



SCIENTIFIC FACULTY MENTORS

St. Jude Graduate School of Biomedical Sciences

Our students benefit from dedicated advising and mentorship from world-class biomedical researchers. The Graduate School faculty draws leading scientific and clinical investigators from diverse research areas across St. Jude Children's Research Hospital.

The scientific investigators on this list teach first-year courses and serve on student committees. Most accept students for laboratory rotations and dissertation projects. The Graduate School faculty also includes clinical faculty who teach, serve on student committees and provide clinical experiences and mentorship.

For the full faculty list, including clinical mentors, visit stjude.org/graduate-school-faculty.

Biostatistics

Arzu Onar-Thomas, PhD
Stan Pounds, PhD

Phase I-II designs, survival analysis, Bayesian statistics
Development of statistical methods for genomics studies

Cell & Molecular Biology

Hans-Martin Herz, PhD
Stacey K. Ogden, PhD
Joseph T. Opferman, PhD
Ryan Potts, PhD
J. Paul Taylor, MD, PhD (Dept Chair)

Regulation of transcription and enhancer activity
Mechanisms of Hedgehog signal transduction
Regulation of cell death and mitochondrial function
Molecular mechanisms of tumorigenesis
Molecular genetics of neurological diseases

Chemical Biology & Therapeutics

Taosheng Chen, PhD
Naoaki Fujii, PhD
Richard E. Lee, PhD
Fatima Rivas, PhD
Anang Shelat, PhD

Small-molecule transcription factor drug discovery
Medicinal chemistry, chemical biology, PDZ domain
Development of new chemotherapeutic agents
Organic chemistry synthesis/natural product discovery
Multi-scale modeling of biological and chemical data

Computational Biology

Jinghui Zhang, PhD (Dept Chair)

Genomic sequence analysis and visualization

Developmental Neurobiology

Suzanne J. Baker, PhD
Xinwei Cao, PhD
Fabio Demontis, PhD
Michael A. Dyer, PhD (Dept Chair)
Young Goo Han, PhD
Myriam Labelle, PhD
Paul Northcott, PhD
Jamy C. Peng, PhD
David J. Solecki, PhD
Stanislav S. Zakharenko, MD, PhD
Jian Zuo, PhD

Signaling pathways driving childhood high-grade glioma
Growth control during neural tube development
Protein homeostasis and stress sensing in skeletal muscle aging
Retinal development, retinoblastoma, and pediatric solid tumor translational research
Hedgehog signaling and primary cilia in brain development and tumorigenesis
Role of platelets in cancer metastasis
Genomics and developmental biology of childhood brain tumors
Epigenetic regulation of stem cell functions
Cell polarity in neuron precursor differentiation
Learning and memory, synaptic mechanisms of schizophrenia
Auditory hair cell function and regeneration in mice

Diagnostic Imaging

Scott Snyder, PhD

Design of radioactive diagnostic agents for functional medical imaging

Genetics

Gerard C. Grosveld, PhD (Dept Chair)
Peter J. McKinnon, PhD

The role of chromosome translocations in cancer
DNA damage responses in the nervous system

Hematology

Wilson K. Clements, PhD
Shannon McKinney-Freeman, PhD
Brian P. Sorrentino, MD
Mitchell J. Weiss, MD, PhD (Dept Chair)

Vascular/hematopoietic development and leukemia
Mechanisms of hematopoietic stem cell development
Gene therapy and hematopoietic stem cell biology
Blood development and associated diseases

Immunology

Hongbo Chi, PhD
Douglas R. Green, PhD (Dept Chair)
Thirumala-Devi Kanneganti, PhD
Maureen A. McGargill, PhD
Paul G. Thomas, PhD
Benjamin A. Youngblood, PhD

Cellular signaling in innate and adaptive immunity
Apoptosis, autophagy and mitochondria
Mechanisms of host defense and inflammation
T-cell regulation to treat autoimmune diseases
Innate and adaptive immunity to influenza
T- cell memory differentiation and exhaustion

Infectious Diseases

Hans Haecker, MD, PhD
Julia L. Hurwitz, PhD
Jason W. Rosch, PhD
Charles J. Russell, PhD
Stacey Schultz-Cherry, PhD
Amber M. Smith, PhD
Elaine I. Tuomanen, MD (Dept Chair)
Richard J. Webby, PhD

Signal transduction of Toll-like and TNF receptors
Vaccine-induced immunity
Bacterial genomics and pathogenesis
Respiratory viruses: disease, cures and prevention
Pathogenesis of influenza and astrovirus infection
Kinetic modeling of influenza and bacterial coinfection
Pathogenesis of pneumococcal infection
Influenza virus pathogenicity

Oncology

Kevin W. Freeman, PhD
Mark E. Hatley, MD, PhD

Genetic interactions that give rise to neuroblastoma
Origins of pediatric sarcomas

Pathology

Terrence L. Geiger, MD, PhD
Mondira Kundu, MD, PhD
Charles G. Mullighan, MD
Leta K. Nutt, PhD
Janet F. Partridge, PhD
Gerard P. Zambetti, PhD

T-cell regulation, autoimmunity
The role of autophagy in erythroid maturation and anemia
Genomic profiling of acute leukemia
Metabolic regulation of cancer cell death
Chromosome segregation, heterochromatin assembly
p53 function in tumor suppression and tumorigenesis

Pharmaceutical Sciences

Mary V. Relling, PharmD (Dept Chair)
Erin G. Schuetz, PhD
John D. Schuetz, PhD
Clinton F. Stewart, PharmD
Jun J. Yang, PhD
Liqin Zhu, PhD

Pharmacogenomics and genetics of leukemia therapy
Mechanisms of human variation in drug response
Regulation and function of ABC transporters
Pharmacology of anticancer drugs in children
Pharmacogenomics of anticancer agents and drug resistance
Stem cells in normal liver development and malignancy

Structural Biology

Eric Enemark, PhD
Richard W. Kriwacki, PhD
Tanja Mittag, PhD
Tudor Moldoveanu, PhD
Junmin Peng, PhD
Stephen W. White, DPhil (Dept Chair)

Molecular mechanisms of DNA replication
Structural basis of tumor suppressor function
Dynamic protein complexes in signal transduction
Programmed cell death in health and disease
Application of proteomics to ubiquitin biology and human disease
DNA repair, catalysis and structure-based drug discovery

Surgery

Andrew M. Davidoff, MD (Dept Chair)
Jun Yang, PhD

Solid tumor surgery, gene therapy, angiogenesis inhibition, neuroblastoma
Cancer epigenetics and targeted therapy

Tumor Cell Biology

Linda M. Hendershot, PhD
Martine F. Roussel, PhD

ER quality control in development and disease
Genes and microRNAs in brain tumors

Contact Us

We welcome your questions about the program, eligibility or the application process.

Email: sjgradschool@stjude.org

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