

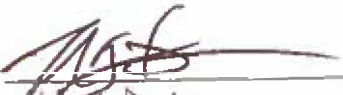

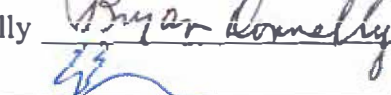





Meeting Minutes

Meeting of Animal Care and Use Committee
Biological Sciences Conference Room, 143 Schrenk Hall
12:00 PM, May 1, 2018

- The meeting minutes from the previous meeting on November 17th, 2017, was circulated among IACUC members and received unanimous approval. The minutes along with the biannual report were submitted together to the Office of VPR for record keeping.
- Facility Inspection:
 - Impression of the current (05/01/2018) inspection of Animal Research Facility (ARF). Members found the ARF was neat and clean. In two rooms, 102 and 104, wall paint was starting to peel in small areas. It was recommended to Mr. Watters that the paint either be touched up or repainted. Mr. Watters will call for the physical plants to fix the problem.
 - The satellite facility at S&T Experimental Mine was inspected. Currently, there are no animals housed in this satellite facility..
- Current and “newly expired” protocols.
 - Two animal protocols (#141-15 & #142-15) were expired on 1/20/2018 and 4/09/2014, respectively.
- Institutional program review:
 - Animal Welfare Assurance will expire on 5/31/2018. Dr. Huang has been working with Dr. Gopee at NIH OLAW to revise the document. The revisions require a policy that details protocol approval process. This Committee discussed the draft policy and approved it unanimously. Dr. Huang will finalize the Assurance and submit it to NIH.
 - According to the Assurance, IACUC members will complete the Essentials for IACUC Members Curriculum located at the Collaborative Institutional Training Initiative website: <https://about.citiprogram.org/en/series/animal-care-and-use-acu/>.

- Individuals who have significant contact with animals will need to fill out the Confidential Health Questionnaire Form and the Hazard Evaluation Form via UM-Columbia eCompliance at <http://ecompliance.missouri.edu>. Awareness of this Confidential Health Questionnaire Form will be incorporated into the facility training for all future students by Mr. Watters.
- The next IACUC meeting will be held in November 2018.

Signatures

Justin Berger		Date: <u>5/22/18</u>
Joel Dittmer		Date: <u>5/21/18</u>
Bryan Donnelly		Date: <u>5/20/18</u>
Chen Hou		Date: <u>5/21/18</u>
Yue-Wern Huang		Date: <u>5/16/2018</u>
Jimmy Rolufs		Date: <u>5/21/18</u>
Julie Semon		Date: <u>5/16/18</u>
Richard Watters		Date: <u>5/21/18</u>

NIH Animal Welfare Assurance #: D16-00250					
PI's Name	Submitted Date	Approved Date	Protocol #	Renewed Date	Project Title
Semon	2/12/18	2/20/18	159-18		Bone Regeneration in 3
Ercal	2/14/18	2/20/18	158-18		Enhancing Ocular Uptake
Duvernell	1/18/18	2/13/18	157-18		Field Collection of Topo
Ercal	8/4/17	8/30/17	156-17		HPLC Analysis of Medic
Huang	1/31/17	2/10/17	155-17		Targeted DNA Nanostru
Huang	11/24/16	11/29/16	154-16		Progenitor cells for trea
Ercal	5/20/16	6/10/16	153-16		Cataract reversal throug
Day	5/13/16	6/10/16	152-16		Bioactive glass to accele
Berkman	5/2/16	5/17/16	151-16		Mammal Ecology
Rahaman	5/2/16	5/17/16	150-16		Silicon nitride spinal in
Rahaman	N/A	10/1/12	149-16	10/1/15	Bioactive glass scaffold
Ercal	2/23/16	3/9/16	148-16		A better antidote for ac
Semon		2/26/16	147-16		Adult Stem Cells for The
Huang		11/11/15	146-15		Targeted Nanodelivery
Huang		8/28/15	145-15		Development of a cherr
Catherine Johnson		8/5/15	143-15		Explosives and brain tra
Ercal		4/10/15	142-15		A better antidote for Ty
Ercal		1/21/15	141-15		Dual Therapeutic Appro
Expired:					
Ercal		6/19/14	140-14		A renewal for 121-11
Rahaman		4/1/14	139-14		Reduction of the BMP2
Ming Leu		1/23/14	138-14		Bone regeneration in bi

Meeting Minutes

Meeting of Animal Care and Use Committee

Biological Sciences Conference Room, 143 Schrenk Hall

12:00 PM, November 27th, 2018

- The meeting minutes from the previous meeting on May 1st, 2018, was circulated among IACUC members and received unanimous approval. The minutes along with the biannual report were submitted together to the Office of VCR for record keeping.

- Impression of the current (11/27/2018) inspection of Animal Research Facility (ARF).

The general impression is that the facility looked clean and neat and animals looked healthy. There is an issue of peeling paint within the Facility which is described below.

- Minor peeling in rooms of 104 and 102A were observed during the last IACUC inspection in May 2018. This concern was documented in the semi-annual report with the recommendation to get the peeling surfaces repainted as soon as possible. Rich filed a work order request, but has not received a quote (service request 11329) from physical facilities. During the most recent inspection, Rich showed how the peeling paint is more widespread throughout the facility. Small chips and cracks can be observed in almost every room and this concern has transitioned from a simple touch up work order request to a major project requiring new paint in the entire facility.
 - The cause of this is likely due to moisture being absorbed and wicking within the cement walls. Paint used in animal facilities contains a hardening component which adheres very well to most surfaces while maintaining an impermeable barrier. However, when cracks start to form in the paint moisture wicks throughout the cement wall which accelerates the degradation of the paint in other locations. Rich will look into when the animal research facility was last painted and will contact physical facilities to see if the facility is scheduled to be painted as routine maintenance.
 - While this is technically a minor deviation through the USDA and NIH, and has no direct effect on the health of the animals, this issue needs to be addressed. No protected animals will be housed in rooms with peeling paint.
 - The satellite facility at the S&T Experimental Mine wasn't inspected. Currently, there are no animals housed in this satellite facility.
- Current and newly expired protocols

- Three animal protocols (#146-15, #145-15, #143-15) were expired on 11/11/2015, 8/28/2015, and 8/05/2015, respectively. The investigators (Huang and Johnson) did not intend to renew or re-submit them.
- Update on traumatic brain injuries (TBI) research
 - Richard briefed the SOP for the Open-Field Blast Core Facility in response to the UM-Columbia's request. The SOP was approved by UM-Columbia according to the Guide for the Care and Use of Laboratory Animals. This SOP applies to TBI research.
 - The storage room in ARF has been converted to a colony room upon request from UM-Columbia for TBI studies. The adjustment of the HVAC system is in process.
- Institutional program review:
 - No major changes in the institutional animal care and use program
 - Status of registration with USDA
 - The application for USDA registration was mailed to the USDA-APHIS for processing following successful completion of two DEA registrations (Huang and Watters).
 - Post approval protocol management was discussed. Richard will monitor animal numbers used by approved protocols. The numbers will be reported to the IACUC meeting. Records will be kept by ARF Director and IACUC Chair for future reference.
- The next IACUC meeting will be held in May 2019.

Signatures

Justin Berger

Date:

Joel Dittmer

Date:

Bryan Donnelly

Date:

Chen Hou

Date:

Yue-Wern Huang

Date:

Jimmy Rolufs

Date:

Julie Semon

Date:

Richard Watters

Date:

SOP: Open-Field Blast Core Facility

1. Policy

All animals for open-field blast testing will be conducted according to the University of Missouri-Columbia (MU)-approved animal protocol for requirements set by the guidelines in the *Guide for the Care and Use of Laboratory Animals, Eighth Edition*.

2. Scope

All faculty, staff, students and employees of the Core Facility

Purpose

To describe the procedures used for blast injury preclinical models and conducting blast animal research to ensure that animals will be handled by the prescribed methods while minimizing stress and discomfort, and maximizing safety of both the animals and the handler.

3. Procedure

Animal Transportation: between the MU and the Missouri University of Science and Technology (Missouri S&T):

- The open-field blast-induced TBI model is created in the Explosives Research Facility (ERF) at Missouri S&T in Rolla. One-way travelling takes about one hour and 40 minutes;
- Only clean, climate-controlled, reliable vehicles (preferably university-owned vehicles) will be used;
- Cargo areas used in the transportation of animals will be kept clean after use;
- Mice will be in disposable cage and monitored and accompanied by trained personnel and are never left unattended in vehicles;
- The cage should be covered with a drape when animals are transported through public access areas to reduce the stress of the animal, screen the animals from public view, and to decrease exposure of public use areas to potential allergens.
- A large container with cover and cotton cloth will be used holding the animal cages with appropriate bedding/litter materials.

Animals at the Experimental Mine Site of the ERF: Animals are housed in Missouri-S&T vivarium with 12-hour light/dark control and temperature and humidity control for two days.

- The blast-induced injury take place at the Experimental Mine Site at Missouri S&T. Mice (both blast and sham) are anesthetized with an i.p. injection of ketamine (100mg/kg) and xylazine (10mg/kg) mixture.
- Anesthetized mice (blast) are placed in individual compartments on a platform. The compartments are tubes made from wire mesh so that the mouse can be securely held in place and oriented correctly to the blast. Sham mice are kept in their home cage without blast exposure.
- The platforms position the mice 1 meter (m) above the ground and can be set a predetermined distance from the blast source.
- The blast source (C4) is also elevated 1 m above ground level. The blast experiments typically take less than two minutes.
- Mice are returned to their home cage and wake up shortly after the blast. Mice will be monitored until they are sternal and then moved to the Missouri S&T vivarium. Personnel will monitor mice every 15-30 minutes for 2 hours after the blast and then once daily until they are transported back to MU. Mice will be housed at Missouri S&T for two days following the blast to reduce stress and mortality. Two days following the blast, animals will be transported back to MU and housed in the 7th floor animal room for the duration of the study.

4. References

1. Guide for the Care and Use of Laboratory Animals, Eighth Edition.

NIH Animal Welfare Assurance#: D16-00250						
PI's Name	Submitted Date	Approved Date	Protocol #	Renewed Date	Project Title	
Ercal	16-Oct	5-Nov	163-18		Enhancing Ocular Uptake of Thiouol Antioxidants with Nanodiamonds	
Yue-Wern Huang	9/10/18	24-Oct	162-18		Effects of jet fuel exhaust on pulmonary mechanics and functions	FCR on 10/1
Brow	6/13/18	7/24/201	161-18		Subcutaneous Implantation of Biphasic Calcium phosphates (BCP) Microspheres	
Semon	4/2/18	5/2/18	160-18		Hair Growth Using Bioactive Glass	
Semon	2/12/18	2/20/18	159-18		Bone Regeneration in 3D Printed Bioactive Glass Implants	
Ercal	2/14/18	2/20/18	158-18		Enhancing Ocular Uptake of Thiouol Antioxidants with Nanodiamonds	
Duvernell	1/18/18	2/13/18	157-18		Field Collection of Topminnows for Genetic Study	
Ercal	8/4/17	8/30/17	156-17		HPLC Analysis of Medicated Lens Tissues	
Huang	1/31/17	2/10/17	155-17		Targeted DNA Nanostructures to Treat Breast Cancer	
Huang	11/24/16	11/29/16	154-16		Progenitor cells for treating intervertebral disc degeneration	
Ercal	5/20/16	6/10/16	153-16		Cataract reversal through lanosterol and thiol antioxidant treatment	
Day	5/13/16	6/10/16	152-16		Bioactive glass to accelerate burn wound healing	
Berkman	5/2/16	5/17/16	151-16		Mammal Ecology	
Rahaman	5/2/16	5/17/16	150-16		Silicon nitride spinal implants with osteoinductive-like properties	
Rahaman	N/A	10/1/12	149-16	10/1/15	Bioactive glass scaffolds for structural bone repair (a renewal for 133-12)	
Ercal	2/23/16	3/9/16	148-16		A better antidote for acetaminophen toxicity	
Semon		2/26/16	147-16		Adult Stem Cells for Therapy of Experimental Auto-Immune Encephalitis	
Huang		11/11/15	146-15		Targeted Nanodelivery to treat Breast Cancer	
Huang		8/28/15	145-15		Development of a chemically-induced breast rat cancer model	
Catherine Johnson		8/5/15	143-15		Explosives and brain trauma	
Expired:						
Ercal		4/10/15	142-15		A better antidote for Tylenol toxicity	
Ercal		1/21/15	141-15		Dual Therapeutic Approach for Degenerative Eye Disorders Using a Novel Antioxidants and Nc	
Ercal		6/19/14	140-14		A renewal for 121-11	
Rahaman		4/1/14	139-14		Reduction of the BMP2 dose required for bone regeneration through the use of a new intrinsic	
Ming Leu		1/23/14	138-14		Bone regeneration in bioglass implants made by the SLS process	