

Chris Counter, PhD

Primary Department: Pharmacology & Cancer Biology

Secondary Department: Radiation Oncology

Research Statement: The laboratory studies focus on identifying and developing inhibitors against novel therapeutic targets in oncogenic RAS signaling.

Jessica Sawyer, PhD

Primary Department: Pharmacology & Cancer Biology

Research Statement: Dr. Sawyer studies non-stem-cell mechanisms of repair in the Fox Lab. We take a diverse approach that includes genetics, cell biology, and pharmacology.

Sarah Goetz, PhD

Primary Department: Pharmacology & Cancer Biology

Secondary Department: Cell Biology

Research Statement: The Goetz lab studies the role of primary cilia in cellular signaling and how its disruption causes diseases such as neurodegenerative conditions. Through understanding the requirements for cilia and ciliary signaling and human disease, we hope to identify new targets for therapies.

Michael Kastan, MD, PhD

Primary Department: Pharmacology & Cancer Biology

Secondary Department: Pediatrics

Research Statement: The Kastan lab studies stress response pathways in mammalian cells, particularly DNA damage signaling responses. Well known for contributions to our understanding of the p53 and ATM tumor suppressor genes, current activities also include development of novel therapeutics targeting signaling steps in stress response pathways.

Cynthia Kuhn, PhD

Primary Department: Pharmacology & Cancer Biology

Research Statement: Dr. Kuhn is studying the ability of an allosteric modulator of a glutamate receptor as a potential medication for treatment of opioid dependence.

David MacAlpine, PhD

Primary Department: Pharmacology & Cancer Biology

Research Statement: Our research program is focused on understanding how the start sites of DNA replication are selected and regulated in the context of the local chromatin environment to maintain genomic stability and to ensure the accurate inheritance of genetic and epigenetic information.

Donald McDonnell, PhD

Primary Department: Pharmacology & Cancer Biology

Secondary Department: Medicine

Research Statement: Dr. McDonnell uses biochemical, genetic, and chemical biological approaches to define targetable regulatory steps in estrogen, androgen, progesterone, and estrogen-related receptor signaling pathways in cancer.

Ann Marie Pendergast, PhD

Primary Department: Pharmacology & Cancer Biology

Research Statement: The long-term goal of the research in the Pendergast lab is to define the pathways that integrate activation of growth factor, chemokine and adhesion receptors to the regulation of morphogenesis, cell polarity, growth, differentiation, adhesion, and migration during cancer and the response to injury. More recently, the focus is on defining the mechanisms that promote metastasis to the brain, with the goal of identifying new therapeutic targets to treat brain metastases.

Kris Wood, PhD

Primary Department: Pharmacology & Cancer Biology

Secondary Department: Biomedical Engineering

Research Statement: Dr. Wood uses genomic and chemical biological approaches to define the pathways that control survival and drug responses in genetically-defined tumor types.

Zhao Zhang, PhD

Primary Department: Pharmacology & Cancer Biology

Research Statement: ZZ-Lab investigates the impact and regulation of transposons during oogenesis and intestinal development, aiming to uncover their influence on reproduction, development, and disease, such as cancer.

Corinne Linardic, MD, PhD

Primary Department: Pediatrics

Secondary Department: Pharmacology & Cancer Biology

Research Statement: Dr. Linardic uses biochemical, genetic and translational approaches to identify and target pathogenic mutations and their dysregulation in the childhood skeletal muscle cancer rhabdomyosarcoma.

Andrea Nackley, PhD

Primary Department: Anesthesiology

Secondary Department: Pharmacology & Cancer Biology

Research Statement: Dr. Nackley applies a translational approach in mouse and man to identify genetic, biologic, and environmental factors that drive chronic pain. These studies will identify unexploited targets for the development of new drugs as well as optimize the efficacy of existing compounds to improve pharmacologic management of maladaptive chronic pain conditions.

Sven-Eric Jordt, PhD

Primary Department: Anesthesiology

Secondary Department: Pharmacology & Cancer Biology

Research Statement: Dr. Jordt studies how the nervous system senses painful stimuli and environmental chemical exposures, with the goal to identify new analgesics and anti-inflammatory interventions for conditions such as chronic pain, asthma and contact dermatitis.

Scott Floyd, MD, PhD

Primary Department: Radiation Oncology

Secondary Department: Pharmacology & Cancer Biology

Research Statement: Our lab focuses on studying mechanisms of DNA damage signaling and repair in human and other mammalian cells. We are particularly interested in the role of epigenetic modifiers and the chromatin state in how cells repair DNA damage. Acquiring deeper knowledge about how cancer cells repair DNA damage, and how cancer cell DNA repair differs from repair in normal tissue can lead to improved cancer treatments in the clinic.

David Kirsch MD, PhD

Primary Department: Radiation Oncology

Secondary Department: Pharmacology & Cancer Biology

Research Statement: Dr. Kirsch uses genetically engineered mouse models to study cancer development as well as tumor and normal tissue response to radiation therapy.

Edward (Ned) Patz, PhD

Primary Department: Radiology

Secondary Department: Pharmacology & Cancer Biology

Research Statement: Dr. Patz studies anti-tumor immunity and is developing novel human derived antibodies for the treatment of cancer.

Jen-Tsan Ashley Chi, MD, PhD

Primary Department: Molecular Genetics & Microbiology

Secondary Department: Pharmacology & Cancer Biology

Research Statement: Dr. Chi studies how cancer cells adapt to the various tumor microenvironmental stresses and nutrient deprivations of solid tumors. These understandings will identify novel therapeutic approaches to target these tumor cells that often don't respond well to current therapeutics.

Gerard Blobe, MD, PhD

Primary Department: Medicine

Secondary Department: Pharmacology & Cancer Biology

Research Statement: Dr. Blobe studies the transforming growth factor-beta (TGF-beta) signaling pathway and its complex role in cancer initiation and progression, with a goal of translating this knowledge into effective targeting of this pathway in human cancers.

Matthew Hirschey, PhD

Primary Department: Medicine

Secondary Department: Pharmacology & Cancer Biology

Research Statement: Dr. Hirschey studies different aspects of metabolic control, mitochondrial signaling, and cellular processes regulating human health and disease.

Steven Patierno, PhD

Primary Department: Medicine

Secondary Department: Pharmacology & Cancer Biology

Research Statement: Dr. Patierno's laboratory studies the molecular genomics and biology underlying cancer disparities and the more aggressive characteristics of prostate, breast and lung cancer in different ancestral populations. The lab focuses on Alternative RNA Splicing as novel generator of biomarkers for aggressive disease and novel molecular targets for precision experimental therapeutics.

Dorothy Sipkins, MD, PhD

Primary Department: Medicine

Secondary Department: Pharmacology & Cancer Biology

Research Statement: Dr. Sipkins studies the molecular characteristics of tissue microenvironments, or niches, that regulate the migration, survival and regeneration of cancerous cells. In combination with classical molecular and cell biology approaches, the lab utilizes state-of-the-art multiphoton and

confocal optical imaging techniques to explore these questions in vivo, in real-time in mouse models of leukemia and breast cancer.

Jatin Roper, MD

Primary Department: Medicine

Secondary Department: Pharmacology & Cancer Biology

Research Statement: Dr. Roper is interested in understanding the molecular mechanisms of stem cell function in the normal intestine and in colorectal cancer using innovative three-dimensional organoid and in vivo platforms.

Vasanth Rao, PhD

Primary Department: Ophthalmology

Secondary Department: Pharmacology & Cancer Biology

Research Statement: Dr. Rao studies two areas of ocular diseases: cataract and glaucoma.