

Molecular Exercise Physiology Laboratory

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Ways to get involved in Research in Molecular Exercise Physiology Laboratory: KIN4933 (Practicum in Kinesiology Research; 150 hours/semester), KIN4936 (Internship in Kinesiology; 300 hours/semester), or participating in federally-funded programs specific to undergraduate research training (i.e. MARC, RISE).

Dr. Chung's Research Interests:

My research has focused on two agendas: First, we investigate the impact of maternal diet and exercise on the cardiometabolic health of offspring. We wish to probe the mechanisms by which maternal exercise before and during pregnancy is a modifiable maternal behavior that may reduce the development of obesity-linked cardiometabolic dysfunction in offspring. Second, we have studied diet-induced obese mouse models to better understand the role of nutritional supplementation in type 2 diabetes, particularly skeletal muscle adaptation. An interdisciplinary approach, including cardiac functional measurement (echocardiography and myocyte contractile properties), gene expression, biochemical assays, immunohistochemistry, mitochondrial respiratory, and histology has been used to investigate these topics using mouse models.

Prerequisites: There are 4 requirements that you must complete before you join.

1. You must have Dr. Chung's permission before you enroll in KIN 4936 or KIN4933. To get permission, you must send an email with your unofficial transcript and resume. It is very important to have a strong science background (Biology, Chemistry, Biochemistry, Organic Chemistry, Exercise Physiology, or related area) and can work well in a collaborative environment.
2. Fill out the availability timesheet, unofficial transcripts, and resume back to eunhee.chung@utsa.edu (do not simply tell me your schedule).
3. Once you get approval from Dr. Chung, you must complete the online training: SA0401, SA0443.01, SA0483, SCT100, and SA0551. These courses are available [My Training \(https://mytraining.utsa.edu/online/\)](https://mytraining.utsa.edu/online/) or you can access them under the "Open Courses" tab on the left side of the Blackboard home screen page. Once completed, please email me a copy of your completed certificates.
4. You must complete the animal training if you are assigned to handling mice.

METHODS OF ASSESSMENT for Mid- and Final Supervisor Evaluation:

- 80% - Follow Intern Responsibilities and Expectations
- 20% - Exit presentation (20 min presentation to summarize the work)

Intern Responsibilities and Expectations

Tasks

1. Every day
 - i. Wash any dishes that are in the sink and return to proper storage if not being autoclaved
 - ii. Clean up benches (put up papers, put away pens, return chemicals to proper locations)
 - iii. Prepare dry dishes for autoclave
2. Once a week (more or less)

- i. Autoclave dishes when the cart is full
- ii. Refill pipette tips in containers
- iii. Refill DI water container next to sink
- iv. Refill Milli-Q water bottles on shelves for future use
3. Once a month
 - i. Remove ice from -80°C freezer
 - ii. Clean pipettes and equipment
 - iii. Check chemical inventory and organize documents
4. At the end of the semester: Exit presentation

Expectations

1. The intern is responsible for checking their email every day before coming into the lab to receive instruction or updates.
2. The intern must come prepared to lab each day with proper attire (long pants, closed-toed shoes, no loose clothing). If preferred, you can bring an extra pair of clothes and change before your lab hours begin
3. The intern is responsible for keeping all data in proper lab journal (if the journal is misplaced, let Dr. Chung or lab manager know immediately.
 - a. Every single data entry must be dated
 - b. Keep your journal up to date and record what you have done each day as detailed as possible
 - c. If you are unsure of something, ASK before doing to avoid mistakes that could have been easily prevented
 - d. It is the intern's responsibility to learn where everything is (chemicals, extra gloves, pipette tips). When first starting, the location of everything will be told to you and you may ask a couple of times after that. However, it is your responsibility to record in your journal where everything is.
 - e. When making new solutions or using a clean container, always label the container with the name of what's inside, date, and your initials
4. Since animal training has already been provided for you, make sure to review the material to avoid lab members from re-teaching handling and to avoid comments/reports from Animal Facility faculty
 - a. When doing bodyweight or food intake, take some time to look over mice to make sure they are healthy. If there is anything wrong with the mouse, let Dr. Chung know before Animal Facility faculty
 - b. When saving animal data into Chung Shared Drive, always include the date, semester, and your initials after the name of the document Ex: "food intake_8-26-2019_Fall2019_KG"
 - c. Keep the loose paper to a minimum but if used, make sure to hole-punch and add to the designated binder to avoid misplaced data
 - d. When printing, make sure to add the date and file name to each printed sheet
Print > Page Setup > "Header/Footer" tab > Header=date, Footer=file name
 - e. Save any files you are working on now and then to avoid losing all data. Also, make sure to log off all computers before you leave.
5. If we are running low on anything (chemicals, mouse food, glucose strips) let Dr. Chung know.
6. If you cannot make it to lab or lab meeting, email Dr. Chung or lab manager as soon as possible
7. It is your responsibility to keep up with your lab hours, your hour log, and any documents that need to be submitted for your internship course
8. Communication is key. Make sure you communicate effectively with other lab members and Dr. Chung to ensure everything gets done and there are minimal to no mistakes
9. Most important things to remember: If you are the last one to leave the lab: make sure all freezer doors are shut, all gas knobs are completely closed, all machines are turned off (except computers), lights are turned off, and the lab door is locked.

Schedule Availability

Time	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.	Sun.
8-9:00AM							
9-10:00 AM							
10-11:00 AM							
11-12:00 PM							
12-1:00 PM							
1:-200 PM							
2-3:00 PM							
3-4:00 PM							
4-5:00 PM							
5-6:00 PM							

Acknowledgment of Syllabus Provisions:

These signatures indicated that we have discussed this syllabus and agree with its provisions.

Print Name

Signature

Faculty

Print Name

Signature

Student