

# ORIP

## **Concept Clearance: Reissue**

### **Development of Animal Models and Related Biological Materials for Research (R21 Clinical Trial Not Allowed)**

**Objective:** Encourage innovative research to develop, characterize, and improve animal models, biological materials, and novel technologies to better understand human health and disease as well as seek projects aimed at improving diagnosis and control of diseases that interfere with animal use for biomedical research

**Funds Available and Anticipated Number of Awards:** Contingent upon NIH appropriations and the submission of meritorious applications

**Award Project Period:** 2 years

**Council Action:** Vote for approval of reissuance of the concept for “Development of Animal Models and Related Biological Materials for Research (R21 Clinical Trial Not Allowed)”



# Background

- **Animal Models R21 Program was established in 2007 by NCRR and has continued to evolve under ORIP's administration since 2012**
- **Meets demand for animal models that are more predictable and accessible for biomedical research**
- **Addresses need for technological advancements for developing animal models, such as genomics, gene editing, and informatics**
- **Aligns with ORIP's mission: "ORIP awards grants to support research resources, such as animal models of human disease...."**

FOA	Time Period	# of Applications	# of Awards	Award Rate
PA-13-145	03/19/2013 to 03/18/2016	154	29	19%
PA-16-141	03/18/2016 to 09/08/2019	187	35	19%
PAR-19-369	09/09/2019 to 03/17/2021	76	19	25%

- **Current FOA, PAR-21-167, is active from 03/17/2021 to 05/08/2024**



# Purpose

- **ORIP Strategic Plan 2021-2025**

- “To facilitate the development and ensure the availability of the highest quality and most useful animal models and related resources for the advancement of research on human disease.... ORIP seeks to improve and disseminate the best models for human conditions and diseases that are of interest to multiple NIH ICs.”

- **Animal Models R21 Program encourages innovative research to:**

- Develop, characterize, and improve animal models, biological materials, and novel technologies to better understand human health and disease
- Improve the diagnosis and control of diseases that interfere with animal use for biomedical research

- **To align with ORIP’s trans-NIH mission, proposed projects must:**

- Have broad application to multiple NIH Institutes and Centers
- Explore multiple body systems or evaluate diseases that impact multiple body systems



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# Progress and Impacts

## For the past three completed FOAs:

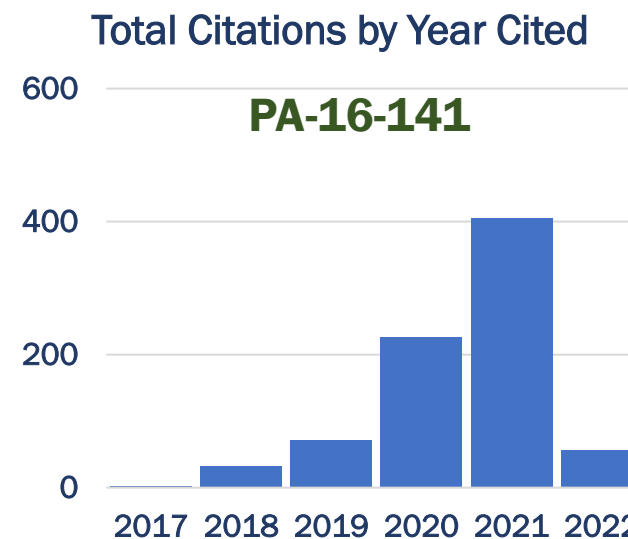
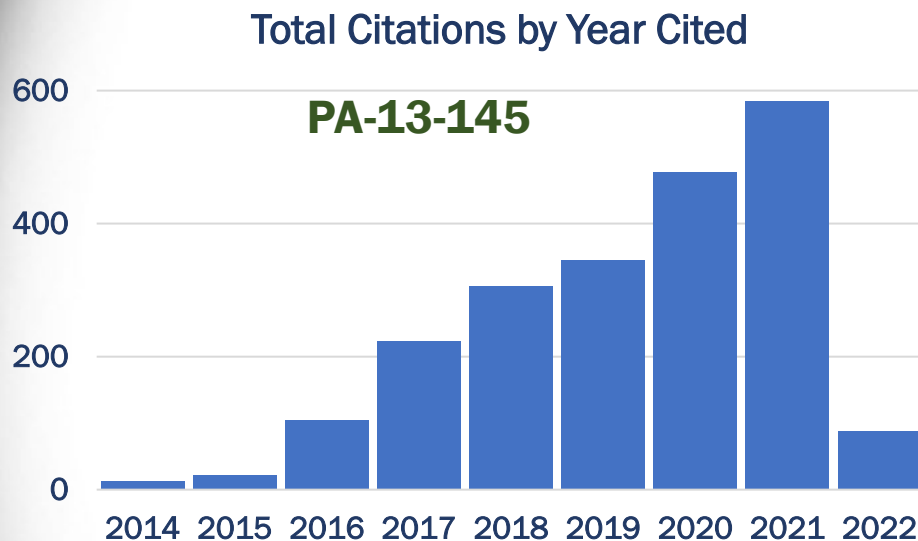
- Most applications and awards were on model development, with the primary model being mouse followed by fly and zebrafish
- Award rate (# of awards/# of applications) was ~20% averaged across 3 FOAs
- Percentage of awards with publication(s) is ~80% for PA-13-145 and PA-16-141

FOA	Time Period	# of Awards	Total # of Publications	Average Publications/Award
PA-13-145	03/19/2013 to 03/18/2016	29	114	3.9
PA-16-141	03/18/2016 to 09/08/2019	35	87	2.5
PAR-19-369	09/09/2019 to 03/17/2021	19	3	0.2



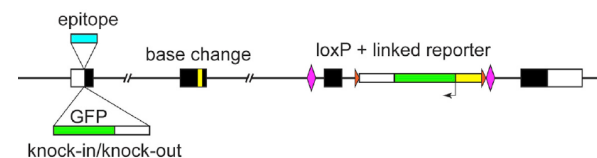
# Progress and Impacts

## Citations of Publications from Awards by FOA



### Publication Example:

Hoshijima, K et al. Precise Editing of the Zebrafish Genome Made Simple and Efficient. *Dev Cell* 2016;36(6):654-67 (Cited 107 times)



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# Concept Clearance

***Vote for approval of reissuance of the concept for “Development of Animal Models and Related Biological Materials for Research (R21 Clinical Trial Not Allowed)”***



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