Application of U.S. Strategic Roadmap ... and How the North American 3R’s Collaborative May Help

SCIENTIFIC ADVISORY COMMITTEE ON ALTERNATIVE TOXICOLOGICAL METHODS
National Institutes of Health, Bethesda, MD
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3Rs Organizations in NA Can Help – Refinement & Communication

• Roadmap is heavy on Reduction and Replacement, but what about Refinement?

• Strategic Road Map Outline - “Develop mechanisms to improve communication between end-users and researchers.”
Microphysiologic Systems

Reproducibility, Endpoints, & Technology
Refinement’s Place in the Roadmap to New Approaches in Toxicology Research and Studies

- Depression / Morbidity / Death
- Clinical Pathology (Liver Enzymes, Renal Chemistry, Hematology)
- Limited Physiologic Parameters (EKG, Ophthalmology)

- Better or Surrogate Endpoints = Refinement
  - Biomarkers
  - Behavior
  - Physiology
New Approaches In Toxicology
Strategic Road Map Outline

“Develop mechanisms to improve communication between end-users and researchers.”
THE NORTH AMERICAN 3Rs COLLABORATIVE

REFINE. REDUCE. REPLACE.

ADVANCING SCIENCE, INNOVATION AND WELFARE THROUGH SHARING
What is the NA3RsC?

- **Mission/Statement of Purpose**
  - The mission of the NA3RsC is to advance the science of the 3Rs – replacing, reducing and refining the use of animals in research.
  - Our strategy includes:
    - Raising awareness of current 3Rs technologies and approaches
    - Fostering networks and collaborations focused on the 3Rs
    - Acting as a clearinghouse for information on the 3Rs
  - To do this we work across the scientific community with researchers from academia and industry, veterinarians and animal care staff, policy makers, regulators and funders.

**Collaborative not Competitive!**
Building a virtual 3Rs community...

• A Dynamic, Interactive, and Evolving Community
  - Theater to present educational symposiums live
  - 3Rs community pavilion
    • (a resource hub / portal to all North American 3Rs communities who participate)
    • Links to useful information
  - Platform to discuss and solve topical issues
The North American 3Rs Collaborative

Refine. Reduce. Replace.
Advancing science, innovation and welfare through sharing.

About Us
Events
Join
Collaborate

Make a Difference Today

Donate
Virtual Education Community

Welcome to the NA3RsC’s Virtual Educational Community (VEC)!

The VEC serves as a virtual location for communication, sharing of information and community conversation about 3Rs.

We are looking forward to your participation.

Event Registration
To start registration, please enter your details below and click Continue.

Email

VEC includes:
- Community Pavilion
- Poster Hall
- Presentation Hall
- Resource Hall
- Discussion Lounge
Welcome to our community...
<table>
<thead>
<tr>
<th>Literature</th>
<th>Title</th>
<th>Authors</th>
<th>File Size</th>
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<td>Replacement</td>
<td>Development of a Vapor Cup Dosing Method for Evaluation of EpiAirway</td>
<td>234 KB</td>
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<td>Refinement</td>
<td>Tissue Engineered In Vitro Human Airway Models</td>
<td>2297 KB</td>
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<td>An In Vitro Human Airway Model for Toxicity and Drug Delivery Screening</td>
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<td>Reconstructed human corneal skinethic HCE test method for eye irritation testing</td>
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<td>Evaluation of in silico modelling for endpoints of toxicological relevance</td>
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<td>Ocular Irritation Risk Assessments Using In Vitro BCOP</td>
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Presentation Hall

- Literature
- Refinement
- Reduction
- Replacement

Presentation 3

00:30
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