Navigating through the minefield of read-across: from research to practical tools

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Read-across is used for regulatory purposes as a data gap filling technique. Research efforts have focused on the scientific justification and documentation challenges involved in read-across predictions. Software tools have also been developed to facilitate read-across prediction. We highlight a handful of the publicly available category workflow read-across tools to articulate their respective capabilities. Whilst these tools address a number of the workflow steps, few consider an uncertainty assessment. We will present an algorithmic, automated read-across approach using *in vitro* bioactivity data (from EPA's ToxCast program) and chemical descriptor information to predict *in vivo* toxicity effects. We will demonstrate how read-across predictions can be evaluated to quantify uncertainty. We showcase progress in translating these efforts into practical tools.

The abstract does not reflect EPA policy.