GS04 1011 Workshop for Experimental Training in Mouse Cancer Biology

One semester hour
Summer, annually
Grading system: Pass or Fail
Prerequisites: Prospective students must be on an approved existing mouse animal protocol and consent of instructor (approval code needed for registration)

The laboratory mouse is widely used in cancer biology research. This lecture and laboratory-based workshop is designed to provide students with a basic working knowledge of using and handling laboratory mice in the setting of cancer biology research. Topics covered include basic research regulations and guidelines for rodents, including mice. Mouse husbandry, genetics, colony management as well as basic mouse handling, restraint, injection, surgery, euthanasia, necropsy and tissue biopsy will be covered in both lecture and laboratory settings. At the end of the workshop students, even those with no prior experience with working with laboratory mice, will be able to properly handle and restrain mice, perform injections, become familiar with surgery, euthanasia, post-mortem tissue collection and processing as well as tissue biopsy. While this workshop is intended primarily for students in the Cancer Biology Program, other GSBS students are encouraged to apply as the laboratory mouse is also an important tool in a wide variety of biomedical research settings.

Course Director:
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Instructors:
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Program Coordinator:

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Program Coordinator for Cancer Biology Program
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Student Performance Will Be Evaluated By:

☒ Participation ☒ Attendance

Total lecture hours: 6
Total Laboratory/Practical hours: 20

Additional activities:
Independent study/Online learning to be completed prior to Laboratory/Practicals.

AALAS Learning Coursework (9.5 hrs) – you will need access (using the information from IACUC) to navigate it.

- "Working with the Laboratory Mouse"
- "Introduction to Mice"
- Under Anesthesia , Analgesia & Surgery
  - "Aseptic Techniques for Rodent Survival Surgery"
  - "Inhalation Anesthesia Systems for Rodents"
  - "Pain Management in Laboratory Animals"
  - "Post Procedure Care of Mice and Rats in Research: Minimizing Pain and Distress"

Individual laboratory supervised shadowing (9.5 hrs)
Students are required to be on an existing approved mouse protocol so they can with appropriate supervision in their own laboratory gain additional practice for methods learned in the laboratory portion of the course.

Workshop for Experimental Training in Mouse Cancer Biology

GS04 1011

Course Outline:

Lectures: 10-11 am

Laboratory/Practical: 1-5 pm

Day	Date	Topic	Location	Instructor(s)
Wednesday	5/29/2019 Lecture:	Introduction	GSBS Small Classroom - BSRB S3.8367	(Johnson/ Mitchell /Swain)
Friday	5/31/2019 Lecture:	IACUC, Regulations and Guidelines	GSBS Small Classroom - BSRB S3.8367	(Mitchell /Swain)
Wednesday	6/5/2019 Lecture:	Mouse genetics and transgenics	GSBS Small Classroom - BSRB S3.8367	(Johnson)
Friday	6/7/2019 Lecture:	Mouse Colony Management	***GSBS Large Classroom BSRB S3.8371*	(Mitchell /Swain)
Friday	6/7/2019 Laboratory/Practical:	Basic mouse handling and restraint; Subcutaneous and Intraperitoneal Injections	**BSRB TB.4233*	(Mitchell /Swain)
Wednesday	6/12/2019 Lecture:	Basic Rodent Health Conditions	GSBS Small Classroom - BSRB S3.8367	(Mitchell /Swain)
Wednesday	6/12/2019 Laboratory/Practical:	Intravenous injection, oral gavage, mammary fat pad injections, and basic anesthesia	**BSRB TB.4233*	(Mitchell /Swain)
Friday	6/14/2019 Laboratory/Practical:	Review of anesthesia, aseptic surgery training and basic surgery training	**BSRB TB.4233*	(Mitchell /Swain)
Wednesday	6/19/2019 Lecture:	History of the Mouse in Cancer Biology Research	GSBS Small Classroom - BSRB S3.8367	(Johnson)
Wednesday	6/19/2019 Laboratory/Practical:	Necropsy	**BSRB TB.4233*	(Mitchell /Swain)
Friday	6/21/2019 Laboratory/Practical:	Ear tagging, tail snips, tissue biopsy, and euthanasia	**BSRB TB.4233*	(Mitchell /Swain)

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**Lab location change*
***Small classroom not available this day*

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