

WSU Spokane CORES Newsletter

May 2018

Lab Safety

Fire code requires there to be 18 inches or more below sprinkler head deflectors in sprinkled parts of the building and 24 inches below the ceiling in non-sprinkled areas. Additionally, code requires there to be 36 inches of space in front of and 30 inches on both sides of all electrical panels. Please go through your lab spaces and make sure that there is the proper space from the ceilings and around electrical panels. If you have any questions you can contact Chad Trent with Environmental Health and Safety at chad.trent@wsu.edu or 368-6699.

Regulations require all employees using respirators to be in the Respiratory Protection Program. This applies to all employees who voluntarily choose to use a respirator including respirators supplied by the employer as well as those brought in by employees. Contact EH&S (86699) with any questions or if you need to be included in the program.

With the approach of warm weather, the issue of proper lab apparel should be reviewed with all research staff. The following guidelines are from the WSU Lab Safety Manual, Section II.F:

1. General Requirements and Recommendations for Laboratory Apparel

- a. Appropriate clothing must be worn, including a protective apron or laboratory coat to protect against chemical splashes or spills, cold, heat, moisture and radiation. Use protective apparel, including face shields or goggles, gloves, and other special clothing or **footwear as needed.**
- b. **Long pants should be worn at all times.**
- c. **Open-toed shoes or sandals should not be worn in the laboratory.**
- d. If laboratory coats are contaminated with hazardous chemicals, they should be removed immediately, and properly laundered, or disposed of as hazardous chemical waste. NOTE: Pharmacy provides laundry services for their department.

IACUC Updates

The semi-annual IACUC inspection was conducted on April 27th. Primary issues cited during the inspection included:

- Expired materials were found in several of the supply boxes maintained by the research staff;
- Incomplete medical records that are the responsibility of the research staff.

The next inspection will be conducted by AAALAC inspectors in October 2018.

Vet Corner

We have previously discussed the list of pathogens excluded from our vivaria and the processes needed for obtaining mice with known pathogens (or mice from a facility with a history of pathogen outbreaks). Recently, there has been a lot of concern over whether we really need to be excluding all these pathogens. In light of this, we would like to discuss reasons why we have such policies.

To begin with is the problem of logistics. We currently don't have the facility design nor manpower to have what many institutions refer to as "barrier" and "conventional" rooms (or sometimes "clean" and "dirty" rooms). Barrier rooms tend to have similar standards/conditions as our vivarium. This includes strict personnel access, strict PPE, and exclusion of rodent pathogens known or thought to impact the health and research involving the animals. Conventional rooms tend to have more laxity in required PPE and allow certain pathogens (dependent on the facility and what PI's are comfortable with having their

rodents infected with). Due to the nature of how our facility is designed, how the rodents are handled here, and how easily these pathogens can spread, it would be highly risky to attempt to have rooms with known pathogens and rooms without. Most likely, many of the intended “clean” rooms would end up contaminated with pathogens as well.

So why do we care about all these pathogens anyway? For some things like *Mycoplasma pulmonis* the reason is obvious – it can lead to significant respiratory infections in many strains of mice that negatively impacts their welfare as well as research data. Many other pathogens that were once thought to be asymptomatic and of no concern are now being shown to have significant health and physiologic impacts on certain strains of mice. Helicobacter for example, which is still frequently allowed in many conventional housing systems, has now been shown to cause a proliferative, inflammatory typhlitis and/or colitis that may result in rectal prolapse in certain strains of mice. For others (like murine norovirus), the verdict is still out on their full impact on research. Currently, murine norovirus (MNV) is the most common pathogen in laboratory mice and is present in many colonies; however, it has now been shown to have significant health impacts in mice with deficiencies in the innate immune system. More research still needs to be conducted to determine its effects on other strains of mice. As it stands, we have many investigators that could not afford, or are not willing to risk, the chance of a pathogen impacting their particular strains of rodents and their research data. Therefore, until we have the facilities that will confidently prevent the spread of pathogens between rooms, we will continue to exclude all pathogens. For more examples and citations on how specific pathogens can effect rodents you can visit:

<http://dora.missouri.edu/> or <https://www.criver.com/products-services/research-models-services/animal-health-surveillance/infectious-agent-information?region=3601>

Vivarium

Test samples were collected at the end of April from the sentinel animals and submitted for evaluation. All colonies are negative for viruses and pathogens.

The USDA inspected the facilities on Tuesday, May 8. No deficiencies were identified.

Flow Cytometry/Mass Spec

Contact Person: Ze Liu (x87633 or ze.liu@wsu.edu) The service representative from Waters will be here June 12th for a seminar. The general topic will be “What is Mass Spec and How Does It Support Your Research”. Please encourage your research staff to attend. If there is a specific topic that you would like to have addressed, please let Ze know. More information will be provided as June gets closer.

Imaging/Histology

Contact Person: Megan Chastain (x87839 or megan.chastain@wsu.edu). Megan returns May 14th.

Genomics

Contact Person: Dr. Yiyong (Ben) Liu (x86741 or yiyong.liu@wsu.edu)

NMR

Contact Person: Dr. Zuping Xia (x86575 or zuping.xia@wsu.edu)