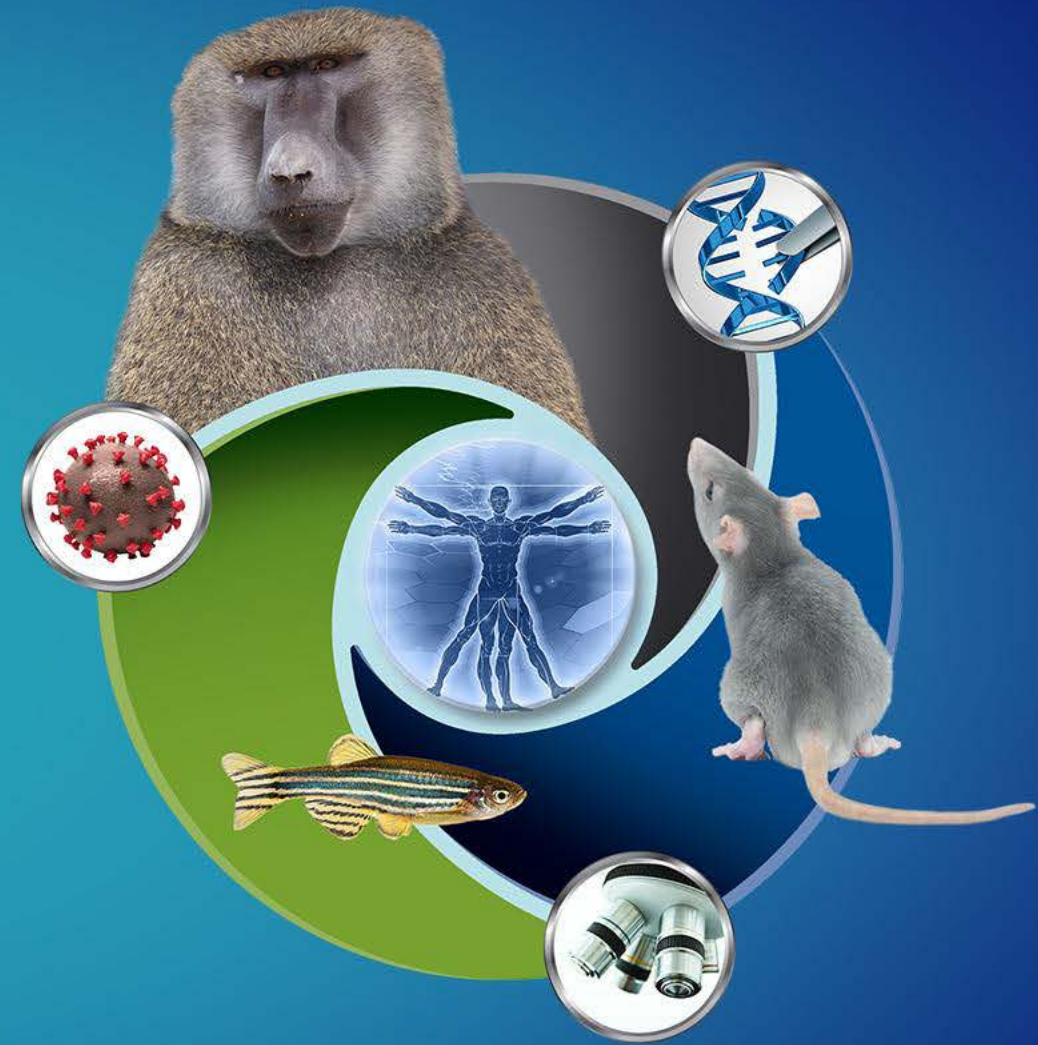# Notice of Special Interest (NOSI): Revision Applications to Add a Curation and Informatics Component to Existing Animal and Biological Material Resource Centers (P40)

ORIP
OFFICE OF RESEARCH
INFRASTRUCTURE PROGRAMS

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Rules of Engagement

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P40 Parent Awards

Animal and Biological Material Resource Centers (P40)

- PAR-17-006 (2016–2020)
- RFA-OD-20-002 (2020–2023)
- RFA-OD-23-001 (2023–2026)

NOT-OD-23-068

NOSI: Revision Applications to Add a Curation and Informatics Component to Existing Animal and Biological Material Resource Centers (P40)

Application Due Dates for 2023

- February 21, 2023
- May 26, 2023
- September 26, 2023

Background

ORIP Strategic Plan Workshop (May 2020)

- Support is needed for—
  - ✓ Development and maintenance of in-house data management systems
  - ✓ Integration of in-house data management systems with the model organism databases
  - ✓ Adequate staff for curation of newly acquired stocks
  - ✓ Collection management

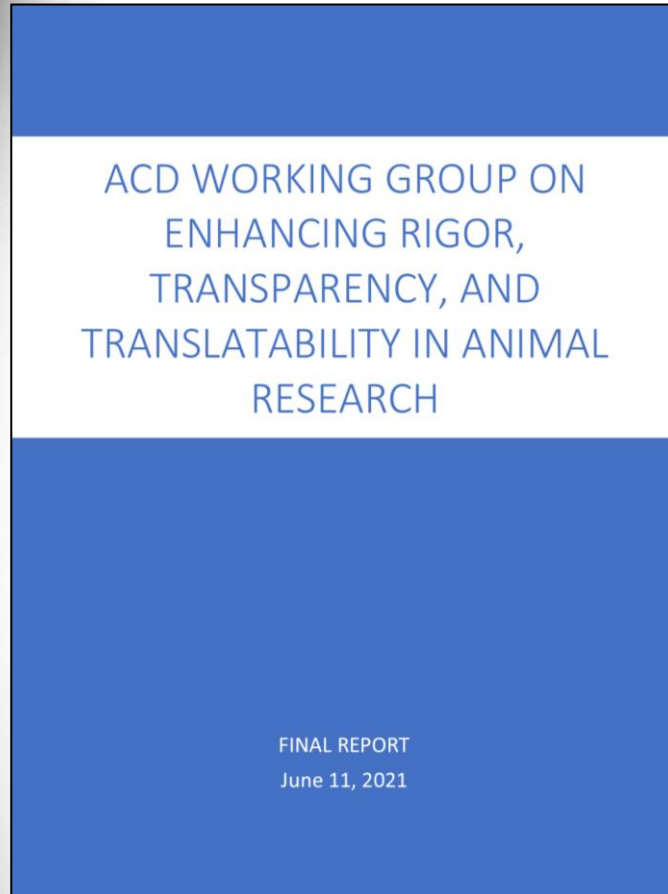## Validation of Animal Models and Tools for Biomedical Research Workshop (2020–2021)

- Infrastructure is needed to optimize all data collection and data management across the NIH and beyond, including—
  - ✓ Standard data collection requirements for genotypes, phenotypes, and perturbations (i.e., metadata)
  - ✓ Standard formats and documentation
  - ✓ Formal testing of discrete analytic approaches against empiric outcomes
  - ✓ Long-term integrated support for databases and stock centers

Thirteenth Comparative Medicine Resource Directors Meeting—Session 5, Strategies for Collecting and Sharing Resource Information (August 2021)

- The discussion focused on information around genetically engineered alleles, genetic background, breeding and husbandry, metagenomic data, health information, and phenotypes.
- Participants touched on identifying donors, tracking reagents' sources, finding publications citing the resource, and acquiring resources.

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Background

ACD WORKING GROUP ON
ENHANCING RIGOR,
TRANSPARENCY, AND
TRANSLATABILITY IN ANIMAL
RESEARCH

FINAL REPORT
June 11, 2021

Recommendation 3.2: NIH Should Establish or Identify Venues for the Exchange of Information Related to Animal Model Design and Characterization, Study Design, and General Best Practices

"The biomedical research community could benefit from dedicated pathways and processes for information exchange, training, and data collation and curation specifically related to the design and characterization of animal models.

These various activities would be aimed at generating, maintaining, and disseminating a knowledge base focused on issues of rigor, reproducibility, and translatability in animal models."

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Background

NIH Strategic Plan for Data Science

https://datascience.nih.gov/nih-strategic-plan-data-science

Biomedical repositories should accept submission of relevant data from the community and generate their own data to store, organize, validate, archive, preserve, and distribute information in compliance with the FAIR (Findable, Accessible, Interoperable, and Reusable) data principles.

RFA-OD-23-001: Animal and Biological Material Resource Centers (P40) (Clinical Trials Not Allowed)

"Center should develop plans in accordance with the new NIH Policy for Data Management and Sharing (NOT-OD-23-053) to better position itself for the updated data requirements. In addition, improving access to the Resource Center's databases as well as developing metrics to evaluate the usage, utility, and impact of a given repository will improve the ability of the center to meet the needs of the biomedical research community."

Major Features of Animal and Biological Material Centers

- The institution submitting the application must be committed to the Center being proposed.

- Significant growth of the Centers should result from program income.

- Applications must include a marketing plan and community outreach strategies.

- Centers should ensure the quality and welfare of distributed animals.

- Centers must have an Applied Research Component to generate new approaches or enhance existing ones that will improve the resources and services (no more than 15% of the direct costs).

- Centers must have a Curation and Informatics Component to support development and maintenance of in-house data management systems, curate stocks of animals and biomaterials, and maintain a searchable web portal.

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Curation and Informatics Component

Informatics/Management

- Support improvements needed to keep up with contemporary information management practices according to the FAIR data principles in ORIP-supported resources.

Curation of Stocks

- Support curation of the repository stocks and generation of the associations with genomic and phenotyping information to improve cross-referencing and integration of the animal models available from ORIP-supported resources.

- Develop the systems that allow animal strain and reagent (e.g., antibody) catalogs to be searched according to model phenotype and reagent properties (i.e., the species in which the reagents work).

Web Portals

- Support development of web content, improvement of web-based presentation and outreach efforts, and development of client-friendly ordering and order management systems at ORIP-supported resources.

- Develop investigator assistance systems allowing searches of repository content for human disease associations.

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Curation and Informatics Component

Reporting Outcomes

- Support efforts to improve the ability of the resources to collect information for—
  - ✓ Reporting purposes (e.g., sRPPR)
  - ✓ Evaluating the impact of distribution activities and services provided to the biomedical community (e.g., tracking user information, associated grant numbers, and outcomes of the studies using obtained animal models)

Training

- Train stock center curators to develop skills in informatics management.

- Train technical personnel to develop skills in webpage development and informatics system maintenance.

Budget and Other Requirements

- The budget for adding a new Curation and Informatics component is up to $300,000 of additional total cost per year.

- Increase of the budget for the Curation and Informatics component is excluded from the budget limits for competitive renewal applications.

- The award project period is limited to the funding period of the parent award for the supplement request (NOT-OD-23-068).

  - ✓ Only Program Directors/Principal Investigators of an active P40 award from ORIP funded under RFA-OD-20-002 or PAR-17-006 who have not yet applied for competitive renewal through RFA-OD-23-001 are eligible.

  - ✓ Only electronically submitted applications will be accepted.

  - ✓ Peer-reviewed NIH-funded parent grants must have at least 18 months of active grant support remaining after the submission deadline for the submitted application.

  - ✓ Applications will be evaluated for scientific and technical merit through the NIH peer review system.

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Curation and Informatics Component

If you are planning to apply—

- Contact the ORIP NOSI scientific contact and the respective program officer for the parent award ahead of submission to confirm that the supplement falls within the scope of the parent award.

- Notify the ORIP NOSI scientific contact that a request has been submitted in response to this funding opportunity announcement to facilitate efficient processing of the request.

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Questions?

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