

Discovery Park Impact

**KIST-PU Global Research Laboratory in
Nanomedicine Molecular Imaging and Theragnosis**

NEED

Science, technology, entrepreneurship and innovation will play even greater economic development roles in the new global knowledge economy, especially in the life sciences and medicine. Applying powerful new nanotechnologies will revolutionize medical practice.

INITIATIVE

Discovery Park has developed a number of partnership agreements with educational institutions, corporations, and research agencies in Australia, China, India, South Korea, New Zealand, Singapore and Qatar.

One of the most significant partnerships is between Discovery Park and the Korean Institute of Science and Technology (KIST), in Seoul, South Korea. This “*Korean MIT*” has strengths in the discovery of biologically active novel compounds, drug-delivery systems, tissue engineering, validation of drug targets, and molecular imaging.

IMPACTS

- Purdue and KIST researchers have held three international symposia. The first, in Seoul in September 2006, focused on molecular imaging and nanomedicine and led to a \$4.5 million, nine-year “Global Research Laboratory (GRL)” award from the Korean Ministry of Science. The topic for the symposia in 2007 and 2008 was nanomedicine and ‘theragnosis’, the simultaneous combination of diagnosis and therapy. These symposia are attended by over 100 researchers from Purdue and from several Korean institutions.
- A joint research proposal, "Molecular Imaging and Nanomedicine for Theragnosis Using Nano-Bio Material," was selected for the international Global Research Laboratory awards. KIST has committed additional funding to support GRL activities at Purdue including travel and expenses for KIST researchers working in Discovery Park. GRL funding will be leveraged with companion proposals to the National Science Foundation Office of International Science and Engineering program, "Partnership in Research and Innovation."
- Similar proposals will be submitted to the Fogarty International Center and to other divisions of National Institute of Health. Purdue is extending this life science partnership to other areas such as bioenergy.
- The Bindley Bioscience Center at Discovery Park, and the KIST Life Sciences Division, Biomedical Research Center, also have established collaborative projects in biomedical engineering, drug delivery technology, cytomics and molecular imaging. These programs emphasize education, training, technology transfer, teaching exchanges and joint proposal writing.