

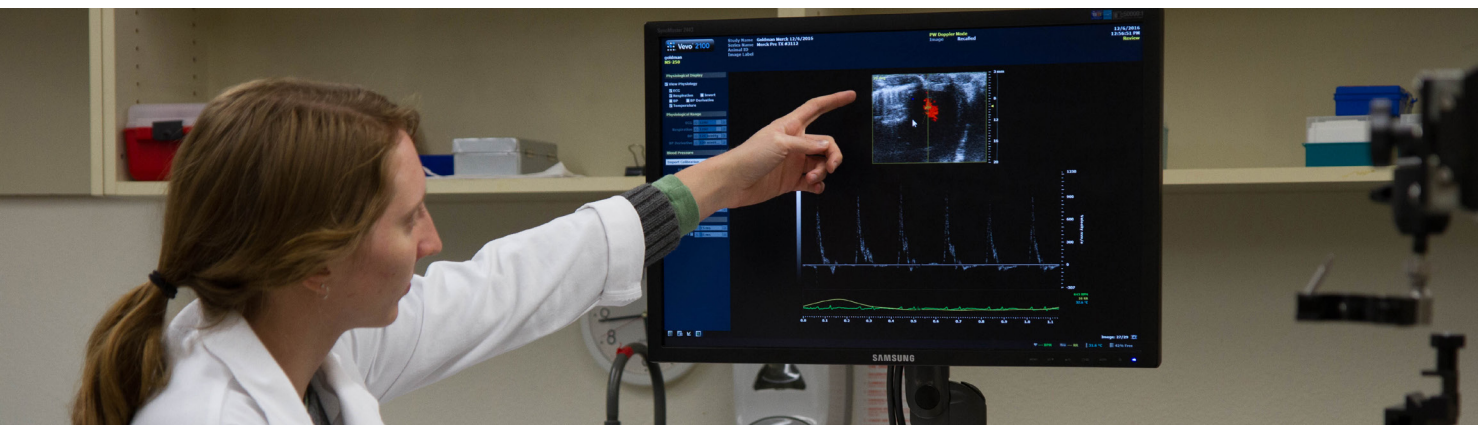
Imaging Cores, Biomedical Research Laboratory – High Resolution Ultrasound Facility



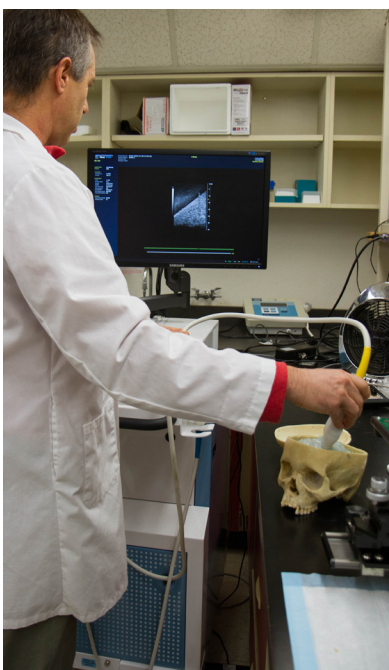
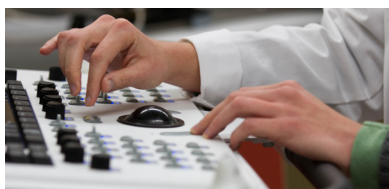
Core Facilities Fair 2017

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Imaging Cores, Biomedical Research Laboratory – High Resolution Ultrasound Facility



The Imaging Cores, Biomedical Research Lab - High Resolution Ultrasound Facility, or HRUF, provides small-animal ultrasound imaging with axial resolution down to 30 microns. HRUF houses and manages the VisualSonics Vevo 2100, the technology used for this kind of imaging, as well as data management and analysis software. The system can be used to measure a variety of cancer-related metrics such as tumor growth, tumor blood flow and volume, angiogenesis, and molecular imaging with microbubble contrast agents. Cardiovascular imaging and measurement of cardiac function are two other popular applications. The technology also applies other disciplines ranging from the neurosciences and embryology to ophthalmology. Specialized human studies are also possible with institutional review board approval.

The HRUF regularly works with researchers in the UA's College of Medicine, Arizona Cancer Center, Sarver Heart Center, College of Optical Sciences, and College of Engineering, as well as a variety of industry partners, that participate in biomedical research and material characterization.

Researchers at the HRUF have collaborated on a number of projects in diverse areas, from investigating the effects of environmental contaminants such as trichloroethylene and arsenic to the imaging of adipose tissues. The HRUF is currently working with the Treatment, Research, and Education of Adipose Tissue (TREAT) Program in the UA Department of Medicine to image lipedema and other subcutaneous adipose tissue disorders. They are also collaborating in a project to measure tumor growth and angiogenesis using microbubbles as an ultrasound contrast agent.

The HRUF is also collaborating on a longitudinal study of etiology and treatment of chronic heart failure after myocardial infarction, ex-vivo studies of cardiac development in chicken embryos, and studies tracking induced development of tumors in the liver.

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Location

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