

PHARMACOLOGY AND PHYSIOLOGICAL SCIENCE (PH)

PH 0303 - Pharmacology Self-Designed Career Exploration

Credit(s): 1-2 Credits

PH 0408 - Microsurgery

Credit(s): 2-12 Credits

This is an elective for highly motivated students who wish to improve their manual dexterity by practicing microsurgery using a dissecting microscope. Students will learn procedures for suturing tissues using excised blood vessels. Arteries will be transected then sutured (repaired). Students may also create vascular anastomosis. This is an independent exercise that will help students identify and improve microsurgical skills.

PH 0409 - Cardiovascular Effects of Cocaine and Behavioral Stress

Credit(s): 2-12 Credits

Studies will be undertaken to describe the cardiovascular effects of cocaine and of behavioral stress. We have noted that rats do not respond similarly such that some are more prone to adverse cardiovascular outcomes with cocaine or stress. We will study regional hemodynamics, sympathetic nerve responses and cardiac function in rats. The CNS pathways and neurotransmitters responsible for response variability will be examined. The student will conduct experiments on rats, analyze data and prepare a summary of the findings.

PH 0410 - Role of Afferent Nerves in Cardiovascular Disease

Credit(s): 2-12 Credits

Studies will be undertaken to describe the effects of selective renal deafferentation on the development of cardiovascular disease. Renal denervation in humans ameliorates hypertension, heart failure and renal failure by unknown mechanisms. We will examine whether renal afferent nerves are responsible for these positive results in rat models. We will study experimental models of hypertension and heart failure and we will use electrophysiological techniques to identify how renal afferent nerves play a role in elevating sympathetic activity. Students will assist in performing experiments, analyze data and prepare a summary of the findings.