

## **A vision for modernizing environmental risk assessment**

Daniel L. Villeneuve, US EPA, Mid-Continent Ecology Division, Duluth, MN, USA.

Natalia Garcia-Reyero, Mississippi State University, Vicksburg, MS, USA.

In 2007, the US National Research Council (NRC) published a Vision and Strategy for [human health] Toxicity Testing in the 21<sup>st</sup> century. Central to the vision was increased reliance on high throughput in vitro testing and predictive approaches based on mechanistic understanding of toxicity pathways as a more cost effective and efficient approach to chemical hazard assessment. In 2009, a SETAC Pellston workshop was held which discussed the applicability of the NRC's vision to ecotoxicology and ecological risk assessment and proposed a parallel vision for Predictive Ecotoxicology in the 21<sup>st</sup> Century. This presentation will highlight key aspects of that vision, including the central role of the Adverse Outcome Pathway concept in supporting the acceptance of this new vision within the regulatory community. Additionally, it will discuss the proposed role(s) of "omics" in within the current and evolving vision of environmental risk assessment in the 21<sup>st</sup> century. *The contents of this abstract neither constitute nor reflect official US EPA policy.*