

The OECD framework for AOP Development and Application

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The AOP Development Programme was launched at OECD in 2012, and has focused on a learning-by-doing approach to AOP development, increasing public awareness of AOPs and producing the first AOP content for the AOP-Knowledge Base (AOP-KB). AOP development has significantly advanced as guidance, a users' handbook and training material for AOP development are in place and is now taking a more strategic approach. As more AOPs are developed, further attention is now being focused on facilitating the use of AOPs in a regulatory context.

This presentation highlights the main milestones achieved since the launch of the OECD AOP Development Programme and explores how it plays a central role in OECD work to improve predictive toxicology by integrating the use and application of mechanistic information to address both testing and assessment needs. The OECD Test Guidelines Programme for the identification of new in vitro test methods, the OECD QSAR Project for the identification of new methods/profilers for grouping chemicals and the OECD Hazard Assessment activities for the development of Integrated Approaches to Testing and Assessment (IATAs) for defined hazard endpoints, all can draw from the mechanistic information that is structurally stored in AOPs. Furthermore, OECD IT Tools will be presented demonstrating how compatible IT systems can link to help address a range of needs related to the regulation of chemicals in a systematic way with the AOP-KB playing a central role. Finally, the audience will be informed about the progress made towards the development of a scientific framework that facilitates the use of AOP knowledge in development of IATA.

As the number of documented AOPs increase, it is an important juncture to further demonstrate their application in IATA and also their use in various regulatory contexts. OECD members will continue AOP development and discuss IATA case studies and this experience will inform future guidance development.