Exploring Current Read-across Applications and Needs Among U.S. Federal Agencies

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Introduction

Read-across is a method of filling in a data gap in a toxicology assessment when no information is available for a substance (source chemical) to make a prediction of the same property for a similar substance (target chemical). The seven key steps in a typical read-across workflow are shown below.

- To raise awareness and facilitate harmonization of the application of read-across, the Toxicology and Safety Assessment Subcommittee of the National Toxicology Program (NTP) hosted a workshop titled "Read-across Options for Toxicity Assessment: Current Status and Future Directions". This workshop was held on August 15-16, 2018, in Bethesda, MD.

- The NTP's objective was to bring together U.S. federal agency leaders and nontoxicology program participants to share information and best practices.

- This information was disseminated through a Web-based presentation and a workshop report that was prepared based on keynote presentations and discussion sessions.

- The presentation slides are available online at toxread.eu.

- The workshop report will be available online at toxread.eu.

Table 1. RAWG Members

<table>
<thead>
<tr>
<th>U.S. Agencies</th>
<th>Agency for Toxic Substances and Disease Registry (ATSDR)</th>
<th>EPA</th>
<th>Department of Defense (DoD)</th>
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<th>Environmental Protection Agency (EPA)</th>
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Table 2. Publicly Available Read-across Tools

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Table 3. Agency-specific Guidance and Other Resources

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Table 4. Agency-specific Decision Contexts and Needs for Read-across

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Table 5. Case Studies from Two Federal Agencies

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<th>Description</th>
<th>Decision Context</th>
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Conclusions

- Among the federal agencies surveyed, read-across is most broadly used at EPA.
- There are many applications for read-across that have not been implemented yet.
- Several agencies are interested in read-across for mixtures, but there is currently minimal implementation of read-across for mixtures.
- An external question that remains is how to adequately and appropriately characterize the scientific rationale behind read-across applications.
- The need for agencies to characterize their chemical landscapes to facilitate the application of read-across was emphasized.

References