

## DNTP Approach for Systematic Review and Evidence Integration for Literature-Based Health Assessments

The National Toxicology Program (NTP) conducts literature-based evaluations to assess the evidence that environmental chemicals, physical substances, or mixtures (collectively referred to as "substances") cause adverse health effects and provides opinions on whether these substances may be of concern given what is known about current human exposure levels. NTP also organizes workshops or state-of-the-science evaluations to address issues of importance in environmental health sciences. The NTP is adopting systematic review procedures for these evaluations to enhance transparency for reaching and communicating evidence assessment conclusions. The systematic review format provides increased transparency through a detailed protocol that outlines each step in an evaluation including procedures used to perform a literature search, determine whether studies are relevant for inclusion, extract data from studies, assess study quality, and synthesize data for reaching conclusions. The method for data synthesis includes steps to assess confidence within an evidence stream (i.e., human, animal, and other relevant data<sup>1</sup> separately) and then to integrate across evidence streams to reach hazard identification conclusions. These methods are being developed, refined, and implemented according to the procedures established for literature-based evaluations through the Office of Health Assessment and Translation (OHAT) within the Division of the NTP.<sup>2</sup> The Revised Draft NTP Approach for Systematic Review and Evidence Integration for Literature-based Health Assessments ("Revised Draft Approach") reflect consideration of input from a working group of the NTP Board of Scientific Counselors (BSC), the BSC, and the public<sup>3</sup>. The approach includes seven steps that provide a framework for incorporating systematic review and evidence integration into NTP health assessments. To assist with determining if additional refinement or revision to the Revised Draft NTP Approach might be needed, OHAT plans to apply it to several case-study evaluations. The Revised Draft NTP Approach and draft protocols for the case studies will be released for public comment early in 2013.

---

<sup>1</sup> See [http://oehha.ca.gov/multimedia/green/pdf/GC\\_Regtext011912.pdf](http://oehha.ca.gov/multimedia/green/pdf/GC_Regtext011912.pdf) for definition and discussion of "Other relevant data"; in brief it refers to non-endpoint data, including chemical, physical, biochemical, biological or other data that may be important for consideration in an evaluation.

<sup>2</sup> See schematic of the OHAT evaluation process at <http://ntp.niehs.nih.gov/go/38138>

<sup>3</sup> See <http://ntp.niehs.nih.gov/go/9741> for information, presentations, and minutes (when available) from the June and December 2012 Board of Scientific Counselors (BSC) meetings and the report of the BSC working group with recommendations presented to the BSC; the report was unanimously accepted by the BSC.