PROPOSAL: Framework for Intelligent Non-Animal Alternative Methods for Safety Assessment

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Outline

- Purpose of proposal
- What is the issue?
- Why is action needed now?
- What can HESI provide?
- Value of project
- Approach to be taken
- Deliverables

Purpose

- The intended goal is to develop:
  - criteria
  - a framework
- The project is **NOT** intended to:
  - validate assays
  - look at individual assays or methods
  - certify or provide a “seal of approval” for certain assays

What Is the Issue?

- Increased focus on replacing conventional animal-based toxicity testing with non-animal alternatives.
- Response has been a flurry of initiatives by numerous organizations.
- For the most part, these different projects are independent and are not coordinated in any meaningful way in terms of implementation.
- Unintended consequences:
  - Lack of broad agreement on objectives for determining the credibility of non-animal testing leads to confusion and poor implementation.
  - Erodes public confidence/trust in regulatory evaluations and product stewardship programs.
  - Increased costs and time to market to meet multiple different regulatory requirements for acceptance.

Regulatory Activities Indicate the Time Is Now!

- Regulatory trends include:
  - US EPA EDSP21
  - OECD AOP Program
  - EU SEURAT
  - “Green” Chemistry Programs (US EPA DfE) emphasizing the use of non-animal testing

Why HESI?

- Provides an opportunity for a **tripartite, neutral forum of experts** to critically evaluate the issue and develop best solutions
- Promotes **cross-disciplinary activity**
  - Different perspectives (government, industry, academia)
  - Different expertise (integrated solutions)
  - Different sectors (e.g. food, agrochemical, chemical, pharmaceutical)
  - Leverage best practices of all
- Organization/Funding – not available by any other mechanism

Value of project

Scientific Impact

- Scientific confidence in the final recommendations of independent groups working on alternative non-animal methods would be strengthened by a consistent set of criteria against which to assess the reliability of a new method or approach.

Policy Impact

- Establishing criteria specific to the intended regulatory decision to be addressed (e.g., prioritization, classification, read-across, hazard prediction) would be instrumental in determining whether a method is “fit for purpose” for decision-making.
- Increase transparency, greater consumer confidence and acceptance of regulatory decisions.

Approach

YEAR 1

- Identify and engage participants and leaders from relevant organizations.
- Collect information from participating organizations on development of non-animal alternative methods.
- Conduct an initial scoping meeting to identify commonalities and differences between organizational programs and initiatives.
- Identify risk assessment scenarios where the criteria for establishing fitness-for-purpose of methods may need to differ.
- Begin distilling information into a draft framework that provides useful, general criteria for assessing fitness-for-purpose.

YEAR 2

- Refine and complete the framework. Ensure that criteria are developed for each major decision point (read-across, hazard assessment, etc.).
- Conduct a “peer review” workshop. Invite others who have not been involved in the framework development to date.
- Further refine the framework based on workshop discussions.
- Develop a manuscript for publication on consensus criteria that should be met for acceptance of new non-animal methods for safety assessments.
- Conduct outreach.

Deliverables

- Broad agreement/endorsement at a HESI level by stakeholders/experts.
- Framework consisting of agreed set of criteria for determining the scientific validity of non-animal methods to be used in regulatory decisions for different purposes (read-across, hazard assessment, etc.).
  - Will level the playing field to ensure consistent acceptance thresholds for non-animal methods thus avoiding the appearance of arbitrary acceptance.
  - Will lead to increased transparency regarding application of non-animal alternatives.
- Publication of framework.
- Outreach via presentations at relevant venues.

Lastly…

- Emerging need for improved, integrated and harmonized framework for regulatory application of non-animal alternatives methods in safety assessments.
- HESI is well positioned to support this.
- No other forum better suited to bring together the right scientific expertise to address the issue.
- It is a natural follow-on to what the RISK21 project started