This interdisciplinary Cancer Biology Program is built on an innovative Ph.D. curriculum to train future scientific leaders in cancer biology.

Unique Integrated Biomedical Research Curriculum - An important goal of the program is to provide students with a strong background in basic biomedical research coupled with an understanding of clinical aspects of cancer including diagnostic, prognostic, and therapeutic intervention.

PROGRAM OVERVIEW

The Cancer Biology Ph.D. Program is a University-wide multidisciplinary training program that will involve faculty from multiple departments and multiple schools and colleges of the University of Miami. The objective of this program is to provide a unique training environment for highly qualified individuals that will prepare them for independent research and teaching careers.

The scientific focus is cancer research with an emphasis on the biology of cancer and the development of novel diagnostic and therapeutic approaches. The program emphasizes an approach which encompasses concepts and state-of-the–art techniques of molecular biology, biochemistry, genetics, genomics, proteomics, structural biology, cell biology, and biostatistics and will integrate students into the extensive and rapidly expanding translational research programs at the Sylvester Comprehensive Cancer Center and other basic science research programs around the University of Miami.

PROGRAM GOALS:

* To provide a multidisciplinary foundation in cancer biology that demonstrates the interrelationship of biological discovery and clinical application.
* To emphasize explicit training in scientific reasoning.
* To provide students with two-tier mentoring. The students will recieve guidance from both a research mentor and a physician mentor: the research mentor is the dissertation advisor, while the physician mentor will provide the stu

CURRICULUM AT A GLANCE

Each student will enroll in Core courses including Tumor Biology, Scientific Reasoning and Logic in Cancer Biology: Bench to Bedside, Approaches to understanding cancer, Colloquia in Translational Cancer Research, and student seminar. Students will also be able to enroll in electives in Cancer Epidemiology, Cellular and Molecular Biology, Molecular and Cellular Immunology, Molecular and Cellular Pharmacology, and Microbiology and Immunology.

ADMISSIONS PROCEDURES

The Cancer Biology Ph.D. Program is designed for highly qualified and motivated students who desire a Ph.D. in the biological sciences with an emphasis in cancer research. Suitable applicants will be assessed on the basis of their academic record, recommendations from their mentors, and an in-person interview.

APPLY

Application is now open for enrollment in Fall 2008. Please apply online at **www.biomed.miami.edu/cab.**

The Schoninger Research Quadrangle

CORE COURSE CURRICULUM:

Scientific Reasoning and Logic in Cancer Biology: Bench to Bedside

One aspect of the Cancer Biology Ph.D. Program is to train students in the application of basic research to clinical problems i.e., translational research. The goal of this course is to expose students to the scientific reasoning and logic behind solving problems in translational cancer research.

Colloquia in Translational Cancer Research

As an in-depth introduction to the fields of clinical research, students will attend Colloquia at which faculty members present seminars on their current clinical research topics and methods of investigation.

Approaches to Understanding Cancer

This interactive lecture course will teach students specific methodologies used to solve problems in cancer research.

Biomedical Research Training

Cancer Biology Ph.D. Program

MILLER SCHOOL OF MEDICINE
UNIVERSITY OF MIAMI

UM/Sylvester Faculty Research Interest

Michael Antoni, Ph.D.	Psycho-oncology, psycho-neuro-immunology
Glen Barber, Ph. D.	Viral oncology, viruses as therapeutic agents
Julio Barredo, M.D.	Bone marrow and stem cell transplantation, childhood brain and spinal tumors, pediatric sickle cell disease
Lisa L. Baumbach-Reardon, Ph.D.	Genetic basis and molecular pathophysiology of breast cancer
Larry Boise, Ph.D.	Cell death; multiple myeloma; proteasome inhibitor
Karoline Briegel, Ph.D.	Transcription; mammary development and breast cancer; mouse models of mammogenesis and breast cancer
Kerry Burnstein, Ph.D.	Signaling mechanisms; prostate cancer cell cycle; steroid hormone responsiveness; vitamin D
Kermit Carraway, Ph.D.	Mammary epithelial; cancer cells, ligand, receptor tyrosine kinase ErbB2/HER2/Neu, glycoprotein complex, Muc4
Ahmjad Farooq, Ph.D.	Protein structure, function and mechanism of signal transduction
Eli Gilboa, Ph.D	Tumor immunology and immunotherapy, dendritic cell biology and vaccines for cancer tx
Edward Harhaj, Ph.D.	Retrovirus; T Cell Leukemia (ATL); HTLV-I-associated myelopathy/tropical spastic paraparesis (HAM/TSP)
T.K. Harris, Ph.D.	NMR and kinetic studies of enzyme signaling mechanisms; tumor-suppressor gene
David Helfman, Ph.D.	Oncogenic ras, cytoskeleton, signal transduction, apoptosis
Jennifer Hu, Ph.D., MPH	Molecular epidemiology, DNA damage/repair, human cancer risk assessment and prevention
Roland Jurecic, Ph.D.	Stem cells; pluripotent cells; stem cell transplantation; gene therapy; hematopoietic stem cells
Erin Kobetz, Ph.D.	Epidemiology and public health; breast and cervical cancer prevention
Leonidas Koniaris, M.D.	Growth regulation in the liver, mechanisms of cancer associated wasting
Ted Lampidis, Ph.D.	Chemother[illegible]n (P-gp); mediated multiple drug resista[illegible] (MDR); hypoxia; mitochondrial
Robert Levy, Ph.D.	T-Cells in bone marrow transplantation and cancer; Graft vs. Host Disease (GVHD) in models of allogeneic bone marrow transplantation (BMT)
Jie Li, M.D., Ph.D.	Angiogenesis, tumor biology, skin disease and cutaneous biology
Balakrishna L. Lokeshwar, Ph.D.	Prostate cancer, diagnostic markers, mechanism of growth
Vinata Lokeshwar, Ph.D.	Diagnostic markers, mechanism of growth
Diana Lopez, Ph.D.	Breast cancer, mammary tumors, tumor immunology, T Lymphocytes, natural killer cells, immunotherapeutic
Izidore Lossos, M.D.	Immunology, lymphoma, signal transduction
Thomas Malek, Ph.D.	Cytokine receptor regulation of T Lymphocyte development, activation, and memory; T regulatory cells in suppression of autoimmunity
Enrique A. Mesri, Ph.D.	Kaposi's sarcoma, Angiogenesis, (KSHV/ HHV-8), vGPCR angiogenesis, tumorigenesis and VEGF
Carlos Moraes, Ph.D.	Human mitochondrial DNA (mtDNA)
Zafar Nawaz, Ph.D.	Mechanisms of steroid hormone receptor; estrogen receptor (ER) regulation in breast cancer and androgen receptor (AR) regulation in prostate cancer
Frank J. Penedo, Ph.D.	Psycho-oncology, HIV and psychoneuroimmunology; psychology of aging and immunosenescence in chronically ill older adults; stress, coping, and personality styles in chronic illness
Eckhard R. Podack, M.D., Ph.D.	Immunotherapy for Non Small Cell Lung Cancer (NSCLC), T Cells, transgenic expression, heat shock proteins
Joseph Rosenblatt, M.D.	Hematologic malignancies, development of novel approaches to breast cancer and solid tumors, gene therapy and immuno therapy of cancer; human retroviruses, immune therapies for cancer and human gene therapy; Human T Cell Leukemia virus type I
Michael Schmale, Ph.D.	Marine animal models; cancer; molecular biology, virology
Sean Scully, M.D., Ph.D.	Ewing's sarcoma; chondrosarcoma; TGF-beta1 and ECM signals; extra-cellular matrix, metastasis; signaling; cell signal transduction
Rakesh Singal, M.D.	Prostate cancer, epigenetics, transcriptional reg[illegible]n DNA methylation, chromatin structure, biomarkers
Joyce Slingerland, M.D., Ph.D., F.R.C.P.(C)	Breast cancer, molecular mechanisms, molecular genetics, epidemiology, cell cycle, and estrogen receptors
Keith Webster, Ph.D.	Therapeutic angiogenesis molecular mechanisms of hypoxia/ischemia-regulated gene expression; pathology of vascular disease; cell death

For More Information

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Eli Avisar, M.D.
Julio Barredo, M.D.
Peter Cassileth, M.D.
Lynn Feun, M.D.
Elizabeth Franzmann, M.D.
Stefan Gluck, M.D., Ph.D.
Mark Goodman, M.D.
W. Jarrard Goodwin, M.D.
William J. Harrington, M.D.
Merce Jorda, M.D.
Leonidas Koniaris, M.D.,Ph.D
Izidore Lossos, M.D.
Joseph A. Lucci III, M.D.
Caio Rocha-Lima, M.D.
Jaime Merchan, M.D. MMS.c
Joseph D. Rosenblatt, M.D.
Niramol Savaraj, M.D.
Sean P. Scully, M.D., Ph.D.
Rakesh Singal, M.D.
Joyce Slingerland, M.D., Ph.D. F.C.R.P. (C)
Aaron Wolfson, M.D.

UMSylvester
Comprehensive Cancer Center

David Helfman, Ph.D.
Program Director

Jeffrey Milner, M.S. A.Ed.
Program Coordinator

6/27/07

To whom it may concern,

Hello! My name is Jeffrey Milner and I am the coordinator for the Cancer Biology Program at the University of Miami Miller School of Medicine. I am writing to inform you that this program is open to all undergraduate students who wish to apply for a Ph.D in Cancer Biology. Enclosed is our Cancer Biology flyer with important information about our program and admissions. If you have any additional questions, please feel free to contact me at your earliest convenience. Thank you very much for your time.

Sincerely,

Jeffrey Milner MSA.Ed.
Cancer Biology Graduate Program Coordinator
UM/Sylvester Comprehensive Cancer Center
University of Miami Miller School of Medicine
Phone: 305-243-8533
Email:jmilner@med.miami.edu

University of Miami

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Leading the Search for a Cancer Cure