FDA-ICCVAM 3Rs

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CDER

- Participant in ICH guidance development:
- International harmonization reduces repetition of studies and reduces animal use in overall drug development
- No acute lethal tox
- Combine endpoints-no stand-alone assays for local tox
- Exposure and dose limits for tox studies
- Exploratory clinical studies section reduces use of animals needed to support clinical studies
- Defer reprotox studies until later in development for biologics
CDER-Phototox

- Use 3T3 photocytox assay instead of animals
- Eliminated any photocarc testing
CDER-Carcinogenicity

• Waive carc studies for most biologics
• Working on criteria for waiving carc for small molecules
• For Impurities: use SAR
CDER-Reprotox

- Considering an alternative (in vitro) battery to sometimes replace one species for regulatory use (already used as screens in drug discovery)
- Considering reuse of animals normally discarded before pre-postnatal studies
CDER Practice

• No need for Draize test for skin or eye (e.g., in vitro/in vitro alternatives-- accept BCOP assay)

• Accept nonanimal pyrogenicity assays (if applicable to product)
CDER ICCVAM Activities

- Contributes to DARPA and NCATS initiatives on “human on a chip” programs
- Supports work on a dermal sensitization nonanimal battery
- Supports work on pathway-based assays
- Supports work on ocular assays for no ocular irritation
CBER- Vaccines (a)

- Continued Leadership in International Efforts to Replace Murine Histamine Sensitization Test HIST for Acellular Pertussis Vaccines
  - Prague meeting. NC3Rs Workshop held in conjunction with the 9th World Congress on Alternatives and Animal Use in the Life Sciences, in Prague. Alternatives to the Murine Histamine Sensitization Test (HIST) for Acellular Pertussis Vaccines: Progress and Challenges in the Replacement of HIST
Vaccines (b)

- International Multi-laboratory Study of Alternatives to HIST ongoing the summer London meeting to discuss results of Multi-laboratory Study

  • Ongoing research on non-animal approaches to potency testing for vaccines such as rabies (with USDA)

  • Accept non-animal endotoxin testing if appropriate for product
CBER- Cellular and Gene Therapies

• Publication of Final Guidance for “Preclinical Assessment of Investigational Cellular and Gene Therapy Products”
  – Specific section on alternatives (III.B.8)
  – Product area specific 3R’s approaches

• Accept non-animal endotoxin testing if appropriate for product
CFSAN

- Represents FDA on Tox 21
- Contributes to DARPA and NCATS initiatives on “human on a chip” programs
- Supports work on AOPs for As
- Supports work on a dermal sensitization nonanimal battery
- Supports work on ocular assays for no ocular irritation
- Uses QSAR and read across when applicable