Members Present: AB  JM (entered @ 2:33)  MB  TH (remote)  
                   AW  JPVH  MK  
                   *KAG  JS  ML  
                   GS  KG (remote)  SL  
                   JE  KS  SRH  

Members Absent: FRR  CH  DM  JA  
                SJH  
*KAG alternate for CH

Opening Business
  • The IACUC Chair called the meeting to order at 2:30 pm.

Confirmation of a Quorum and Announcement
  • Quorum was confirmed by KC.

Approval of the IACUC Meeting Minutes
  • The IACUC Chair called for the approval of the October 17, 2019 meeting minutes.
     Motion was made and seconded: to approve the minutes as written.
     Discussion: none
     Vote: Approved with 11 members voting in favor, 0 against and 4 abstentions.

Member entered at 2:33PM

Benefit Story
  This month's benefit story is about building a better mouse model, and it comes from Phillip Greenberg's lab. We hear a lot these days about the failure of mouse models to predict human outcomes. Some people have suggested that we should stop using mouse models altogether. But the Greenberg team is taking a different approach, aiming to develop and validate a better mouse model of ovarian cancer to test promising treatments in a preclinical setting.

A significant improvement has been the 'humanization' of the ovarian tumors that are implanted in the model mice. The Greenberg group started by characterizing gene expression in tumors removed from human patients with high-grade ovarian cancer. The research team then genetically modified mouse ovarian cancer cells to more faithfully replicate protein levels found in human ovarian cancer cells. When the modified mouse cells are injected into mice, they develop into tumors that can be detected with ultrasound. Critically, when these tumors are analyzed, they continue to show a humanized pattern of protein expression.

One of the most notable proteins is called mesothelin. Mesothelin is normally found at low levels in healthy cells, but it is expressed at very high levels in human ovarian cancer cells. This makes mesothelin an excellent candidate for a so-called 'druggable target'.

Using the humanized mouse ovarian cancer cells, which express high levels of mesothelin, the Greenberg group was able to test the ability of mesothelin-targeted cancer treatments to slow
ovarian tumor growth in a mouse model. The researchers genetically engineered T-cells, a type of immune cell, so they would selectively attack mesothelin-expressing cells. Injection of these engineered T-cells into mice with tumors led to accumulation of the T-cells within the tumors—showing that they were reaching their target—and significantly increased survival of the tumor-bearing mice.

The use of better mouse models such as this one, in which key elements are modified to recapitulate the human condition, is expected to improve the ability to identify treatments that will perform well in humans in a pre-clinical setting.


IACUC Training

- Site Visit Refresher Training – LI
  - LI reviewed the items that the IACUC should be focusing on when doing their regular site inspections and then led a group discussion with the members on best practices during site visits.

Protocol Review

- Standard Procedure Review – AS
  - This is the first month that groups of Standard procedures are being reviewed and approved by FCR. AS provided a summary of the changes, if any, made to the procedures up for review. There were slight modifications to some of the procedures, but most had no changes.

    Motion was made and seconded: to approve the standard procedures as written.
    Discussion: None
    Vote: Approved with 16 members voting in favor, 0 against, 0 abstentions.

Attending Veterinarian’s/OAW Director’s Report - KS

- IACUC metrics- see meeting documents. Note that the number of items sent for urgent review has decreased greatly in the past year – an expected and welcome result of the daily review packet.

- Facility issues:
  - Humidity: Instances of low humidity in various animal facilities due to cool, dry weather.

  - Temperature and lights: Lighting failure in one ARCF primate housing room overnight Oct 31st/Nov 1st. The failure caused the low light level to remain ON from 6 PM Oct 31st to 6 AM Nov 1st and the monitoring system did not alarm out for an unknown reason. The failure is assumed to be due to the existing lighting panel problem that has been present since occupancy.

- Protocol Monitoring:
Twenty-two total protocols. Of the protocols, 14 involve surgery, two restraint (and sx), one conscious restraint, 1 tumor modeling, 4 miscellaneous (tape skirt, infection, water quality). Seven are inactive right now.

3202-01 has been added by the AV at the request of the research lab so that a single DCM veterinarian can work with the lab to develop a standardized mouse castration surgery SOP, and to assist with lab member surgery certifications.

- Adverse Events:
  - A cage of 2 adult male mice were found dead by husbandry during a scheduled cage change. The cage was found on an automated watering system rack without a lixit, hydropac or water bottle. The cage had a red dot on it to indicate that a hydropac or water bottle was needed. Mice were not on experiment and the investigator had not handled the cage in the last month. The previous cage change was 2 weeks prior with no reports submitted to Vet Services for a flood cage or sick animals within the previous week. Also, it's not clear how a red dot cage made it into the facility.
    
    **Corrective Actions:** AT was retrained and ARCF cage wash personnel were reminded to ensure that red dot cages do not go to facilities that have automated watering systems. An email reminder was sent to the facilities’ user lists which included a link to the Check Food and Water on-line lesson. DCM has also implemented a red dot cage scavenger hunt in automated watering system facilities to increase DCM staff and researcher awareness that these types of cages should not be present in those facilities.
    
    Reported to OLAW.

  - 4298-01: 11 mice were infected with attenuated influenza virus. 7 days later, 2 mice were found dead and Veterinary Services found the remaining mice to be ill. The group immediately euthanized the remaining mice. Mortality at the intended virus dose was not expected; however, a lab review of the records revealed that the mice received a much higher dose due to a dilution error.
    
    **Corrective Action:** PI spoke to relevant lab personnel about double-checking dilutions and infection protocols to ensure this issue does not arise in the future.
    
    Reported to OLAW.

  - Motion was made and seconded: to send a letter of acknowledgement to the lab.
    
    **Discussion:** None
    
    **Vote:** Approved with 16 members voting in favor, 0 against, 0 abstentions.

  - 2950-01: A singly housed adult male rat was reported to Vet Services for a skin lesion around the prepuce. 2 weeks prior to this, the rat had undergone a surgical procedure. Due to the extent of the lesion, this rat was euthanized and submitted to necropsy. Histology showed lesions consistent with a thermal injury around the time of the surgery. The investigative group was informed of the findings and that the likely cause being an electric heating pad related injury.
    
    **Corrective Action:** The group has since replaced the heating pad with a different one.
    
    Reported to OLAW
4073-01: 4 adult male rats were reported for dermal lesions on their ventral abdomens by husbandry staff. These rats had a surgical procedure the week before, and recovered without issue. All lesions were in the same area near the prepuce. Based on the location and consistency of the lesions across animals, it was suspected that the lesions were thermal injuries related to the electric heat pad used by the investigative group during surgery. Three of the rats are receiving topical treatment for the lesions and are expected to heal/recover. The other did not have to be treated. The investigative group indicated they had used the heat pad on its lowest setting with a barrier between the rat and the pad, but agreed to discontinue the use of electric heating pad.

**Corrective Action:** In the future, the lab will use isothermal, non-electric heating pads.

**Reported to OLAW.**

*Discussion: Although there is no policy on this, it is recommended that isothermal heating pads or water circulating heating pads be used rather than electric heating pads. However, water circulating heating pads are quite expensive and would be needed for the longer procedures. Isothermal heating pads are not as expensive, but they are only good for shorter procedures.*

*Those that are interested in working on creating guidance for best practices in providing supplemental heat during procedures are asked to reach out to the chair.*

- **Non-compliances:** None

- **From Arizona**
  - Facilities items: No items to report.
  - Adverse events: No adverse events to report.

**Standard Operation Procedures / Policies / Guidelines**

- **Species Specific Training Policy for Researchers Using Animals – KS**
  - *Content was reorganized and primate specific information was added.*

  *Motion was made and seconded: to approve the policy as written.*
  *Discussion: None*
  *Vote: Approved with 16 members voting in favor, 0 against, 0 abstentions.*

- **Standard Light Cycles in Animal Housing Facilities – KS**
  - *No changes. Template updated.*

  *Motion was made and seconded: to approve the policy as written.*
  *Discussion: None*
  *Vote: Approved with 16 members voting in favor, 0 against, 0 abstentions.*

**Other Business**

- **Semi-Annual Program Review – LI**
LI will assign teams for Program Review. Each team (3-4 members) will be assigned certain sections to think about how UW is doing as a program – Looking at Big Picture items. Members should discuss amongst themselves to find if they have the information needed to review. If they are missing info, they should contact LI. Each team should come to the December IACUC Meeting with their report/recommendations and make a presentation for the IACUC to discuss.

Closing Business:
The Meeting was brought to a close at 3:43 pm. The floor was opened to public comment.