

Methods2AOP: An International Collaboration Advancing AOP Key Event Descriptions

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The AOP framework requires that key events (KEs) be quantifiable to substantiate linkages between stressors and effects. The existing AOP-Wiki section for method-related information (“how it is measured or detected”) neither reflects the importance of linking KE with test method nor enables consistent description of methods across KEs. Methods2AOP is an international collaboration aiming to make linkages between test methods and KEs more explicit and visible. Collaborators have identified roughly 30 information fields across two levels to associate test method with KEs (level 1: critical) in a simple but FAIR (Findable, Accessible, Interoperable, Reusable) manner while also integrating sufficient assay details (level 2: informational) to annotate technical implementation and interpretation of results in AOP context. Fields drawn from established ontologies will be tabularized in the AOP-Wiki. The goal is for test method tables to formalize connections between AOP descriptions, external sources, and supporting evidence. Encouraging adoption among contributors is essential to collecting requisite details to increase the overall trustworthiness and utility of a methods-annotated AOP. This annotation framework is aligned with requirements from stakeholders including OECD EAGMST to advance the integration of experimental definitions into AOP frameworks and facilitate regulatory relevance of AOP knowledge. Facilitated by JRC, EURL ECVAM in collaboration with NIH NICEATM, US EPA, Environment and Climate Change Canada, and others. The views expressed in this presentation are the authors own and do not necessarily reflect those of the US government; funded by NIEHS, NIH under Contract No. HHSN273201500010C.