USEPA's Office of Pesticide Programs

Update on Animal Reduction & Implementing Alternatives

Inhalation Risk Assessment

Opportunities to Use Alternative Approaches for Inhalation Risk Assessment of Pesticides. M. Perron. US EPA, Washington, DC.

Thursday, March 14, 8:30 AM to 11:15 AM in the Workshop Session: Use of Adverse Outcome Pathways to Design Nonanimal Testing Strategies for Assessing Inhalation Toxicity

- Proposal for refining inhalation risk assessment using a 3D human airway epithelia reconstituted in vitro model initially presented to EPA in 2014 by Syngenta Crop Protection
- Agency recognized the value of the proposal for chlorothalonil, as well as other respiratory contact irritants and encouraged further development
- Collaborated with National Toxicology Program Interagency Center for the Evaluation of Alternative Toxicological Methods (NICEATM) for review
- Convened FIFRA SAP meeting in December 4-7, 2018 to evaluate the proposed approach
  - First time a point of departure for risk assessment will be derived using in vitro data for a pesticide
  - Potential use for other contact irritants, as well as other chemicals that cause portal of entry effects in the respiratory tract
- SAP report expected in April, 2019

Developing guidance and waiver approach for rodent carcinogenicity studies

Commitment at the US EPA/OPP to Reduce and Replace Animal Use: Looking at Carcinogenicity and Beyond. G. Akerman. US EPA, Washington, DC.

Monday, March 11, 1:45 PM to 4:30 PM in the Workshop Session: A Herculean Switch? Rethinking Chemical Carcinogenicity Assessment

- EPA-OPP is currently collaborating with industry and non-government organizations
- Workgroup is considering:
  - Different chemistries
  - Modes of action
  - Use patterns/exposures
  - Metabolic profiles
- Goal: Develop waiver criteria for rodent carcinogenicity studies.

Modernizing Acute Toxicity “6 Pack”

US EPA Initiative to Implement Alternatives to Acute Systemic Toxicity: An Update. A. B. Lowit. US EPA, Washington, DC.

Tuesday, March 12, 1:00 PM to 2:30 PM in the Symposium Session: Scientific and Regulatory Update in the Application of the 3Rs Principle in Chemical and Drug Development

Regulatory Progress on Acute Toxicity Testing. A. Lowit. US EPA, Washington, DC.

Wednesday, March 13, 8:00 AM to 10:45 AM in the Symposium Session: Establishing Effective Alternatives for Acute Oral and Inhalation Systemic Toxicity Testing

- Letter to Stakeholders on OPP’s Goal to Reduce Animal Testing from Jack E. Housenger, Director.
  - https://www.regulations.gov/#!documentDetail;D=EPA-HQ-OPP-2016-0093-0003
  - Working in partnership with other governmental entities, industry and non-governmental organizations (NGOs) and need continued robust participation and support to achieve our mutual goal.
  - Activities fall under three main objectives
    - Critically evaluating which studies form the basis of OPP decisions;
    - Expanding acceptance of alternative methods and;
    - Reducing barriers such as challenges of data sharing among companies and international harmonization to adopting alternative methods in the U.S. and internationally.

Draft Interim Science Policy: Use of Alternative Approaches for Skin Sensitization as a Replacement for Laboratory Animal Testing

- Announced April 10, 2018 & describes the science that supports a policy to accept alternative (*in vitro*, *in silico*, *in chemico*) approaches for identifying skin sensitization hazard in place of animal studies.
  - ***Multiple non-animal testing strategies - in vitro, in chemico, and in silico inputs demonstrate comparable or superior performance to the laboratory animal studies.***
- The interim policy is the result of collaboration between
  - Interagency Coordinating Committee on the Validation of Alternative Methods (ICCVAM)
  - NTP Interagency Center for the Evaluation of Alternative Toxicological Methods (NICEATM)
  - European Union Reference Laboratory for Alternatives to Animal Testing (EURL ECVAM)
  - Health Canada (PMRA)

Retrospective Analysis: Avian Subacute/Acute Risk

Examination of the Avian Acute Oral versus Sub-Acute Dietary Testing in Ecological Risk Assessment. G. M. Hilton, E. Odenkirchen, M. Panger, G. Waleko, A. Lowit, and A. J. Clippinger. PETA International Science Consortium Ltd, London, United Kingdom; and US EPA, Washington, DC.

Monday, Author Attended: 3:00 PM–4:30 PM Poster Board Number P183

- Background
  - 40 CFR Section 158 outlines two requirements for avian acute effects testing
    - Two single oral dose LD50 studies (commonly quail or mallard and a songbird)
    - Two subacute dietary LC50 studies (commonly quail and mallard)
- Can we confidently assess acute risk for birds using a reduced suite of effects studies focusing on the single oral dose protocol?
  - How often have subacute dietary risk quotients (RQs) quantitatively driven risk assessment conclusions?
  - How often have subacute dietary risks qualitatively altered the risk conclusions?
- Bottom Line: In 99% of cases (118 of 119) the subacute dietary approach did not change risk conclusions already reached using oral, dose-based RQs
- Peer-reviewed scientific journal publication (PETA lead, Agency coauthors): manuscript has been submitted

EPA-OPP is hiring toxicologists !!!

- Interested? Stop by the EPA ORD Booth (#4065)

- EPA-OPP representatives will be there:
  Monday 1:30-2:30
  Tuesday 2:30-3:30
  Wednesday 10:30-12:00

  USAjobs announcement#:
  09/11 is R-OCSPP-DE-2019-0036
  12/13 is R-OCSPP-DE-2019-0037