

Indiana Institute for Biomedical Imaging Sciences:

The *Indiana Institute for Biomedical Imaging Sciences (IIBIS)* was created to foster the development, testing, and translation of modern biomedical imaging technologies and methodologies into clinical care in order to advance our ability to care for patients. The Institute is housed across three buildings. The Research Institute II (R2) building is centrally located within the Medical School campus, and is in close proximity to the Medical Science Building (home to the IU School of Medicine Basic Science Departments), the IU Melvin and Bren Simon Cancer Center Hospital and Research Facilities, the O'Brien Center for Biological Microscopy, and the Wells Research Center (Department of Pediatrics), Indiana University Hospital, Riley Children's Hospital, the Ruth Lilly Medical Library, the CTSI sponsored Clinical Research Center (ICRC), the IU CTSI – Covance Phase I Clinical Trials Unit, and the Laboratory Animal Resource Center (LARC). All of these facilities are linked to the R2 facility via tunnels or indoor walkways with less than a 5 minute walk between any two locations. The first floor and basement level of the R2 building house comprehensive dedicated research facilities for human and animal imaging (MRI, PET, and CT) along with ancillary support space including wet laboratories, surgery suites, an image processing laboratory, a machine shop, and an electronics shop.

The *Biomedical Research and Training Center (BRTC)* houses the tracer and contrast agent development program. This space accommodates medical cyclotrons and has extensive synthetic chemistry space, radiochemistry space, molecular biology laboratories, cell culture labs, and ancillary support labs for shared instrumentation and device construction. The BRTC, R2, and IU Simon Cancer Hospital buildings are linked by a pneumatic tube system that permits the rapid transfer of short-lived PET radiopharmaceuticals from the chemistry laboratories to the PET imaging systems.

The *IU Health Neuroscience Center* (Goodman Hall, GH) houses the *IU Center for Neuroimaging* and additional *IIBIS* core imaging facilities. GH is easily accessible from R2 via a 10-minute ride on the IU Health Monorail system. GH is a cutting-edge outpatient facility, which houses all major clinical neuroscience departments. There are both dedicated and research clinical imaging facilities with state-of-the-art human imaging equipment.

The *IIBIS Office for Research Imaging (ORI)* has been established as a centralized point of contact for all investigators who are interested in utilizing imaging in their research. ORI offers a range of services that include education of investigators on the capabilities and application of imaging technologies, consultation to assist with imaging study design, assistance with the development regulatory documents for research protocols, budget development, coordinated scheduling, and support for image processing and data analysis. ORI has arrangements with our hospital partners and facilities access to *IIBIS* imaging systems and clinical imaging systems distributed throughout the IU Health Academic Hospitals.

As a means to assist investigators, an *IIBIS Research Development Initiative (IIBIS-RDI)* has been created to aid in the collection of key preliminary data required for the submission of competitive extramural grant applications. Of particular interest are projects that can be classified as high risk/high reward. Through the *IIBIS-RDI* the cost for imaging studies utilizing the *IIBIS* in vivo imaging core facilities will be covered by *IIBIS*. *IIBIS-RDI* support can be coupled with other pilot study programs such as those provided through the Indiana CTSI, the IUSM Strategic Research Initiative, and our academic institutions (IUPUI, IU, Purdue) in order to maximally leverage the limited resources available through those programs. Applications are accepted on a rolling submission basis and will be reviewed for approval on the basis of scientific merit, feasibility, and preliminary data needs for the target grant application. Investigators interested in the *IIBIS-RDI* are encouraged to contact the *IIBIS* Office for Research Imaging (ori@iupui.edu) to initiate project discussions, get more information about this program, and obtain the *IIBIS-RDI* application template.