

AOP-Wiki updates and development

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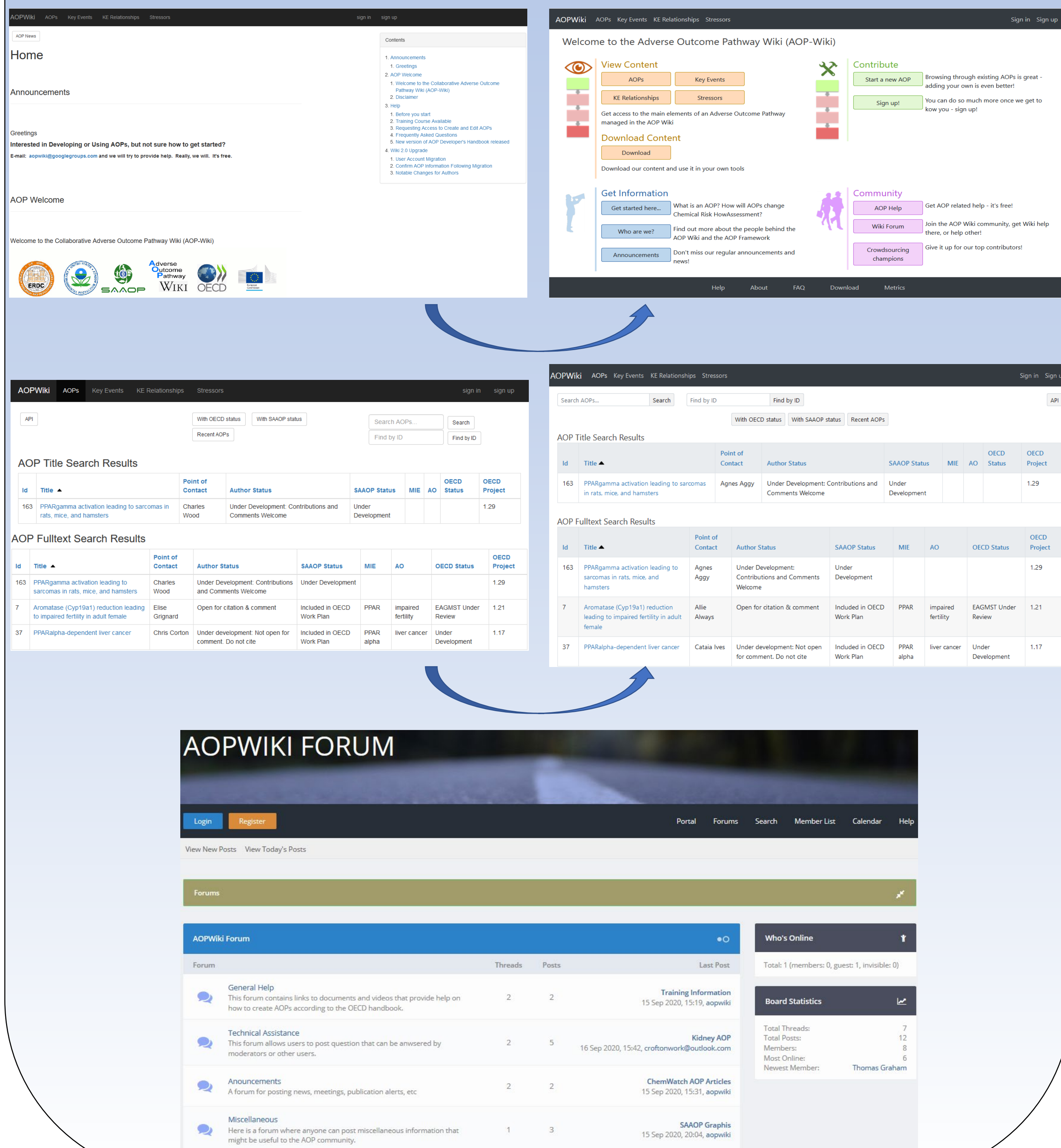
Abstract

The adverse outcome pathway (AOP) framework provides a systematic means for assembling, synthesizing, and documenting existing knowledge concerning how biological perturbations at the molecular or cellular level can translate to adverse health consequences. The Adverse Outcome Pathway Wiki (AOP-Wiki) is a publicly available, open-source platform that facilitates collaborative AOP development and the sharing of aggregated AOP knowledge. Recently, efforts have been made to improve end-user experience, identify and address issues through user feedback, and partner with journals to better integrate AOP information with the AOP-Wiki. An upcoming version of the AOP-Wiki will implement a new, more user friendly and mobile compatible interface, fixes to e-mail services, a user forum, updated cookies permissions, and additional content curation functions. User feedback is being collected on an ongoing basis via interviews with both content consumers and contributors. Identified areas for future development include, but are not limited to, improving collaborative tools, duplicative content mitigation, write access and content attribution strategies, improved query tools, and enhanced AOP developer recognition. A recent analysis of AOP-related journal publications supports user feedback that there is a disparity in the amount of AOP information being published and that which is being entered into the AOP-Wiki. The AOP Knowledgebase team is working on partnerships with journals to create a framework which will streamline the ability to capture AOP-relevant information from emerging publications and harness journals' existing infrastructure to facilitate peer review of content assembled in the AOP-Wiki. Near term updates are expected in this calendar year with additional significant updates to follow. The contents of this abstract do not constitute, nor necessarily reflect, US EPA policy.

Recent Updates

Major feature updates

- Mobile compatible interface
- E-mail service fixes
- Companion forum
- Updated cookies permission to comply with EU legislation
- Content curation functions



Collecting Feedback and Analysis of Literature

Requirements gathering interviews

- Content Contributors
- Content Consumers

Contributor	Consumer
Subject background <ul style="list-style-type: none">• Affiliation• Sector• Professional responsibilities	Subject background <ul style="list-style-type: none">• Affiliation• Sector• Professional responsibilities
Use patterns <ul style="list-style-type: none">• Motivations• Frequency• Self Assessment	Use of pathway-based data AOP-Wiki as information resource
Content <ul style="list-style-type: none">• User interface• Features and functionality• Re-use• Information resource	Walkthrough of potential use-cases <ul style="list-style-type: none">• User interface• Content applicability and supporting evidence• Evaluative properties
Knowledge and use of AOP-kb modules	Knowledge and use of AOP-kb modules

Initial efforts focused on contributors rather than use and access. Subsequent focus has been on how to serve up the information.

EPA Desktop Library – Summon 2.0
Directory of Open Access Journals (DOAJ)
NCBI – PubMed

Analyzing publications mentioning adverse outcome pathways

- Reviews
- Concept Reference
- Putative AOP

Journal Partnership

Engage scientific journals in co-publication of AOPs

- Provide authors with the career recognition associated with a peer-reviewed publication.
- Engage the journal editorial infrastructure to manage the review process
- Direct “review-like” articles with high citation potential to participating journals

Two components of an AOP Report

1. AOP entered into the AOP-Wiki
2. Summary journal article

Attribute	Description
Content to be reviewed	Manuscript + Wiki pages
Time to review	6-8 weeks
Anonymity	<ul style="list-style-type: none">• The reviews are not anonymous.• Reviewers identities will be published, but comments not attributed to individuals.
Transparency	Both review comments and the authors responses to the review comments will be published
Collaborative	<ul style="list-style-type: none">• Discussions between the authors and reviewers may be arranged• Clarification and discussion of review comments• Aimed at improving the product not just gate-keeping
Cooperative	<ul style="list-style-type: none">• Reviewers open to cooperate during the review process
Credit	Participation in the review of an AOP Report is regarded as a notable scholarly activity/achievement. Reviewers are encouraged to cite review of AOP reports as professional credentials

Searching for Pioneers:

- Submission by December 2020
- Debut articles by June 2021

Journals:

- Environ. Toxicol. Chem.
- Environ. Molec. Mutagenesis