The Department of Pharmacology and Regenerative Medicine offers a training program in Cellular and Molecular Pharmacology leading to a Master of Science or Doctor of Philosophy degree. It actively participates in the Medical Scientist Training Program. The training faculty members conduct both basic and translational research focusing on cellular signal transduction, lung and vascular biology, thrombosis, stem cell therapy, inflammation, and cardiovascular pharmacology. Research in these areas is pursued at the molecular, cellular, organ-system, and whole-organism levels of investigation using state-of-the-art techniques and instrumentation.

Admission and Degree Requirements

- MS in Cellular and Molecular Pharmacology (See listing for PhD in Cellular and Molecular Pharmacology)
- PhD in Cellular and Molecular Pharmacology

PCOL 430. Principles of Toxicology. 2 hours.
Examine the toxic effects of drugs and chemicals on organ systems. Lectures emphasize basic principles, effects on specific organ systems, major classes of toxic chemicals, and specialized topics such as forensic and industrial toxicology. Course Information: Same as BPS 430. Credit is not given for PCOL 430 if the student has credit for EOHS 457.

PCOL 510. Molecular Pharmacology of Platelets, Thrombosis and Vascular System. 2 hours.
Molecular mechanism and therapeutic approaches to: platelet functions, thrombosis, hemostasis, and vascular biology. The platelet as a model cell for molecular mechanisms of intracellular signal transduction and cell adhesion. Course Information: Prerequisite(s): Credit or concurrent registration in GCLS 501 and GCLS 503; or consent of the instructor.

PCOL 530. Pharmacology and Biology of the Vessel Wall. 2 hours.
Regulation of physiological and pathological processes in the cardiovascular system; e.g. endothelial barrier, cell adhesion, smooth muscle proliferation, angiogenesis, endothelial gene expression. Pharmacological treatment of cardiovascular diseases. Course Information: Prerequisite(s): Credit or concurrent registration in GCLS 501 and GCLS 503; and consent of the instructor.