.75	0.99
15A	28.2	108.5	26.75	0.92
16A	28.8	103.5	31.75	1.07
17A	30.7	106.5	28.75	0.91
18A	26.9	109	26.25	0.94
Average	27.98	107.25	28.00	0.97
SD	1.86	2.23	2.23	0.06
3.0 mg/kg/day				
19A	29.45	108	27.25	2.61
20A	24.3	105	30.25	3.51
21A	28.65	104	31.25	3.07
22A	27.7	102.5	32.75	3.33
23A	25.55	109.5	25.75	2.84
24A	28.1	103	32.25	3.23
Average	27.29	105.33	29.92	3.10
SD	1.97	2.82	2.82	0.33
30.0 mg/kg/day				
25A	26.65	108.5	26.75	27.96
26A	24.1	109.5	25.75	29.76
27A	27.35	103	32.25	32.85
28A	27.75	105.5	29.75	29.86
29A	26.6	101	34.25	35.87
30A	28.75	105.5	29.75	28.83
Average	26.87	105.50	29.75	30.86
SD	1.57	3.21	3.21	2.96

Date: 06/11/98

90-Day IP Parameters #1
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1A	29	112	27	N/A
2A	28.2	110	29	N/A
3A	20.8	107.5	31.5	N/A
4A	27	107.5	31.5	N/A
5A	25.95	111.5	27.5	N/A
6A	26.45	111	28	N/A
Average	26.23	109.92	29.08	N/A
SD	2.89	1.99	1.99	N/A
0.1 mg/kg/day				
7A	25.35	114	25	0.10
8A	22.9	111.5	27.5	0.12
9A	29.55	105.5	33.5	0.11
10A	32.2	100	39	0.12
11A	25.3	107.5	31.5	0.12
12A	31.65	109	30	0.09
Average	27.83	107.92	31.08	0.11
SD	3.83	4.89	4.89	0.01
1.0 mg/kg/day				
13A	29.5	109.5	29.5	1.03
14A	25.65	111.5	27.5	1.11
15A	29.5	112.5	26.5	0.93
16A	30.65	109	30	1.01
17A	31.1	111	28	0.93
18A	27.65	112	27	1.01
Average	29.01	110.92	28.08	1.00
SD	2.03	1.39	1.39	0.07
3.0 mg/kg/day				
19A	31.7	110	29	2.77
20A	25.35	109	30	3.59
21A	31.8	102.5	36.5	3.48
22A	29.7	106	33	3.37
23A	26.25	111.5	27.5	3.18
24A	30.7	104	35	3.46
Average	29.25	107.17	31.83	3.31
SD	2.79	3.56	3.56	0.30
30.0 mg/kg/day				
25A	26.55	111.5	27.5	30.85
26A	24.85	113	26	31.16
27A	29	107.5	31.5	32.35
28A	29	107	32	32.87
29A	28.15	105.5	33.5	35.45
30A	30.25	111	28	27.57
Average	27.97	109.25	29.75	31.71
SD	1.95	2.98	2.98	2.60

Date: 04/01/98

90-Day IP Parameters #2
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1D	20.7	111.5	21.25	N/A
2D	20.65	105.5	27.25	N/A
3D	19.8	102.5	30.25	N/A
4D	20.35	101	31.75	N/A
5D	20.1	107.5	25.25	N/A
6D	20.25	107.5	25.25	N/A
Average	20.31	105.92	26.83	N/A
SD	0.34	3.80	3.80	N/A
0.1 mg/kg/day				
7D	20.9	107	25.75	0.07
8D	20.7	103	29.75	0.09
9D	20.55	107	25.75	0.07
10D	20.25	107.5	25.25	0.07
11D	20.9	107.5	25.25	0.07
12D	19.6	108.5	24.25	0.07
Average	20.48	106.75	26.00	0.07
SD	0.50	1.92	1.92	0.01
1.0 mg/kg/day				
13D	21.55	103.5	29.25	0.84
14D	20.25	106.5	26.25	0.75
15D	20.85	111	21.75	0.62
16D	21.25	99	33.75	0.96
17D	20.35	108	24.75	0.71
18D	20.55	102.5	30.25	0.86
Average	20.80	105.08	27.67	0.79
SD	0.52	4.28	4.28	0.12
3.0 mg/kg/day				
19D	20.5	109.5	23.25	1.99
20D	21.4	112.5	20.25	1.74
21D	21.75	108.5	24.25	2.08
22D	20.4	138	2	0.86
23D	20.2	110	22.75	1.95
24D	19.7	105	27.75	2.38
Average	20.66	113.92	20.04	1.83
SD	0.77	12.05	9.17	0.52
30.0 mg/kg/day				
25D	20.95	108	24.75	21.21
26D	19.7	109.5	23.25	19.93
27D	21.1	92	40.75	34.93
28D	20.35	99	33.75	28.93
29D	20.45	101	31.75	27.21
30D	21.75	97	35.75	30.64
Average	20.72	101.08	31.67	27.14
SD	0.71	6.67	6.67	5.71

Date: 04/08/98

90-Day IP Parameters #2
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1D	21.6	111	23.83	N/A
2D	21.3	107.5	27.33	N/A
3D	21.35	100	34.83	N/A
4D	21.1	100	34.83	N/A
5D	20.9	110	24.83	N/A
6D	20.9	105	29.83	N/A
Average	21.19	105.58	29.25	N/A
SD	0.28	4.80	4.80	N/A
0.1 mg/kg/day				
7D	21.35	109	25.83	0.07
8D	21.75	100.5	34.33	0.10
9D	21.35	110	24.83	0.07
10D	21.45	108.5	26.33	0.08
11D	21.35	111.5	23.33	0.07
12D	21.25	109	25.83	0.07
Average	21.42	108.08	26.75	0.08
SD	0.18	3.87	3.87	0.01
1.0 mg/kg/day				
13D	22.9	106.5	28.33	0.81
14D	21	106	28.83	0.82
15D	21.1	111.5	23.33	0.67
16D	22	100	34.83	1.00
17D	21.85	111.5	23.33	0.67
18D	21.6	105	29.83	0.85
Average	21.74	106.75	28.08	0.80
SD	0.69	4.34	4.34	0.12
3.0 mg/kg/day				
19D	20.85	110.5	24.33	2.09
20D	22.65	104.5	30.33	2.60
21D	23.1	112	22.83	1.96
22D	21.8	111.5	23.33	2.00
23D	21.75	108.5	26.33	2.26
24D	20.65	108	26.83	2.30
Average	21.80	109.17	25.66	2.20
SD	0.96	2.79	2.79	0.24
30.0 mg/kg/day				
25D	21.8	108	26.83	23.00
26D	20.55	112.5	22.33	19.14
27D	21.85	84	50.83	43.57
28D	21	110	24.83	21.28
29D	21.35	104.5	30.33	26.00
30D	22.85	104.5	30.33	26.00
Average	21.57	103.92	30.91	26.50
SD	0.80	10.24	10.24	8.78

Date: 04/15/98

90-Day IP Parameters #2
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1D	22.3	107.5	21.17	N/A
2D	21.5	103	25.67	N/A
3D	22.15	99	29.67	N/A
4D	21.5	98	30.67	N/A
5D	21.15	102	26.67	N/A
6D	21.45	102	26.67	N/A
Average	21.68	101.92	26.75	N/A
SD	0.45	3.35	3.35	N/A
0.1 mg/kg/day				
7D	22.1	122	6.67	0.02
8D	22.4	85	43.67	0.14
9D	22.2	108	20.67	0.07
10D	22.35	105.5	23.17	0.07
11D	21.25	109	19.67	0.07
12D	22.5	108	20.67	0.07
Average	22.13	106.25	22.42	0.07
SD	0.46	11.95	11.95	0.04
1.0 mg/kg/day				
13D	23.75	102	26.67	0.81
14D	21.4	79	49.67	1.68
15D	21.9	107.5	21.17	0.70
16D	22.75	95	33.67	1.07
17D	22.6	108	20.67	0.66
18D	22.2	100	28.67	0.93
Average	22.43	98.58	30.09	0.98
SD	0.81	10.75	10.75	0.38
3.0 mg/kg/day				
19D	21.65	118	10.67	1.08
20D	24	102	26.67	2.43
21D	23.65	107	21.67	2.00
22D	22.35	106	22.67	2.22
23D	22.2	105	23.67	2.33
24D	21.45	102	26.67	2.72
Average	22.55	106.67	22.00	2.13
SD	1.05	5.92	5.92	0.57
30.0 mg/kg/day				
25D	22.3	102	26.67	26.05
26D	20.75	104.5	24.17	25.37
27D	22.3	78	50.67	49.49
28D	22.05	106.5	22.17	21.90
29D	22.2	101.5	27.17	26.66
30D	23.75	99.5	29.17	26.75
Average	22.23	98.67	30.00	29.37
SD	0.95	10.41	10.41	10.02

Date: 04/22/98

90-Day IP Parameters #2
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1D	23.05	112	21.67	N/A
2D	22.2	107	26.67	N/A
3D	22.25	103	30.67	N/A
4D	22.5	101	32.67	N/A
5D	21.8	108.5	25.17	N/A
6D	22.45	104.5	29.17	N/A
Average	22.38	106.00	27.67	N/A
SD	0.41	3.99	3.99	N/A
0.1 mg/kg/day				
7D	23.25	105.5	28.17	0.10
8D	23.25	98	35.67	0.12
9D	22.8	109.5	24.17	0.08
10D	22.95	111	22.67	0.08
11D	21.85	111	22.67	0.08
12D	22.5	108.5	25.17	0.09
Average	22.77	107.25	26.42	0.09
SD	0.53	4.97	4.97	0.02
1.0 mg/kg/day				
13D	24.55	105	28.67	0.94
14D	21.7	105.5	28.17	1.05
15D	22.65	106.5	27.17	0.97
16D	23.7	100	33.67	1.15
17D	23.05	109.5	24.17	0.85
18D	22.75	104.5	29.17	1.03
Average	23.07	105.17	28.50	1.00
SD	0.97	3.09	3.09	0.10
3.0 mg/kg/day				
19D	22.85	109.5	24.17	2.58
20D	24.85	106	27.67	2.72
21D	24.25	108.5	25.17	2.54
22D	22.85	109.5	24.17	2.58
23D	22.3	106.5	27.17	2.98
24D	22.45	103	30.67	3.34
Average	23.26	107.17	26.50	2.79
SD	1.04	2.52	2.52	0.31
30.0 mg/kg/day				
25D	22.85	107.5	26.17	27.49
26D	21.6	109	24.67	27.41
27D	22.9	76	57.67	60.44
28D	23	110	23.67	24.70
29D	23.15	106	27.67	28.69
30D	23.8	103.5	30.17	30.42
Average	22.88	102.00	31.67	33.19
SD	0.72	12.94	12.94	13.48

Date: 04/29/98

90-Day IP Parameters #2
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1D	23.95	113	25.83	N/A
2D	23.15	109	29.83	N/A
3D	23	103	35.83	N/A
4D	23.4	103.5	35.33	N/A
5D	22.4	110.5	28.33	N/A
6D	23.5	106.5	32.33	N/A
Average	23.23	107.58	31.25	N/A
SD	0.52	3.97	3.97	N/A
0.1 mg/kg/day				
7D	24.1	107	31.83	0.11
8D	24.3	100.5	38.33	0.13
9D	24.4	110.5	28.33	0.09
10D	23.4	108.5	30.33	0.11
11D	22.8	111.5	27.33	0.10
12D	22.9	110	28.83	0.10
Average	23.65	108.00	30.83	0.11
SD	0.71	4.00	4.00	0.01
1.0 mg/kg/day				
13D	25.75	105.5	33.33	1.07
14D	22.3	108	30.83	1.15
15D	23.8	108.5	30.33	1.06
16D	25.25	102.5	36.33	1.19
17D	23.95	112	26.83	0.93
18D	23.95	104.5	34.33	1.19
Average	24.17	106.83	32.00	1.10
SD	1.22	3.37	3.37	0.10
3.0 mg/kg/day				
19D	23.55	111	27.83	2.96
20D	25.1	109.5	29.33	2.93
21D	24.7	112	26.83	2.72
22D	23.65	111.5	27.33	2.90
23D	23.25	110	28.83	3.11
24D	23.55	105.5	33.33	3.55
Average	23.97	109.92	28.91	3.03
SD	0.75	2.35	2.35	0.28
30.0 mg/kg/day				
25D	23.8	108.5	30.33	31.95
26D	23.2	108	30.83	33.32
27D	24	78	60.83	63.55
28D	23.75	110.5	28.33	29.91
29D	23.8	107	31.83	33.53
30D	24.7	102	36.83	37.38
Average	23.88	102.33	36.50	38.27
SD	0.49	12.25	12.25	12.62

Date: 05/06/98

90-Day IP Parameters #2
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1D	24.85	114	18.67	N/A
2D	24.1	104	28.67	N/A
3D	24.85	101.5	31.17	N/A
4D	23.85	102.5	30.17	N/A
5D	23.4	105	27.67	N/A
6D	24.85	102.5	37.5	N/A
Average	24.32	104.92	28.98	N/A
SD	0.63	4.62	6.11	N/A
0.1 mg/kg/day				
7D	24.6	102	30.67	0.11
8D	25.3	96	36.67	0.12
9D	25.8	110	22.67	0.08
10D	24.75	106.5	26.17	0.09
11D	24	108.5	24.17	0.09
12D	24.3	107	25.67	0.09
Average	24.79	105.00	27.67	0.10
SD	0.66	5.17	5.17	0.02
1.0 mg/kg/day				
13D	26.5	104	28.67	0.94
14D	23.4	103.5	29.17	1.08
15D	25	105	27.67	0.96
16D	25.85	100	32.67	1.10
17D	25.3	109.5	23.17	0.79
18D	25.3	101.5	31.17	1.07
Average	25.23	103.92	28.75	0.99
SD	1.04	3.26	3.28	0.12
3.0 mg/kg/day				
19D	24.5	106	26.67	2.82
20D	25.35	102.5	30.17	3.09
21D	25.05	109	23.67	2.45
22D	24.9	108	24.67	2.57
23D	24.2	109	23.67	2.54
24D	24.2	101.5	31.17	3.34
Average	24.70	106.00	26.67	2.80
SD	0.47	3.30	3.30	0.35
30.0 mg/kg/day				
25D	25.75	105	27.67	28.32
26D	24.25	107.5	25.17	27.36
27D	24.65	80	52.67	56.32
28D	24.45	107	25.67	27.67
29D	24.3	100	32.67	35.44
30D	25.55	103	29.67	30.61
Average	24.83	100.42	32.25	34.29
SD	0.66	10.38	10.38	11.20

Date: 05/13/98

90-Day IP Parameters #2
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1D	25.4	110.5	21.83	N/A
2D	24.75	104	28.33	N/A
3D	25.45	101.5	30.83	N/A
4D	23.65	100	32.33	N/A
5D	23.45	105	27.33	N/A
6D	25.9	100	32.33	N/A
Average	24.77	103.50	28.83	N/A
SD	1.01	4.00	4.00	N/A
0.1 mg/kg/day				
7D	24.85	104	28.33	0.10
8D	25.75	98	34.33	0.12
9D	25.65	108.5	23.83	0.08
10D	25.15	106	26.33	0.09
11D	24.8	106.5	25.83	0.09
12D	25.5	107	25.33	0.09
Average	25.28	105.00	27.33	0.10
SD	0.41	3.73	3.73	0.01
1.0 mg/kg/day				
13D	26.55	105	27.33	0.92
14D	24.7	102.5	29.83	1.08
15D	25.85	107	25.33	0.88
16D	25.4	100	32.33	1.14
17D	25.95	107.5	24.83	0.86
18D	25.65	95	37.33	1.30
Average	25.68	102.83	29.50	1.03
SD	0.62	4.76	4.76	0.18
3.0 mg/kg/day				
19D	24.8	107	25.33	2.74
20D	25.95	102	30.33	3.13
21D	25.9	107	25.33	2.62
22D	25.75	106	26.33	2.74
23D	24.3	106	26.33	2.90
24D	24.1	101.5	30.83	3.43
Average	25.13	104.92	27.41	2.93
SD	0.64	2.50	2.50	0.30
30.0 mg/kg/day				
25D	26.3	102	30.33	31.26
26D	23.85	106	26.33	29.93
27D	24.9	77	55.33	60.23
28D	24.6	105	27.33	30.12
29D	24.65	97	35.33	38.85
30D	25.7	101.5	30.83	32.52
Average	25.00	98.08	34.25	37.15
SD	0.87	10.80	10.80	11.78

Date: 05/27/98

90-Day IP Parameters #2
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1D	27.1	114	19.17	N/A
2D	27.4	104.5	28.67	N/A
3D	26.95	100	33.17	N/A
4D	24.15	102	31.17	N/A
5D	25.7	106	27.17	N/A
6D	27.45	97.5	35.67	N/A
Average	26.46	104.00	29.17	N/A
SD	1.30	5.77	5.77	N/A
0.1 mg/kg/day				
7D	27.3	103.5	29.67	0.10
8D	27.3	97	36.17	0.13
9D	27.65	106.5	26.67	0.09
10D	27.65	101	32.17	0.11
11D	27.35	110.5	22.67	0.08
12D	29	107.5	25.67	0.09
Average	27.71	104.33	28.84	0.10
SD	0.65	4.86	4.86	0.02
1.0 mg/kg/day				
13D	27.9	102.5	30.67	1.04
14D	25.55	105	28.17	1.04
15D	28.25	107	26.17	0.87
16D	26.6	100	33.17	1.18
17D	28.4	106	27.17	0.90
18D	27.6	101.5	31.67	1.08
Average	27.38	103.67	29.50	1.02
SD	1.10	2.75	2.75	0.11
3.0 mg/kg/day				
19D	26.95	106	27.17	2.81
20D	28.55	104	29.17	2.85
21D	27.3	108.5	24.67	2.52
22D	28.85	109	24.17	2.33
23D	25.55	109	24.17	2.64
24D	25.55	105	28.17	3.07
Average	27.19	106.92	26.25	2.70
SD	1.42	2.20	2.20	0.26
30.0 mg/kg/day				
25D	27.2	106	27.17	27.40
26D	25.75	106.5	26.67	28.41
27D	26.5	84	49.17	50.89
28D	25.1	107.5	25.67	28.05
29D	26.1	103	30.17	31.71
30D	26.1	106	27.17	28.55
Average	26.13	102.17	31.00	32.50
SD	0.71	9.03	9.03	9.13

Date: 06/03/98

90-Day IP Parameters #2
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1D	27.6	120	11.67	N/A
2D	28.6	110	21.67	N/A
3D	28.05	110	21.67	N/A
4D	24.55	100	31.67	N/A
5D	26.25	88	43.67	N/A
6D	29.2	105	26.67	N/A
Average	27.38	105.50	26.17	N/A
SD	1.71	10.84	10.84	N/A
0.1 mg/kg/day				
7D	28.5	108	23.67	0.08
8D	27.45	107	24.67	0.09
9D	28	112.5	19.17	0.07
10D	29.45	120.5	11.17	0.04
11D	28.75	135	***	***
12D	31.1	114	17.67	0.06
Average	28.88	116.17	19.27	0.07
SD	1.28	10.41	5.40	0.02
1.0 mg/kg/day				
13D	28.3	122	9.67	0.35
14D	26.2	132	***	***
15D	30.1	115	16.67	0.56
16D	26.95	107	24.67	0.93
17D	30.4	115	16.67	0.56
18D	29.15	120	11.67	0.41
Average	28.52	118.50	15.87	0.56
SD	1.69	8.41	5.81	0.23
3.0 mg/kg/day				
19D	27.45	113	18.67	2.03
20D	29.7	118	13.67	1.37
21D	28.2	120	11.67	1.23
22D	30.6	112	19.67	1.91
23D	26	112	19.67	2.25
24D	26.8	107	24.67	2.74
Average	28.13	113.67	18.00	1.92
SD	1.75	4.68	4.68	0.56
30.0 mg/kg/day				
25D	28.95	106.5	25.17	24.78
26D	26.85	109	22.67	24.06
27D	26.65	80	51.67	55.26
28D	25.7	110	21.67	24.03
29D	26.8	103	28.67	30.49
30D	26.75	106	25.67	27.35
Average	26.95	102.42	29.25	30.99
SD	1.07	11.25	11.25	12.14

Date: 06/10/98

90-Day IP Parameters #2
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1D	27.95	104.5	31.83	N/A
2D	29.5	109	27.33	N/A
3D	28.65	109	27.33	N/A
4D	25.1	103.5	32.83	N/A
5D	26.85	110	26.33	N/A
6D	31.2	107.5	28.83	N/A
Average	28.21	107.25	29.08	N/A
SD	2.12	2.66	2.66	N/A
0.1 mg/kg/day				
7D	28.75	111	25.33	0.09
8D	27.65	103	33.33	0.13
9D	28.95	108	28.33	0.10
10D	28.95	113	23.33	0.08
11D	29.5	115	21.33	0.08
12D	32.2	114.5	21.83	0.07
Average	29.33	110.75	25.58	0.09
SD	1.53	4.58	4.58	0.02
1.0 mg/kg/day				
13D	27.75	117	19.33	0.71
14D	27.25	111.5	24.83	0.93
15D	31.4	111	25.33	0.83
16D	27	104	32.33	1.23
17D	32	112	24.33	0.78
18D	30.5	105.5	30.83	1.04
Average	29.32	110.17	26.16	0.92
SD	2.24	4.74	4.74	0.19
3.0 mg/kg/day				
19D	27.15	112	24.33	2.74
20D	31.1	105.5	30.83	3.03
21D	29.45	107	29.33	3.04
22D	31.55	102	34.33	3.32
23D	25.95	111	25.33	2.98
24D	28	107.5	28.83	3.14
Average	28.87	107.50	28.83	3.04
SD	2.22	3.66	3.66	0.19
30.0 mg/kg/day				
25D	30	111.5	24.83	24.21
26D	27.65	110	26.33	27.85
27D	26.95	85	51.33	55.71
28D	25.85	103	33.33	37.71
29D	26.8	103	33.33	36.38
30D	27	106	30.33	32.86
Average	27.38	103.08	33.25	35.79
SD	1.41	9.53	9.53	11.01

Date: 06/16/98

90-Day IP Parameters #2
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1D	28.35	119	15.67	N/A
2D	29.1	114	20.67	N/A
3D	29.7	110	24.67	N/A
4D	25.8	107	27.67	N/A
5D	27.35	112	22.67	N/A
6D	32.4	110.5	24.17	N/A
Average	28.78	112.08	22.59	N/A
SD	2.24	4.10	4.10	N/A
0.1 mg/kg/day				
7D	29.6	108	26.67	0.11
8D	28	101	33.67	0.15
9D	29.75	106	28.67	0.12
10D	28.3	109.5	25.17	0.11
11D	30.05	112	22.67	0.09
12D	32.25	115.5	19.17	0.07
Average	29.88	108.67	26.00	0.11
SD	1.52	5.00	5.00	0.03
1.0 mg/kg/day				
13D	28.4	106	28.67	1.26
14D	26.8	109.5	25.17	1.17
15D	31.7	110.5	24.17	0.95
16D	28.25	102	32.67	1.45
17D	34	113	21.67	0.80
18D	32.05	107	27.67	1.08
Average	30.20	108.00	26.67	1.12
SD	2.78	3.86	3.86	0.23
3.0 mg/kg/day				
19D	27.8	106.5	28.17	3.70
20D	32.3	106.5	28.17	3.18
21D	30.3	109	25.67	3.09
22D	32.05	111.5	23.17	2.64
23D	25.95	111	23.67	3.33
24D	28.7	107.5	27.17	3.46
Average	29.52	108.67	26.00	3.23
SD	2.49	2.21	2.21	0.36
30.0 mg/kg/day				
25D	30.55	108.5	26.17	29.45
26D	28.4	111.5	23.17	28.04
27D	26.8	88	46.67	59.86
28D	26.25	111	23.67	31.00
29D	27.15	105.5	29.17	36.93
30D	27.7	110.5	24.17	29.99
Average	27.81	105.83	28.84	35.88
SD	1.53	9.01	9.01	12.14

Date: 06/23/98

90-Day IP Parameters #2
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1D	29.15	114.5	17.5	N/A
2D	29.3	105	27	N/A
3D	31.05	105.5	26.5	N/A
4D	25.9	105	27	N/A
5D	28.05	107	25	N/A
6D	33.45	108.5	23.5	N/A
Average	29.48	107.58	24.42	N/A
SD	2.58	3.65	3.65	N/A
0.1 mg/kg/day				
7D	31.9	109	23	0.08
8D	28.7	103	29	0.11
9D	31.3	104	28	0.10
10D	29.1	107	25	0.09
11D	31.15	111	21	0.07
12D	32.5	113	19	0.06
Average	30.78	107.83	24.17	0.08
SD	1.53	3.92	3.92	0.02
1.0 mg/kg/day				
13D	29.8	105.5	26.5	0.97
14D	26.7	106.5	25.5	1.04
15D	31	111.5	20.5	0.72
16D	29.7	101.5	30.5	1.12
17D	35.75	110.5	21.5	0.66
18D	33.55	103.5	28.5	0.93
Average	31.08	106.50	25.50	0.90
SD	3.18	3.90	3.90	0.18
3.0 mg/kg/day				
19D	29.8	109.5	22.5	2.41
20D	33.7	105.5	26.5	2.51
21D	31.4	104.5	27.5	2.80
22D	31.9	116	16	1.60
23D	26.45	110.5	21.5	2.60
24D	29.45	108.5	23.5	2.55
Average	30.45	109.08	22.92	2.41
SD	2.49	4.10	4.10	0.42
30.0 mg/kg/day				
25D	31.05	106	26	25.30
26D	29.25	108.5	23.5	24.27
27D	26.95	64	68	76.24
28D	27.35	110	22	24.30
29D	28.3	105	27	28.83
30D	30.05	103	29	29.16
Average	28.83	99.42	32.58	34.68
SD	1.59	17.53	17.53	20.47

Drinking Water Consumption Tables 14-Day AP Studies

Date: 03/27/98

14-Day IP Parameters "C"
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1C	23.9	106.5	28	N/A
2C	26.2	111.5	23	N/A
3C	22.4	104.5	30	N/A
4C	22	107	27.5	N/A
5C	23.5	104.5	30	N/A
6C	21.7	114.5	20	N/A
Average	23.28	108.08	26.42	N/A
SD	1.67	4.05	4.05	N/A
0.1 mg/kg/day				
7C	22.3	104	30.5	0.09
8C	21.9	111.5	23	0.07
9C	21.4	114.5	20	0.06
10C	22.7	104	30.5	0.09
11C	21.6	111	23.5	0.07
12C	20.9	112	22.5	0.06
Average	21.80	109.50	25.00	0.07
SD	0.64	4.43	4.43	0.01
1.0 mg/kg/day				
13C	21	106.5	28	0.80
14C	19.9	98	36.5	1.04
15C	21.6	124.5	10	0.29
16C	19.9	104	30.5	0.87
17C	20	110	24.5	0.70
18C	24.1	107.5	27	0.77
Average	21.08	108.42	26.08	0.75
SD	1.63	8.87	8.87	0.25
3.0 mg/kg/day				
19C	21.5	111.5	23	1.97
20C	22.4	106.5	28	2.40
21C	24.1	111.5	23	1.97
22C	23.5	105	29.5	2.53
23C	24.1	109	25.5	2.19
24C	22.6	104	30.5	2.61
Average	23.03	107.92	26.58	2.28
SD	1.04	3.25	3.25	0.28
30.0 mg/kg/day				
25C	21	112	22.5	19.29
26C	20.7	116	18.5	15.86
27C	22.3	110	24.5	21.00
28C	22.7	112.5	22	18.86
29C	21.2	108.5	26	22.29
30C	20.8	108.5	26	22.29
Average	21.45	111.25	23.25	19.93
SD	0.84	2.88	2.88	2.47

Total volume consumed is calculated as the amount of drinking water consumed in a seven day period minus the average amount of water loss due to cage handling and evaporation.

Date: 04/03/98

14-Day IP Parameters "C"
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1C	24.2	110	24.34	N/A
2C	25.9	114	20.34	N/A
3C	21.7	108	26.34	N/A
4C	21.9	112	22.34	N/A
5C	23.8	109	25.34	N/A
6C	22.5	114	20.34	N/A
Average	23.33	111.17	23.17	N/A
SD	1.61	2.56	2.56	N/A
0.1 mg/kg/day				
7C	23.2	110	24.34	0.07
8C	22.4	114	20.34	0.06
9C	21.1	118	16.34	0.05
10C	24	105	29.34	0.08
11C	21.9	114	20.34	0.06
12C	22.2	116	18.34	0.05
Average	22.47	112.83	21.51	0.06
SD	1.02	4.67	4.67	0.01
1.0 mg/kg/day				
13C	22.1	110	24.34	0.70
14C	21.2	113	21.34	0.61
15C	22.4	108	26.34	0.75
16C	19.5	118	16.34	0.47
17C	22.5	109	25.34	0.72
18C	24.5	112	22.34	0.64
Average	22.03	111.67	22.67	0.65
SD	1.65	3.61	3.61	0.10
3.0 mg/kg/day				
19C	21.7	114	20.34	1.74
20C	23.1	110	24.34	2.09
21C	23.7	116	18.34	1.57
22C	25.5	106	28.34	2.43
23C	24.9	113	21.34	1.83
24C	22.5	105	29.34	2.51
Average	23.57	110.67	23.67	2.03
SD	1.44	4.46	4.46	0.38
30.0 mg/kg/day				
25C	22.2	112	22.34	19.15
26C	21.7	116	18.34	15.72
27C	23.5	108	26.34	22.58
28C	24.1	114	20.34	17.43
29C	21.1	112	22.34	19.15
30C	21.3	115	19.34	16.58
Average	22.32	112.83	21.51	18.43
SD	1.22	2.86	2.86	2.45

Total volume consumed is calculated as the amount of drinking water consumed in a seven day period minus the average amount of water loss due to cage handling and evaporation.

Date: 04/14/98

14-Day CTL "F"
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1F	24.1	102.5	28	N/A
2F	22.5	102.5	28	N/A
3F	22.7	105	25.5	N/A
4F	25.3	94	36.5	N/A
5F	22.6	106	24.5	N/A
6F	23.2	106	24.5	N/A
Average	23.40	102.67	27.83	N/A
SD	1.10	4.54	4.54	N/A
0.1 mg/kg/day				
7F	24	100	30.5	0.09
8F	22.6	109	21.5	0.06
9F	24.1	109	21.5	0.06
10F	23.5	108	22.5	0.06
11F	22.9	110.5	20	0.06
12F	23.5	104	26.5	0.08
Average	23.43	106.75	23.75	0.07
SD	0.59	3.97	3.97	0.01
1.0 mg/kg/day				
13F	23.5	106	24.5	0.70
14F	23.4	102.5	28	0.80
15F	23.1	102.5	28	0.80
16F	23.3	102	28.5	0.81
17F	23.2	110.5	20	0.57
18F	23.9	108.5	22	0.63
Average	23.40	105.33	25.17	0.72
SD	0.26	3.59	3.59	0.10
3.0 mg/kg/day				
19F	23.1	99	31.5	2.70
20F	24.4	102.5	28	2.40
21F	23.4	88	42.5	3.64
22F	23.8	115	15.5	1.33
23F	24.5	108	22.5	1.93
24F	23.4	104	26.5	2.27
Average	23.77	102.75	27.75	2.38
SD	0.58	9.07	9.07	0.78
30.0 mg/kg/day				
25F	22.2	109.5	21	18.00
26F	22.8	107	23.5	20.14
27F	23.8	107	23.5	20.14
28F	24.4	108.5	22	18.86
29F	23.3	109	21.5	18.43
30F	23.2	104.5	26	22.29
Average	23.28	107.58	22.92	19.64
SD	0.77	1.83	1.83	1.57

Total volume consumed is calculated as the amount of drinking water consumed in seven days minus the average amount of water loss due to cage handling and evaporation.

Date: 04/21/98

14-Day CTL "F"
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1F	23.8	109.5	22.83	N/A
2F	22.6	105	27.33	N/A
3F	22.6	108.5	23.83	N/A
4F	24.5	110.5	21.83	N/A
5F	23.6	109	23.33	N/A
6F	22.8	108.5	23.83	N/A
Average	23.32	108.50	23.83	N/A
SD	0.78	1.87	1.87	N/A
0.1 mg/kg/day				
7F	24.3	103.5	28.83	0.10
8F	23.2	106.5	25.83	0.09
9F	24.6	114.5	17.83	0.06
10F	23.1	110.5	21.83	0.08
11F	23.1	111	21.33	0.08
12F	23.8	107	25.33	0.09
Average	23.68	108.83	23.50	0.08
SD	0.66	3.92	3.92	0.01
1.0 mg/kg/day				
13F	23.8	114.5	17.83	0.63
14F	23.7	109.5	22.83	0.81
15F	22.7	113	19.33	0.71
16F	24.1	108	24.33	0.84
17F	24.1	112	20.33	0.70
18F	23.5	116	16.33	0.58
Average	23.65	112.17	20.16	0.71
SD	0.52	3.01	3.01	0.10
3.0 mg/kg/day				
19F	23	105	27.33	3.03
20F	24.1	109	23.33	2.47
21F	24.3	101.5	30.83	3.24
22F	22.8	120	12.33	1.38
23F	23.3	114.5	17.83	1.95
24F	23.5	114	18.33	1.99
Average	23.50	110.67	21.66	2.34
SD	0.60	6.81	6.81	0.71
30.0 mg/kg/day				
25F	22.6	103.5	28.83	31.85
26F	23.7	113.5	18.83	19.83
27F	23.7	113	19.33	20.36
28F	24.8	114	18.33	18.45
29F	21.4	107.5	24.83	28.97
30F	24.6	109.5	22.83	23.17
Average	23.47	110.17	22.16	23.77
SD	1.28	4.14	4.14	5.44

Total volume consumed is calculated as the amount of drinking water consumed in seven days minus the average amount of water loss due to cage handling and evaporation.

Date: 04/17/98

14-Day "G"
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1G	21.5	97	35.34	N/A
2G	20.8	108	24.34	N/A
3G	21.4	103	29.34	N/A
4G	19.7	112	20.34	N/A
5G	19.4	91.5	40.84	N/A
6G	19.5	116.5	15.84	N/A
Average	20.38	104.67	27.67	N/A
SD	0.97	9.38	9.38	N/A
0.1 mg/kg/day				
7G	23.5	108.5	23.84	0.07
8G	20.8	108.5	23.84	0.08
9G	20.2	114	18.34	0.07
10G	22.1	112	20.34	0.07
11G	20.4	110	22.34	0.08
12G	21.5	112	20.34	0.07
Average	21.42	110.83	21.51	0.07
SD	1.24	2.21	2.21	0.01
1.0 mg/kg/day				
13G	21.2	110.5	21.84	0.73
14G	20.6	106	26.34	0.91
15G	21.4	111	21.34	0.71
16G	22.6	111.5	20.84	0.65
17G	20.5	108	24.34	0.84
18G	20.8	107	25.34	0.86
Average	21.18	109.00	23.34	0.78
SD	0.78	2.30	2.30	0.10
3.0 mg/kg/day				
19G	20.5	113	19.34	2.00
20G	22.8	107	25.34	2.35
21G	21.5	107	25.34	2.50
22G	21	109	23.34	2.35
23G	21	105	27.34	2.76
24G	21.1	105	27.34	2.74
Average	21.52	107.67	24.67	2.45
SD	0.79	3.01	3.01	0.28
30.0 mg/kg/day				
25G	19.1	110.5	21.84	23.75
26G	20.6	111.5	20.84	21.01
27G	20.2	105	27.34	28.11
28G	21.3	109.5	22.84	22.27
29G	21.2	108.5	23.84	23.36
30G	21.2	112.5	19.84	19.44
Average	20.60	109.58	22.76	22.99
SD	0.85	2.65	2.65	2.97

Total volume consumed is calculated as the amount of drinking water consumed in seven days minus the average amount of water loss due to cage handling and evaporation.

Date: 04/24/98

14-Day "G"
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1G	23.6	97	37.17	N/A
2G	21.9	106	28.17	N/A
3G	22.4	104	30.17	N/A
4G	21.9	110.5	23.67	N/A
5G	20.7	87	47.17	N/A
6G	20.3	109	25.17	N/A
Average	21.80	102.25	31.92	N/A
SD	1.19	8.84	8.84	N/A
0.1 mg/kg/day				
7G	25.3	102	32.17	0.10
8G	23	108.5	25.67	0.09
9G	21	116	18.17	0.07
10G	22.5	109	25.17	0.09
11G	21.8	108	26.17	0.09
12G	22.2	107.5	26.67	0.09
Average	22.83	108.50	25.67	0.09
SD	1.47	4.47	4.47	0.01
1.0 mg/kg/day				
13G	21.8	109	25.17	0.87
14G	23	106.5	27.67	0.91
15G	22.4	107	27.17	0.92
16G	23.9	115	19.17	0.61
17G	21.5	106.5	27.67	0.97
18G	22.6	105.5	28.67	0.96
Average	22.53	108.25	25.92	0.87
SD	0.86	3.50	3.50	0.14
3.0 mg/kg/day				
19G	21.4	110.5	23.67	2.52
20G	23.5	110.5	23.67	2.30
21G	22.6	106	28.17	2.84
22G	22.4	109.5	24.67	2.51
23G	22	103.5	30.67	3.18
24G	21.7	106	28.17	2.96
Average	22.27	107.67	26.50	2.72
SD	0.75	2.91	2.91	0.33
30.0 mg/kg/day				
25G	20.2	110.5	23.67	25.86
26G	21.7	112.5	21.67	22.04
27G	22.2	105.5	28.67	28.50
28G	21.9	113	21.17	21.34
29G	22.9	107.5	26.67	25.71
30G	21.1	115.5	18.67	19.53
Average	21.67	110.75	23.42	23.83
SD	0.93	3.71	3.71	3.39

Total volume consumed is calculated as the amount of drinking water consumed in seven days minus the average amount of water loss due to cage handling and evaporation.

Date: 05/05/98

14-Day "H"
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1H	20.4	105	30.67	N/A
2H	21	103	32.67	N/A
3H	22.1	106	29.67	N/A
4H	20	105	30.67	N/A
5H	21	105	30.67	N/A
6H	21.9	103.5	32.17	N/A
Average	21.07	104.58	31.09	N/A
SD	0.82	1.11	1.11	N/A
0.1 mg/kg/day				
7H	21.1	103	32.67	0.11
8H	21.2	108.5	27.17	0.09
9H	19.7	110	25.67	0.09
10H	19.9	109	26.67	0.10
11H	22.7	106	29.67	0.09
12H	21.4	101	34.67	0.12
Average	21.00	106.25	29.42	0.10
SD	1.10	3.60	3.60	0.01
1.0 mg/kg/day				
13H	19.7	102	33.67	1.18
14H	21.7	101	34.67	1.10
15H	21.8	106.5	29.17	0.92
16H	20.5	108.5	27.17	0.91
17H	19.2	105	30.67	1.10
18H	21	110	25.67	0.84
Average	20.65	105.50	30.17	1.01
SD	1.06	3.55	3.55	0.13
3.0 mg/kg/day				
19H	20.5	108.5	27.17	2.80
20H	20.8	109	26.67	2.71
21H	19.4	110.5	25.17	2.74
22H	20.6	111	24.67	2.53
23H	22	107	28.67	2.75
24H	22.9	109	26.67	2.46
Average	21.03	109.17	26.50	2.66
SD	1.23	1.44	1.44	0.14
30.0 mg/kg/day				
25H	23	110.5	25.17	22.98
26H	19.5	113	22.67	24.41
27H	20.7	109.5	26.17	26.55
28H	20.7	106.5	29.17	29.59
29H	20.6	110	25.67	26.17
30H	20.5	111	24.67	25.27
Average	20.83	110.08	25.59	25.83
SD	1.16	2.13	2.13	2.25

Total volume consumed is calculated as the amount of drinking water consumed in seven days minus the average amount of water loss due to cage handling and evaporation.

Date: 05/12/98

14-Day "H"
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1H	20.8	107.5	26.5	N/A
2H	21.5	107.5	26.5	N/A
3H	22.4	110.5	23.5	N/A
4H	22.2	108	26	N/A
5H	21.9	109.5	24.5	N/A
6H	23.3	104.5	29.5	N/A
Average	22.02	107.92	26.08	N/A
SD	0.85	2.06	2.06	N/A
0.1 mg/kg/day				
7H	21.6	105.5	28.5	0.10
8H	21	113.5	20.5	0.07
9H	20.5	110	24	0.09
10H	21	109.5	24.5	0.09
11H	21.5	110.5	23.5	0.08
12H	23	106.5	27.5	0.09
Average	21.43	109.25	24.75	0.09
SD	0.86	2.89	2.89	0.01
1.0 mg/kg/day				
13H	20.8	103.5	30.5	1.08
14H	22.6	103	31	1.01
15H	22.2	109	25	0.83
16H	21.4	115	19	0.66
17H	20.1	109.5	24.5	0.90
18H	22.2	110.5	23.5	0.78
Average	21.55	108.42	25.58	0.88
SD	0.96	4.53	4.53	0.16
3.0 mg/kg/day				
19H	21.6	108.5	25.5	2.66
20H	22.1	110.5	23.5	2.39
21H	19.7	112.5	21.5	2.46
22H	21.1	110	24	2.56
23H	21.4	115	19	2.00
24H	24.5	110.5	23.5	2.16
Average	21.73	111.17	22.83	2.37
SD	1.58	2.27	2.27	0.25
30.0 mg/kg/day				
25H	22.3	115	19	18.99
26H	20.4	115	19	20.76
27H	22	110.5	23.5	23.81
28H	20.9	110	24	25.59
29H	21.6	109.5	24.5	25.28
30H	19.9	115.5	18.5	20.72
Average	21.18	112.58	21.42	22.52
SD	0.94	2.85	2.85	2.74

Total volume consumed is calculated as the amount of drinking water consumed in seven days minus the average amount of water loss due to cage handling and evaporation.

Date: 05/08/98

14-Day "I"
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1I	21	109.5	23.83	N/A
2I	21.8	105.5	27.83	N/A
3I	20.1	101	32.33	N/A
4I	19.9	110.5	22.83	N/A
5I	19.6	110	23.33	N/A
6I	22.2	108	25.33	N/A
Average	20.77	107.42	25.91	N/A
SD	1.07	3.63	3.63	N/A
0.1 mg/kg/day				
7I	21.8	110	23.33	0.08
8I	20.9	109	24.33	0.08
9I	21.5	107	26.33	0.09
10I	21.5	112	21.33	0.07
11I	20.4	127	11	0.13
12I	20.7	109	24.33	0.08
Average	21.13	112.33	21.78	0.09
SD	0.55	7.37	5.52	0.02
1.0 mg/kg/day				
13I	21.2	95	38.33	1.32
14I	21.2	107	26.33	0.90
15I	21.8	110.5	22.83	0.76
16I	20.2	106	27.33	0.99
17I	20	108	25.33	0.92
18I	20.8	114.5	18.83	0.66
Average	20.67	106.83	26.50	0.93
SD	0.68	6.55	6.55	0.23
3.0 mg/kg/day				
19I	19.8	115	18.33	1.95
20I	20.8	108	25.33	2.57
21I	21.6	109	24.33	2.38
22I	20.5	108.5	24.83	2.56
23I	19.7	113.5	19.83	2.12
24I	20.1	109.5	23.83	2.50
Average	20.42	110.58	22.75	2.35
SD	0.71	2.92	2.92	0.25
30.0 mg/kg/day				
25I	20.9	110	23.33	23.32
26I	22.7	103	30.33	27.92
27I	19.8	109.5	23.83	25.15
28I	20.7	109	24.33	24.56
29I	17.1	112	21.33	26.06
30I	21.1	103	30.33	30.03
Average	20.38	107.75	25.58	26.17
SD	1.86	3.82	3.82	2.44

Total volume consumed is calculated as the amount of drinking water consumed in a seven day period minus the average amount of water loss due to cage handling and evaporation.

Date: 05/15/98

14-Day "I"
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1I	21.1	110	27.83	N/A
2I	22.8	107.5	30.33	N/A
3I	20.5	104.5	33.33	N/A
4I	21.4	109	28.83	N/A
5I	19.6	111.5	26.33	N/A
6I	24	111	26.83	N/A
Average	21.57	108.92	28.91	N/A
SD	1.59	2.60	2.60	N/A
0.1 mg/kg/day				
7I	21.8	115	22.83	0.08
8I	23.2	107	30.83	0.10
9I	21.7	109.5	28.33	0.10
10I	22	109.5	28.33	0.10
11I	21.9	111	26.83	0.09
12I	21	111.5	26.33	0.09
Average	21.93	110.58	27.25	0.09
SD	0.71	2.67	2.67	0.01
1.0 mg/kg/day				
13I	21.3	97.5	40.33	1.41
14I	22.5	110.5	27.33	0.90
15I	23.4	111.5	26.33	0.84
16I	23.2	107	30.83	0.99
17I	20.9	112	25.83	0.92
18I	20.7	111	26.83	0.96
Average	22.00	108.25	29.58	1.00
SD	1.19	5.56	5.56	0.20
3.0 mg/kg/day				
19I	21.8	116.5	21.33	2.14
20I	20.6	112	25.83	2.74
21I	22	110	27.83	2.76
22I	21.7	111	26.83	2.70
23I	20	116.5	21.33	2.33
24I	21.4	106.5	31.33	3.20
Average	21.25	112.08	25.75	2.65
SD	0.78	3.89	3.89	0.37
30.0 mg/kg/day				
25I	21.5	109.5	28.33	28.66
26I	23.1	105	32.83	30.91
27I	20.4	110	27.83	29.67
28I	20.4	109	28.83	30.74
29I	19.1	114	23.83	27.14
30I	22.3	112	25.83	25.19
Average	21.13	109.92	27.91	28.72
SD	1.45	3.04	3.04	2.22

Total volume consumed is calculated as the amount of drinking water consumed in a seven day period minus the average amount of water loss due to cage handling and evaporation.

Date: 05/26/98

14-Day "J"
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1J	21.8	103	29	N/A
2J	21.5	106	26	N/A
3J	21.1	110	22	N/A
4J	21.3	107	25	N/A
5J	21.4	106.5	25.5	N/A
6J	22.4	107	25	N/A
Average	21.58	106.58	25.42	N/A
SD	0.46	2.25	2.25	N/A
0.1 mg/kg/day				
7J	22.5	103.5	28.5	0.10
8J	23.5	107	25	0.08
9J	21.5	108.5	23.5	0.08
10J	17.5	109.5	22.5	0.10
11J	21.9	108.5	23.5	0.08
12J	21.6	103	29	0.10
Average	21.42	106.67	25.33	0.09
SD	2.06	2.77	2.77	0.01
1.0 mg/kg/day				
13J	20.6	112.5	19.5	0.70
14J	23	100.5	31.5	1.01
15J	21.6	70	62	*
16J	23.4	101	31	0.98
17J	21.4	106	26	0.90
18J	20.1	107.5	24.5	0.90
Average	21.66	99.58	32.42	0.90
SD	1.30	15.16	15.16	0.12
3.0 mg/kg/day				
19J	22.1	100	32	3.21
20J	20	107	25	2.77
21J	20.4	112	20	2.17
22J	20.2	111.5	20.5	2.25
23J	20.6	114	18	1.94
24J	22.4	105.5	26.5	2.62
Average	20.95	108.33	23.67	2.50
SD	1.03	5.19	5.19	0.46
30.0 mg/kg/day				
25J	21.2	113	19	19.59
26J	20.3	107	25	26.92
27J	21.5	108.5	23.5	23.89
28J	20.4	105.5	26.5	28.39
29J	19.3	111	21	23.78
30J	21.1	111	21	21.75
Average	20.63	109.33	22.67	24.05
SD	0.80	2.82	2.82	3.24

Total volume consumed is calculated as the amount of drinking water consumed in seven days minus the average amount of water loss due to cage handling and evaporation.

Date: 06/02/98

14-Day "J"
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1J	22.4	106.5	28.5	N/A
2J	22.1	107	28	N/A
3J	22.1	111	24	N/A
4J	21.8	113	22	N/A
5J	21.5	110	25	N/A
6J	22.8	107.5	27.5	N/A
Average	22.12	109.17	25.83	N/A
SD	0.45	2.58	2.58	N/A
0.1 mg/kg/day				
7J	24.1	103	32	0.10
8J	24.3	108	27	0.08
9J	22.6	111.5	23.5	0.08
10J	19.1	111	24	0.10
11J	23.2	108.5	26.5	0.09
12J	23.2	106	29	0.10
Average	22.75	108.00	27.00	0.09
SD	1.90	3.18	3.18	0.01
1.0 mg/kg/day				
13J	21.2	113	22	0.80
14J	24.6	110.5	24.5	0.77
15J	21.6	70	65	*
16J	23.9	111	24	0.78
17J	20.8	112	23	0.86
18J	21.1	111	24	0.88
Average	22.20	104.58	30.42	0.82
SD	1.62	16.97	16.97	0.05
3.0 mg/kg/day				
19J	22.9	104.5	30.5	3.00
20J	21.6	111.5	23.5	2.45
21J	21	113	22	2.36
22J	20.6	113	22	2.40
23J	22.2	114.5	20.5	2.08
24J	22.9	105.5	29.5	2.90
Average	21.87	110.33	24.67	2.53
SD	0.97	4.25	4.25	0.35
30.0 mg/kg/day				
25J	22.7	114	21	20.42
26J	21.6	109	26	26.57
27J	22.6	110	25	24.42
28J	21.4	107	28	28.88
29J	19.7	111	24	26.89
30J	22.2	109	26	25.85
Average	21.70	110.00	25.00	25.50
SD	1.11	2.37	2.37	2.88

Total volume consumed is calculated as the amount of drinking water consumed in seven days minus the average amount of water loss due to cage handling and evaporation.

Date: 06/22/98

14-Day CTL "M"
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1M	21.2	115.5	17.83	N/A
2M	21.4	105.5	27.83	N/A
3M	19.1	109.5	23.83	N/A
4M	20.1	109	24.33	N/A
5M	20	110	23.33	N/A
6M	19.7	107	26.33	N/A
Average	20.25	109.42	23.91	N/A
SD	0.89	3.43	3.43	N/A
0.1 mg/kg/day				
7M	19.7	105.5	27.83	0.09
8M	21.2	108	25.33	0.08
9M	19.1	23	110.33	*
10M	20.6	110.5	22.83	0.07
11M	18.2	115.5	17.83	0.07
12M	20.1	109.5	23.83	0.08
Average	19.82	95.33	38.00	0.08
SD	1.07	35.59	35.59	0.01
1.0 mg/kg/day				
13M	19.3	105	28.33	0.95
14M	19.4	110	23.33	0.78
15M	19.4	109	24.33	0.82
16M	18.7	107.5	25.83	0.90
17M	20	105	28.33	0.92
18M	17.4	111	22.33	0.83
Average	19.03	107.92	25.41	0.87
SD	0.90	2.54	2.54	0.07
3.0 mg/kg/day				
19M	19	102.5	30.83	3.20
20M	18.2	103.5	29.83	3.23
21M	20.4	107.5	25.83	2.50
22M	19.2	105	28.33	2.91
23M	20	104.5	28.83	2.84
24M	20.6	109	24.33	2.33
Average	19.57	105.33	28.00	2.83
SD	0.92	2.45	2.46	0.37
30.0 mg/kg/day				
25M	20.6	106.5	26.83	25.26
26M	18.5	111	22.33	23.41
27M	19.5	109.5	23.83	23.70
28M	17.9	115	18.33	19.86
29M	20.8	104.5	28.83	26.88
30M	17.9	111.5	21.83	23.65
Average	19.20	109.67	23.66	23.79
SD	1.30	3.75	3.75	2.34

Total volume consumed is calculated as the amount of drinking water consumed in seven days minus the average amount of water loss due to cage handling and evaporation.

Date: 06/29/98

14-Day CTL "M"
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1M	22.1	117.5	16.5	N/A
2M	22.8	107.5	26.5	N/A
3M	19.7	110.5	23.5	N/A
4M	20.9	111.5	22.5	N/A
5M	21.3	98	36	N/A
6M	20.9	108	26	N/A
Average	21.28	108.83	25.17	N/A
SD	1.07	6.40	6.40	N/A
0.1 mg/kg/day				
7M	20.4	110	24	0.08
8M	21.8	112	22	0.07
9M	21.3	114	20	0.07
10M	22.1	112	22	0.07
11M	18.9	117	17	0.06
12M	20.8	109	25	0.08
Average	20.88	112.33	21.67	0.07
SD	1.15	2.88	2.88	0.01
1.0 mg/kg/day				
13M	19.8	110	24	0.82
14M	20.9	112	22	0.71
15M	20.6	113	21	0.69
16M	22.2	99	35	1.07
17M	22.6	109.5	24.5	0.74
18M	19.5	113.5	20.5	0.71
Average	20.93	109.50	24.50	0.79
SD	1.25	5.39	5.39	0.14
3.0 mg/kg/day				
19M	20.2	112.5	21.5	2.24
20M	19.6	109	25	2.68
21M	21.9	110	24	2.30
22M	22.3	110	24	2.26
23M	21.6	106.5	27.5	2.67
24M	21.7	110.5	23.5	2.27
Average	21.22	109.75	24.25	2.40
SD	1.06	1.97	1.97	0.21
30.0 mg/kg/day				
25M	21.5	107	27	25.83
26M	20.1	110	24	24.56
27M	20.9	112	22	21.65
28M	19.5	114	20	21.10
29M	22.3	108	26	23.98
30M	19	116	18	19.49
Average	20.55	111.17	22.83	22.77
SD	1.25	3.49	3.49	2.40

Total volume consumed is calculated as the amount of drinking water consumed in seven days minus the average amount of water loss due to cage handling and evaporation.

Date: 05/12/98

14-Day "H"
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1H	20.8	107.5	26.5	N/A
2H	21.5	107.5	26.5	N/A
3H	22.4	110.5	23.5	N/A
4H	22.2	108	26	N/A
5H	21.9	109.5	24.5	N/A
6H	23.3	104.5	29.5	N/A
Average	[illegible]	[illegible]	[illegible]	[illegible]
SD	[illegible]	[illegible]	[illegible]	[illegible]
0.1 mg/kg/day				
7H	21.6	105.5	28.5	0.10
8H	21	113.5	20.5	0.07
9H	20.5	110	24	0.09
10H	21	109.5	24.5	0.09
11H	21.5	110.5	23.5	0.08
12H	23	106.5	27.5	0.09
Average	[illegible]	[illegible]	[illegible]	[illegible]
SD	[illegible]	[illegible]	[illegible]	[illegible]
1.0 mg/kg/day				
13H	20.8	103.5	30.5	1.08
14H	22.6	103	31	1.01
15H	22.2	109	25	0.83
16H	21.4	115	19	0.66
17H	20.1	109.5	24.5	0.90
18H	22.2	110.5	23.5	0.78
Average	[illegible]	[illegible]	[illegible]	[illegible]
SD	[illegible]	[illegible]	[illegible]	[illegible]
3.0 mg/kg/day				
19H	21.6	108.5	25.5	2.66
20H	22.1	110.5	23.5	2.39
21H	19.7	112.5	21.5	2.46
22H	21.1	110	24	2.56
23H	21.4	115	19	2.00
24H	24.5	110.5	23.5	2.16
Average	[illegible]	[illegible]	[illegible]	[illegible]
SD	[illegible]	[illegible]	[illegible]	[illegible]
30.0 mg/kg/day				
25H	22.3	115	19	18.99
26H	20.4	115	19	20.76
27H	22	110.5	23.5	23.81
28H	20.9	110	24	25.59
29H	21.6	109.5	24.5	25.28
30H	19.9	115.5	18.5	20.72
Average	[illegible]	[illegible]	[illegible]	[illegible]
SD	[illegible]	[illegible]	[illegible]	[illegible]

Total volume consumed is calculated as the amount of drinking water consumed in seven days minus the average amount of water loss due to cage handling and evaporation.

Date: 04/21/98

14-Day CTL "F"
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1F	23.8	109.5	22.83	N/A
2F	22.6	105	27.33	N/A
3F	22.6	108.5	23.83	N/A
4F	24.5	110.5	21.83	N/A
5F	23.6	109	23.33	N/A
6F	22.8	108.5	23.83	N/A
Average	[illegible]	[illegible]	[illegible]	
SD	[illegible]	[illegible]	[illegible]	
0.1 mg/kg/day				
7F	24.3	103.5	28.83	0.10
8F	23.2	106.5	25.83	0.09
9F	24.6	114.5	17.83	0.06
10F	23.1	110.5	21.83	0.08
11F	23.1	111	21.33	0.08
12F	23.8	107	25.33	0.09
Average	[illegible]	[illegible]	[illegible]	[illegible]
SD	[illegible]	[illegible]	[illegible]	[illegible]
1.0 mg/kg/day				
13F	23.8	114.5	17.83	0.63
14F	23.7	109.5	22.83	0.81
15F	22.7	113	19.33	0.71
16F	24.1	108	24.33	0.84
17F	24.1	112	20.33	0.70
18F	23.5	116	16.33	0.58
Average	[illegible]	[illegible]	[illegible]	[illegible]
SD	[illegible]	[illegible]	[illegible]	[illegible]
3.0 mg/kg/day				
19F	23	105	27.33	3.03
20F	24.1	109	23.33	2.47
21F	24.3	101.5	30.83	3.24
22F	22.8	120	12.33	1.38
23F	23.3	114.5	17.83	1.95
24F	23.5	114	18.33	1.99
Average	[illegible]	[illegible]	[illegible]	[illegible]
SD	[illegible]	[illegible]	[illegible]	[illegible]
30.0 mg/kg/day				
25F	22.6	103.5	28.83	31.85
26F	23.7	113.5	18.83	19.83
27F	23.7	113	19.33	20.36
28F	24.8	114	18.33	18.45
29F	21.4	107.5	24.83	28.97
30F	24.6	109.5	22.83	23.17
Average	[illegible]	[illegible]	[illegible]	[illegible]
SD	[illegible]	[illegible]	[illegible]	[illegible]

Total volume consumed is calculated as the amount of drinking water consumed in seven days minus the average amount of water loss due to cage handling and evaporation.

Date: 06/29/98

14-Day CTL "M"
Drinking Water Consumption

Dose	BW grams	Vol of H20 at 7 days ml	Total Vol. Consumed mL	Conc. of AP mg/kg/day consumed in 7 days
Control				
1M	22.1	117.5	16.5	N/A
2M	22.8	107.5	26.5	N/A
3M	19.7	110.5	23.5	N/A
4M	20.9	111.5	22.5	N/A
5M	21.3	98	36	N/A
6M	20.9	108	26	N/A
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SD	[illegible]	[illegible]	[illegible]	[illegible]
0.1 mg/kg/day				
7M	20.4	110	24	0.08
8M	21.8	112	22	0.07
9M	21.3	114	20	0.07
10M	22.1	112	22	0.07
11M	18.9	117	17	0.06
12M	20.8	109	25	0.08
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SD	[illegible]	[illegible]	[illegible]	[illegible]
1.0 mg/kg/day				
13M	19.8	110	24	0.82
14M	20.9	112	22	0.71
15M	20.6	113	21	0.69
16M	22.2	99	35	1.07
17M	22.6	109.5	24.5	0.74
18M	19.5	113.5	20.5	0.71
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SD	[illegible]	[illegible]	[illegible]	[illegible]
3.0 mg/kg/day				
19M	20.2	112.5	21.5	2.24
20M	19.6	109	25	2.68
21M	21.9	110	24	2.30
22M	22.3	110	24	2.26
23M	21.6	106.5	27.5	2.67
24M	21.7	110.5	23.5	2.27
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SD	[illegible]	[illegible]	[illegible]	[illegible]
30.0 mg/kg/day				
25M	21.5	107	27	25.83
26M	20.1	110	24	24.56
27M	20.9	112	22	21.65
28M	19.5	114	20	21.10
29M	22.3	108	26	23.98
30M	19	116	18	19.49
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SD	[illegible]	[illegible]	[illegible]	[illegible]

Total volume consumed is calculated as the amount of drinking water consumed in seven days minus the average amount of water loss due to cage handling and evaporation.

Results Obtained Prior to August 1, 1998

Additional 90-day Data Tables & Statistics

Descriptive Statistics

90-Day Experiment "A"
TSH Quantitation

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	8.833	9.000	8.833	1.329	0.543
0.1	6	7.667	8.000	7.667	0.516	0.211
1.0	6	7.000	7.000	7.000	1.414	0.577
3.0	6	6.500	6.500	6.500	1.517	0.619
30.0	6	7.500	7.500	7.500	1.871	0.764

Variable	Minimum	Maximum	Q1	Q3
0.0	7.000	11.000	7.750	9.500
0.1	7.000	8.000	7.000	8.000
1.0	5.000	9.000	5.750	8.250
3.0	5.000	9.000	5.000	7.500
30.0	5.000	10.000	5.750	9.250

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	18.33	4.58	2.33	0.084
Error	25	49.17	1.97		
Total	29	67.50			

Level	N	Mean	StDev
0.0	6	8.833	1.329
0.1	6	7.667	0.516
1.0	6	7.000	1.414
3.0	6	6.500	1.517
30.0	6	7.500	1.871

Pooled StDev = 1.402

```
Individual 95% CIs For Mean
Based on Pooled StDev
-----+---------+---------+---------+-
                  (-------*-------)
          (-------*-------)
     (-------*-------)
(-------*-------)
        (-------*-------)
-----+---------+---------+---------+-
   6.0       7.5       9.0      10.5
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-1.209 3.543			
1.0	-0.543 4.209	-1.709 3.043		
3.0	-0.043 4.709	-1.209 3.543	-1.876 2.876	
30.0	-1.043 3.709	-2.209 2.543	-2.876 1.876	-3.376 1.376

Descriptive Statistics

90-Day Experiment "D"
Thyroid Stimulating Hormone (TSH) Quantitation

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	4	9.500	10.000	9.500	1.915	0.957
0.1	4	8.500	8.000	8.500	1.732	0.866
1.0	4	8.250	8.500	8.250	1.708	0.854
3.0	5	10.00	10.00	10.00	2.24	1.00
30.0	3	12.67	10.00	12.67	8.33	4.81

Variable	Minimum	Maximum	Q1	Q3
0.0	7.000	11.000	7.500	11.000
0.1	7.000	11.000	7.250	10.250
1.0	6.000	10.000	6.500	9.750
3.0	7.00	13.00	8.00	12.00
30.0	6.00	22.00	6.00	22.00

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	41.1	10.3	0.82	0.531
Error	15	187.4	12.5		
Total	19	228.5			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  --------+---------+---------+--------
 0.0        4     9.500     1.915      (----------*----------)
 0.1        4     8.500     1.732    (---------*----------)
 1.0        4     8.250     1.708   (----------*---------)
 3.0        5    10.000     2.236         (---------*--------)
30.0        3    12.667     8.327                (-----------*------------)
                                   --------+---------+---------+--------
Pooled StDev =    3.535                  7.0       10.5      14.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00747

Critical value = 4.37

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-6.723 8.723			
1.0	-6.473 8.973	-7.473 7.973		
3.0	-7.827 6.827	-8.827 5.827	-9.077 5.577	
30.0	-11.509 5.176	-12.509 4.176	-12.759 3.926	-10.643 5.310

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Descriptive Statistics

90-Day Experiment "D"
T4 Quantitiation

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	3.650	3.600	3.650	0.489	0.200
0.1	6	2.967	2.900	2.967	0.520	0.212
1.0	4	2.475	2.400	2.475	0.377	0.189
3.0	6	2.717	2.600	2.717	0.402	0.164
30.0	6	2.317	2.450	2.317	0.256	0.105

Variable	Minimum	Maximum	Q1	Q3
0.0	3.000	4.300	3.225	4.150
0.1	2.500	3.900	2.500	3.300
1.0	2.100	3.000	2.175	2.850
3.0	2.300	3.300	2.375	3.150
30.0	1.900	2.500	2.050	2.500

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	6.297	1.574	8.81	0.000
Error	23	4.112	0.179		
Total	27	10.410			

Level	N	Mean	StDev
0.0	6	3.6500	0.4889
0.1	6	2.9667	0.5203
1.0	4	2.4750	0.3775
3.0	6	2.7167	0.4021
30.0	6	2.3167	0.2563

Pooled StDev = 0.4229

```
Individual 95% CIs For Mean
Based on Pooled StDev
--------+---------+---------+--------
                        (-----*-----)
            (-----*-----)
   (------*-------)
        (-----*-----)
 (-----*-----)
--------+---------+---------+--------
      2.40      3.00      3.60
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00709

Critical value = 4.18

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-0.0383 1.4049			
1.0	0.3682 1.9818	-0.3151 1.2984		
3.0	0.2117 1.6549	-0.4716 0.9716	-1.0484 0.5651	
30.0	0.6117 2.0549	-0.0716 1.3716	-0.6484 0.9651	-0.3216 1.1216

Descriptive Statistics

90-Day Experiment "A"
T4 Quantitation

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	3.550	3.400	3.550	0.809	0.330
0.1	6	3.067	3.050	3.067	0.509	0.208
1.0	6	3.100	3.050	3.100	0.363	0.148
3.0	6	2.917	2.800	2.917	0.343	0.140
30.0	6	2.550	2.450	2.550	0.695	0.284

Variable	Minimum	Maximum	Q1	Q3
0.0	2.700	5.000	3.000	4.025
0.1	2.400	3.700	2.625	3.550
1.0	2.700	3.700	2.775	3.400
3.0	2.500	3.500	2.725	3.200
30.0	1.800	3.700	2.025	3.025

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	3.118	0.780	2.37	0.080
Error	25	8.232	0.329		
Total	29	11.350			

Level	N	Mean	StDev
0.0	6	3.5500	0.8093
0.1	6	3.0667	0.5086
1.0	6	3.1000	0.3633
3.0	6	2.9167	0.3430
30.0	6	2.5500	0.6950

Pooled StDev = 0.5738

```
                    Individual 95% CIs For Mean
                    Based on Pooled StDev
------+---------+---------+---------+
                  (-------*-------)
          (-------*-------)
           (-------*-------)
        (-------*-------)
(--------*-------)
------+---------+---------+---------+
    2.40      3.00      3.60      4.20
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-0.4888 1.4555			
1.0	-0.5222 1.4222	-1.0055 0.9388		
3.0	-0.3388 1.6055	-0.8222 1.1222	-0.7888 1.1555	
30.0	0.0278 1.9722	-0.4555 1.4888	-0.4222 1.5222	-0.6055 1.3388

Worksheet size: 100000 cells

Descriptive Statistics

90-Day Experiment "D"
T4 Quantitiation

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	3.650	3.600	3.650	0.489	0.200
0.1	6	2.967	2.900	2.967	0.520	0.212
1.0	4	2.475	2.400	2.475	0.377	0.189
3.0	6	2.717	2.600	2.717	0.402	0.164
30.0	6	2.317	2.450	2.317	0.256	0.105

Variable	Minimum	Maximum	Q1	Q3
0.0	3.000	4.300	3.225	4.150
0.1	2.500	3.900	2.500	3.300
1.0	2.100	3.000	2.175	2.850
3.0	2.300	3.300	2.375	3.150
30.0	1.900	2.500	2.050	2.500

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	6.297	1.574	8.81	0.000
Error	23	4.112	0.179		
Total	27	10.410			

Level	N	Mean	StDev
0.0	6	3.6500	0.4889
0.1	6	2.9667	0.5203
1.0	4	2.4750	0.3775
3.0	6	2.7167	0.4021
30.0	6	2.3167	0.2563

Pooled StDev = 0.4229

```
Individual 95% CIs For Mean
Based on Pooled StDev
--------+---------+---------+--------
                        (-----*-----)
            (-----*-----)
   (------*-------)
        (-----*-----)
 (-----*-----)
--------+---------+---------+--------
      2.40      3.00      3.60
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00709

Critical value = 4.18

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-0.0383 1.4049			
1.0	0.3682 1.9818*	-0.3151 1.2984		
3.0	0.2117 1.6549*	-0.4716 0.9716	-1.0484 0.5651	
30.0	0.6117 2.0549*	-0.0716 1.3716	-0.6484 0.9651	-0.3216 1.1216

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Worksheet size: 100000 cells

Descriptive Statistics

90 Day experiment "D"
Neutrophils

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	15.25	14.25	15.25	3.97	1.62
0.1	6	14.667	13.750	14.667	2.041	0.833
1.0	6	18.333	18.000	18.333	0.983	0.401
3.0	6	13.333	13.500	13.333	1.080	0.441
30.0	6	12.17	9.50	12.17	7.81	3.19

Variable	Minimum	Maximum	Q1	Q3
0.0	11.50	22.50	12.25	18.00
0.1	13.000	17.500	13.000	17.125
1.0	17.000	19.500	17.750	19.500
3.0	11.500	14.500	12.625	14.125
30.0	4.00	26.00	7.00	18.50

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	130.7	32.7	1.97	0.131
Error	25	415.2	16.6		
Total	29	545.9			

Level	N	Mean	StDev
0.0	6	15.250	3.972
0.1	6	14.667	2.041
1.0	6	18.333	0.983
3.0	6	13.333	1.080
30.0	6	12.167	7.808

Pooled StDev = 4.075

```
Individual 95% CIs For Mean
Based on Pooled StDev
---------+---------+---------+-------
         (-------*--------)
       (--------*-------)
                (--------*-------)
    (-------*--------)
 (-------*--------)
---------+---------+---------+-------
       12.0      16.0      20.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-6.321 7.488			
1.0	-9.988 3.821	-10.571 3.238		
3.0	-4.988 8.821	-5.571 8.238	-1.905 11.905	
30.0	-3.821 9.988	-4.405 9.405	-0.738 13.071	-5.738 8.071

Current worksheet: Worksheet 2

Descriptive Statistics

90 Day experiment "D"
Lymphocytes

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	79.08	80.75	79.08	4.93	2.01
0.1	6	77.58	78.00	77.58	3.58	1.46
1.0	6	75.083	74.750	75.083	2.108	0.860
3.0	6	79.88	79.50	79.88	2.65	1.08
30.0	6	83.05	86.50	83.05	7.95	3.25

Variable	Minimum	Maximum	Q1	Q3
0.0	71.50	84.00	74.13	82.88
0.1	71.50	81.50	74.88	80.75
1.0	73.000	78.000	73.000	77.250
3.0	77.50	84.00	77.50	81.97
30.0	69.00	90.50	76.12	88.10

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	207.1	51.8	2.31	0.085
Error	25	559.2	22.4		
Total	29	766.3			

Level	N	Mean	StDev
0.0	6	79.083	4.934
0.1	6	77.583	3.584
1.0	6	75.083	2.108
3.0	6	79.883	2.650
30.0	6	83.050	7.950

Pooled StDev = 4.730

```
Individual 95% CIs For Mean
Based on Pooled StDev
--------+---------+---------+--------
        (-------*-------)
      (-------*-------)
(-------*-------)
          (-------*-------)
                (-------*-------)
--------+---------+---------+--------
     75.0      80.0      85.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-6.513 9.513			
1.0	-4.013 12.013	-5.513 10.513		
3.0	-8.813 7.213	-10.313 5.713	-12.813 3.213	
30.0	-11.980 4.046	-13.480 2.546	-15.980 0.046	-11.180 4.846

Current worksheet: Worksheet 3

Descriptive Statistics

90 Day experiment "D"
Monocytes

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	4.58	4.25	4.58	2.56	1.04
0.1	6	6.500	6.750	6.500	1.483	0.606
1.0	6	7.750	7.750	7.750	0.822	0.335
3.0	6	5.967	6.000	5.967	1.071	0.437
30.0	6	3.867	4.000	3.867	1.374	0.561

Variable	Minimum	Maximum	Q1	Q3
0.0	1.00	8.50	2.88	6.63
0.1	4.000	8.000	5.500	7.625
1.0	7.000	8.500	7.000	8.500
3.0	4.500	7.500	5.100	6.750
30.0	1.700	5.500	2.675	5.125

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	57.10	14.27	5.73	0.002
Error	25	62.25	2.49		
Total	29	119.35			

Level	N	Mean	StDev
0.0	6	4.583	2.558
0.1	6	6.500	1.483
1.0	6	7.750	0.822
3.0	6	5.967	1.071
30.0	6	3.867	1.374

Pooled StDev = 1.578

```
Individual 95% CIs For Mean
Based on Pooled StDev
--------+---------+---------+--------
    (------*------)
                (------*-----)
                      (------*-----)
            (------*-----)
 (-----*------)
--------+---------+---------+--------
      4.0       6.0       8.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-4.590 0.757			
1.0	-5.840 -0.493	-3.923 1.423		
3.0	-4.057 1.290	-2.140 3.207	-0.890 4.457	
30.0	-1.957 3.390	-0.040 5.307	1.210 6.557	-0.573 4.773

Current worksheet: Worksheet 4

Descriptive Statistics

90 Day experiment "D"
Bands

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	0.583	0.500	0.583	0.585	0.239
0.1	6	0.417	0.500	0.417	0.376	0.154
1.0	6	0.333	0.250	0.333	0.408	0.167
3.0	6	0.550	0.500	0.550	0.505	0.206
30.0	6	0.800	0.650	0.800	0.837	0.342

Variable	Minimum	Maximum	Q1	Q3
0.0	0.000	1.500	0.000	1.125
0.1	0.000	1.000	0.000	0.625
1.0	0.000	1.000	0.000	0.625
3.0	0.000	1.500	0.225	0.750
30.0	0.000	2.000	0.000	1.625

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	0.765	0.191	0.60	0.669
Error	25	8.025	0.321		
Total	29	8.790			

Level	N	Mean	StDev
0.0	6	0.5833	0.5845
0.1	6	0.4167	0.3764
1.0	6	0.3333	0.4082
3.0	6	0.5500	0.5050
30.0	6	0.8000	0.8367

Pooled StDev = 0.5666

```
Individual 95% CIs For Mean
Based on Pooled StDev
----+---------+---------+---------+--
        (-----------*----------)
   (----------*-----------)
(-----------*-----------)
      (-----------*-----------)
             (-----------*-----------)
----+---------+---------+---------+--
  0.00      0.40      0.80      1.20
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-0.7932 1.1266			
1.0	-0.7099 1.2099	-0.8766 1.0432		
3.0	-0.9266 0.9932	-1.0932 0.8266	-1.1766 0.7432	
30.0	-1.1766 0.7432	-1.3432 0.5766	-1.4266 0.4932	-1.2099 0.7099

Worksheet size: 100000 cells

Current worksheet: Worksheet 1

Descriptive Statistics

90 Day Experiment "D"
Spleen weight/Body weight Ratio

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	0.3043	0.3240	0.3043	0.0450	0.0184
0.1	6	0.3112	0.3175	0.3112	0.0319	0.0130
1.0	6	0.3123	0.3190	0.3123	0.0419	0.0171
3.0	6	0.3270	0.3310	0.3270	0.0437	0.0178
30.0	6	0.3437	0.3420	0.3437	0.0499	0.0204

Variable	Minimum	Maximum	Q1	Q3
0.0	0.2470	0.3460	0.2478	0.3393
0.1	0.2590	0.3430	0.2845	0.3385
1.0	0.2510	0.3730	0.2742	0.3408
3.0	0.2500	0.3850	0.3063	0.3513
30.0	0.2750	0.4160	0.3005	0.3875

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	0.00595	0.00149	0.81	0.532
Error	25	0.04598	0.00184		
Total	29	0.05192			

Level	N	Mean	StDev
0.0	6	0.30433	0.04497
0.1	6	0.31117	0.03186
1.0	6	0.31233	0.04191
3.0	6	0.32700	0.04370
30.0	6	0.34367	0.04992

Pooled StDev = 0.04288

```
Individual 95% CIs For Mean
Based on Pooled StDev
----+---------+---------+---------+--
 (---------*---------)
   (---------*---------)
   (---------*----------)
       (---------*----------)
             (---------*---------)
----+---------+---------+---------+--
  0.280     0.315     0.350     0.385
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-0.07949 0.06582			
1.0	-0.08066 0.06466	-0.07382 0.07149		
3.0	-0.09532 0.04999	-0.08849 0.05682	-0.08732 0.05799	
30.0	-0.11199 0.03332	-0.10516 0.04016	-0.10399 0.04132	-0.08932 0.05599

Current worksheet: Worksheet 2

Descriptive Statistics

90 Day Experiment "D"
Kidney weight/Body weight Ratio

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	6	1.0960	1.1285	1.0960	0.1862	0.0760
0.1	6	1.1120	1.1015	1.1120	0.0537	0.0219
1.0	6	1.1860	1.2290	1.1860	0.1479	0.0604
3.0	6	1.1942	1.1880	1.1942	0.0834	0.0340
30.0	6	1.2477	1.1885	1.2477	0.1476	0.0602

Variable	Minimum	Maximum	Q1	Q3
0.0	0.8010	1.3070	0.9240	1.2613
0.1	1.0470	1.2010	1.0710	1.1567
1.0	0.9730	1.3370	1.0323	1.3063
3.0	1.0730	1.3070	1.1277	1.2740
30.0	1.0850	1.4440	1.1420	1.4253

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	0.0940	0.0235	1.33	0.285
Error	25	0.4408	0.0176		
Total	29	0.5348			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  --------+---------+---------+--------
 0.0        6    1.0960    0.1862  (--------*---------)
 0.1        6    1.1120    0.0537   (---------*--------)
 1.0        6    1.1860    0.1479          (--------*--------)
 3.0        6    1.1942    0.0834          (---------*--------)
30.0        6    1.2477    0.1476               (--------*--------)
                                   --------+---------+---------+--------
Pooled StDev =   0.1328                   1.08      1.20      1.32
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00706

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-0.2410 0.2090			
1.0	-0.3150 0.1350	-0.2990 0.1510		
3.0	-0.3231 0.1268	-0.3071 0.1428	-0.2331 0.2168	
30.0	-0.3766	-0.3606	-0.2866	-0.2785

0.0733 0.0893 0.1633 0.1715

Worksheet size: 100000 cells
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Worksheet size: 100000 cells

Descriptive Statistics

90 Day experiment "D"
Phagocytosis

Variable	N	Mean	Median	TrMean	StDev	SE Mean
0.0	4	19.75	19.00	19.75	4.57	2.29
0.1	6	15.50	16.00	15.50	3.78	1.54
1.0	5	15.400	16.000	15.400	1.949	0.872
3.0	6	21.00	21.00	21.00	4.15	1.69
30.0	6	18.33	19.00	18.33	2.50	1.02

Variable	Minimum	Maximum	Q1	Q3
0.0	15.00	26.00	16.00	24.25
0.1	9.00	20.00	12.75	18.50
1.0	13.000	18.000	13.500	17.000
3.0	16.00	27.00	16.75	24.75
30.0	15.00	22.00	15.75	19.75

One-way Analysis of Variance

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	138.2	34.5	2.85	0.048
Error	22	266.8	12.1		
Total	26	405.0			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ------+---------+---------+---------+
 0.0        4    19.750     4.573              (---------*----------)
 0.1        6    15.500     3.782    (-------*--------)
 1.0        5    15.400     1.949   (--------*--------)
 3.0        6    21.000     4.147                     (-------*-------)
30.0        6    18.333     2.503            (-------*--------)
                                   ------+---------+---------+---------+
Pooled StDev =    3.482                  14.0      17.5      21.0      24.5
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00707

Critical value = 4.20

Intervals for (column level mean) - (row level mean)

	0.0	0.1	1.0	3.0
0.1	-2.426 10.926			
1.0	-2.588 11.288	-6.162 6.362		
3.0	-7.926 5.426	-11.471 0.471	-11.862 0.662	
30.0	-5.259 8.092	-8.804 3.138	-9.196 3.329	-3.304 8.638

Experiment A - 90 Day AP

Descriptive Statistics WBC

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	2.467	2.400	2.467	0.472	0.193
0.1 mg/k	6	1.800	1.950	1.800	0.540	0.221
1.0 mg/k	6	2.300	2.150	2.300	0.740	0.302
3.0 mg/k	6	2.467	2.700	2.467	0.625	0.255
30 mg/kg	6	2.383	2.400	2.383	0.422	0.172

Variable	Min	Max	Q1	Q3
control	1.900	3.000	2.050	3.000
0.1 mg/k	1.000	2.400	1.225	2.250
1.0 mg/k	1.300	3.300	1.750	3.075
3.0 mg/k	1.300	2.900	2.050	2.900
30 mg/kg	1.700	2.900	2.075	2.750

One-Way Analysis of Variance WBC

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	1.867	0.467	1.43	0.253
Error	25	8.155	0.326		
Total	29	10.022			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ----+---------+---------+---------+--
c           6    2.4667    0.4719                (--------*---------)
0.1         6    1.8000    0.5404  (---------*---------)
1           6    2.3000    0.7403            (---------*---------)
3           6    2.4667    0.6250                (--------*---------)
30          6    2.3833    0.4215              (---------*--------)
                                   ----+---------+---------+---------+--
Pooled StDev =   0.5711              1.50      2.00      2.50      3.00
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-0.3010 1.6343			
1	-0.8010 1.1343	-1.4676 0.4676		
3	-0.9676 0.9676	-1.6343 0.3010	-1.1343 0.8010	
30	-0.8843 1.0510	-1.5510 0.3843	-1.0510 0.8843	-0.8843 1.0510

Experiment A - 90 Day AP

Descriptive Statistics WBC

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	2.467	2.400	2.467	0.472	0.193
0.1 mg/k	6	1.800	1.950	1.800	0.540	0.221
1.0 mg/k	6	2.300	2.150	2.300	0.740	0.302

3.0 mg/k	6	2.467	2.700	2.467	0.625	0.255
30 mg/kg	6	2.383	2.400	2.383	0.422	0.172

Variable	Min	Max	Q1	Q3
control	1.900	3.000	2.050	3.000
0.1 mg/k	1.000	2.400	1.225	2.250
1.0 mg/k	1.300	3.300	1.750	3.075
3.0 mg/k	1.300	2.900	2.050	2.900
30 mg/kg	1.700	2.900	2.075	2.750

One-Way Analysis of Variance WBC

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	1.867	0.467	1.43	0.253
Error	25	8.155	0.326		
Total	29	10.022			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ----+---------+---------+---------+--
c           6    2.4667    0.4719                 (--------*---------)
0.1         6    1.8000    0.5404  (---------*---------)
1           6    2.3000    0.7403            (---------*---------)
3           6    2.4667    0.6250                 (--------*---------)
30          6    2.3833    0.4215              (---------*--------)
                                   ----+---------+---------+---------+--
Pooled StDev =   0.5711              1.50      2.00      2.50      3.00
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-0.3010 1.6343			
1	-0.8010 1.1343	-1.4676 0.4676		
3	-0.9676 0.9676	-1.6343 0.3010	-1.1343 0.8010	
30	-0.8843 1.0510	-1.5510 0.3843	-1.0510 0.8843	-0.8843 1.0510

Descriptive Statistics RBC

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	8.760	8.825	8.760	0.430	0.176
0.1 mg/k	6	8.742	8.740	8.742	0.376	0.154
1.0 mg/k	6	8.5267	8.6200	8.5267	0.2371	0.0968
3.0 mg/k	6	9.307	9.345	9.307	0.320	0.131
30 mg/kg	6	8.475	8.640	8.475	0.673	0.275

Variable	Min	Max	Q1	Q3
control	8.150	9.410	8.375	9.028
0.1 mg/k	8.150	9.290	8.495	9.012
1.0 mg/k	8.1300	8.7300	8.2950	8.7150
3.0 mg/k	8.920	9.740	8.950	9.582
30 mg/kg	7.330	9.120	7.907	9.045

One-Way Analysis of Variance RBC

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	2.609	0.652	3.48	0.022
Error	25	4.690	0.188		
Total	29	7.299			

Level	N	Mean	StDev	Individual 95% CIs For Mean Based on Pooled StDev
c	6	8.7600	0.4301	(------*------)
0.1	6	8.7417	0.3761	(------*------)
1	6	8.5267	0.2371	(-------*------)
3	6	9.3067	0.3202	(------*------)
30	6	8.4750	0.6729	(-------*------)

Pooled StDev = 0.4331

8.50 9.00 9.50

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-0.7155 0.7521			
1	-0.5005 0.9671	-0.5188 0.9488		
3	-1.2805 0.1871	-1.2988 0.1688	-1.5138 -0.0462	
30	-0.4488 1.0188	-0.4671 1.0005	-0.6821 0.7855	0.0979 1.5655

Descriptive Statistics HCT

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	48.683	48.300	48.683	1.922	0.785
0.1 mg/k	6	47.967	48.300	47.967	1.612	0.658
1.0 mg/k	6	47.63	47.60	47.63	2.62	1.07
3.0 mg/k	6	49.083	48.800	49.083	1.934	0.790
30 mg/kg	6	45.867	45.650	45.867	1.788	0.730

Variable	Min	Max	Q1	Q3
control	46.300	52.100	47.575	49.850
0.1 mg/k	45.000	49.800	47.100	48.900
1.0 mg/k	45.00	51.00	45.00	49.95
3.0 mg/k	46.900	52.700	47.950	49.925
30 mg/kg	44.000	48.000	44.000	47.925

One-Way Analysis of Variance HCT

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	37.26	9.31	2.32	0.085
Error	25	100.36	4.01		
Total	29	137.61			

```
                                        Individual 95% CIs For Mean
                                        Based on Pooled StDev
Level        N      Mean      StDev   ----------+---------+---------+------
c            6    48.683      1.922                  (-------*--------)
0.1          6    47.967      1.612             (--------*-------)
1            6    47.633      2.615            (-------*--------)
3            6    49.083      1.934                   (-------*--------)
30           6    45.867      1.788   (-------*--------)
                                        ----------+---------+---------+------
Pooled StDev =    2.004                        46.0      48.0      50.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-2.678 4.111			
1	-2.344 4.444	-3.061 3.728		
3	-3.794 2.994	-4.511 2.278	-4.844 1.944	
30	-0.578 6.211	-1.294 5.494	-1.628 5.161	-0.178 6.611

Descriptive Statistics HGB

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	14.800	14.750	14.800	0.443	0.181
0.1 mg/k	6	14.417	14.400	14.417	0.279	0.114
1.0 mg/k	6	14.417	14.350	14.417	0.655	0.268
3.0 mg/k	6	15.450	15.400	15.450	0.315	0.128
30 mg/kg	6	14.467	14.850	14.467	0.804	0.328

Variable	Min	Max	Q1	Q3
control	14.300	15.400	14.375	15.250
0.1 mg/k	14.000	14.800	14.225	14.650
1.0 mg/k	13.400	15.300	14.000	15.000
3.0 mg/k	15.000	15.900	15.225	15.750
30 mg/kg	13.400	15.200	13.475	15.050

One-Way Analysis of Variance HGB

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	4.722	1.181	4.07	0.011
Error	25	7.245	0.290		
Total	29	11.967			

```
                                        Individual 95% CIs For Mean
                                        Based on Pooled StDev
Level        N      Mean      StDev   --------+---------+---------+--------
c            6    14.800      0.443          (-------*------)
0.1          6    14.417      0.279   (------*-------)
1            6    14.417      0.655   (------*-------)
3            6    15.450      0.315                   (-------*------)
30           6    14.467      0.804    (------*-------)
                                        --------+---------+---------+--------
Pooled StDev =    0.538                     14.40     15.00     15.60
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-0.5287 1.2954			
1	-0.5287 1.2954	-0.9121 0.9121		
3	-1.5621 0.2621	-1.9454 -0.1213	-1.9454 -0.1213	
30	-0.5787 1.2454	-0.9621 0.8621	-0.9621 0.8621	0.0713 1.8954

Experiment "A" - 90 day AP

Descriptive Statistics Final Body Weight

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	27.12	28.00	27.12	3.34	1.36
0.1 mg/k	6	28.15	28.35	28.15	3.79	1.55
1.0 mg/k	6	29.700	30.300	29.700	2.063	0.842
3.0 mg/k	6	29.83	31.45	29.83	3.50	1.43
30 mg/kg	6	28.883	29.500	28.883	2.054	0.838

Variable	Min	Max	Q1	Q3
control	20.60	29.50	25.48	29.50
0.1 mg/k	22.80	32.50	25.05	31.45
1.0 mg/k	26.500	32.000	27.625	31.325
3.0 mg/k	24.40	32.60	25.97	32.60
30 mg/kg	25.800	31.300	26.775	30.400

One-Way Analysis of Variance Final Body Weight

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	30.72	7.68	0.83	0.518
Error	25	231.23	9.25		
Total	29	261.95			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  --+---------+---------+---------+----
c           6    27.117     3.338  (---------*----------)
0.1         6    28.150     3.794     (----------*---------)
1           6    29.700     2.063            (---------*---------)
3           6    29.833     3.498            (---------*----------)
30          6    28.883     2.054        (----------*---------)
                                     --+---------+---------+---------+----
Pooled StDev =    3.041            25.0      27.5      30.0      32.5
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-6.186 4.119			
1	-7.736 2.569	-6.703 3.603		
3	-7.869 2.436	-6.836 3.469	-5.286 5.019	
30	-6.919 3.386	-5.886 4.419	-4.336 5.969	-4.203 6.103

Descriptive Statistics Kidney Weight

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	342.00	349.50	342.00	18.13	7.40
0.1 mg/k	6	348.0	348.0	348.0	38.8	15.8
1.0 mg/k	6	367.50	360.00	367.50	22.71	9.27
3.0 mg/k	6	386.8	395.0	386.8	31.4	12.8
30 mg/kg	6	367.3	367.5	367.3	24.5	10.0

Variable	Min	Max	Q1	Q3
control	313.00	361.00	323.50	354.25
0.1 mg/k	292.0	388.0	316.7	387.2
1.0 mg/k	351.00	411.00	351.75	381.00
3.0 mg/k	346.0	421.0	349.8	415.0
30 mg/kg	333.0	398.0	344.3	392.0

One-Way Analysis of Variance Kidney Weight

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	7625	1906	2.42	0.075
Error	25	19688	788		
Total	29	27313			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ---+---------+---------+---------+---
c           6    342.00     18.13  (---------*--------)
0.1         6    348.00     38.75     (--------*---------)
1           6    367.50     22.71             (--------*--------)
3           6    386.83     31.45                    (---------*--------)
30          6    367.33     24.54            (---------*--------)
                                   ---+---------+---------+---------+---
Pooled StDev =    28.06             325       350       375       400
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-53.5 41.5			
1	-73.0 22.0	-67.0 28.0		
3	-92.4 2.7	-86.4 8.7	-66.9 28.2	

30	-72.9	-66.9	-47.4	-28.0
	22.2	28.2	47.7	67.0

Descriptive Statistics Thymus Weight

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	56.50	52.50	56.50	12.18	4.97
0.1 mg/k	6	51.17	50.00	51.17	4.83	1.97
1.0 mg/k	6	49.00	48.00	49.00	4.20	1.71
3.0 mg/k	6	46.50	46.00	46.50	4.97	2.03
30 mg/kg	6	46.00	45.50	46.00	4.43	1.81

Variable	Min	Max	Q1	Q3
control	42.00	75.00	48.00	69.00
0.1 mg/k	46.00	57.00	46.75	57.00
1.0 mg/k	44.00	55.00	45.50	53.50
3.0 mg/k	39.00	52.00	42.75	52.00
30 mg/kg	40.00	53.00	43.00	49.25

One-Way Analysis of Variance Thymus Weight

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	436.3	109.1	2.34	0.083
Error	25	1167.8	46.7		
Total	29	1604.2			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ---+---------+---------+---
c           6    56.500    12.178                   (--------*---------)
0.1         6    51.167     4.834            (--------*---------)
1           6    49.000     4.195        (---------*--------)
3           6    46.500     4.970   (---------*--------)
30          6    46.000     4.427  (---------*--------)
                                   ---+---------+---------+---------+---
Pooled StDev =    6.835            42.0      48.0      54.0      60.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-6.246 16.913			
1	-4.080 19.080	-9.413 13.746		
3	-1.580 21.580	-6.913 16.246	-9.080 14.080	
30	-1.080 22.080	-6.413 16.746	-8.580 14.580	-11.080 12.080

Descriptive Statistics Spleen Weight

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	95.67	97.00	95.67	10.52	4.29
0.1 mg/k	6	95.67	94.50	95.67	10.35	4.22

1.0 mg/k	6	111.67	113.00	111.67	12.36	5.04
3.0 mg/k	6	108.00	107.50	108.00	10.88	4.44
30 mg/kg	6	103.33	102.00	103.33	14.08	5.75

Variable	Min	Max	Q1	Q3
control	82.00	109.00	84.25	105.25
0.1 mg/k	81.00	113.00	90.00	101.75
1.0 mg/k	95.00	128.00	99.50	122.00
3.0 mg/k	91.00	123.00	100.75	117.00
30 mg/kg	86.00	126.00	91.25	114.75

One-Way Analysis of Variance Spleen Weight

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	1246	312	2.27	0.090
Error	25	3435	137		
Total	29	4681			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  -----+---------+---------+---------+-
c           6     95.67     10.52   (---------*---------)
0.1         6     95.67     10.35   (---------*---------)
1           6    111.67     12.36                   (---------*---------)
3           6    108.00     10.88               (---------*---------)
30          6    103.33     14.08          (---------*---------)
                                   -----+---------+---------+---------+-
Pooled StDev =    11.72                 90        100       110       120
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-19.86 19.86			
1	-35.86 3.86	-35.86 3.86		
3	-32.19 7.53	-32.19 7.53	-16.19 23.53	
30	-27.53 12.19	-27.53 12.19	-11.53 28.19	-15.19 24.53

Descriptive Statistics Liver Weight

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	1425.2	1456.5	1425.2	174.1	71.1
0.1 mg/k	6	1426.3	1464.0	1426.3	191.8	78.3
1.0 mg/k	6	1426.5	1408.0	1426.5	90.8	37.1
3.0 mg/k	6	1505.0	1632.0	1505.0	235.6	96.2
30 mg/kg	6	1437.0	1421.0	1437.0	69.3	28.3

Variable	Min	Max	Q1	Q3
control	1096.0	1610.0	1347.3	1528.2
0.1 mg/k	1116.0	1612.0	1253.2	1605.3
1.0 mg/k	1324.0	1574.0	1351.0	1507.3
3.0 mg/k	1196.0	1690.0	1205.7	1675.7
30 mg/kg	1363.0	1524.0	1375.7	1515.8

```
c          6   6275000   1608589     (---------*---------)
0.1        6   6762500   1848896        (---------*---------)
1          6   5847500   1112811  (---------*---------)
3          6   7482500   1728308             (---------*---------)
30         6   6885000   2326848         (---------*---------)
                                   -+---------+---------+---------+-----
Pooled StDev =  1768931       4500000   6000000   7500000   9000000
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-3484477 2509477			
1	-2569477 3424477	-2081977 3911977		
3	-4204477 1789477	-3716977 2276977	-4631977 1361977	
30	-3606977 2386977	-3119477 2874477	-4034477 1959477	-2399477 3594477

Descriptive Statistics Thymus Cellularity

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	1.17E+08	1.15E+08	1.17E+08	34638778	14141222
0.1 mg/k	6	90920000	87210000	90920000	14075988	5746498
1.0 mg/k	6	86910000	85230000	86910000	13405603	5472815
3.0 mg/k	6	91390000	91380000	91390000	25508213	10413684
30 mg/kg	6	1.06E+08	1.02E+08	1.06E+08	17047171	6959478

Variable	Min	Max	Q1	Q3
control	66660000	1.60E+08	91005000	1.51E+08
0.1 mg/k	74160000	1.10E+08	79875000	1.06E+08
1.0 mg/k	70440000	1.11E+08	78045000	94725000
3.0 mg/k	58800000	1.35E+08	71130000	1.06E+08
30 mg/kg	86400000	1.36E+08	93645000	1.19E+08

One-Way Analysis of Variance Thymus Cellularity

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	3.901E+15	9.753E+14	1.94	0.136
Error	25	1.259E+16	5.038E+14		
Total	29	1.650E+16			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ------+---------+---------+---------+
c           6  1.17E+08  34638778                 (---------*--------)
0.1         6  90920000  14075988    (--------*---------)
1           6  86910000  13405603  (--------*---------)
3           6  91390000  25508213    (---------*--------)
30          6  1.06E+08  17047171            (--------*--------)
                                   ------+---------+---------+---------+
Pooled StDev = 22445327            80000000  1.00E+08  1.20E+08  1.40E+08
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-11667556 64387556			
1	-7657556 68397556	-34017556 42037556		
3	-12137556 63917556	-38497556 37557556	-42507556 33547556	
30	-26677556 49377556	-53037556 23017556	-57047556 19007556	-52567556 23487556

Descriptive Statistics Spleen Cellularity

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	1.87E+08	1.78E+08	1.87E+08	44203620	18046052
0.1 mg/k	6	1.81E+08	1.85E+08	1.81E+08	19924364	8134088
1.0 mg/k	6	1.71E+08	1.68E+08	1.71E+08	32320480	13194781
3.0 mg/k	6	2.01E+08	1.98E+08	2.01E+08	36781232	15015875
30 mg/kg	6	1.49E+08	1.57E+08	1.49E+08	53698259	21922223

Variable	Min	Max	Q1	Q3
control	1.43E+08	2.66E+08	1.54E+08	2.16E+08
0.1 mg/k	1.49E+08	2.05E+08	1.64E+08	1.96E+08
1.0 mg/k	1.31E+08	2.16E+08	1.41E+08	2.04E+08
3.0 mg/k	1.52E+08	2.66E+08	1.80E+08	2.18E+08
30 mg/kg	61320000	2.19E+08	1.06E+08	1.87E+08

One-Way Analysis of Variance Spleen Cellularity

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	9.099E+15	2.275E+15	1.49	0.235
Error	25	3.816E+16	1.526E+15		
Total	29	4.726E+16			

Level	N	Mean	StDev	Individual 95% CIs For Mean Based on Pooled StDev
c	6	1.87E+08	44203620	(--------*---------)
0.1	6	1.81E+08	19924364	(---------*--------)
1	6	1.71E+08	32320480	(--------*--------)
3	6	2.01E+08	36781232	(--------*---------)
30	6	1.49E+08	53698259	(--------*---------)

Pooled StDev = 39068954

1.40E+08 1.75E+08 2.10E+08

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-59881809 72501809			
1	-50131809 82251809	-56441809 75941809		

3	-79791809	-86091809	-95841809	
	52601809	46291809	36541809	
30	-27711809	-34021809	-43771809	-14121809
	104671809	98361809	88611809	118261809

Descriptive Statistics Macrophage Cellularity

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	6862500	6690000	6862500	1604699	655115
0.1 mg/k	6	7510000	7267500	7510000	851528	347635
1.0 mg/k	6	8117500	7590000	8117500	2089719	853124
3.0 mg/k	6	10685000	10927500	10685000	1812747	740051
30 mg/kg	6	6832500	6210000	6832500	2698746	1101758

Variable	Min	Max	Q1	Q3
control	5115000	9675000	5598750	7852500
0.1 mg/k	6555000	8535000	6825000	8523750
1.0 mg/k	5760000	11745000	6603750	9787500
3.0 mg/k	8475000	13245000	8722500	12108750
30 mg/kg	4140000	12075000	5546250	7777500

One-Way Analysis of Variance Macrophage Cellularity

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	6.072E+13	1.518E+13	4.16	0.010
Error	25	9.118E+13	3.647E+12		
Total	29	1.519E+14			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  ----+---------+---------+---------+--
c           6   6862500   1604699  (-------*-------)
0.1         6   7510000    851528      (-------*-------)
1           6   8117500   2089719         (-------*-------)
3           6  10685000   1812747                     (-------*-------)
30          6   6832500   2698746  (-------*-------)
                                   ----+---------+---------+---------+--
Pooled StDev =  1909783          6000000   8000000  10000000  12000000
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-3883113			
	2588113			
1	-4490613	-3843113		
	1980613	2628113		
3	-7058113	-6410613	-5803113	
	-586887	60613	668113	
30	-3205613	-2558113	-1950613	616887
	3265613	3913113	4520613	7088113

Experiment "D" - 90 day AP

Descriptive Statistics Final Body Weight

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	31.72	30.00	31.72	5.66	2.31
0.1 mg/k	6	31.650	32.200	31.650	1.654	0.675
1.0 mg/k	6	31.72	30.70	31.72	3.23	1.32
3.0 mg/k	6	30.900	31.250	30.900	2.336	0.954
30 mg/kg	6	29.650	29.350	29.650	1.864	0.761

Variable	Min	Max	Q1	Q3
control	25.40	41.70	28.02	36.15
0.1 mg/k	29.400	33.200	29.700	33.125
1.0 mg/k	27.60	36.60	29.63	34.95
3.0 mg/k	27.000	33.800	29.100	32.675
30 mg/kg	27.500	32.000	27.875	31.775

One-Way Analysis of Variance Final Body Weight

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	19.2	4.8	0.44	0.776
Error	25	270.6	10.8		
Total	29	289.9			

```
                                    Individual 95% CIs For Mean
                                    Based on Pooled StDev
Level       N      Mean     StDev  ---+---------+---------+---------+---
c           6    31.717     5.661           (----------*----------)
0.1         6    31.650     1.654           (----------*----------)
1           6    31.717     3.227           (----------*----------)
3           6    30.900     2.336        (----------*----------)
30          6    29.650     1.864   (----------*----------)
                                    ---+---------+---------+---------+---
Pooled StDev =    3.290             27.5      30.0      32.5      35.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-5.508 5.641			
1	-5.574 5.574	-5.641 5.508		
3	-4.758 6.391	-4.824 6.324	-4.758 6.391	
30	-3.508 7.641	-3.574 7.574	-3.508 7.641	-4.324 6.824

Descriptive Statistics Kidney Weight

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	339.00	334.00	339.00	11.14	4.55
0.1 mg/k	6	351.50	355.00	351.50	15.91	6.49
1.0 mg/k	6	372.50	365.50	372.50	19.70	8.04
3.0 mg/k	6	368.2	355.5	368.2	27.9	11.4
30 mg/kg	6	368.5	366.0	368.5	33.9	13.8

Variable	Min	Max	Q1	Q3
control	331.00	360.00	331.75	347.25
0.1 mg/k	330.00	370.00	333.75	365.50

1.0 mg/k	354.00	398.00	355.50	396.50
3.0 mg/k	339.0	408.0	349.5	400.5
30 mg/kg	325.0	413.0	339.3	401.0

One-Way Analysis of Variance Kidney Weight

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	4851	1213	2.25	0.092
Error	25	13455	538		
Total	29	18306			

```
                                    Individual 95% CIs For Mean
                                    Based on Pooled StDev
Level        N      Mean     StDev  -+---------+---------+---------+-----
c            6    339.00     11.14   (---------*--------)
0.1          6    351.50     15.91         (---------*---------)
1            6    372.50     19.70                   (---------*---------)
3            6    368.17     27.87                 (---------*---------)
30           6    368.50     33.90                 (---------*---------)
                                    -+---------+---------+---------+-----
Pooled StDev =    23.20            320       340       360       380
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-51.81 26.81			
1	-72.81 5.81	-60.31 18.31		
3	-68.47 10.14	-55.97 22.64	-34.97 43.64	
30	-68.81 9.81	-56.31 22.31	-35.31 43.31	-39.64 38.97

Descriptive Statistics Liver Weight

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	1455.3	1461.0	1455.3	88.1	36.0
0.1 mg/k	6	1578.2	1594.0	1578.2	129.5	52.9
1.0 mg/k	6	1534.3	1521.5	1534.3	98.5	40.2
3.0 mg/k	6	1454.3	1478.5	1454.3	133.4	54.5
30 mg/kg	6	1408.3	1370.5	1408.3	111.5	45.5

Variable	Min	Max	Q1	Q3
control	1318.0	1548.0	1384.0	1540.5
0.1 mg/k	1436.0	1716.0	1436.8	1698.0
1.0 mg/k	1404.0	1692.0	1464.7	1609.5
3.0 mg/k	1276.0	1581.0	1325.5	1572.7
30 mg/kg	1296.0	1601.0	1326.7	1506.5

One-Way Analysis of Variance Liver Weight

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	112837	28209	2.19	0.100
Error	25	322312	12892		
Total	29	435149			

```
                                        Individual 95% CIs For Mean
                                        Based on Pooled StDev
Level        N      Mean      StDev  ---------+---------+---------+-------
c            6    1455.3       88.1       (---------*--------)
0.1          6    1578.2      129.5                  (---------*--------)
1            6    1534.3       98.5               (--------*---------)
3            6    1454.3      133.4       (--------*---------)
30           6    1408.3      111.5  (---------*--------)
                                      ---------+---------+---------+-------
Pooled StDev =     113.5                   1400      1500      1600
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-315 70			
1	-271 113	-149 236		
3	-191 193	-69 316	-112 272	
30	-145 239	-23 362	-66 318	-146 238

Descriptive Statistics Thymus Weight

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	41.67	43.00	41.67	4.84	1.98
0.1 mg/k	6	48.67	48.50	48.67	3.14	1.28
1.0 mg/k	6	48.33	49.00	48.33	4.03	1.65
3.0 mg/k	6	42.00	47.00	42.00	11.51	4.70
30 mg/kg	6	48.83	48.00	48.83	3.76	1.54

Variable	Min	Max	Q1	Q3
control	34.00	47.00	37.00	45.50
0.1 mg/k	44.00	53.00	46.25	51.50
1.0 mg/k	42.00	52.00	45.00	52.00
3.0 mg/k	23.00	53.00	30.50	50.00
30 mg/kg	45.00	56.00	46.50	50.75

One-Way Analysis of Variance Thymus Weight

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	331.9	83.0	2.11	0.109
Error	25	980.8	39.2		
Total	29	1312.7			

```
                                        Individual 95% CIs For Mean
                                        Based on Pooled StDev
Level        N      Mean      StDev  --------+---------+---------+--------
c            6    41.667      4.844   (---------*----------)
0.1          6    48.667      3.141                 (---------*----------)
1            6    48.333      4.033                (----------*---------)
3            6    42.000     11.507   (----------*----------)
30           6    48.833      3.764                 (----------*---------)
                                      --------+---------+---------+--------
Pooled StDev =     6.264                  40.0      45.0      50.0
```

Tukey's pairwise comparisons

```
    Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

                c           0.1          1           3

     0.1      -17.612
               3.612

     1        -17.279     -10.279
               3.945      10.945

     3        -10.945      -3.945      -4.279
              10.279      17.279      16.945

     30       -17.779     -10.779     -11.112     -17.445
               3.445      10.445      10.112       3.779
```

Descriptive Statistics Spleen Weight

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	94.67	95.00	94.67	7.47	3.05
0.1 mg/k	6	98.33	98.50	98.33	9.83	4.01
1.0 mg/k	6	98.00	98.00	98.00	3.69	1.51
3.0 mg/k	6	101.17	102.50	101.17	17.47	7.13
30 mg/kg	6	101.33	98.50	101.33	10.95	4.47

Variable	Min	Max	Q1	Q3
control	85.00	103.00	87.25	102.25
0.1 mg/k	83.00	114.00	93.50	102.75
1.0 mg/k	92.00	103.00	95.75	100.75
3.0 mg/k	79.00	130.00	85.75	111.25
30 mg/kg	88.00	121.00	95.50	108.25

One-Way Analysis of Variance Spleen Weight

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	179	45	0.38	0.821
Error	25	2957	118		
Total	29	3136			

```
                                    Individual 95% CIs For Mean
                                    Based on Pooled StDev
Level       N      Mean     StDev   ---------+---------+---------+--------
c           6     94.67      7.47   (------------*------------)
0.1         6     98.33      9.83       (------------*------------)
1           6     98.00      3.69       (------------*------------)
3           6    101.17     17.47           (------------*------------)
30          6    101.33     10.95            (------------*------------)
                                    ---------+---------+---------+--------
Pooled StDev =    10.88                 91.0      98.0     105.0
```

Tukey's pairwise comparisons

```
    Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

                c           0.1          1           3

     0.1      -22.09
               14.76
```

1	-21.76	-18.09		
	15.09	18.76		
3	-24.93	-21.26	-21.59	
	11.93	15.59	15.26	
30	-25.09	-21.43	-21.76	-18.59
	11.76	15.43	15.09	18.26

Descriptive Statistics Bone Marrow Cellularity

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	7725000	7672500	7725000	786778	321201
0.1 mg/k	6	8112500	7112500	8112500	2167899	885041
1.0 mg/k	6	8553333	8967500	8553333	2092431	854231
3.0 mg/k	6	8840833	9082500	8840833	2432701	993146
30 mg/kg	6	7579167	6930000	7579167	2476000	1010823

Variable	Min	Max	Q1	Q3
control	6870000	8800000	6922500	8496250
0.1 mg/k	6355000	11945000	6651250	10036250
1.0 mg/k	5145000	11410000	6930000	9831250
3.0 mg/k	4890000	12000000	6933750	10781250
30 mg/kg	4730000	11810000	5813750	9627500

One-Way Analysis of Variance Bone Marrow Cellularity

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	6.882E+12	1.721E+12	0.40	0.810
Error	25	1.087E+14	4.349E+12		
Total	29	1.156E+14			

Level	N	Mean	StDev	Individual 95% CIs For Mean Based on Pooled StDev
c	6	7725000	786778	(----------*----------)
0.1	6	8112500	2167899	(----------*----------)
1	6	8553333	2092431	(----------*----------)
3	6	8840833	2432701	(----------*----------)
30	6	7579167	2476000	(----------*----------)

Pooled StDev = 2085458 6000000 7500000 9000000 10500000

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-3920747 3145747			
1	-4361580 2704914	-3974080 3092414		
3	-4649080 2417414	-4261580 2804914	-3820747 3245747	
30	-3387414 3679080	-2999914 4066580	-2559080 4507414	-2271580 4794914

Descriptive Statistics Thymus Cellularity

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	48337500	50250000	48337500	7909822	3229171
0.1 mg/k	6	47160000	49567500	47160000	12112613	4944953
1.0 mg/k	6	44885000	44407500	44885000	8900038	3633425
3.0 mg/k	6	48002500	49117500	48002500	14146982	5775481
30 mg/kg	6	50090000	52672500	50090000	12920170	5274637

Variable	Min	Max	Q1	Q3
control	39180000	59670000	39258750	53460000
0.1 mg/k	26055000	60930000	38036250	56340000
1.0 mg/k	35355000	58170000	36738750	51870000
3.0 mg/k	23625000	63630000	38126250	60581250
30 mg/kg	26310000	62025000	42453750	59775000

One-Way Analysis of Variance Thymus Cellularity

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	8.655E+13	2.164E+13	0.17	0.954
Error	25	3.278E+15	1.311E+14		
Total	29	3.364E+15			

Level	N	Mean	StDev	Individual 95% CIs For Mean Based on Pooled StDev
c	6	48337500	7909822	(----------*----------)
0.1	6	47160000	12112613	(----------*----------)
1	6	44885000	8900038	(----------*----------)
3	6	48002500	14146982	(----------*----------)
30	6	50090000	12920170	(----------*----------)
				42000000 49000000 56000000

Pooled StDev = 11450408

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-18222130 20577130			
1	-15947130 22852130	-17124630 21674630		
3	-19064630 19734630	-20242130 18557130	-22517130 16282130	
30	-21152130 17647130	-22329630 16469630	-24604630 14194630	-21487130 17312130

Descriptive Statistics Spleen Cellularity

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	1.56E+08	1.46E+08	1.56E+08	30960308	12639493
0.1 mg/k	6	1.68E+08	1.60E+08	1.68E+08	27825343	11359649
1.0 mg/k	6	1.62E+08	1.61E+08	1.62E+08	14401141	5879241
3.0 mg/k	6	1.69E+08	1.66E+08	1.69E+08	34001276	13880963
30 mg/kg	6	1.90E+08	1.92E+08	1.90E+08	23090210	9426539

Variable	Min	Max	Q1	Q3
control	1.32E+08	2.15E+08	1.34E+08	1.74E+08
0.1 mg/k	1.39E+08	2.12E+08	1.44E+08	1.95E+08
1.0 mg/k	1.45E+08	1.87E+08	1.50E+08	1.72E+08
3.0 mg/k	1.22E+08	2.24E+08	1.45E+08	1.93E+08
30 mg/kg	1.53E+08	2.20E+08	1.71E+08	2.08E+08

One-Way Analysis of Variance Spleen Cellularity

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	3.932E+15	9.830E+14	1.35	0.278
Error	25	1.815E+16	7.259E+14		
Total	29	2.208E+16			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  -------+---------+---------+---------
c           6  1.56E+08  30960308  (--------*--------)
0.1         6  1.68E+08  27825343       (--------*--------)
1           6  1.62E+08  14401141     (--------*--------)
3           6  1.69E+08  34001276       (---------*--------)
30          6  1.90E+08  23090210                 (--------*--------)
                                   -------+---------+---------+---------
Pooled StDev = 26942264            1.50E+08  1.75E+08  2.00E+08
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-57823902 33468902			
1	-52296402 38996402	-40118902 51173902		
3	-58843902 32448902	-46666402 44626402	-52193902 39098902	
30	-79753902 11538902	-67576402 23716402	-73103902 18188902	-66556402 24736402

Descriptive Statistics Macrophage Cellularity

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	5906667	5925000	5906667	1900344	775812
0.1 mg/k	6	5727500	5692500	5727500	568777	232202
1.0 mg/k	6	5483333	5332500	5483333	1290812	526972
3.0 mg/k	6	3826667	3915000	3826667	449329	183438
30 mg/kg	6	4120833	3822500	4120833	1170963	478044

Variable	Min	Max	Q1	Q3
control	3210000	8935000	4511250	7108750
0.1 mg/k	4815000	6375000	5351250	6288750
1.0 mg/k	4000000	7080000	4195000	6941250
3.0 mg/k	3000000	4320000	3570000	4117500
30 mg/kg	3255000	6400000	3318750	4663750

One-Way Analysis of Variance Macrophage Cellularity

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	2.240E+13	5.601E+12	3.90	0.013
Error	25	3.587E+13	1.435E+12		
Total	29	5.827E+13			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  -------+---------+---------+---------
```

```
c          6   5906667   1900344                    (-------*---------)
0.1        6   5727500    568777                 (--------*-------)
1          6   5483333   1290812               (--------*-------)
3          6   3826667    449329  (--------*-------)
30         6   4120833   1170963     (-------*--------)
                                   -------+---------+---------+---------
Pooled StDev =  1197837             3600000   4800000   6000000
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-1850244 2208578			
1	-1606078 2452744	-1785244 2273578		
3	50589 4109411	-128578 3930244	-372744 3686078	
30	-243578 3815244	-422744 3636078	-666911 3391911	-2323578 1735244

14 and 90 day AP Stem cell assay experiments (K and D)

Descriptive Statistics Stem Cell Assay 14d "K"

Variable	N	N*	Mean	Median	Tr Mean	StDev	SE Mean
c	6	0	688889	766667	688889	217732	88889
0.1	6	0	883333	983333	883333	350079	142919
1	7	20	780953	800000	780953	470953	178004
3	6	0	1200000	1233333	1200000	202210	82552
30	6	0	1455556	1533333	1455556	351294	143415

Variable	Min	Max	Q1	Q3
c	333333	933333	483333	833333
0.1	400000	1266667	500000	1166667
1	?	1400000	466667	1266667
3	933333	1466667	983333	1366667
30	800000	1800000	1250000	1700000

One-Way Analysis of Variance Stem Cell Assay 14d "K"

Analysis of Variance for control

Source	DF	SS	MS	F	P
C1	4	2.172E+12	5.430E+11	5.93	0.002
Error	25	2.291E+12	9.162E+10		
Total	29	4.462E+12			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  --------+---------+---------+--------
c           6    688889    217732  (-------*------)
0.1         6    883333    350079        (------*-------)
1           6    911111    351926         (------*------)
3           6   1200000    202210                (------*-------)
30          6   1455556    351294                       (-------*------)
                                   --------+---------+---------+--------
Pooled StDev =   302692               700000   1050000   1400000
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-707274 318385			
1	-735052 290607	-540607 485052		
3	-1023940 1718	-829496 196163	-801718 223940	
30	-1279496 -253837	-1085052 -59393	-1057274 -31615	-768385 257274

Descriptive Statistics Stem Cell Assay - 90d "D"

Variable	N	N*	Mean	Median	Tr Mean	StDev	SE Mean
c	6	0	527778	600000	527778	283170	115604
0.1	6	0	955556	900000	955556	234442	95711
1	5	1	520000	666667	520000	269361	120462
3	6	0	597222	525000	597222	295600	120678
30	6	0	577778	583333	577778	161475	65922

Variable	Min	Max	Q1	Q3
c	0	766667	350000	741667
0.1	733333	1366667	758333	1141667
1	100000	733333	250000	716666
3	333333	933333	333333	933333
30	366667	800000	416666	725000

One-Way Analysis of Variance Stem Cell Assay - 90d "D"

Analysis of Variance for control

Source	DF	SS	MS	F	P
Cl	4	7.792E+11	1.948E+11	3.05	0.036
Error	24	1.533E+12	6.388E+10		
Total	28	2.312E+12			

Level	N	Mean	StDev	Individual 95% CIs For Mean Based on Pooled StDev
c	6	527778	283170	(-------*--------)
0.1	6	955556	234442	(-------*--------)
1	5	520000	269361	(---------*--------)
3	6	597222	295600	(--------*-------)
30	6	577778	161475	(-------*--------)

Pooled StDev = 252754

500000 750000 1000000

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00705

Critical value = 4.17

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-858065 2510			

1	-443511	-15734		
	459067	886845		
3	-499732	-71954	-528511	
	360843	788621	374067	
30	-480287	-52510	-509067	-410843
	380287	808065	393511	449732

14 and 90 day AP Stem cell assay experiments (K and D)

Descriptive Statistics Stem Cell Assay 14d "K"

Variable	N	N*	Mean	Median	Tr Mean	StDev	SE Mean
c	6	0	688889	766667	688889	217732	88889
0.1	6	0	883333	983333	883333	350079	142919
1	7	20	780953	800000	780953	470953	178004
3	6	0	1200000	1233333	1200000	202210	82552
30	6	0	1455556	1533333	1455556	351294	143415

Variable	Min	Max	Q1	Q3
c	333333	933333	483333	833333
0.1	400000	1266667	500000	1166667
1	7	1400000	466667	1266667
3	933333	1466667	983333	1366667
30	800000	1800000	1250000	1700000

One-Way Analysis of Variance Stem Cell Assay 14d "K"

Analysis of Variance for control

Source	DF	SS	MS	F	P
C1	4	2.172E+12	5.430E+11	5.93	0.002
Error	25	2.291E+12	9.162E+10		
Total	29	4.462E+12			

```
                                    Individual 95% CIs For Mean
                                    Based on Pooled StDev
Level       N      Mean     StDev  --------+---------+---------+--------
c           6    688889    217732  (-------*------)
0.1         6    883333    350079        (------*-------)
1           6    911111    351926         (------*------)
3           6   1200000    202210                 (------*-------)
30          6   1455556    351294                        (-------*------)
                                   --------+---------+---------+--------
Pooled StDev =   302692               700000   1050000   1400000
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-707274			
	318385			
1	-735052	-540607		
	290607	485052		
3	-1023940	-829496	-801718	
	1718	196163	1223940	
30	-1279496	-1085052	-1057274	-768385
	-253837	-59393	-31615	257274

Descriptive Statistics Stem Cell Assay - 90d "D"

Variable	N	N*	Mean	Median	Tr Mean	StDev	SE Mean
c	6	0	527778	600000	527778	283170	115604
0.1	6	0	955556	900000	955556	234442	95711
1	5	1	520000	666667	520000	269361	120462
3	6	0	597222	525000	597222	295600	120678
30	6	0	577778	583333	577778	161475	65922

Variable	Min	Max	Q1	Q3
c	0	766667	350000	741667
0.1	733333	1366667	758333	1141667
1	100000	733333	250000	716666
3	333333	933333	333333	933333
30	366667	800000	416666	725000

One-Way Analysis of Variance Stem Cell Assay - 90d "D"

Analysis of Variance for control

Source	DF	SS	MS	F	P
C1	4	7.792E+11	1.948E+11	3.05	0.036
Error	24	1.533E+12	6.388E+10		
Total	28	2.312E+12			

Level	N	Mean	StDev	Individual 95% CIs For Mean Based on Pooled StDev
c	6	527778	283170	(-------*-------)
0.1	6	955556	234442	(-------*-------)
1	5	520000	269361	(---------*--------)
3	6	597222	295600	(--------*-------)
30	6	577778	161475	(-------*-------)

Pooled StDev = 252754

500000 750000 1000000

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00705

Critical value = 4.17

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-858065 2510			
1	-443511 459067	-15734 886845		
3	-499732 360843	-71954 788621	-528511 374067	
30	-480287 380287	-52510 808065	-509067 393511	-410843 449732

Experiment "D" - 90 day AP

Descriptive Statistics CD8+CD4-Thymus

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	3.567	3.650	3.567	0.524	0.214
0.1 mg/k	6	3.667	3.700	3.667	0.781	0.319
1.0 mg/k	6	3.717	3.750	3.717	0.471	0.192
3.0 mg/k	6	3.583	3.550	3.583	0.527	0.215

30 mg/kg	6	3.167	3.250	3.167	0.320	0.131

Variable	Min	Max	Q1	Q3
control	2.800	4.200	3.100	3.975
0.1 mg/k	2.400	4.500	3.075	4.425
1.0 mg/k	3.000	4.300	3.300	4.150
3.0 mg/k	2.900	4.400	3.125	4.025
30 mg/kg	2.700	3.600	2.850	3.375

One-Way Analysis of Variance CD8+CD4- Thymus

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	1.135	0.284	0.95	0.450
Error	25	7.437	0.297		
Total	29	8.572			

```
                                    Individual 95% CIs For Mean
                                    Based on Pooled StDev
Level       N     Mean     StDev  ---+---------+---------+---------+---
c           6   3.5667    0.5241              (----------*----------)
0.1         6   3.6667    0.7815                (----------*----------)
1           6   3.7167    0.4708                 (----------*----------)
3           6   3.5833    0.5269              (----------*----------)
30          6   3.1667    0.3204   (----------*----------)
                                  ---+---------+---------+---------+---
Pooled StDev =   0.5454            2.80      3.20      3.60      4.00
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-1.0240 0.8240			
1	-1.0740 0.7740	-0.9740 0.8740		
3	-0.9407 0.9074	-0.8407 1.0074	-0.7907 1.0574	
30	-0.5240 1.3240	-0.4240 1.4240	-0.3740 1.4740	-0.5074 1.3407

Descriptive Statistics CD8+CD4+ Thymus

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	83.633	83.550	83.633	1.585	0.647
0.1 mg/k	6	84.317	83.850	84.317	1.712	0.699
1.0 mg/k	6	84.067	84.400	84.067	2.009	0.820
3.0 mg/k	6	85.067	85.000	85.067	1.389	0.567
30 mg/kg	6	86.850	86.550	86.850	1.361	0.555

Variable	Min	Max	Q1	Q3
control	82.100	86.300	82.100	84.725
0.1 mg/k	82.700	87.300	83.000	85.650
1.0 mg/k	81.500	87.000	81.950	85.500
3.0 mg/k	82.700	86.700	84.275	86.325
30 mg/kg	85.300	88.900	85.675	88.225

One-Way Analysis of Variance CD8+CD4+ Thymus

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	38.43	9.61	3.62	0.018
Error	25	66.28	2.65		
Total	29	104.71			

Level	N	Mean	StDev	Individual 95% CIs For Mean Based on Pooled StDev
c	6	83.633	1.585	(------*------)
0.1	6	84.317	1.712	(------*-----)
1	6	84.067	2.009	(------*------)
3	6	85.067	1.389	(------*------)
30	6	86.850	1.361	(------*------)

Pooled StDev = 1.628

```
---------+---------+---------+-------
        84.0      86.0      88.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-3.442 2.075			
1	-3.192 2.325	-2.509 3.009		
3	-4.192 1.325	-3.509 2.009	-3.759 1.759	
30	-5.975 -0.458	-5.291 0.225	-5.542 -0.025	-4.542 0.975

Descriptive Statistics CD8-CD4- Thymus

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	3.817	3.700	3.817	0.717	0.293
0.1 mg/k	6	3.717	3.800	3.717	0.264	0.108
1.0 mg/k	6	3.883	3.800	3.883	0.538	0.220
3.0 mg/k	6	3.667	3.300	3.667	0.706	0.288
30 mg/kg	6	3.000	3.050	3.000	0.424	0.173

Variable	Min	Max	Q1	Q3
control	3.100	5.100	3.250	4.275
0.1 mg/k	3.300	4.000	3.450	3.925
1.0 mg/k	3.300	4.700	3.450	4.325
3.0 mg/k	3.100	4.800	3.175	4.425
30 mg/kg	2.400	3.400	2.625	3.400

One-Way Analysis of Variance CD8-CD4- Thymus

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	3.023	0.756	2.44	0.074
Error	25	7.758	0.310		
Total	29	10.782			

Level	N	Mean	StDev	Individual 95% CIs For Mean Based on Pooled StDev
c	6	3.8167	0.7167	(--------*---------)
0.1	6	3.7167	0.2639	(--------*---------)
1	6	3.8833	0.5382	(---------*--------)
3	6	3.6667	0.7062	(--------*---------)
30	6	3.0000	0.4243	(--------*--------)

```
                                        ----------+---------+---------+------
Pooled StDev =    0.5571                        3.00      3.50      4.00

Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

              c           0.1          1           3

     0.1     -0.8438
              1.0438

     1       -1.0105     -1.1105
              0.8771      0.7771

     3       -0.7938     -0.8938     -0.7271
              1.0938      0.9938      1.1605

     30      -0.1271     -0.2271     -0.0605     -0.2771
              1.7605      1.6605      1.8271      1.6105
```

Descriptive Statistics CD8-CD4+ Thymus

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	8.983	8.800	8.983	0.920	0.375
0.1 mg/k	6	8.283	8.700	8.283	0.958	0.391
1.0 mg/k	6	8.317	8.300	8.317	1.513	0.618
3.0 mg/k	6	7.700	7.850	7.700	0.529	0.216
30 mg/kg	6	6.950	7.050	6.950	0.969	0.396

Variable	Min	Max	Q1	Q3
control	7.600	10.200	8.425	9.900
0.1 mg/k	6.500	9.000	7.550	8.925
1.0 mg/k	6.500	10.000	6.725	10.000
3.0 mg/k	6.800	8.200	7.250	8.125
30 mg/kg	5.500	8.000	6.175	7.775

One-Way Analysis of Variance CD8-CD4+ Thymus

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	13.97	3.49	3.31	0.026
Error	25	26.36	1.05		
Total	29	40.33			

```
                                        Individual 95% CIs For Mean
                                        Based on Pooled StDev
Level       N      Mean     StDev      ----------+---------+---------+------
c           6     8.983     0.920                      (------*------)
0.1         6     8.283     0.958                (------*------)
1           6     8.317     1.513                (------*-------)
3           6     7.700     0.529            (------*------)
30          6     6.950     0.969       (------*------)
                                        ----------+---------+---------+------
Pooled StDev =    1.027                        7.2       8.4       9.6

Tukey's pairwise comparisons

    Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)
```

	c	0.1	1	3
0.1	-1.040 2.440			
1	-1.073 2.406	-1.773 1.706		
3	-0.456 3.023	-1.156 2.323	-1.123 2.356	
30	0.294 3.773	-0.406 3.073	-0.373 3.106	-0.990 2.490

Descriptive Statistics CD8+CD4- Spleen

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	11.933	12.150	11.933	0.609	0.249
0.1 mg/k	6	13.550	14.050	13.550	1.674	0.683
1.0 mg/k	6	11.750	11.800	11.750	1.005	0.410
3.0 mg/k	6	12.117	12.000	12.117	0.719	0.294
30 mg/kg	6	12.217	12.200	12.217	0.634	0.259

Variable	Min	Max	Q1	Q3
control	11.100	12.700	11.250	12.325
0.1 mg/k	10.800	15.100	12.000	14.950
1.0 mg/k	10.200	12.900	10.875	12.750
3.0 mg/k	11.300	13.100	11.525	12.800
30 mg/kg	11.400	13.000	11.700	12.775

One-Way Analysis of Variance CD8+CD4- Spleen

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	12.23	3.06	3.00	0.039
Error	25	25.52	1.02		
Total	29	37.75			

```
                                    Individual 95% CIs For Mean
                                    Based on Pooled StDev
Level       N      Mean     StDev  -+---------+---------+---------+-----
c           6    11.933     0.609    (-------*--------)
0.1         6    13.550     1.674                     (--------*-------)
1           6    11.750     1.005  (--------*-------)
3           6    12.117     0.719      (-------*--------)
30          6    12.217     0.634       (-------*--------)
                                    -+---------+---------+---------+-----
Pooled StDev =    1.010          11.0      12.0      13.0      14.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-3.328 0.095			
1	-1.528 1.895	-0.088 3.512		
3	-1.895 1.528	-0.278 3.145	-2.078 1.345	
30	-1.995	-0.378	-2.178	-1.812

1.428	3.045	1.245	1.612

Descriptive Statistics CD8+CD4+ Spleen

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	0.4833	0.5500	0.4833	0.2317	0.0946
0.1 mg/k	6	0.5000	0.4500	0.5000	0.2191	0.0894
1.0 mg/k	6	0.4500	0.4000	0.4500	0.1871	0.0764
3.0 mg/k	6	0.4833	0.4500	0.4833	0.2229	0.0910
30 mg/kg	6	0.683	0.650	0.683	0.264	0.108

Variable	Min	Max	Q1	Q3
control	0.2000	0.7000	0.2000	0.7000
0.1 mg/k	0.2000	0.8000	0.3500	0.7250
1.0 mg/k	0.3000	0.8000	0.3000	0.5750
3.0 mg/k	0.3000	0.9000	0.3000	0.6000
30 mg/kg	0.300	1.100	0.525	0.875

One-Way Analysis of Variance CD8+CD4+ Spleen

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	0.2080	0.0520	1.02	0.418
Error	25	1.2800	0.0512		
Total	29	1.4880			

```
                                    Individual 95% CIs For Mean
                                    Based on Pooled StDev
Level       N      Mean     StDev  --------+---------+---------+--------
c           6    0.4833    0.2317     (--------*---------)
0.1         6    0.5000    0.2191     (---------*---------)
1           6    0.4500    0.1871   (--------*---------)
3           6    0.4833    0.2229     (--------*---------)
30          6    0.6833    0.2639                (--------*---------)
                                    --------+---------+---------+--------
Pooled StDev =   0.2263                   0.40      0.60      0.80
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-0.4000 0.3667			
1	-0.3500 0.4167	-0.3334 0.4334		
3	-0.3834 0.3834	-0.3667 0.4000	-0.4167 0.3500	
30	-0.5834 0.1834	-0.5667 0.2000	-0.6167 0.1500	-0.5834 0.1834

Descriptive Statistics CD8-CD4- Spleen

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	65.067	64.400	65.067	2.008	0.820
0.1 mg/k	6	61.95	60.90	61.95	3.50	1.43
1.0 mg/k	6	66.52	66.25	66.52	2.91	1.19
3.0 mg/k	6	65.28	66.05	65.28	2.76	1.13
30 mg/kg	6	62.983	63.000	62.983	1.836	0.749

Variable	Min	Max	Q1	Q3
control	63.400	69.000	63.925	66.075
0.1 mg/k	58.30	68.00	59.50	64.78
1.0 mg/k	63.00	71.40	64.13	68.62
3.0 mg/k	61.70	68.20	62.00	67.75
30 mg/kg	60.200	65.800	61.775	64.150

One-Way Analysis of Variance CD8-CD4- Spleen

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	82.24	20.56	2.87	0.044
Error	25	178.97	7.16		
Total	29	261.21			

```
                                    Individual 95% CIs For Mean
                                    Based on Pooled StDev
Level        N      Mean     StDev  --+---------+---------+---------+----
c            6    65.067     2.008              (--------*--------)
0.1          6    61.950     3.504   (--------*--------)
1            6    66.517     2.913                    (--------*--------)
3            6    65.283     2.762              (--------*--------)
30           6    62.983     1.836       (--------*--------)
                                    --+---------+---------+---------+----
Pooled StDev =    2.676            60.0      62.5      65.0      67.5
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-1.416 7.650			
1	-5.983 3.083	-9.100 -0.034		
3	-4.750 4.316	-7.866 1.200	-3.300 5.766	
30	-2.450 6.616	-5.566 3.500	-1.000 8.066	-2.233 6.833

Descriptive Statistics CD8-CD4+ Spleen

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	22.517	22.950	22.517	1.589	0.649
0.1 mg/k	6	24.033	24.250	24.033	1.773	0.724
1.0 mg/k	6	21.283	21.500	21.283	2.010	0.821
3.0 mg/k	6	22.150	21.900	22.150	2.192	0.895
30 mg/kg	6	24.117	24.150	24.117	1.552	0.634

Variable	Min	Max	Q1	Q3
control	19.400	23.900	21.800	23.450
0.1 mg/k	20.900	26.000	22.850	25.475
1.0 mg/k	18.000	23.600	19.650	23.075
3.0 mg/k	19.200	24.900	20.250	24.525
30 mg/kg	22.200	26.600	22.650	25.250

One-Way Analysis of Variance CD8-CD4+ Spleen

Analysis of Variance for C2

Source	DF	SS	MS	F	P

Cl	4	36.33	9.08	2.68	0.055
Error	25	84.63	3.39		
Total	29	120.97			

```
                                   Individual 95% CIs For Mean
                                   Based on Pooled StDev
Level       N      Mean     StDev  --+---------+---------+---------+----
c           6    22.517     1.589         (-------*------)
0.1         6    24.033     1.773                 (-------*-------)
1           6    21.283     2.010   (------*-------)
3           6    22.150     2.192       (-------*------)
30          6    24.117     1.552                 (-------*------)
                                   --+---------+---------+---------+----
Pooled StDev =    1.840            20.0      22.0      24.0      26.0
```

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-4.634 1.601			
1	-1.884 4.351	-0.367 5.867		
3	-2.751 3.484	-1.234 5.001	-3.984 2.251	
30	-4.717 1.517	-3.201 3.034	-5.951 0.284	-5.084 1.151

One-Way Analysis of Variance Liver Weight

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	28458	7115	0.26	0.899
Error	25	678244.	27130		
Total	29	706702			

Level	N	Mean	StDev	Individual 95% CIs For Mean Based on Pooled StDev
c	6	1425.2	174.1	(----------*----------)
0.1	6	1426.3	191.8	(----------*----------)
1	6	1426.5	90.8	(----------*----------)
3	6	1505.0	235.6	(----------*----------)
30	6	1437.0	69.3	(----------*----------)

Pooled StDev = 164.7

1300 1400 1500 1600

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.00702

Critical value = 4.15

Intervals for (column level mean) - (row level mean)

	c	0.1	1	3
0.1	-280 278			
1	-280 278	-279 279		
3	-359 199	-358 200	-358 201	
30	-291 267	-290 268	-290 269	-211 347

Descriptive Statistics Bone Marrow Cellularity

Variable	N	Mean	Median	Tr Mean	StDev	SE Mean
control	6	6275000	6825000	6275000	1608589	656704
0.1 mg/k	6	6762500	6592500	6762500	1848896	754809
1.0 mg/k	6	5847500	5977500	5847500	1112811	454303
3.0 mg/k	6	7482500	6772500	7482500	1728308	705579
30 mg/kg	6	6885000	7035000	6885000	2326848	949932

Variable	Min	Max	Q1	Q3
control	4020000	8160000	4458750	7451250
0.1 mg/k	4530000	9180000	5160000	8527500
1.0 mg/k	4290000	7605000	4908750	6491250
3.0 mg/k	5805000	10155000	6221250	9311250
30 mg/kg	4200000	9750000	4391250	9063750

One-Way Analysis of Variance Bone Marrow Cellularity

Analysis of Variance for C2

Source	DF	SS	MS	F	P
C1	4	9.273E+12	2.318E+12	0.74	0.573
Error	25	7.823E+13	3.129E+12		
Total	29	8.750E+13			

Level	N	Mean	StDev	Individual 95% CIs For Mean Based on Pooled StDev

T4 Quantitation 90-Day "D"

Mouse	CPM	Log (cpm)	T4 ug/dL
1D	12798.5	4.11	2.8
2D	12314.3	4.09	3.1
3D	13208	4.12	2.7
4D	11837.7	4.07	3.35
5D	11606.5	4.06	3.5
6D	12954.6	4.11	2.8
Average	12453	4.09	3.04
SD	641	0.02	0.33
7D	14420.9	4.16	2.2
8D	13341.7	4.13	2.5
9D	11741.5	4.07	3.35
10D	13093.3	4.12	2.7
11D	13211.7	4.12	2.7
12D	12660.3	4.10	2.95
Average	13078	4.12	2.73
SD	878	0.03	0.39
13D	14175.9	4.15	2.3
14D	13964.3	4.15	2.3
15D	13843.1	4.14	2.4
16D	14874.3	4.17	2.1
17D	12720.9	4.10	2.95
18D	13988.6	4.15	3.3
Average	13928	4.14	2.56
SD	697	0.02	0.46
19D	14702	4.17	2.1
20D	12523.9	4.10	2.95
21D	11845.7	4.07	3.35
22D	13766.5	4.14	2.4
23D	13437.6	4.13	2.5
24D	12332.6	4.09	3.1
Average	13101	4.12	2.73
SD	1060	0.03	0.48
25D	13853.2	4.14	2.4
26D	13571.4	4.13	2.5
27D	13348.5	4.13	2.5
28D	14377.6	4.16	2.2
29D	14585.7	4.16	2.2
30D	13240.7	4.12	2.7
Average	13830	4.14	2.42
SD	551	0.02	0.19

Trt. Group	Ave T4 (ug/dL	SD
Control	3.04	0.33
0.1 mg/kg	2.73	0.39
1.0 mg/kg	2.56	0.46
3.0 mg/kg	2.73	0.48
30.0 mg/kg	2.42	0.19

90 Day AP Experiment "D"

Hematology Results

Trt. Group	WBC	RBC	HCT	HGB
Control	(x10e3 cells/μL)	(x10e6 cells/μL)	%	g/dL
1D	3.3	9.89	48.0	15.3
2D	4.3	9.51	46.0	14.6
3D	3.9	9.22	49.0	14.4
4D	2.6	9.40	48.6	14.4
5D	2.6	8.66	45.5	14.0
6D	3.2	9.07	45.0	13.6
Average	3.3	9.29	47.0	14.4
SD	0.69	0.42	1.72	0.57
0.1 mg/kg/day				
7D	4.1	9.05	45.0	14.3
8D	3.1	9.66	50.0	15.1
9D	3.3	8.89	48.9	14.1
10D	2.3	9.22	49.4	14.2
11D	2.6	9.32	49.9	14.6
12D	3.4	8.95	48.2	14.3
Average	3.1	9.18	48.6	14.4
SD	0.63	0.28	1.87	0.37
1.0 mg/kg/day				
13D	2.3	9.14	46.4	14.3
14D	1.8	9.24	47.0	14.3
15D	0.8	9.64	51.4	15.0
16D	2.7	9.25	48.9	14.5
17D	5.1	9.09	47.4	14.5
18D	3.3	9.22	46.0	14.2
Average	2.7	9.26	47.9	14.5
SD	1.46	0.19	2.01	0.29
3.0 mg/kg/day				
19D	3.0	9.29	48.4	14.9
20D	4.2	9.77	50.0	15.3
21D	2.6	9.28	47.9	14.7
22D	2.0	9.39	49.2	14.4
23D	2.1	9.14	48.1	14.1
24D	3.5	9.26	47.5	14.7
Average	2.9	9.36	48.5	14.7
SD	0.85	0.22	0.92	0.41
30.0 mg/kg/day				
25D	2.8	9.61	49.0	15.2
26D	5.7	9.43	48.9	14.9
27D	4.4	9.86	49.8	15.3
28D	3.2	9.56	45.0	14.6
29D	5.2	9.40	47.8	14.7
30D	3.8	9.02	47.1	14.4
Average	4.2	9.48	47.9	14.9
SD	1.13	0.28	1.72	0.35

90 day AP experiment "D" 6/17/98

Mouse #	Neutrophils	Lymphocytes	Monocytes	Eosinophils	Bands	Basophil
1	16.5	79	3.5	0	1	0
2	13.5	84	1	0	0.5	0
3	11.5	82.5	3.5	0	0.5	0
4	12.5	82.5	5	0	0	0
5	22.5	71.5	6	0	0	0
6	15	75	8.5	0	1.5	0
mean	**15.3**	**79.1**	**4.6**	**0.0**	**0.6**	**0.0**
std dev	**3.6**	**4.5**	**2.3**	**0.0**	**0.5**	**0.0**
Mouse #	Neutrophils	Lymphocytes	Monocytes	Eosinophils	Bands	Basophil
7	13	78.5	8	0	0.5	0
8	13	77.5	7.5	0	0	0
9	17.5	71.5	7.5	0	0.5	0
10	14	81.5	4	0	1	0
11	17	76	6	0.5	0.5	0
12	13.5	80.5	6	0	0	0
mean	**14.7**	**77.6**	**6.5**	**0.1**	**0.4**	**0.0**
std dev	**1.9**	**3.3**	**1.4**	**0.2**	**0.3**	**0.0**
Mouse #	Neutrophils	Lymphocytes	Monocytes	Eosinophils	Bands	Basophil
13	18	73	8.5	0.5	0	0
14	18	74	7	0	1	0
15	19.5	78	8.5	0	0.5	0
16	15.5	77	7	0	0.5	0
17	17	75.5	7	0.5	0	0
18	18	73	8.5	0.5	0	0
mean	**17.7**	**75.1**	**7.8**	**0.3**	**0.3**	**0.0**
std dev	**1.2**	**1.9**	**0.8**	**0.3**	**0.4**	**0.0**
Mouse #	Neutrophils	Lymphocytes	Monocytes	Eosinophils	Bands	Basophil
19	14	77.5	7.5	0.5	0.5	0
20	13	81	5.5	0	0.5	0
21	14	78	6.5	0	1.5	0
22	14.5	77.5	6.5	1	0.5	0
23	13	81.3	5.3	0	0.3	0
24	11.5	84	4.5	0	0	0
mean	**13.3**	**79.9**	**6.0**	**0.3**	**0.6**	**0.0**
std dev	**1.0**	**2.4**	**1.0**	**0.4**	**0.5**	**0.0**
Mouse #	Neutrophils	Lymphocytes	Monocytes	Eosinophils	Bands	Basophil
25	16	78.5	5	0.5	0	0
26	10	87.3	1.7	0	0.3	0
27	26	69	3	0	2	0
28	8	87	5.5	0	0	0
29	9	86	4	0	1	0
30	4	90.5	4	0	1.5	0
mean	**12.2**	**83.1**	**3.9**	**0.1**	**0.8**	**0.0**
std dev	**7.1**	**7.3**	**1.3**	**0.2**	**0.8**	**0.0**

NO2 Prod. by Peritoneal Macrophages after Stimulation by IFN-y &/or LPS: 90 Day IP #2

Animal	Control	NO2 (uM)	INF-y	NO2 (uM)	LPS	NO2 (uM)	IFN-y/LPS	NO2 (uM)
Control								
1D	0.044	0.010	0.109	7.036	0.212	18.171	0.267	24.116
2D	0.043	-0.098	0.092	5.199	0.132	9.523	0.232	20.333
3D	0.044	0.010	0.105	6.604	0.144	10.820	0.255	22.819
4D	0.043	-0.098	0.194	16.225	0.343	32.332	0.406	39.142
5D	0.043	-0.098	0.125	8.766	0.141	10.496	0.294	27.035
6D	0.043	-0.098	0.128	9.090	0.250	22.278	0.384	36.764
Average	0.043	-0.062	0.126	8.820	0.204	17.270	0.306	28.368
SD	0.001	0.056	0.036	3.902	0.083	8.947	0.072	7.769
0.1 mg/kg/day								
7D	0.042	-0.206	0.108	6.928	0.195	16.333	0.289	26.494
8D	0.043	-0.098	0.107	6.820	0.139	10.279	0.287	26.278
9D	0.045	0.118	0.368	35.034	0.180	14.711	0.303	28.008
10D	0.044	0.010	0.237	20.873	0.146	11.036	0.280	25.521
11D	0.044	0.010	0.246	21.846	0.188	15.576	0.392	37.629
12D	0.045	0.118	0.246	21.846	0.273	24.765	0.414	40.007
Average	0.044	-0.008	0.219	18.891	0.187	15.450	0.328	30.656
SD	0.001	0.126	0.099	10.685	0.048	5.183	0.059	6.417
1.0 mg/kg/day								
13D	0.045	0.118	0.318	29.629	0.299	27.575	0.419	40.547
14D	0.044	0.010	0.284	25.954	0.235	20.657	0.379	36.223
15D	0.044	0.010	0.134	9.739	0.158	12.333	0.262	23.576
16D	0.045	0.118	0.203	17.198	0.169	13.522	0.372	35.467
17D	0.045	0.118	0.203	17.198	0.128	9.090	0.255	22.819
18D	0.044	0.010	0.325	30.386	0.163	12.874	0.322	30.062
Average	0.045	0.064	0.245	21.684	0.192	16.009	0.335	31.449
SD	0.001	0.059	0.076	8.246	0.063	6.823	0.067	7.213
3.0 mg/kg/day								
19D	0.045	0.118	0.301	27.792	0.212	18.171	0.289	26.494
20D	0.054	1.091	0.421	40.764	0.249	22.170	0.412	39.791
21D	0.050	0.658	0.292	26.819	0.250	22.278	0.452	44.115
22D	0.047	0.334	0.319	29.737	0.242	21.414	0.351	33.197
23D	0.044	0.010	0.260	23.359	0.276	25.089	0.364	34.602
24D	0.047	0.334	0.307	28.440	0.197	16.549	0.551	54.817
Average	0.048	0.424	0.317	29.485	0.238	20.945	0.403	38.836
SD	0.004	0.395	0.055	5.931	0.029	3.088	0.091	9.861
30.0 mg/kg/day								
25D	0.045	0.118	0.431	41.845	0.171	13.739	0.432	41.953
26D	0.045	0.118	0.453	44.223	0.255	22.819	0.480	47.141
27D	0.045	0.118	0.476	46.709	0.238	20.981	0.503	49.628
28D	0.045	0.118	0.470	46.060	0.318	29.629	0.468	45.844
29D	0.045	0.118	0.193	16.117	0.108	6.928	0.319	29.737
30D	0.047	0.334	0.305	28.224	0.187	15.468	0.476	46.709
Average	0.045	0.154	0.388	37.196	0.213	18.261	0.446	43.502
SD	0.001	0.088	0.114	12.368	0.073	7.926	0.067	7.189

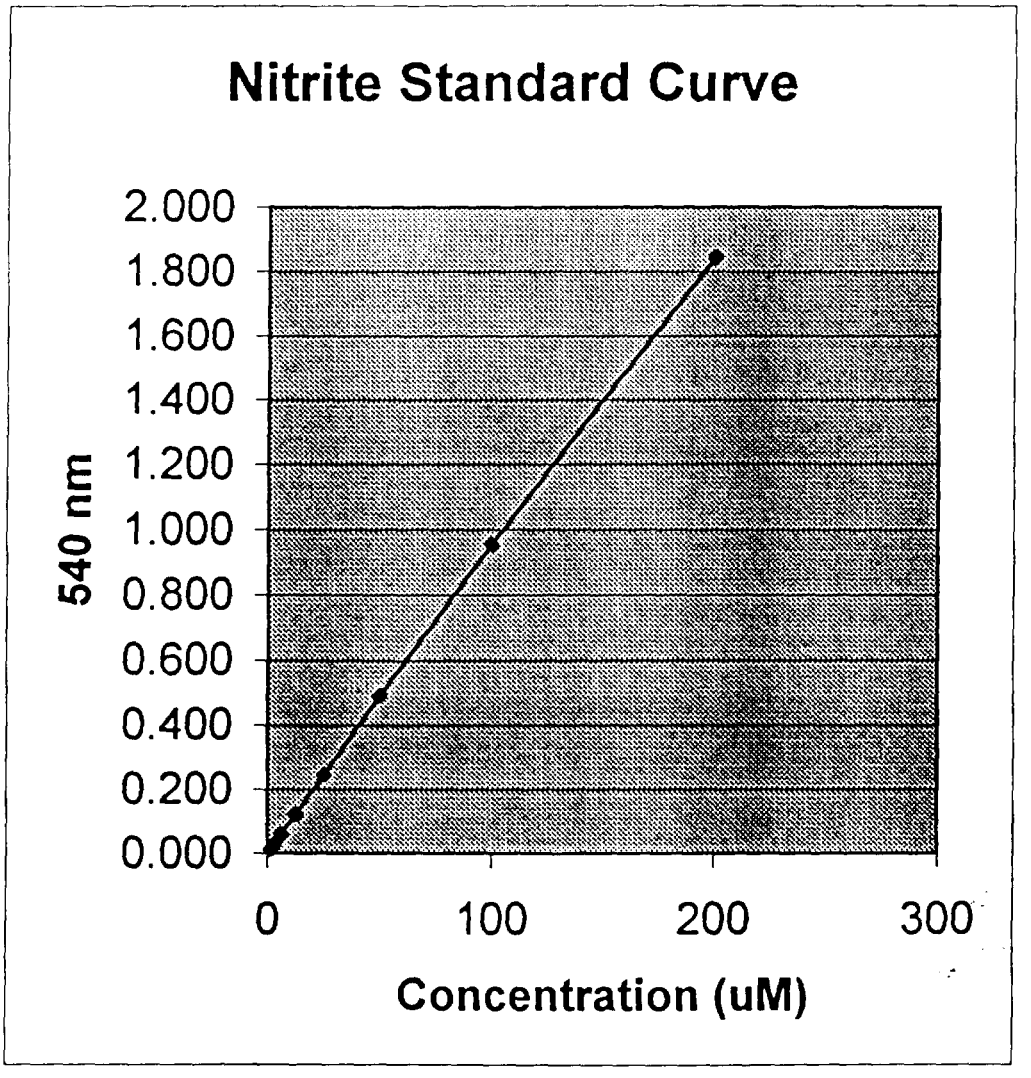
Nitrite Production by Peritoneal Macrophages: 90 Day "D" Standard Curve

Conc.	Standard			
uM	Rep 1	Rep 2	Rep 3	Average
200	1.882	1.879	1.903	1.844
100	0.999	1.002	0.998	0.956
50	0.539	0.534	0.533	0.491
25	0.291	0.28	0.293	0.244
12.5	0.165	0.167	0.17	0.123
6.25	0.103	0.104	0.107	0.061
3.125	0.071	0.074	0.075	0.029
1.56	0.058	0.059	0.059	0.015

Slope	Intercept
108.0999	0.009857

Greiss Blank
0.044

Formula to calculate nitrite concentration (uM):
=(Slope * (Spec-Greiss Blank))+intercept



90 day AP Study Experiment "D"

Thymus CD4/CD8 Subpopulations

Trt. Group	CD8+/CD4-	CD8+/CD4+	CD8-/CD4-	CD8-/CD4+
Control				
1D	2.8	86.3	3.3	7.6
2D	3.4	84.0	3.9	8.7
3D	3.2	83.1	4.0	9.8
4D	4.2	82.1	3.5	10.2
5D	3.9	84.2	3.1	8.7
6D	3.9	82.1	5.1	8.9
Average	3.6	83.6	3.8	9.0
SD	0.52	1.58	0.72	0.92
0.1 mg/kg/day				
7D	3.9	83.3	4.0	8.8
8D	3.3	84.4	3.3	9.0
9D	3.5	85.1	3.5	7.9
10D	4.4	82.7	3.9	8.9
11D	4.5	83.1	3.8	8.6
12D	2.4	87.3	3.8	6.5
Average	3.7	84.3	3.7	8.3
SD	0.78	1.71	0.26	0.96
1.0 mg/kg/day				
13D	3.7	85.0	3.3	8.0
14D	4.1	84.3	4.7	6.8
15D	4.3	81.5	4.2	10.0
16D	3.8	82.1	4.1	10.0
17D	3.4	84.5	3.5	8.6
18D	3.0	87.0	3.5	6.5
Average	3.7	84.1	3.9	8.3
SD	0.47	2.01	0.54	1.51
3.0 mg/kg/day				
19D	2.9	86.2	3.3	7.7
20D	3.5	84.9	4.3	7.4
21D	3.2	86.7	3.2	6.8
22D	4.4	82.7	4.8	8.1
23D	3.9	84.8	3.3	8.0
24D	3.6	85.1	3.1	8.2
Average	3.6	85.1	3.7	7.7
SD	0.53	1.39	0.71	0.53
30.0 mg/kg/day				
25D	3.2	86.4	2.4	8.0
26D	3.3	86.7	3.4	6.5
27D	2.9	88.0	2.7	6.4
28D	2.7	88.9	2.8	5.5
29D	3.6	85.3	3.4	7.7
30D	3.3	85.8	3.3	7.6
Average	3.2	86.9	3.0	7.0
SD	0.32	1.36	0.42	0.97

90 day AP Study Experiment "D"

Spleen CD4/CD8 Subpopulations

Trt. Group	CD8+/CD4-	CD8+/CD4+	CD8-/CD4-	CD8-/CD4+
Control				
1D	12.7	0.7	64.1	22.6
2D	12.2	0.6	64.2	23.0
3D	12.1	0.7	63.4	23.9
4D	11.1	0.5	65.1	23.3
5D	11.3	0.2	69.0	19.4
6D	12.2	0.2	64.6	22.9
Average	11.9	0.5	65.1	22.5
SD	0.61	0.23	2.01	1.59
0.1 mg/kg/day				
7D	13.6	0.5	61.9	24.1
8D	14.5	0.2	59.9	25.3
9D	14.9	0.8	59.9	24.4
10D	15.1	0.7	58.3	26.0
11D	10.8	0.4	68.0	20.9
12D	12.4	0.4	63.7	23.5
Average	13.6	0.5	62.0	24.0
SD	1.67	0.22	3.50	1.77
1.0 mg/kg/day				
13D	12.9	0.5	63.0	23.6
14D	12.7	0.4	65.7	21.2
15D	11.8	0.8	64.5	22.9
16D	11.8	0.3	67.7	20.2
17D	11.1	0.3	66.8	21.8
18D	10.2	0.4	71.4	18.0
Average	11.8	0.5	66.5	21.3
SD	1.01	0.19	2.91	2.01
3.0 mg/kg/day				
19D	12.7	0.9	62.1	24.4
20D	11.6	0.4	65.8	22.2
21D	11.3	0.5	67.6	20.6
22D	11.6	0.5	66.3	21.6
23D	13.1	0.3	61.7	24.9
24D	12.4	0.3	68.2	19.2
Average	12.1	0.5	65.3	22.2
SD	0.72	0.22	2.76	2.19
30.0 mg/kg/day				
25D	12.6	0.7	62.6	24.1
26D	12.7	0.6	60.2	26.6
27D	11.8	1.1	62.3	24.8
28D	13.0	0.8	63.4	22.8
29D	11.4	0.6	65.8	22.2
30D	11.8	0.3	63.6	24.2
Average	12.2	0.7	63.0	24.1
SD	0.63	0.26	1.84	1.55

Date: 06/23/98

90-Day Immune Parameters
"D"
Macrophage Cell Counts

Animal	Coulter Counter	Total Cellularity
Control		
1D	1300	6.50E+06
2D	1787	8.94E+06
3D	1267	6.34E+06
4D	642	3.21E+06
5D	1103	5.52E+06
6D	989	4.95E+06
Average	1181	5.91E+06
SD	380	1.90E+06
0.1 mg/kg/day		
7D	1252	6.26E+06
8D	1275	6.38E+06
9D	963	4.82E+06
10D	1106	5.53E+06
11D	1110	5.55E+06
12D	1167	5.84E+06
Average	1146	5.73E+06
SD	114	5.69E+05
1.0 mg/kg/day		
13D	800	4.00E+06
14D	1036	5.18E+06
15D	1379	6.90E+06
16D	852	4.26E+06
17D	1416	7.08E+06
18D	1097	5.49E+06
Average	1097	5.48E+06
SD	258	1.29E+06
3.0 mg/kg/day		
19D	864	4.32E+06
20D	799	4.00E+06
21D	767	3.84E+06
22D	810	4.05E+06
23D	752	3.76E+06
24D	600	3.00E+06
Average	765	3.83E+06
SD	90	4.49E+05
30.0 mg/kg/day		
25D	817	4.09E+06
26D	715	3.58E+06
27D	668	3.34E+06
28D	651	3.26E+06
29D	1280	6.40E+06
30D	814	4.07E+06
Average	824	4.12E+06
SD	234	1.17E+06

Date: 06/23/98

90-Day Immune Parameters
"D"
Spleen Cell Counts

Animal	Coulter Counter	Total Cellularity
Control		
1D	10119	1.52E+08
2D	14336	2.15E+08
3D	8778	1.32E+08
4D	9377	1.41E+08
5D	10645	1.60E+08
6D	8987	1.35E+08
Average	10374	1.56E+08
SD	2064	3.10E+07
0.1 mg/kg/day		
7D	9669	1.45E+08
8D	14112	2.12E+08
9D	9288	1.39E+08
10D	10533	1.58E+08
11D	10843	1.63E+08
12D	12668	1.90E+08
Average	11186	1.68E+08
SD	1855	2.78E+07
1.0 mg/kg/day		
13D	12455	1.87E+08
14D	11142	1.67E+08
15D	9679	1.45E+08
16D	10151	1.52E+08
17D	10552	1.58E+08
18D	10923	1.64E+08
Average	10817	1.62E+08
SD	960	1.44E+07
3.0 mg/kg/day		
19D	11516	1.73E+08
20D	14913	2.24E+08
21D	12211	1.83E+08
22D	8142	1.22E+08
23D	10555	1.58E+08
24D	10184	1.53E+08
Average	11254	1.69E+08
SD	2267	3.40E+07
30.0 mg/kg/day		
25D	10226	1.53E+08
26D	14699	2.20E+08
27D	13005	1.95E+08
28D	13579	2.04E+08
29D	11765	1.76E+08
30D	12611	1.89E+08
Average	12648	1.90E+08
SD	1539	2.31E+07

Date: 06/23/98

90-Day Immune Parameters
"D"
Thymus Cell Counts

Animal	Coulter Counter	Total Cellularity
Control		
1D	3426	5.14E+07
2D	3978	5.97E+07
3D	2612	3.92E+07
4D	2619	3.93E+07
5D	3416	5.12E+07
6D	3284	4.93E+07
Average	3223	4.83E+07
SD	527	7.91E+06
0.1 mg/kg/day		
7D	3236	4.85E+07
8D	3373	5.06E+07
9D	4062	6.09E+07
10D	3654	5.48E+07
11D	1737	2.61E+07
12D	2802	4.20E+07
Average	3144	4.72E+07
SD	808	1.21E+07
1.0 mg/kg/day		
13D	2357	3.54E+07
14D	2643	3.96E+07
15D	3878	5.82E+07
16D	2480	3.72E+07
17D	3318	4.98E+07
18D	3278	4.92E+07
Average	2992	4.49E+07
SD	593	8.90E+06
3.0 mg/kg/day		
19D	3238	4.86E+07
20D	4242	6.36E+07
21D	3971	5.96E+07
22D	1575	2.36E+07
23D	3311	4.97E+07
24D	2864	4.30E+07
Average	3200	4.80E+07
SD	943	1.41E+07
30.0 mg/kg/day		
25D	1754	2.63E+07
26D	4135	6.20E+07
27D	3763	5.64E+07
28D	3189	4.78E+07
29D	3260	4.89E+07
30D	3935	5.90E+07
Average	3339	5.01E+07
SD	861	1.29E+07