

**Concept Clearance - Reissue of SBIR/STTR Funding Opportunity Announcements “Novel Tools and Devices for Animal Research Facilities and to Support the Care of Animal Models” (R41/R42, R43/R44)**

The Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs are congressionally-mandated set-aside programs for U.S. small businesses to engage in R&D that has a strong potential for commercialization. Current legislation requires NIH to allocate 3.65% of its annual budget to the SBIR (3.2%) and STTR (0.45%) programs. This obligation is distributed proportionally across NIH’s Offices, Institutes, and Centers (ICs). FY2019 ORIP’s SBIR/STTR budget is \$7.55M.

ORIP participates in NIH-wide “parent” Funding Opportunity Announcements (FOAs) for SBIR (R43, R44) and STTR (R41, R42) programs. In addition, since its creation in 2011, ORIP published FOAs targeting specific scientific areas within ORIP’s mission. In particular, ORIP published PAR15-185/186 “Novel Tools and Devices for Animal Research Facilities and to Support the Care of Animal Models”. Applications for these FOAs were considered in FYs2016-2019. The goal of these FOAs was to encourage small business to develop and implement technologies to:

- Improve the handling of laboratory animals;
- Ease the management of animal facilities;
- Enhance experiments which use animal models;
- Benefit the welfare and care of research animals;
- Better monitor and assess environmental conditions of animal research facilities to improve robustness of experiments.

Other ORIP-issued SBIR/STTR FOAs addressed the development and commercialization of technologies to better understand, preserve, characterize, improve, and treat animal models of human diseases.

Since 2011, approximately 50% of ORIP SBIR/ STTR applications came for ORIP-specific FOAs and the other 50% responding to the parent NIH announcements. In FYs 2016-2019, ORIP received 45 applications for PAR15-185/186 and funded 8 of them (6 SBIR and 2 STTR awards, respectively). Funded grants support the development of imaging systems based on photoacoustic, fluorescence, and ultrasound technologies for the characterization of murine models, systems employing electrical and optical interfaces for assessing an array of physiological parameters in free moving mouse, and a low-distress injection system. These are examples of engineering efforts benefitting animal-based research that are aligned with ORIP’s strategic goals. Publishing a targeted FOA stimulates interest in the development of tools and technologies for animal model research and brings in new non-hypothesis driven concepts. Such projects must be reviewed with the appropriately formulated review criteria to measure the projects’ innovation in the context of the users’ needs they fulfill and by the potential overall advancements and improvements they can bring to a field of science.

ORIP-issues FOAs are an asset for the SBIR/STTR program. These targeted projects advance ORIP’s scientific goals, benefitting animal-based research supported by all NIH ICs.

ORIP requests continued support for the SBIR/STTR Program that targets the development of novel tools and devices for animal care research facilities and to support care of animal models.