From: Cogliano, Vincent
Sent: Wednesday, May 13, 2015 12:35 PM
To: Burgess, Michele; Tsui-Bowen, Alethea
Subject: FW: Differing evaluations of five pesticides by EPA/OPP and IARC
Attachments: News Item Monograph Volume 112.pdf; TLO_V112_PIIS1470204515701348.pdf

Hello again – As you're both interested in the different glyphosate evaluations by IARC and EPA/OPP, below you'll find a summary I had sent to our staff on the subject – Vince

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From: Cogliano, Vincent
Sent: Monday, March 30, 2015 2:01 PM
To: Olden, Kenneth; Vandenberg, John; Ross, Mary; Flowers, Lynn; D'Amico, Louis; Birchfield, Norman; ORD-NCEA-IRIS; ORD-NCEA-IRIS-Extended
Subject: FYI: Differing evaluations of five pesticides by EPA/OPP and IARC

Hello everyone – As I returned yesterday from a long out-of-touch vacation, I saw in the airport version of the NY Times a story about IARC classifying glyphosate (the active ingredient in Roundup) as probably carcinogenic. Kate Guyton, the responsible officer for the IARC meeting earlier this month, was quoted. Diazinon and malathion were also classified as probably carcinogenic, and parathion and tetrachlorvinphos were classified as possibly carcinogenic. This sets up an interesting contrast with EPA/OPP, which has lower classifications for these pesticides. Most notably, glyphosate is classified here as Group E, evidence of non-carcinogenicity.

One reason for the difference is statistical. IARC used trend tests to conclude that two rare tumors were induced in animals, while EPA/OPP used pairwise comparisons to determine that nothing was induced.

Another reason is the consideration of mechanistic data. For the three compounds classified as probably carcinogenic, IARC took into consideration evidence of DNA or chromosomal damage.

Mostly, though, it's a matter that studies in humans are now available. It makes me think that a descriptor like "evidence of non-carcinogenicity" should be used only when some of that evidence is in humans. There are several prominent examples (tobacco, alcohol, arsenic) where positive evidence was observed in humans first.

Overall, it was an interesting exercise in evaluating coherence across human, animal, and mechanistic studies.

Attached are IARC's news release and a summary it published in Lancet Oncology just 10 days after the meeting.

-- Vince