

Microsurgery Core
Comprehensive Transplant Center
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<http://www.feinberg.northwestern.edu/sites/transplant/research/research-cores/microsurgery-core.html>

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Microsurgery Core

M Northwestern
Medicine®

Comprehensive
Transplant Center

Mission

The mission of the Microsurgery Core is to provide high quality microsurgical services and bioanalysis to support all principal investigators in need of small animal surgical models, and offer consultations on any issues pertaining to small animal surgical models.

About the Microsurgery Core

The Microsurgery core is located on Tarry Building 11th floor in Northwestern University Feinberg School of Medicine. The facility consists of two surgical suites along with a satellite animal holding suite for peri-operative animal care. The surgical suites are equipped by state-of-the-art operating microscopes including four Zeiss OPMI® operating microscopes with dual binocular heads and two Zeiss Stereo Zoom Microscopes (STEMI SV6) with five aseptic surgical units. In addition, there are two Abaxis VetScan bioanalyzers available for blood chemistry and diagnostic tests. In addition, the facility holds two murine intensive care units for postoperative animals to recover from surgery as well as other separate areas designated for animal prep, drug delivery, necropsy and tissue sampling.

The core has served all interested investigators in NU community for years, performed more than 6000 small animal surgical procedures with high success rate and has helped Principal Investigators to secure funding support from various funding agencies including the NIH.

The core also provides training for students and fellows in Northwestern University Feinberg School of Medicine, as well as trainees from other institutions.

The core is staffed by five experienced microsurgeons who have successfully performed rodent surgical procedures, such as vascularized organ transplantation, ischemia reperfusion injury and other surgeries, and have been trained for performing diagnostic tests using VetScan analyzers.

Operating suites/microscopes



Animal ICU



i-STAT Bio-analyzer



Services

The Microsurgery Core currently provides the following services. Investigators are responsible for the costs incurred for their projects and should have animal protocol approval prior to the work.

Microsurgical services:

- Kidney transplantation
- Liver transplantation
- Aortic transplantation
- Cardiac transplantation (abdominal or cervical)
- Lung and trachea transplantation
- Skin transplant and parabiosis models
- Models ischemia reperfusion injury (hepatic/renal/intestinal/hindlimb)
- Models of arterial malformation and fistula formation
- Carotid artery balloon injury models
- Myocardial infarction models
- Unilateral ureteral obstruction and 5/6 Nephrectomy
- Models of bile duct ligation and short bowel syndrome
- Sepsis models - cecal ligation and puncture

Other custom services:

- Drug deliveries (including intravenous and intracecal injections)
- Alzet Osmotic Pump Implantation
- Serial blood collections (retro-orbital or tail vein, cardiac picture)
- Diagnostic tests including liver and renal function panels, blood gas.
- Training and consultations
- Developing any new microsurgical models, collaborations as needed

Getting Started

To discuss starting a project using the services of the Microsurgery Core of the Comprehensive Transplant Center, please contact:

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