

Interstate Alliance on Stem Cell Research
Update from Wisconsin
October, 2009

The Wisconsin *Institutes* for Discovery (discovery.wisc.edu/), slated for completion in early 2011, represents the most recent and visible State of Wisconsin investment in interdisciplinary research that includes a focus on stem cells and regenerative medicine. The private half of the Wisconsin Institutes for Discovery, called the Morgridge Institute for Research, an affiliate of WARF (warf.org), has five focus areas:

- Regenerative Biology
- Virology
- Medical Devices
- Pharmaceutical Informatics
- Education

Regenerative Biology is the Morgridge Institute's inaugural platform for realizing the *Institutes'* "discovery-to-delivery" paradigm. World-renowned stem cell pioneer and scientist Dr. James Thomson was appointed as its director and the first member of the Morgridge Institute's multidisciplinary leadership team.

The public half of the Wisconsin *Institutes* for Discovery, similarly called the Wisconsin *Institute* for Discovery, is part of the University of Wisconsin-Madison. A competition to select themes for the institute during the summer of 2009 resulted in five winning focus areas:

- Epigenetics or how genes are activated or inactivated, led by John M. Denu, a professor of biomolecular chemistry in the UW-Madison School of Medicine and Public Health.
- Tissue engineering scaffold research, led by Lih-Sheng Turng, UW-Madison professor of mechanical engineering.
- Health Technology Design in the Living Environments Laboratory aimed at accelerating the development of personal care diagnostic and therapeutic technology, led by Patricia Flatley Brennan, professor of industrial and systems engineering and nursing.
- Optimization in Biology and Medicine, a mathematical approach to minimize or maximize the variables of a given subject, led by Michael C. Ferris, professor of computer science.
- Systems Biology, an integrated, "system level" understanding of living organisms, spearheaded by John Yin, professor of chemical and biological engineering.

The combined Wisconsin *Institutes* for Discovery focus on improving human health and well-being through breakthrough scientific research and exploiting discoveries for the development of new healthcare solutions.

WiCell Research Institute (wicell.org) continues to support stem cell research in Wisconsin and beyond and has had some notable recent accomplishments including the production of a clinically relevant, current Good Manufacturing Practice (cGMP) embryonic stem cell line with the Waisman Clinical Manufacturing Facility at the UW-Madison, and the addition of the WiCell International Stem Cell (WISC) Bank to supplement the ongoing National Stem Cell Bank's distribution of pluripotent stem cells worldwide.