

Research Development Fund – Fall 2021 Application Template

Submission Deadline: **12:00PM CDT Monday – October 4, 2021**, to rdf@tamu.edu

****Applications exceeding page limits for any section or do not follow the template will not be reviewed****

Application Title:

3T MRI upgrade to meet research needs at the Translational Imaging Center, an advanced radiological imaging facility

Lead contact for RDF Application:

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| Name | Vidya Sridhar |
| Department | Texas Institute for Preclinical Studies |
| Email address | vidyas@tamu.edu |
| Phone Number | 979-458-5470 |

Key Participating Units:

College of Veterinary Medicine and Biomedical Sciences
College of Engineering
Health Science Center
College of Liberal Arts

RDF Amount Requested (\$): **1,719,675**

Executive Summary

Include the overall scope/objective of the application. What research infrastructure enhancement is proposed? How will research at Texas A&M be improved? Who (units) will benefit at the Brazos County locations? How will external funding be enhanced? What outcomes are anticipated? Explain clearly how this investment supports Texas A&M research infrastructure for broad campus benefit.

Scope/Objective: To obtain funding support for an upgrade of the current 3T MRI scanner system at the Translational Imaging Center (TIC) at Texas A&M Institute for Preclinical Studies (TIPS) to meet the increasing needs of researchers within Texas A&M University that rely on this imaging system for their study needs.

The current MRI scanner supports a diverse variety of research projects for both animals and humans, although the focus is on the former. Presently the available MRI research scan protocols, as well as the technical features of the scanner, are increasingly proving inadequate to meet the needs of researchers. These scientists are competing for extramural grants with investigators from other facilities that may have access to more advanced MRI technology. To be competitive for the limited grant funding available, the collaborators require their research data to be obtained at comparatively high standards. The current scanner demands a longer acquisition time for commonly run imaging sequences, resulting in a lengthened scan time which is potentially problematic during extensive animal imaging data collections due to the constraints of anesthesia.

TIC works with researchers primarily within the Texas A&M University College Station Texas campus, and functions as a specialized facility for researchers within the University. TIC currently supports approximately 20-40 internal and extramural grant proposals each year, with TIC collaborating in these studies. At least 70% of these grant submissions involve MRI based studies. Producing pilot and study data using advanced technology because of an MRI upgrade, will lead to increased opportunities for grant funding, which would ultimately lead to enhanced research output for the University.