Hope Center Core: Animal Surgery

### About the Core

The Hope center surgery core is available to plan and carry out surgical procedures for small rodent experiments. In addition to standardized procedures shown, we custom-tailor invasive or non-invasive procedure to the needs of the individual investigators.

The overall objective of the Animal Models Core is to assist translation of scientific discoveries to rodent models and to facilitate development of new therapeutic strategies for nervous system diseases. The Animal Models Core can provide access to core equipment and facilities, and expertise for surgery or protocol development. In addition, specific surgical and genetic models of disease will be made available to the Washington University community to accelerate investigation in disease-related neuroscience.

### Who can use the Animal Surgery Core?

The facility is open to Hope Center investigators who complete appropriate training. Animal Studies Committee approval is required. Other WU investigators and outside investigators are also encouraged to utilize Hope Center resources. Facility and procedure costs can be charged to grants; please see the current price list for costs (website). Hope Center investigators are eligible for discounted use. Please contact the Hope if you have questions about access or payment for core services.

### Surgeries

- Middle cerebral artery occlusion (MCAO)
- Bilateral carotid artery occlusion (BCAO)
- Neonatal hypoxia-ischemia (H-I)
- Hypoxic pre-conditioning
- Seizure models

### Drug / Virus Delivery

- Stereotactic injection (forebrain, brainstem, spinal cord, or retina)
- Drug injection (intraperitoneal, retro-orbital, tail vein)
- Osmotic pump implantation

### Microscopy / Monitoring

- Cranial window prep for microscopy
- Laminectomy prep for microscopy
- BP/CBF/Temperature monitoring

### Fluid / Tissue Collection

- CSF collection
- Blood collection
- Organ harvesting
- Perfusion fixation

### Analysis

- TTC-infarct volume analysis
- Edema quantification
- Leukocyte adhesion

### Miscellaneous

- Consultation or training

### Procedures

- Perfusion fixation
- Organ harvesting
- Blood collection
- CSF collection
- Fluid / Tissue Collection
- BP/CBF/Temperature monitoring

### Equipment

- Surgical stereo dissecting microscopes (4)
- Autoregulated thermocontrollers (4)
- Laser doppler
- Inhalant anesthesia delivery system (5)
- Blood Gas Machine
- Blood pressure monitor
- Drug infusion pumps (2)
- Rota rod
- Autoclave
- Incubator
- Spinal cord injury impactor (NYU model) new
- Biosafety hood for viral delivery
- Short-term rodent housing

### Personnel

- Faculty Core Director: Jin-Moo Lee, MD, PhD  
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### Contacts / Information

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Please visit our website  
hopecenter.wustl.edu > Cores > Animal Surgery