To: Gessner, Lauren [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0e7b04b30d744fa79c41c960b61c2e19-Gessner, La]; Cascio, Wayne [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a1bd931ca2f84ea8ac2f4c44538f3589-Cascio, Wayne]; Firestone, Michael [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=32a70f97969d462da98320e25d27fe23-Mfiresto]; Knudsen, Thomas [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c455f47a79054857908108d7a6dcda5b-Knudsen, Thomas]; Louie, Nica [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=6edf2e5abafe43c688b3f6f6cd0536ef-Louie, Nica]; Sacks, Jason [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=2099bec11ced4d5c88c07a89aa8ee652-Sacks, Jason]; Rogers, John M. [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=9d2a5d5b6a71487cb4373cfcea7bb01b-Rogers, John M.]; Klieforth, Barbara [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=fd3c257f83384b14859e21e5a700d798-Klieforth, Barbara]; Raffaele, Kathleen [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=cc48281bbab34bf5bf3ab1a63780d5ca-Kathleen Raffaele]; Axelrad, Daniel [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=6a51eaa06cef403abd7d28275fd278b4-DAxelrad]; Ohanian, Edward [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=f119491e2ba8476381a39c57a456ac55-EOhanian]; Ramasamy, Santhini [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=f078b65256de4c22a8ec9d9f9720715f-SRAMASAM]; Ward, Prentiss [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=ea5e0d404cd24652b7b401c86980ead0-Pward]; Whitlock, Siobhan [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=04f062f3f81c4352afdaa2622c912bb9-Tarver, Sio]; Keteles, Kristen [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=44affc6da534432a8a7787c6344185ee-Keteles, Kristen]; Fenton, Kathleen [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=27fe6d983f74453c9d2a53a84f19300f-FENTON, KATHLEEN]; Menghrajani, jacquelyn [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=fe15a33505784356b3a8c34ade3c8c51-JHAYES02]; Aguilar, Marcus [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=7b710032dc3d423e91170ee9a4032d3d-Aguilar, Ma]; Stewart, Gretchen [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a321f0adb2d745d583d38e1a2e36b697-Stewart, Gretchen A.]; Bartels, Kimberly [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5aa1ae6ec9ee4c8dae63a1cde0867d5d-Larson, Kimberly]; Dye, Janice [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=ecebf6b063f547878ad97b2a616ccbb4-Dye, Janice]; Miller, Colette [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=53199adc4ae647d8b92c67ae5d8b2bcf-Miller, Col]; Suero, Maryann [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1f0d67522a5a42d5acd1ac3e14c70cf2-MSuero]; Bahadori, Tina [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=7da7967dcafb4c5bbc39c666fee31ec3-Bahadori, Tina]; Hubal, Elaine [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d871bc8ab3c94a7c9a4716a951aa70ec-Cohen-Hubal, Elaine]; Geller, Andrew [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=51de0a18e67b4886a0020fe9c2e93f48-Geller, Andrew]; Guiseppi-Elie, Annette [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=63d3e2eaeb9c4acba2609baa90b0f735-Guiseppi-El]; Gwinn, Maureen [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=4bdc5237a5c440a7b664518e23eb5647-Gwinn, Maureen]; Hahn, Intaek

[/o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=ff7b8b77f982422a98d8793a88be337a-Hahn, Intaek]; Hines, Ronald
[/o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=464f333922cc4aa68db2a1677122ab58-Hines, Ronald]; Gibbons, Dayna
[/o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=7de1aa41c89448e6b26325a1e19f9ae9-Gibbons, Dayna]; Foster, Stiven
[/o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=43d242767f304355ad415ec856988213-sfoste02]; Hines, Erin
[/o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=3e840f3081d94c45923db315e11110aa-Hines, Erin]; Gavett, Stephen
[/o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=d5a02a1b92724d43b62314e403ab4ee7-Gavett, Stephen]; Fry, Meridith
[/o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=6be7d51fa0ee416ea043fdc67c18f719-Fry, Meridi]; Kodavanti, Urmila
[/o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=813ac332b11444719322c8370cc89694-Kodavanti, Urmila]; Tulve, Nicolle
[/o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=5df597178ff54b8cb9c3edf239905634-Tulve, Nicolle]; Kenyon, Elaina
[/o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=0395d5b93f214c8ca49066f498f7d5c9-Kenyon, Elaina]; Cashdollar, Jennifer
[/o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=341010ea20014f059a33c49f880a7c36-Cashdollar, Jennifer]; Franzosa, Jill
[/o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=a2cc12ea79e141048cc0c2302f9a539a-Franzosa, Jill]; Cowden, John
[/o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=4cccc2629cb043e0901c6b5f61344e9c-Cowden, John]; Frithsen, Jeff
[/o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=e3743bd6f3c345baaae407c1d6f78e92-FRITHSEN, JEFF]; Mazur, Sarah
[/o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=17239e84cf754302834dce90abaf21d4-Mazur, Sarah]; Belle, Kara
[/o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=8db65b54e54847ddb75d5aa71387aebe-Belle, Kara]; Euling, Susan
[/o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=cb0873315ed244fa852df546e1191e4c-Euling, Susan]; Hackel, Angela
[/o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=b2e0a52dbebc4d8c84961f50c117334d-Hackel, Angela]; Figueroa, Zaida
[/o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=e9aff316c03a4396a97dc8555099a3d2-Figueroa, Zaida]; Dzubow, Rebecca
[/o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=403ca1721f3d43d38de9189a93a95b76-Dzubow, Rebecca]; Schroeder,
Kathleen [/o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=0db676b2fade4b54bebcc7b6e664fc94-Schroeder,]; Foos, Brenda
[/o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=18b24f2f79414190852a748bf650d2b9-Bperkovi]; Yaquian-Luna, Jose
[/o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=b4ac9ea811cc4192b312280670944f3f-Yaquian-Lun]; Carleton, Jim
[/o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=cde4afd5c7e6410a80809e722c4f03aa-Carleton, Jim]; Miller, Gregory
[/o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=0e889cdc40224a5484182092e4824fa7-GMille03]; Nachman, Rebecca
[/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=Nachman, Rebecca];
Coopwood, Theodore [/o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=2b197ea0ed734df49ccf4d1aeae0662e-Tcoopwoo]; Berger, Martha
[/o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=58f5ef445e4d4dc694a2d4fb35951b9a-Mberger]; Albano, Emily
[/o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=2b37ad261b8543579819fda30470f153-BARKER, EMILY]; Kargbo, Marcia
[/o=ExchangeLabs/ou=Exchange Administrative Group

(FYDIBOHF23SPDLT)/cn=Recipients/cn=4c4ca443c2164ce4bdd1e884696a693e-MKargbo]; Blair, Susanna [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=6c869b985f3d43db982c18aaabd826bd-Blair, Susa]; Fiedorczyk, Bryan [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=145a0d880f35482e841c4d05443ca6d6-Fiedorczyk, Bryan]; Nagle, Kathleen [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=72ce665eff784373a90fe2de78c78080-Nagle, Kathleen]; Schappelle, Seema [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=81c19296c1164a8dab7c8a7cb7b99d3c-Schappelle, Seema]; Selzer, Paula [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=33615dc9cf3b425499d4fc0ef6a7c151-Selzer, Paula]; Morgan, Marsha [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=dd3afb12720d42e0874d371eb51775ad-Morgan, Marsha]; Tietge, Joe [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b80e15eaaf374819a28f936069a093c2-Tietge, Joe]; Loughran, Michael [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=4d2a5935a18c4150bf6d8889c181ee4c-Loughran, Michael]; Nolt-Helms, Cynthia [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b374bff76a7f4ce5b4bdf96f92ddf4d7-Nolt, Cynthia]; Malashock, Daniel [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=86ad680ab41a4fa6a0fc113c1222fcb0-Malashock,]; Bever, Ronnie [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=6c971f60b28c46d8b68fafc244d9a464-Bever, Ronnie]; OShaughnessy, Katie [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=021d1026cc6047f3bbd8e158148f9311-Oshaughness]; Kirk, Andrea [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=950a380c45ab4cb48d882dc3c2a87f30-Kirk, Andre]; Markey, Kristan [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a075536a33b247d393b1643f84ea5dfa-Markey, Kristan]; Bell, Kiersten [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=dca1641ef9bd491f87a3cbeef5e18e4b-Bell, Kiers]

CC: Dockins, Chris [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3c8db533f0c847c98d706f1a52b0482b-CDockins]; Klemick, Heather [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=826dccc673744a83b5eaca9f71ece8c0-Klemick, Heather]

Location: RTP - Room D101 Dial in number: Ex. 6 Personal Privacy (PP) Ex. 6 Personal Privacy (PP)

Start: 4/3/2019 3:00:00 PM
End: 4/3/2019 4:00:00 PM

Recurrence: (none)

Hello everyone,

The Children's Environmental Health Partner Alliance Coordination Team meeting standard agenda will be:

1. **Roll Call – 5 min**

2. **ORD Science Update – 10-15 mins**

Colette Miller (NHEERL) - Acute exposures, lifelong consequences? Assessing metabolic effects of early-life ozone exposure.

- ***What is the children's environmental health issue that our research is addressing?***

Gestational exposure to ozone is associated with the development of adverse pregnancy outcomes. One such adverse outcome, intrauterine growth restriction (IUGR), may increase the risk of cardiometabolic disease in offspring. We are working to understand how prenatal exposure to ozone affects the health of both the mother and the fetus, with additional interest in how such exposures may increase the risk of non-communicable diseases (e.g., obesity and diabetes) in growing offspring using animal models.

- ***What did we learn?***

We have learned that acute exposure to ozone in a defined window in pregnancy (implantation) produces growth restriction in our rodent model. Our early studies in the offspring mimic the well-defined catch-up growth phenomenon observed in the clinical manifestation of IUGR. As offspring age into adolescence, we have observed that those exposed to ozone prenatally appear to have disrupted energy balance. This caloric imbalance will likely increase the risk of metabolic disease as they age, supporting the importance of understanding gestational exposures in risk assessment.

- ***When will we know more?***

We are continuously working to understand why offspring from dams exposed to ozone are at a metabolic disadvantage. We are doing this by studying the molecular underpinnings of this phenotype through investigating disruptions in both organogenesis and epigenetics. Continued work is also underway to determine if offspring are at risk of other health conditions, such as asthma. As we synthesize this information, we anticipate a number of high-impact papers in the coming years describing the impacts of acute exposures to ozone on the long-term health consequences in the offspring.

- ***Provide citations to papers.***

Miller CN, Stewart EJ, Snow SJ, Richards JH, Thompson LC, Schladweiler MC, Farraj AK, Kodavanti UP, Dye JA. Ozone exposure during implantation increases serum bioactivity in HTR-8/SVneo trophoblasts. Toxicological Sciences, In press.

Miller CN, Kodavanti UP, Stewart EJ, Schladweiler MC, Richards JH, Ledbetter AD, Jarrell LT, Snow SJ, Henriquez AR, Farraj AK, Dye JA. Aspirin treatment modulates ozone-induced fetal growth restriction and alterations in uterine blood flow in rats. 2019. Reproductive Toxicology, 83:63-72.

Miller CN, Dye JA, Ledbetter AD, Schladweiler MC, Richards JE, Wood C, Snow SJ, Henriquez A, Thompson LA, Farraj A, Hazari M, Kodavanti UP. Uterine Artery Flow and Offspring Growth in Long-Evans Rats Following Maternal Exposure to Ozone During Implantation. 2017. Environmental Health Perspectives, 125(12):127005.

3. <u>Program Office Update – 10-15 mins</u>

Daniel Axelrad & Chris Dockins (OP) - Advancing benefits analysis of children's health effects

- ***What is the children's environmental health issue that our research is addressing?***

We are developing tools, methods and analyses that increase EPA's ability to quantify and monetize children's health effects that may be avoided due to exposure reductions resulting from EPA actions.

These include: effects of policy actions on lead (Pb) exposure; cost-of-illness estimates for changes in birthweight; willingness-to-pay values for low birthweight; identifying dose-response relationships for Pb-ADHD and Pb-birthweight; demonstrating methods to include longer-term effects from early-life exposures.

- ***What did we learn?***

That we can more completely characterize children's health benefits in benefit-cost analysis.

- ***When will we know more?***

We expect external peer review or journal review of several work products in 2019-2020. Those that are intended for direct use in EPA benefit-cost analyses will generally be circulated for internal Agency review first.

- ***Provide citations to papers.***

Kim JJ, Axelrad DA, Dockins C. Preterm birth and economic benefits of reduced maternal exposure to fine particulate matter. *Environmental Research*, 2019 March;170:178-186. doi:10.1016/j.envres.2018.12.013

Klemick H, Mason H, Sullivan K. Superfund Cleanups and Children's Lead Exposure. NCEE Working Paper 19—01, January 2019. https://www.epa.gov/environmental-economics/superfund-cleanups-and-childrens-lead-exposure

Abt Associates. Development of Medical Cost Estimates for Adverse Birth Outcomes. Draft, 2018 (available by request from Chris Dockins).

4. Administrative Updates – 5 min

- *Please feel free to forward this invite to those interested within the Agency.*
- *Read/subscribe to our monthly update, The Chalkboard, which includes new ORD CEH-related research, upcoming CEH PACT Presentations, and CEH-related conferences and events.*
- *Check out our Intranet site for more CEH related information, including past presentations.*

2019

January	**Cancelled**		
February	**NHEERL –** Tim Shafer *(New Alternative Methods for Developmental Neurotoxicity Testing: Moving from development to evaluation of assays)*	**Region 7** – Emily Albano *(Region 7's St. Joseph, Missouri Lead Initiative)*	
March	**NHEERL – Katie O'Shaughnessy** *(Bridging the Gaps: New Tools and Approaches for Evaluating the Neurodevelopmental Effects of Thyroid Toxicants)*		**OLEM** - Andrea Kirk *(Thyroid Systematic Review: An Opportunity to Improve Risk Assessments for the Protection of Children's Health)*
April	**NHEERL –** Colette Miller		**OP** – Daniel Axelrad/Chris Dockins
May	**NERL** – Jose Zambrana (*Tire Crumb Team Update*)	**Region 10** – Bryan Fiedorczyk (*R10 Air Quality Flag Program*)	**OCHP-ORD Collaboration** – Mona Dai (*Characterizing Aggregate Exposure to Environmental Chemicals Across Childhood Lifestages)*