



Interagency Coordinating Committee on the Validation of Alternative Methods

ICCVAM 2022-2023 Biennial Report

Scientific Advisory Committee on Alternative
Toxicological Methods
September 17, 2024

Agency for Toxic Substances and Disease Registry • Consumer Product Safety Commission • Department of Agriculture
Department of Defense • Department of Energy • Department of the Interior • Department of Transportation Energy
Department of Veterans Affairs Office of Research and Development • Environmental Protection Agency • Food and Drug Administration
National Institute for Occupational Safety and Health • National Institutes of Health • National Cancer Institute
National Institute of Environmental Health Sciences • National Institute of Standards and Technology • National Library of Medicine
Occupational Safety and Health Administration

The ICCVAM Authorization Act of 2000

“ICCVAM shall...prepare reports to be made available to the public on its progress under the Act. The first report shall be completed not later than 12 months after the date of enactment of this Act, and subsequent reports shall be completed biennially thereafter.”

Public Law 106–545
106th Congress

An Act

To establish, wherever feasible, guidelines, recommendations, and regulations that promote the regulatory acceptance of new or revised scientifically valid toxicological tests that protect human and animal health and the environment while reducing, refining, or replacing animal tests and ensuring human safety and product effectiveness.

SEC. 3. INTERAGENCY COORDINATING COMMITTEE ON THE VALIDATION OF ALTERNATIVE METHODS.

(e) DUTIES.—The ICCVAM shall, consistent with the purposes described in subsection (b), carry out the following functions:

(1) Prepare reports to be made available to the public on its progress under this Act. The first report shall be completed not later than 12 months after the date of the enactment of this Act, and subsequent reports shall be completed biennially thereafter.



12th ICCVAM Report Now Available

The screenshot shows the official website for the ICCVAM 2022-2023 Biennial Progress Report. The header features the ICCVAM logo, the title 'BIENNIAL PROGRESS REPORT 2022-2023', and the full name of the committee. A search bar is located in the top right. Below the header is a navigation menu with links to Home, Technology, Confidence, Utilization, Leadership, About, Reference Pages, Search Agencies, and Search Topics. The main content area has a dark blue background with a graphic of a human head profile composed of binary code and a microscopic image of cells. The text states that ICCVAM facilitates the development, validation, and regulatory acceptance of test methods that replace, reduce, or refine the use of animals in testing. Below this, the title 'ICCVAM 2022-2023 Biennial Progress Report' is followed by a URL. A paragraph explains that the report was directed by the ICCVAM Authorization Act of 2000. Another paragraph mentions a strategic roadmap published in January 2018. A list of three links is provided: 'Key NICEATM and ICCVAM Accomplishments and Impact 2022-2023', 'Message from NIEHS and NTP', and 'Message from NICEATM and ICCVAM'. At the bottom, there are three small images: a person in a lab coat working in a lab, two people in lab coats looking at a screen, and a close-up of laboratory glassware.

UNITED STATES
ICCVAM
Advancing Alternatives
to Animal Testing

**BIENNIAL PROGRESS REPORT
2022-2023**

Interagency Coordinating Committee on the Validation of
Alternative Methods

Search ICCVAM Report

Home Technology Confidence Utilization Leadership About Reference Pages Search Agencies Search Topics

ICCVAM
facilitates the development, validation, and
regulatory acceptance of test methods that replace,
reduce, or refine the use of animals in testing.

ICCVAM 2022-2023 Biennial Progress Report <https://ntp.niehs.nih.gov/go/2023iccvamreport>

The [ICCVAM Authorization Act of 2000](#) directed ICCVAM to prepare a progress report on its first anniversary and biennially thereafter.

In January 2018, ICCVAM published [A Strategic Roadmap for Establishing New Approaches to Evaluate the Safety of Chemicals and Medical Products in the United States](#). The roadmap described how ICCVAM agencies will encourage development of new technologies for, support utilization of, and build confidence in new methods. This report summarizes progress toward these goals during 2022-2023.

- [Key NICEATM and ICCVAM Accomplishments and Impact 2022-2023](#)
- [Message from NIEHS and NTP](#)
- [Message from NICEATM and ICCVAM](#)

<https://ntp.niehs.nih.gov/go/2023iccvamreport>

Report Outline

- **Home**
- **About NICEATM and ICCVAM**
- **Technology**
 - Assay Development
 - Data Resources
 - Computational Tools Development
 - Tox21 Cross-partner Projects
- **Confidence**
 - Assay Application
 - Communication and Education
 - Computational Tools Applications
- **Utilization**
 - Assessments of Agency Needs and Practices
 - Initiatives to Replace or Reduce Animal Use
 - Policies and Guidance for Implementation of Alternative Methods
- **Leadership**
 - Resources for Alternative Methods Development
 - International Interactions
 - Collaboration
- **Reference Pages**
 - Agency Representative in 2022 and 2023
 - NICEATM and ICCVAM Publications, 2022-2023
 - Glossary of Key Terms
 - Acronyms and Abbreviations

Report at a Glance

- Number of articles: **212**
- Number of topic tags: **29**
- Number of agencies represented: **17**

Key Accomplishments

- Publication of updated guidance: “Validation, Qualification, and Regulatory Acceptance of New Approach Methodologies”
- Articles describing agency information needs and testing requirements
- Curation and publication of human skin sensitization database
- Broadening applicability of defined approaches for skin sensitization
- Development of approaches to predict and characterize cardiotoxic potential
- Web tools for chemical exploration and toxicity prediction

Explore Agency Activities



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- [Message from NIEHS and NTP](#)
- [Message from NICEATM and ICCVAM](#)

About ICCVAM and NICEATM

- ▶ ICCVAM Establishment and Purpose
- ▶ How NICEATM Supports ICCVAM
- ▶ ICCVAM Advisory Committee

Technology

- ▶ Assay Development
- ▶ Computational Tools Development
- ▶ Data Resources
- ▶ Tox21 Cross-partner Projects


Confidence

- ▶ Assay Application
- ▶ Communication and Education
- ▶ Computational Tools Applications

Agency List:

- AI/SDR
- CPSC
- DoD
- DOE
- DOI
- DOT
- EPA
- FDA
- ICCVAM
- NCI
- NIEHS
- NIH
- NIOSH
- NIST
- NLM
- OSHA
- USDA
- VA ORD


Explore Topic Areas



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Search ICCVAM Report

[Home](#)
[About](#)
[Technology](#)
[Confidence](#)
[Utilization](#)
[Leadership](#)
[Reference Pages](#)
[Search Agencies](#)
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ICCVAM facilitates the development, validation, regulatory acceptance of test methods, reduce, or refine the use of animals in research.

ICCVAM 2022-2023 Biennial Progress Report

<https://ntp.niehs.nih.gov/>


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Technology

- Assay Development
- Computational Tools Development
- Data Resources
- Tox21 Cross-partner Projects



Confidence

- Assay Application
- Communication and Outreach
- Computational Toxicology

- Acute Toxicity
- AOP
- Carcinogenicity
- Cardiotoxicity
- Defined Approaches/IATA
- Developmental Neurotoxicity
- Developmental Toxicity
- Ecotoxicity
- Endocrine Disruptors
- Exposure
- Eye Irritation
- Genotoxicity
- Hepatotoxicity
- Inhalation Toxicity
- IVIVE
- Machine Learning
- Metabolism
- Metrics
- Mixtures Toxicity
- MPS
- Neurotoxicity
- PFAS
- Population Variability



Live Demo of Website

<https://ntp.niehs.nih.gov/iccvamreport/2023>



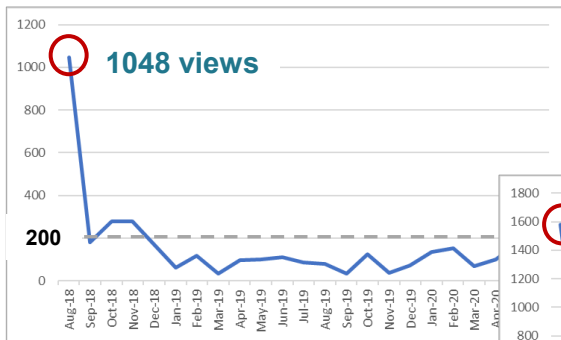
Evolution of the Biennial Report Since 2005

- **2004-2005, 2006-2007:** 75-page Word document, no illustrations, focused on workgroup activities
- **2008-2009, 2010-2011:** graphics and layout added, still focused on workgroup activities
- **2012-2013, 2014-2015:** shift to encompass more agency activities
 - 2014-2015 edition first to be published as a website
- **2016-2017:** current website platform implemented; greater focus on agency activities
- **2018-2019:** structure updated to reflect Strategic Roadmap; filtering tags implemented

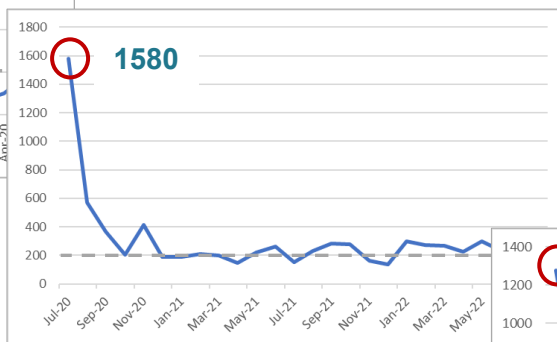


Audience Engagement

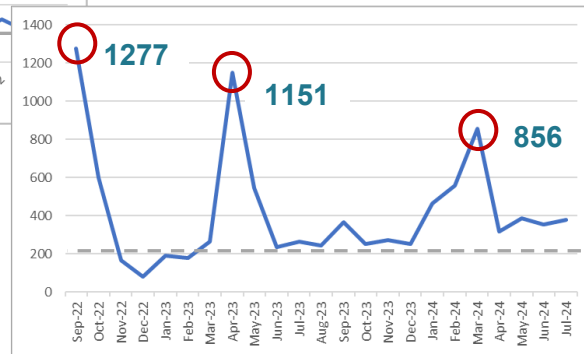
2016-2017 Report



2018-2019 Report

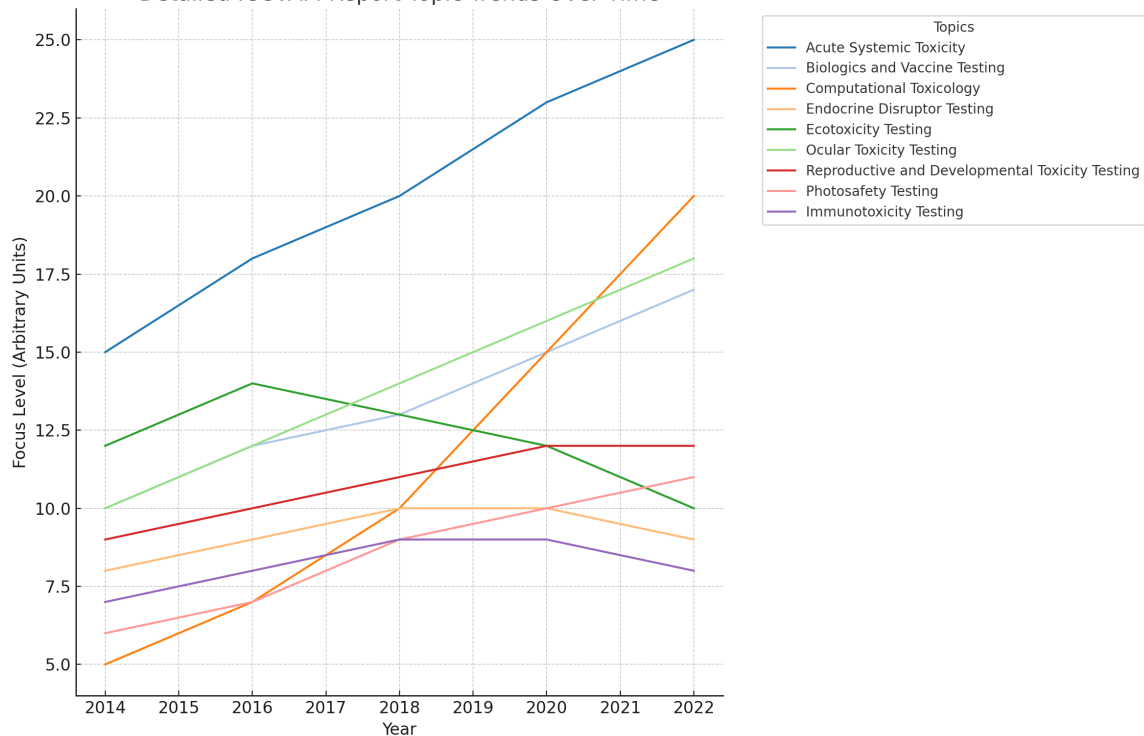


2020-2021 Report



Topical Trend Analysis

Detailed ICCVAM Report Topic Trends Over Time



Regulatory Acceptance and Policy Development

- Steady increase in efforts to validate and accept new methods.
- 2018-2019: Notable progress in international harmonization, working closely with OECD.
- 2020-2021: Policies adapted to accommodate rapid method development.
- 2022-2023: Established frameworks begin to streamline acceptance processes.



Questions?

<https://ntp.niehs.nih.gov/go/iccvam>