

Name	Primary (& Secondary) Appointment (s)	Research Interest
Blobe, Gerard / M.D., Ph.D.	Medicine (Pharmacology and Cancer Biology)	Role of transforming growth factor-beta (TGF-beta) superfamily signaling pathways in cancer biology.
Caron, Marc / Ph.D.	Cell Biology	Molecular and cellular mechanisms by which G protein-coupled receptors control normal and abnormal physiological functions.
Chi, Jen-Tsan Ashley / M.D., Ph.D.	Molecular Genetics and Microbiology (Institute of Genome, Science and Policy)	The use of genomic tools to enhance the understanding of human diseases and disease-related biological questions.
Counter, Christopher / Ph.D.	Pharmacology and Cancer Biology (Radiation Oncology)	Molecular analysis of Ras signaling in cancer.
Diehl, Anna Mae / M.D.	Medicine	Liver injury and repair.
Fox, Donald/ Ph.D.	Pharmacology and Cancer Biology	We study polyploidy- the acquisition of extra genome sets. Using Drosophila genetics, we study how polyploidy can both destabilize the genome during mitosis and promote tissue repair when mitosis is impaired.
Goetz, Sarah C. / Ph.D.	Pharmacology and Cancer Biology	The role of primary cilia-mediated cell signaling in development and disease.
Gromeier, Matthias / Ph.D.	Surgery-Neuro-Oncology (Medicine, Molecular Genetics and Microbiology)	Mechanisms of protein synthesis regulation and ways to exploit abnormal signal transduction to translation machinery for cancer treatment.
Hirschey, Matthew / Ph.D.	Medicine (Pharmacology and Cancer Biology)	Mitochondrial function and small metabolite regulation of nutrient metabolism by post-translational modifications.
Huang, Jiaoti / M.D., Ph.D.	Pathology (Pharmacology and Cancer Biology)	Our lab's research focuses on prostate cancer including molecular mechanisms of carcinogenesis, therapeutic resistance and disease progression. We are particularly interested in biomarkers, imaging and novel treatment strategies.
Kastan, Michael / M.D., Ph.D.	Pharmacology and Cancer Biology	Molecular and cellular responses to DNA damage and other stresses.
Kirsch, David / M.D., Ph.D.	Radiation Oncology (Pharmacology and Cancer Biology)	Modeling cancer in the mouse and mechanisms of DNA damage response after radiation.
Kontos, Christopher / M.D.	Medicine (Pharmacology and Cancer Biology)	Molecular mechanisms of vascular remodeling in cardiovascular diseases, including tumor angiogenesis, with emphasis on signaling by endothelial receptor tyrosine kinases.

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Lefkowitz, Robert / M.D.	Medicine (Biochemistry, Immunology)	Molecular properties and regulatory mechanisms controlling the function of G protein-coupled receptors.
Lew, Daniel / Ph.D.	Pharmacology and Cancer Biology (Molecular Genetics and Microbiology)	Cell cycle control and the control of cell polarity.
Li, Chuan-Yuan / Ph.D.	Dermatology (Pharmacology and Cancer Biology)	Mechanisms of sarcomagenesis; senescence; modeling cancer from primary human cells.
Li, Qi-Jing / Ph.D.	Immunology; (Duke Cancer Institute)	microRNA-mediated immunoregulation in T lymphocytes and cancer immunotherapy.
Linardic, Corinne / M.D., Ph.D.	Pediatrics (Pharmacology and Cancer Biology)	Mechanisms of sarcomagenesis; senescence; modeling cancer from primary human cells.
Locasale, Jason / Ph.D.	Pharmacology and Cancer Biology	Understanding metabolism and its contribution to human cancer pathogenesis.
Luftig, Micah / Ph.D.	Molecular Genetics and Microbiology	Mechanisms by which Epstein-Barr virus activates and ultimately subverts the host oncogenic stress response to growth transform primary B lymphocytes into indefinitely proliferating lymphoblastoid cell lines (LCLs).
MacAlpine, David / Ph.D.	Pharmacology and Cancer Biology	Understanding the mechanisms by which the molecular architecture of the chromosome regulates fundamental biological processes such as replication and transcription.
McDonnell, Donald / Ph.D.	Pharmacology and Cancer Biology (Medicine)	Identify druggable targets within estrogen- and androgen-regulated signal transduction pathways that can be exploited in the development of novel breast and prostate cancer therapeutics.
Murphy, Susan / Ph.D.	Obstetrics and Gynecology	Epigenetic alterations in gynecologic malignancies, cancer stem cells, preclinical studies of novel therapeutics, role of epigenetics in the early origins of disease.
Patz, Edward Jr. / M.D.	Radiology (Pathology, Pharmacology and Cancer Biology)	Translational issues related to early cancer detection and mechanisms of metastasis.

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Pendergast, Ann Marie / Ph.D.	Pharmacology and Cancer Biology	We seek to define the role of protein tyrosine phosphorylation and transcription factor networks in cancer and the response to injury and regeneration. Specifically, we are currently using state-of-the-art transcriptomic technologies to discover actionable networks that promote lung and breast cancer metastasis to the brain and other organs, as well as mediate the crosstalk of cancer cells with immune and other cell types in the tumor microenvironment. Together these studies will provide molecular understanding of the mechanisms that promote tumor metastasis, leading to the discovery of novel therapies.
Petes, Thomas / Ph.D.	Molecular Genetics and Microbiology	The genetic regulation of genome stability and the mechanism of mitotic recombination.
Sampson, John / M.D., Ph.D., M.H.Sc.	Surgery (Pathology, Immunology, Radiation Oncology)	We derive novel mechanisms of immunotherapy for cancer and develop drugs for translation into humans. We also study the delivery of therapeutics into the central nervous system.
Shen, Xiling / Ph.D.	Biomedical Engineering	My lab studies colon cancer focusing on cancer stem cell, organoid, and metabolic and epigenetic reprogramming of metastasis.
Sherwood, David / Ph.D.	Biology	Using live-cell imaging, molecular genetics and systems level approaches in <i>C. elegans</i> to understand cell invasive behavior.
Sullivan, Beth / Ph.D.	Molecular Genetics and Microbiology	The Sullivan Lab is focused on chromosome organization, with a specific emphasis on the genomics and epigenetics of the chromosomal locus called the centromere and the formation and fate of chromosome abnormalities that are associated with birth defects, reproductive abnormalities, and cancer.
Tsvetanova, Nikoleta (Nina) / Ph.D.	Pharmacology and Cancer Biology	We study the biochemical and spatial regulation of GPCR signaling networks and their impact on physiology, using a combination of high-throughput quantitative approaches and cell biology techniques.
Wang, Xiao Fan / Ph.D.	Pharmacology and Cancer Biology	Molecular nature and signaling mechanism of tumor microenvironment associated with tumor progression and metastasis.
Wingler, Laura / Ph.D.	Pharmacology and Cancer Biology	Studies G protein-coupled receptor (GPCR) activation.

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Wood, Kris / Ph.D.	Pharmacology and Cancer Biology	New functional genomics technologies and their applications in basic and translational cancer biology.
Wu, Colleen / Ph.D.	Orthopaedic Surgery	The Wu lab seeks to understand how hypoxia (low oxygen) and hypoxia inducible signaling (HIF) signaling regulates cells in the bone microenvironment to control tissue homeostasis and to contribute to metastatic colonization of the bone.
Yan, Hai / M.D., Ph.D.	Pathology	Cancer genomics and signaling pathways that control tumorigenesis.
Yao, Tso-Pang / Ph.D.	Pharmacology and Cancer Biology	Identify and reconstruct the fundamental steps leading to physiological aging and devise therapeutic solutions.
Zhang, Zhao (ZZ) / Ph.D.	Pharmacology and Cancer Biology	We investigate the impact and regulation of transposons in both reproductive and somatic tissues, aiming to uncover their influence on reproduction, development, and disease, such as cancer.
Zhuang, Yuan / Ph.D.	Immunology	Genetic analysis of lymphocyte development and lymphoid system diseases.