Neurology Research
Henry Ford Hospital

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Stroke is the leading cause of disability. There are ~4 million disabled stroke survivors in the United State. Thus, there are compelling needs to develop therapies for improvement of neurological outcome in these patients.
Restorative Therapies for Stroke

Angiogenesis

Synaptogenesis

Neurogenesis
Model of Middle Cerebral Artery Occlusion
How to Study Adult Neurogenesis
Neuroblast migration tracked with time-lapse microscopy
How to Study Neural Stem Cell Fate in the Ischemic Boundary Zone

![Diagram showing timeline with tamoxifen treatment and MCAO (middle cerebral artery occlusion) days]

![Images showing neural stem cell fate with YFP and NN markers]
Stroke Changes Gene Profiles in Neural Stem Cells Isolated by Laser Capture Microdissection
How to Study Cerebral Angiogenesis
Stroke induces angiogenesis in vivo, as measured by 2-photon microscopy.
How to Study Coupling of Neurogenesis with Angiogenesis
In Vitro Studies of Interactions between Angiogenesis and Neurogenesis: Co-culture of Cerebral Endothelial and Neural Stem Cells
How to Study Axonal Regeneration
How to Study Axonal Regeneration by MRI
How to Study Neurological Function after Stroke
Restorative Therapies for Neural Injury

- Angiogenesis
- Oligodendrogenesis
- Neurogenesis