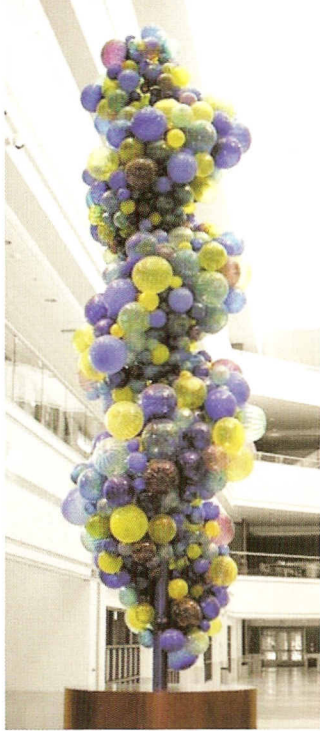


The M.D./Ph.D. Program



We are committed to increasing the numbers of MD/PhDs addressing expanding health care needs at the bench and in the clinic. To accomplish this goal the administrations of Indiana University and Purdue University and their respective faculties have created an environment in which this unique group of highly talented students can realize their potential. Our full scholarship package, streamlined curriculum, clinical and research mentors combined with programmatic activities that address career and personal development facilitate individualized training at the interface of the clinic and the bench.

"The combined degree that I received at the IU School of Medicine has given me the tools to compete with top-notch applicants from around the world and has been instrumental in helping me foster my career as a clinician and researcher at the Mayo Clinic."

Steven R. Zeldenrust, M.D./Ph.D. 2001; Assistant Professor of Hematology/Medical Oncology Mayo Clinic



INDIANA UNIVERSITY
SCHOOL OF MEDICINE

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Indiana University MD/PhD Combined Degree Program

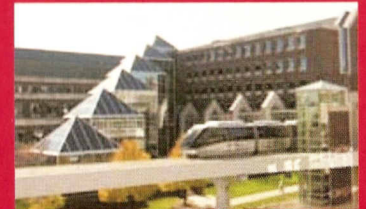
INGENUITY

INSIGHT



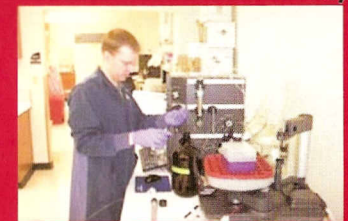
INQUIRY

INVOLVEMENT



INNOVATION

INTEGRITY



INSPIRATION

Director's Welcome



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This is an incredibly exciting time at IU. Scientific growth has fostered the opening of several new basic and clinical research buildings, with additional buildings opening in 2008–2010.

We are home to an NCI designated Clinical Cancer Center, the only NIH funded viral vector production facility for clinical grade therapeutics, and a Center of Excellence in Molecular Hematopoiesis. The School has received two substantial awards from the Lilly Endowment which allowed for an expansion in genomics, proteomics, bioinformatics, bioethics and high resolution medical imaging.

Our goal is to develop for you a flexible academic program that integrates state-of-the-art clinical medicine with cutting edge biomedical research. We offer a broad range of academic programs that span from biomedical engineering, medical biophysics and medical neuroscience to the more traditional programs of anatomy and cell biology, cellular and integrative physiology, biochemistry and molecular biology, micro-biology and immunology, pharmacology, toxicology, and medical and molecular genetics.

We look forward to working with you to realize your career aspirations. The advancements in medicine are the result of dynamic interaction between the research laboratory and the patient bedside. We are eager to help you develop your clinical acumen and knowledge of the basic sciences that will allow you to gain insight into the molecular pathogenesis of disease with the goal of developing new therapies.

Clinical Mentoring

The M.D./Ph.D. Combined Degree Program matches incoming students with faculty physician-scientists who actively participate in clinical duties. These mentors, who meet with the combined degree students throughout their training, facilitate a progressive exposure to the clinical aspects of patient care. This relationship emphasizes the opportunity to better define and understand basic approaches to clinically grounded problems through patient service.



"Mentoring is the key to any M.D./Ph.D. program. I received excellent mentoring throughout my training at Indiana University. I hope to continue that tradition by educating and guiding future physician-scientists." Cynthia M. Hingtgen, M.D./Ph.D., 1996; Assist. Prof. Dept. of Neurology, IU

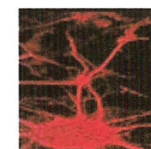
Curriculum

Students have direct access to top clinical and graduate faculty and courses at the School of Medicine and the Purdue University Weldon School of Biomedical Engineering. A typical academic plan permits most students to complete the combined degree program in seven years. The M.D./Ph.D. program is completed in three phases: Medical school basic science courses; Graduate school courses and dissertation research experience and Medical school clinical rotations. Entering students do a summer research rotation the summer prior to the start of the first year of medical school and between years 1 and 2 of medical school with the goal of identifying a research mentor. Years 3-5 are dedicated to graduate school courses, thesis research and defense. Finally, students return to medical school for clinical rotations to complete their Combined Degree Program.

Research Opportunities

Hematopoiesis and gene transfer:

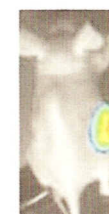
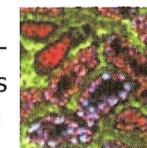
development of gene therapies for childhood leukemias, adult and childhood cancers, and a variety of genetic blood diseases and metabolic disorders. Development of lentiviral vectors for use in



non-dividing cells. **Immunology and Infectious Diseases:** programs in transplant immunology, autoimmunity and tumor

immunology; human papilloma virus vaccine development; **Neuro-**

science and Alcohol: determining biological and molecular basis for differences in the way people react to alcohol; mechanisms of pain; signal transduction pathways and electrophysiological properties that modu-



late the sensory neuronal system. **Diabetes:** Focused on improving the health status of people with diabetes through improved patient education and basic research focused on islet cell biology, glucose metabo-

lism and transport. **Cancer Biology:** An internationally recognized program focused on Breast Cancer, Testicular Cancer, Tumor Microenvironment, Experimental and Developmental therapeutics. **Biomolecular Imaging and Structural Biology:** develop new optical methodologies; current approaches include intravital multiphoton microscopy of living animals, 3-dimensional imaging and quantitative microscopic analyses; **Biomedical Engineering:** Biomaterials and tissue engineering; biomedical imaging & optics; bionanotechnology & biosensors; neural engineering.