

## UCSF IACUC Full Committee Meeting Minutes

Committee Name: IACUC Full Committee

Committee Type: IACUC

Meeting Date: 03/05/2019

Chair's Report: Voting Members:

Staff:

Guest:

- IACUC Chair's Report

A. Guest: Introduction to [REDACTED] rotation in LARC

B. Minutes

a. 1/29/2019 Policy Minutes (Handout)- Minutes from 1/29- approved

b. 2/5/2019 Full Committee Minutes (Handout)- Minutes from 2/5- approved

Director's Report: A. Director's Report (Handout)

Announced that the quadrennial update to the UCSF Assurance of Animal Welfare (allows UCSF to receive NIH, DoD and other funds) has been approved, as have the Fish and Wildlife annual permit renewal (allows maintenance of voles, ferrets, Xenopus frogs, transgenic fish). Thanks to [REDACTED] who manages regulatory communications and processes.

IACUC has agreed on a policy of no more annual reviews for certain classes of protocols, and for allowing IACUC office staff to triage annual reviews and approve them as a form of DMR. Neither practice will be initiated until we work out with our RIO support staff (one of whom is retiring in May) how to manage these changes

Reviewed some notes from a Mouse Behavior Webinar some staff had attended. Committee requested a presentation on mouse thermoregulatory needs and preferences, and impacts on research of ambient temperature, set for the April 30 Policy Meeting, with LARC's behavior specialist, [REDACTED].

Attending Veterinarian  
(AV) Report:

- AV Report/LARC Clinical Case Report

A. Squirrel Monkey Report- [REDACTED] - LARC provided a clinical case report on an anesthetic death of an animal [REDACTED]

EH&S/Occupational  
Health Report:

- EH&S/Occ Health Report

A. Herpes B Exposure Report (Handout)- Public Health office reported on a potential Herpes-B virus splash exposure. LARC is managing the personnel issue as a confidential matter.

### Protocols Reviewed

During the review process, the members discussed for each protocol, the rationale for involving animals, the appropriateness of the species, the database searches for alternatives, the steps taken to reduce animal numbers, the measures to relieve pain, discomfort or distress, if needed, the appropriateness and adequacy of anesthesia and analgesia, if applicable, and the number of animals to be used.

### USDA Covered Species

Project Number: [REDACTED]

Approval Type: Continuation

Title: Intravenous Chemotherapy Filter: In-vivo Validation of a Novel Device to Improve Chemotherapy Dose and Toxicity

PI: [REDACTED]

Species: Swine

Primary Reviewer: (1) [REDACTED]

Secondary Reviewer: (1) [REDACTED]

Results: **Revisions Requested**

Post Approval Requirements: Please do not schedule any more studies until a statistician provides us with a detailed calculation explaining the rationale for requesting 8 animals per group. Please have a statistical consultation before April 31 2019.

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**Non-USDA Covered Species**


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Project Number: [REDACTED]

Approval Type: New Approval

Title: The role of fibrosis in multiple sclerosis.

PI: [REDACTED]

Species: Mouse

Primary Reviewer: (1) [REDACTED]

Secondary (1) [REDACTED]  
Reviewer:

Results: **Revisions Requested**

Revisions Section C. Animals

Requested: Please provide justification for repeating the experiment(s) 5 times.

Section D. Contacts and Personnel

Update this section to indicate who will be doing gavage, tail vein injection and, if necessary, who will train them. (Question D.3 for each person)

Section E. Justifications and Alternatives

Please update your literature searches.

Section F. Standard Procedures

You list several behavioral procedures that are uncommon in EAE. If you are really doing those, mention them in Section G.

Section I. Therapeutic and Experimental Agents

Add the radiation dose and the transfused murine cells as "Experimental Agents," and antibiotics you provide the irradiated mice as "Therapeutic Agents."

Section K. Locations

There are no locations within LARC in the building your mice occupy for doing the behavioral tests you checked in Section F. Will you be bringing mice to a Behavior Core at [REDACTED] or [REDACTED]? Setting up space within LARC? Request permission to bring to your lab? Please discuss.

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Project Number: [REDACTED]

Approval Type: New Approval

Title: Local Delivery of Drugs to Modulate Tooth Movement in Rats

PI: [REDACTED]

Species: Rat

Primary Reviewer: (1) [REDACTED]

Secondary (1) [REDACTED]  
Reviewer:

Results: **Revisions Requested**

Revisions in Section E.2.1, please remove the information non-related to animal work (first paragraph)

Requested: and instead describe why animals are necessary for your model.

Post Approval -Please contact IACUC staff -you can email [REDACTED] - when you have a Requirements: target date for the first appliance placement.

-Please report to the IACUC on the outcomes of the first 20 rats undergoing appliance placements.

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Project Number: [REDACTED]

Approval Type: New Approval

Title: Sustained local delivery of pharmacological agents via nanoengineered films to improve healing of craniofacial fractures: comparative pre-clinical evaluation of BMP and deferoxamine in prevalent high-risk injuries

PI: [REDACTED]

Species: Rat

Primary Reviewer: (1) [REDACTED]

Secondary (1) [REDACTED]  
Reviewer:

Results: **Revisions Requested** DMR/designated reviewer(s) [REDACTED]

Revisions Objectives

Requested: • Confirm the source of the BMP, i.e. human or rat.

- Please provide a sentence or 2 explaining:
  - o why DFO and MBP were selected.
  - o where this technology has been used successfully
 Section C. Animals
- Please indicate why you propose to use 4 animals per time-point for your PK studies, as the standard is typically 3, and why a vehicle-only group is useful for this work. It seems your DFO animals will show whether you get non-specific detection of BMP-2, and vice-versa. Additionally, please ensure animals have been accounted for in the table in C.1.
- Power analysis: Note that the statistician on the committee is currently evaluating this section and IACUC staff will relay their comments/guidance during the week of 3/17/2019. Thank you for your patience in this matter.  
Section D. Personnel and Contacts
- Specify who, if anyone, has experience with rats and performing the mandibular fracture procedure.
- Please update this section to indicate who from your lab will conduct the tobacco exposure studies and specify the experience and training that this individual possesses.  
Section E. Justifications and Alternatives
- Please add the following terms to your literature search: polyprolactone, deferoxamine, and bone morphogenic protein-2 (BMP).  
Section G. Procedures Involving Living Animals
- Indicate where the smoke exposure studies will take place (update Section K. if necessary), e.g. are you collaborating with another lab. Additionally, please describe how it will fit in with the other procedures you have proposed.

- We note that the experimental groups and order of procedures is out of order in various parts of this section. Please re-order and ensure that the order is congruent between this section and Section C.

- Please address the following additional points:

- o The website links you have provided pertain to the DFO and BMP, not the nanoengineered film. Please provide an additional link or include specific details about this film.
- o Indicate whether there is a concern for tissue rejection or immune reactions as it appears you are proposing to use human BMP.
- o Measuring weight to assess nutritional status: for this new (to UCSF) model the committee requests that you weigh animals at least daily for the first 5 days following surgery and then bi-weekly after that point. We have made these changes for you in Sections G and J.
- o Indicate whether you have performed studies on carcasses to determine how the implants will be placed.
- o Provide a brief description of the proposed PK studies.
- o Please describe the "titanium hardware" that you will use to fix the fracture (size, weight, how it will be used, etc.). Also describe how it might affect the animal.
- o Please provide a few additional details about the drug delivery membrane (how it is made, what it is made from, where is it made, etc.)
- o Please note that you have committed to group housing your animals. However, please remember that the standard procedure is allowing the animal to be singly housed while they are waking up from anesthesia.
- o Discuss how you decided on a radiation dose of 36Gy.

I. Pre-Anesthetics and Anesthetics, Neuromuscular Blocking Drugs, Therapeutics, Analgesics and Experimental Agents

Nanoengineered films are non-pharmaceutical grade experimental agents, as are the BMP-2 and the DFO. Please indicate as such these as such and provide a description about their composition and how they are made.

Section K. Locations

Add the location of the Vape-exposure machine --- is it in your own lab? In the [REDACTED] lab?

Section M. Restraint

If animals placed in the tobacco smoke chambers will need to be restrained, fill in the information in this section. Otherwise, make a note in Procedures (Sec G) that they are placed in their cage in the exposure machine.

Project Number: [REDACTED]

Approval Type: New Approval

Title: "Functional genomic studies of normal and neoplastic development in mouse models"

PI: [REDACTED]

Species: Mouse

Primary Reviewer: (1) [REDACTED]

Secondary (1) [REDACTED]  
Reviewer:

Results: **Revisions Requested**

DMR/designated reviewer(s) [REDACTED]

Revisions Section C. Animals

Requested: Please reconcile the numerical differences between this section and the supplemental attachment you provided. This pertains specifically to the Category D animals.  
Section G. Procedures Involving Living Animals

Please state which procedure will include the administration of ketamine/xylazine, as you do not mention it in this section. We have added the words "non-surgically" and "via the glottis" for the bleomycin infusions to clarify that you are using the method depicted in the JoVE

video you cite.

Section J. Management and Monitoring of Adverse Effects of Procedures and Experimental Agents

J.3 Please mark "yes" for all humane endpoints listed (Category C animals).

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## UCSF IACUC Subcommittee Meeting Minutes

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Committee Name: IACUC SubCommittee/DMR

Committee Type: IACUC

Meeting Date: 03/05/2019

Members Present: IACUC Chair (or Vice Chair): [REDACTED]

LARC Attending Veterinarian or Designee: [REDACTED]

IACUC Committee Member as Specified: [REDACTED]

Chair's Report:

1. Subcommittee Minutes

- 2/5/2019 Subcommittee Minutes (Handout)- Minutes from 2/5- approved

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### Protocols Reviewed

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The following protocols will be reviewed by Designated Member Review process in accordance with the PHS Policy Section IV.B.3.

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### USDA Covered Species

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Project Number: [REDACTED]

Approval Type: Annual Review

Title: Central Nervous System Representation of Complex Auditory Stimuli

PI: [REDACTED]

Species: Cat

Results: **Approved**

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Project Number: [REDACTED]

Approval Type: Annual Review

Title: In Vivo Cardiac Reprogramming for Cardiac Regeneration: Non-Invasive Quantification

PI: [REDACTED]

Species: Swine

Results: **Approved**

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**Non-USDA Covered Species**

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Project Number: [REDACTED]

Approval Type: Annual Review/Modify

Title: Determinants of Regeneration or Fibrosis after Lung Injury

PI: [REDACTED]

Species: Mouse

Results: **Approved**

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Project Number: [REDACTED]

Approval Type: Annual Review

Title: Retinal Circuit Wiring during Development, and Rewiring subject to Injuries

PI: [REDACTED]

Species: Mouse

Results: **Approved**

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Project Number: [REDACTED]

Approval Type: Modification

Title: In Vivo Evaluation of Experimental Anti-Cancer Therapeutics; UCSF Preclinical Therapeutics Core

PI: [REDACTED]

Species: Mouse, Rat

Results: **Approved**

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Project Number: [REDACTED]

Approval Type: Annual Review

Title: Pharmacological Analysis of Reward-seeking, Consummatory and Conditioned Place Preference Behavior: Corticotrophin Releasing Factor (CRF) and Endorphin Modulation of Ventral Tegmental Area (VTA) Neurons

PI: [REDACTED]

Species: Rat

Results: **Approved**

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Project Number: AN174764-02

Approval Type: [REDACTED]

Title: Viral gene therapy platform development and characterization

PI: [REDACTED]

Species: Mouse

Results: **Approved**

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Project Number: [REDACTED]

Approval Type: Annual Review

Title: Astrocytic signaling in the cerebral cortex

PI: [REDACTED]

Species: Mouse

Results: **Approved**

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Project Number: [REDACTED]

Approval Type: Modification

Title: The role of oxidative stress and inflammation on synaptic functions after exposure to space radiation

PI: [REDACTED]

Species: Mouse

Results: **Approved**

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Project Number: [REDACTED]

Approval Type: Annual Review

Title: Mechanisms of Brain Injury following Focal Cerebral Ischemia in the Developing Nervous System

PI: [REDACTED]

Species: Mouse, Rat

Results: **Approved**

## UCSF IACUC Full Committee Meeting Minutes

Committee IACUC Full Committee  
Name:

Committee IACUC  
Type:

Meeting 03/19/2019  
Date:

Chair's Voting Members:

Report:

Staff:

Guests:

- IACUC Chair's Report

A. Guest: Introduction to [REDACTED] rotation in LARC

B. Minutes

a. 2/19/2019 Full Committee Minutes (Handout)- Minutes from 2/19- approved

Director's

Report: • IACUC Director's Report

A. Director's Report (Handout)

a. PACUC Nesting Enrichment info sheet (Handout)

b. Mouse Behavior (Handout)

c. Nesting Material for Mice Policy (Handout)

Approved Fish and Wildlife permit is in hand, and under modification to add transgenic killifish as a species and [REDACTED] as a Location (for transgenic zebra fish).

Deployment of IACUC's policy to allow some protocols to get a 3-year approval without annual reviews will depend on IT RIO support. We have had some initial meetings to scope the project, including what to do if a protocol changes status (funding; category E) to a status that does require annual review.

Director requested that members fill out their Reviewer sheets including their assessment of how essential the questions they pose are, and whether they are related to animal welfare. We work with investigators on readability when necessary for clarity, but otherwise, excess attention to grammar and punctuation in user-unfriendly RIO goes against the goals of prompt user-friendly, welfare-relevant reviews. Also, please list the time it takes for your review (helps with managing member workloads) and always feel free to consult the IACUC office, vets or the other reviewer on the protocol if you think that will be helpful.

NOTES from some recent meetings:

3/5/19:

Mouse Behavior webinar --- As discussed at the 3/5 meeting, some staff had watched a recent, excellent webinar by [REDACTED] at [REDACTED] on mouse behavior. We distributed to members the powerpoint slides and a link to view the recorded webinar, as well as [REDACTED] new guidance and policy on nesting material for their mice. They use 3 nestlets per cage (when using nestlets) and allow protocol departures for less or no nesting material. Committee on 3/5 asked that LARC's behavior/enrichment specialist [REDACTED] update us on the science examining what serves as 'adequate' nesting material

3/19/19 Subcommittee

Subcommittee reviews modifications and annual reviews and also triages compliance issues: reported to Full Committee that [REDACTED] lab has worked up a mouse surgery oversight program with IACUC (Dr. Karlsson), as part of his commitments following compliance concerns in 2018. [REDACTED] lab has problems with a new strain of mouse, with some surgical outcomes, and with cleanliness of lab --- he too will be instructed to work up a surgery training and oversight program with [REDACTED]

Training  
and  
Compliance  
Report:

• Training & Compliance Report

A. [REDACTED] Room Update (Handout)- [REDACTED] updated the Committee with plans for their fish room ([REDACTED]), including purchasing new housing equipment and contracting with Cardiovascular Research Institute's fish core manager for oversight of [REDACTED] people and practices. Committee accepted this in principle, sets June 1 as deadline for a finalized plan for equipment and for contracted support from [REDACTED] and in between, meetings with the IACUC Chair, the Attending Veterinarian, and possibly the Institutional Official. Once new equipment and procedures are in place, IACUC oversight will determine whether the PI can continue to self-staff, or must contract daily animal care services from [REDACTED]

Clinical Case Report: Yost suggested that IACUC meetings include interesting case presentations every couple of months (large animals or rodents)

IACUC Member Training and Information: • Committee Information and Training

A. [REDACTED], Presentation – Prion Research at UCSF- Member continuing education – [REDACTED] presented an overview on prion diseases and rodent models for studying them.

B. Upcoming CE opportunities

• OLAW Webinar: "Superstar Rats Teach Empathy to Researchers" March 21, 2019  
<https://olaw.nih.gov/education/online-seminars.htm>

• PRIMR Webinar: "Every Day with Every Interaction: Deepening the IACUC's Understanding of Positive Reinforcement Training" April 17, 2019 [https://www.primr.org/calendar/webinars/2019/positive-reinforcement/?utm\\_source=MagnetMail&utm\\_medium=email&utm\\_term=gina.alvino@ucsf.edu&utm\\_content=3-6-27%20Upcoming%20Webinars&utm\\_campaign=Upcoming%20PRIM%26R%20Webinars](https://www.primr.org/calendar/webinars/2019/positive-reinforcement/?utm_source=MagnetMail&utm_medium=email&utm_term=gina.alvino@ucsf.edu&utm_content=3-6-27%20Upcoming%20Webinars&utm_campaign=Upcoming%20PRIM%26R%20Webinars)

• AALAS Webinar: "Right Numbers for Animal Protocols" April 24, 2019  
<https://www.aalas.org/store/meeting?productId=9280313>

• Bellevue, WA: PRIM&R 2019 IACUC Conference April 2-3, 2019 <https://www.primr.org/iacuc19/>

• Seattle, WA: AALAS Annual Meeting April 25-26, 2019 <http://azaalas.org/district-8/annual-meeting>

• South San Francisco, CA: IACUC YourWay: From AtoZ May 7, 2019

• 2019 SCAW IACUC Training Workshop: <https://scaw.com/iacuc-training-workshops/>

o May 23, 2019: Philadelphia, PA  
o September 27, 2019: New York City, NY  
o November 22, 2019: Chicago, IL

• 2019 IACUC 101 Series: <https://iacuc101.org/courses/iacuc-101/>

o June 26 - 27, 2019: IACUC 101 and 301 in Providence, RI - Hosted by Brown University

o August 21 - 22, 2019: IACUC 101 and 201 in Minneapolis, MN - Hosted by Medtronics

o November 6, 7, 8, 2019: IACUC 101, 201 and 301 in Houston, TX - Hosted by Rice University

## Protocols Reviewed

During the review process, the members discussed for each protocol, the rationale for involving animals, the appropriateness of the species, the database searches for alternatives, the steps taken to reduce animal numbers, the measures to relieve pain, discomfort or distress, if needed, the appropriateness and adequacy of anesthesia and analgesia, if applicable, and the number of animals to be used.

## USDA Covered Species

Project Number: [REDACTED]

Approval Type: Continuation

Title: Amnioseal: A novel biomimetic sealant for aqueous environments

PI: [REDACTED]

Species: Rabbit

Primary Reviewer: (1) [REDACTED]

Secondary Reviewer: (1) [REDACTED]

Results: **Revisions Requested**

Revisions Requested: March 27- following second FCR:

Objectives

Please include an explicit statement confirming that all adhesive compounds used in live animals will have been tested for cytocompatibility and shown to be non-toxic. You may place this statement at the very end of this section after the sentence that reads, "But we are in contact with groups from other academic centers and a commercial lab, both of which may supply additional adhesives to test."

Section G. Procedures Involving Living Animals

- Please provide a few descriptive sentences about how exactly you will plan to conduct the procedures related to the fetal trachea, patent process vaginalis and fetal skin, including a description of incision sites and how you will measure the effectiveness of the adhesive compounds.
- Phase II studies: with regard to premature labor/abortion, you have written that, "At the discretion of the researchers, in the event of premature labor the doe may also be euthanized at that time..."
  - o Please update this paragraph to indicate that you will consult with a LARC veterinarian for a clinical exam should this situation arise. Please also update the relevant portion(s) of J.1 (adverse effect of iatrogenic abortion) with a similar statement.

## Non-USDA Covered Species

Project Number: [REDACTED]

Approval Type: Continuation

Title: Development and Function of vertebrate nervous systems

PI: [REDACTED]

Species: Fish

Primary Reviewer: (1) [REDACTED]

Secondary (1) [REDACTED]  
Reviewer:

Results: **Revisions Requested**

Revisions Section C. Animals

Requested: • The Committee requires using the zebrafish number spreadsheet (attached) and listing the different genetic lines being studied and the procedures performed on them in order to determine the number of animals needed for breeding as well as the experimental animals needed for each experiment.

• In this section, both references provided as evidence for the group sizes (Berberglou et al., J Neurosci 2014 & Dong et al., Neuron 2012) do not use n=20 but state n=3-4 brains.

Therefore, please justify the need for n=20 fish per group, since the published manuscripts state significantly less. The # of animals needed should be based on the # of experimental groups and then extrapolated to the # of genetic lines.

• Please justify the # of fish needed per group based on how many embryos needed for each experiment based on the # of groups, thus equating to the # of breeding fish based on 150 embryos (30-300 per breeding) per pair of mating fish x the # of births from 1-2 years of age.

• You state "an estimated 500 lines" in the top of section C. but then only state "an estimated 400 lines" in the section on fin clip. Please rectify the discrepancy.

• The table for Category D. animals states that 8800 bred fish are requested but the text in Section C. has n=20 per transgenic line x 400 lines equals 8000 for fin clip, n=20 per transgenic line x 10 lines equals 200 for intracranial injection, and n=20 per transgenic line x 40 lines equals 800 for imaging in methylcellulose, totaling 9000 not 8800. Please rectify the discrepancy.

• Several experiments in Section G. state n=12 is required testing (#2, 3, 4, 5, 6, 7, & 12). Please modify the earlier statement requesting a sample size of 20.

Section D. Contacts & Personnel

• Please specify the type and location of training for all personnel in which "yes" has been stated for question D.2. Do not state future training in this section.

• Please describe and quantify the years of experience for all personnel in which "yes" has been stated for question D.3.

• Provide location of training and description for all training & experience.

Section E. Justifications & Alternatives

• E.1.1 Please add agents, behavioral paradigms and transmitter systems to search terms for alternatives.

Section G. Procedures Involving Living Animals

• The Committee strongly recommends separating behavioral procedures from experimental agents. Describe behavioral procedures separately and completely, and clearly note if multiple behaviors will be performed on the same animal.

• Pg. 16, #2: Please fully describe the following tests in details, including duration and doses used:

o Ethanol test on locomotion

o CPP ethanol test

o Novel tank test

• Pg. 17, #3: describe and justify the chronic use of amphetamine, 5x per week for 6 months.

• Pg. 17, #4: describe and justify the acute and chronic use of cocaine, once a week for 3 months.

• Pg. 17, #5: describe and justify the acute and chronic use of morphine, once a week for 3 months.

• Pg. 18, #8: describe and justify the chronic use of diazepam, once a week for 3 months.

Obtained by Rise for Animals.

Uploaded to Animal Research Laboratory Overview (ARLO) on 03/12/2021

- Pg. 18, #9: describe and justify the chronic use of MPTP, once a week for 3 months.
- Pg. 19, #12: chlordiazepoxide is listed in Section J. as being given 'once per fish for 1 hour' but the description here states exposure is for 3 minutes. Please reconcile.
- Pg. 20, Group D. Stated that 100 animals per year (n=300 total) will undergo injection of lentiviral vectors but pg. 4 section C states that 200 animals will undergo procedure. Please rectify.

Section I. Pre-Anesthetics and Anesthetics, Neuromuscular Blocking Drugs, Therapeutics, Analgesics and Experimental Agents

- Please provide a stronger justification on why non-pharmaceutical agents need to be used. Additionally, many non-pharmaceutical agents are not described or listed in I.7. Please, complete the full list of non-pharmaceuticals being utilized.

Section N. Euthanasia

- Please provide additional details on the hypothermic shock m

Project Number: [REDACTED]

Approval Type: New Approval

Title: Intravenous cardiac progenitor cell therapy inhibits the progression of pulmonary artery hypertension in rats

PI: [REDACTED]

Species: Rat

Primary Reviewer: (1) [REDACTED]

Secondary (1) [REDACTED]  
Reviewer:

Results: **Revisions Requested**

Revisions General  
Requested:

Remove all remnants of ASD surgery descriptions. Note: IACUC staff has completed this on your behalf. No action needed on your part.  
Section C. Animals

Creation of pulmonary artery hypertension (PAH) induced by monocrotaline:

- Please explain how you determined the number of rats (n = 20) to test monocrotaline dosage? Additionally, what methods/measurements do you have in place to determine whether monocrotaline adequately induces PAH?
- There is a need to validate your model before testing cell therapy. To this end, how will you quantify the degree of hypertension before initiation of therapy?
- Please provide power analysis to justify n = 23 per group.
- Confirm that you have properly validated model before testing stem cell therapy. How do you quantify degree of hypertension before starting therapy?
- Please describe how you calculated the number of rats to be used as cell donors.

Section E. Justifications and Alternatives

Include additional relevant keywords (e.g. monocrotaline), and update your literature search accordingly.

Section G. Procedures Involving Living Animals

- Provide details about how you will test monocrotaline dose range to determine the optimal dose (e.g. the outcome(s) you will be measuring, etc.). Do you need some pilot animals to do invasive non-survival direct catheter measurements? Please let us know.
- Please indicate at what point during your experimental timeline the MRI evaluation will take

place.

- Please discuss the pulmonary pressure measurements (to be taken during the terminal procedure) in greater detail.
- In the third section (cardiac MRI analysis) and the final section (terminal surgery), you mention an “observation period” that will take place over 6 weeks. Please clarify the timeline (i.e. when this period will begin) and how it fits with the rest of the procedures.

Section I. Pre-Anesthetics and Anesthetics, Neuromuscular Blocking Drugs, Therapeutics, Analgesics and Experimental Agents

This section is not complete, as some agents mentioned in Section G appear to be missing from the listing of experimental agents (I.5) (e.g. PBS, HCL, adiposed-derived stem cells, fluorescent nanoparticles in supplemented condition medium, etc.). Please rectify.

Section J. Management and Monitoring of Adverse Effects of Procedures and Experimental Agents

Add heart failure as an adverse effect and include the clinical signs you would look for such as ascites, liver congestion, labored breathing, as well as all pertinent details of management.

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Project Number: [REDACTED]

Approval Type: Continuation

Title: Regulators of muscle cell engraftment potential

PI: [REDACTED]

Species: Mouse

Primary Reviewer: (1) [REDACTED]

Secondary (1) [REDACTED]  
Reviewer:

Results: **Revisions Requested**

Revisions During protocol reviews, Committee discussed PI A. [REDACTED] report of irradiating mice who Requested: may have been too young or small for the irradiation dose they received. The Revisions Requested letter will include Warning language that the lab must only subject animals to procedures if they appear healthy and robust enough for the procedure.

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Project Number: [REDACTED]

Approval Type: New Approval

Title: Elucidating the role and mechanisms of MANF-mediated cardioprotection

PI: [REDACTED]

Species: Mouse

Primary Reviewer: (1) [REDACTED]

Secondary (1) [REDACTED]  
Reviewer:

Results: **Revisions Requested**

Revisions Please schedule a meeting with LARC veterinarian and IACUC staff to discuss procedural

Requested: details and study endpoints. You can contact [REDACTED] via email to schedule.

#### Section C. Animals

- As you expect a very high mortality rate (up to 50%), please provide a strong scientific justification on why the benefits of this work outweigh the high animal welfare cost.
- Explain what factors lead to the determination that 12 hours represents the optimal endpoint.
- In the experimental design and subsequent power calculation, please specify what the three experimental groups are and what outcomes are measured.
- Please remove references to "ischemia-reperfusion" as it is no longer proposed.
- As this protocol does not have Category C. mice (breeders), please clarify whether the knockout strain is being transferred from another lab.

#### Section D. Contacts & Personnel

As this protocol does not include survival surgery, please remove the "post-operative care" functional roles for [REDACTED].

#### Section G. Procedures Involving Living Animals

Please specify which of the four chambers owned by [REDACTED] you will use for this project. This information must also be clearly defined in the attached Chamber SOP.

#### Section H. Surgery and Post-Operative Care

Please remove non-survival surgery, as the tissue collection will occur following overdose of euthanasia agents.

#### Section I. Pre-Anesthetics and Anesthetics, Neuromuscular Blocking Drugs, Therapeutics, Analgesics and Experimental Agents

- Please modify the dosage of Xylazine to 20-40mg/kg instead of 5-10mg/kg.
- Please modify the dosage of Ketamine to 300-400mg/kg instead of 80-100mg/kg.
- The Committee recommends adding Acepromazine (2-3mg/kg) to the Ketamine/Xylazine in order to achieve a deeper plane of anesthesia.

#### Section K. Species Locations

Clarify whether you will be performing perfusion or only vital organs removal. If the latter, please remove references to perfusion in this section.



## UCSF IACUC Subcommittee Meeting Minutes

Committee Name: IACUC SubCommittee/DMR

Committee Type: IACUC

Meeting Date: 03/19/2019

Members Present: IACUC Chair (or Vice Chair): [REDACTED]

LARC Attending Veterinarian or Designee: [REDACTED]

IACUC Committee Member as Specified: [REDACTED]

Chair's Report: 1. Subcommittee Minutes

- 2/19/2019 Subcommittee Minutes (Handout)- Minutes from 2/19 subcommittee were approved

Training and Compliance Report: 2. Training & Compliance Report

Compliance reviews were triaged by the Subcommittee; none were referred for Full Committee review:

[REDACTED]: 2 mice left in cage overnight; no illness identified. Warning Letter

[REDACTED]: various issues with mice, including communications with veterinarians for one strain having anesthesia-recovery problems. Warning Letter, to include requirement for an improvement plan with outcomes monitoring, as [REDACTED] has been working on. Protocol must be updated before any more work with VIP-KO mice

[REDACTED] presented her summary of the status of [REDACTED] requested plan for improved training and outcomes monitoring for surgical mice in his lab. Committee requests more specificity about sterilization of the various implants, and monitoring of individuals' outcomes. Has been working on this with [REDACTED]

[REDACTED] Vet observation of his system for temporarily tethering voles for social interaction assays. LARC vet reports no concerns with what she observed.

### Protocols Reviewed

The following protocols will be reviewed by Designated Member Review process in accordance with the PHS Policy Section IV.B.3.

### USDA Covered Species

Project Number: [REDACTED]

Approval Type: Annual Review

Title: Tissue engineered vascular grafts made with nanofibrous polymer scaffolds

PI: [REDACTED]

Species: Swine

Results: **Approved**

**Non-USDA Covered Species**

Project Number: [REDACTED]

Approval Type: Annual Review/Modify

Title: Control of skeletal cell differentiation, matrix quality and hearing loss.

PI: [REDACTED]

Species: Mouse

Results: **Revisions Requested**

Project Number: [REDACTED]

Approval Type: Modification

Title: Immunopathogenesis of Hepatitis B Virus: Studies in a Murine Model

PI: [REDACTED]

Species: Mouse

Results: **Approved**

Project Number: [REDACTED]

Approval Type: Annual Review/Modify

Title: Preclinical models of melanocytic neoplasia

PI: [REDACTED]

Species: Mouse

Results: **Approved**

Project Number: [REDACTED]

Approval Type: Modification

Title: Stem cell regulation during muscle growth, regeneration and aging

PI: [REDACTED]

Species: Mouse

Results: **Revisions Requested**

Revisions Section C. Animals

- Requested:
- Please clarify whether 5 vs 6 new strains will be added and correct the discrepancy.
  - Explain why you chose to calculate the number of mice requested per year, instead of stating the total required to reach your experimental goal.
- Section G. Procedures Involving Living Animals
- Category D. mice: Clarify whether your experimental design accounts for uninjured controls that will get the intramuscular injection without barium chloride.
- Section J. Adverse Effects
- In box J.3, you unchecked dehiscence of surgical incision as an endpoint for Category D. mice: If you are planning on repairing dehiscence, please add this procedure as "survival surgery" in Section H. and check the SOP on dehiscence repair in Section F.1. The analgesics regimen following repair must also be clearly listed in Section I.

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Project Number: [REDACTED]

Approval Type: Modification

Title: The Neural Basis of Vocal Learning in Songbirds

PI: [REDACTED]

Species: Bird

Results: **Approved**

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Project Number: [REDACTED]

Approval Type: Modification

Title: MR studies of Preclinical Models of Multiple Sclerosis

PI: [REDACTED]

Species: Mouse, Rat

Results: **Approved**

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Project Number: [REDACTED]

Approval Type: Annual Review

Title: In vivo Efficacy of Novel Acute Leukemia Vaccines

PI: [REDACTED]

Species: Mouse

Results: **Approved**

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Project Number: [REDACTED]

Approval Type: Annual Review

Title: Signaling Mechanisms of Survival and Cell Death in the Nervous System

PI: [REDACTED]

Species: Mouse

Results: **Approved**

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Project Number: [REDACTED]

Approval Type: Annual Review/Modify

Title: Molecular and cellular mechanisms of germ cell development in the mouse

PI: [REDACTED]

Species: Mouse

Results: **Revisions Requested**

Revisions Section C. Animals

Requested: • Project 3: Please specify for many fetuses will be obtained and genotyped. Please also clarify whether the dams have been accounted for in your calculations.

Section G. Procedures Involving Living Animals

• Please clarify if pregnant mice treated with Dexamethasone will be maintained for a total of 2 vs 10 days and correct the discrepancy.

---

Project Number: [REDACTED]

Approval Type: Modification

Title: Testing Experimental Therapies for Treating Brain Tumors in Rodent Models

PI: [REDACTED]

Species: Mouse, Rat

Results: **Approved**

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Project Number: [REDACTED]

Approval Type: Modification

Title: Studying Cortical Neuronal Migration in the Brain

PI: [REDACTED]

Species: Mouse

Results: **Revisions Requested**

Revisions Section D. Contacts & Personnel

Requested:

- Please specify who has been trained in performing the new proposed embryonic surgery.

Section G. Procedures Involving Living Animals

- Please clarify the specific location of injection into ventricle(s).

Section J. Adverse Effects

- As you selected "no" for dehiscence of incision as an endpoint for Category D. mice, please add dehiscence repair as a survival surgery in Section H. and specify in Section I. what analgesic regimen will be followed. Additionally, please check the IACUC SOP on dehiscence repair in Section F.

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Project Number: [REDACTED]

Approval Type: Annual Review/Modify

Title: Effect of direct stimulation on cortical motor neurons.

PI: [REDACTED]

Species: Rat

Results: **Approved**

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Project Number: [REDACTED]

Approval Type: Modification

Title: Neural Circuitry and Plasticity in the Rodent Central Auditory System

PI: [REDACTED]

Species: Mouse, Rat

Results: **Approved**

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Project Number: [REDACTED]  
Approval Type: Modification  
Title: Developmental neurogenetics  
PI: [REDACTED]  
Species: Frog  
Results: **Approved**

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Project Number: [REDACTED]  
Approval Type: Modification  
Title: Analysis of tumor suppressors and oncogenes in mouse models of cancer  
PI: [REDACTED]  
Species: Mouse  
Results: **Approved**

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Project Number: [REDACTED]  
Approval Type: Annual Review/Modify  
Title: Neurobehavioral core for rehabilitation research  
PI: [REDACTED]  
Species: Mouse  
Results: **Approved**

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Project Number: [REDACTED]  
Approval Type: Modification  
Title: Mouse models for neural cancer  
PI: [REDACTED]  
Species: Mouse  
Results: **Approved**

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**UCSF IACUC Subcommittee Meeting Minutes**

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Committee Name: IACUC SubCommittee/DMR

Committee Type: IACUC

Meeting Date: 03/26/2019

Members Present: IACUC Chair (or Vice Chair):

LARC Attending Veterinarian or Designee: Lawrence Carbone

IACUC Committee Member as Specified: Thomas Gill

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**Protocols Reviewed**

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The following protocols will be reviewed by Designated Member Review process in accordance with the PHS Policy Section IV.B.3.

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**USDA Covered Species**

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**Non-USDA Covered Species**

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Project Number: [REDACTED]

Approval Type: Modification

Title: The Role of Growth Factors and Genetic Modifiers in Vascular Disease and Cancer

PI: [REDACTED]

Species: Mouse

Results: **Approved**

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Project Number: [REDACTED]

Approval Type: Annual Review/Modify

Title: Regulation of gene expression in the immune system

PI: [REDACTED]

Species: Mouse

Results: **Approved**

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Project Number: [REDACTED]

Approval Type: Annual Review

Title: Regulation of Corneal Repair by Metalloproteinases

PI: [REDACTED]

Species: Mouse

Results: **Approved**

---

Project Number: [REDACTED]

Approval Type: Modification

Title: Immune determinants of metabolism and energy balance

PI: [REDACTED]

Species: Mouse

Results: **Approved**

---

Project Number: [REDACTED]

Approval Type: Modification

Title: Breeding Protocol

PI: [REDACTED]

Species: Mouse

Results: **Approved**

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Project Number: [REDACTED]

Approval Type: Modification

Title: Analysis of Homeostatic Synaptic Plasticity in the Rodent Central Nervous System

PI: [REDACTED]

Species: Mouse

Results: **Approved**

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Project Number: [REDACTED]

Approval Type: Annual Review

Title: Plasticity and Behavioral Coding in the Rodent Brain

PI: [REDACTED]

Species: Rat

Results: **Approved**

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Project Number: [REDACTED]

Approval Type: Modification

Title: Microglia-mediated Abeta toxicity

PI: [REDACTED]

Species: Mouse, Rat

Results: **Approved**

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Project Number: [REDACTED]

Approval Type: Annual Review/Modify

Title: Investigating models of pancreatic development in normal and diseased states.

PI: [REDACTED]

Species: Mouse

Results: **Approved**



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Project Number: [REDACTED]

Approval Type: Modification

Title: Physiology of ion channels and receptors

PI: [REDACTED]

Species: Mouse

Results: **Revisions Requested**

Revisions Modification Justification  
Requested: • Colonic viral tracing experiment: Please confirm that even though only about 50% of injections will result in data of sufficient quality, you do not need to double the number of animals requested.  
Section G. Procedures  
• Retrograde tracing using a modified rabies virus: As you will be using P3 pups, please remove reference to single housing. Additionally, please add potential adverse effects and monitoring parameters for maternal rejection in Section J.

---

Project Number: [REDACTED]

Approval Type: Modification

Title: Pharmacological Analysis of Reward-seeking, Consummatory and Conditioned Place Preference Behavior: Corticotrophin Releasing Factor (CRF) and Endorphin Modulation of Ventral Tegmental Area (VTA) Neurons

PI: [REDACTED]

Species: Rat

Results: **Approved**

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Project Number: [REDACTED]

Approval Type: Modification

Title: Mechanisms of toxin resistance in amphibians

PI: [REDACTED]

Species: Frog

Results: **Revisions Requested**

Revisions Section I. Pre-Anesthetics and Anesthetics, Neuromuscular Blocking Drugs, Therapeutics,  
Requested: Analgesics and Experimental Agents  
• For the new toxins administered, please clarify whether the dosage proposed is in micrograms (Section I.) or nanograms (Section G.) and correct the discrepancy.

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Project Number: [REDACTED]

Approval Type: Annual Review

Title: T-Cell Activation, Tolerance, and Memory

PI: [REDACTED]

Species: Mouse

Results: **Approved**

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Project Number: [REDACTED]

Approval Type: Annual Review/Modify

Title: Mouse models of CNS development and neurological disease

PI: [REDACTED]

Species: Mouse

Results: **Approved**

---

Project Number: [REDACTED]

Approval Type: Modification

Title: Genetic Control of CNS and Craniofacial Development

PI: [REDACTED]

Species: Mouse

Results: **Approved**

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Project Number: [REDACTED]

Approval Type: Annual Review

Title: Investigations of the Genetics and Biology of Cerebral Malformations

PI: [REDACTED]

Species: Mouse

Results: **Approved**

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Project Number: [REDACTED]

Approval Type: Modification

Title: Regulatory T cell control of autoimmunity and transplant rejection

PI: [REDACTED]

Species: Mouse

Results: **Revisions Requested**

Revisions: Modification Justification

Requested: • Mice used in Exp. 5.5-5.6 need to be placed in Category D. as they will undergo skin flap and terminal imaging. Please adjust the totals in Section C. accordingly, in the table and in the narrative.

• You mention Exp. 5.7 in this section but it does not appear in the procedures (Section G.). Please modify.

Section I. Pre-Anesthetics and Anesthetics, Neuromuscular Blocking Drugs, Therapeutics, Analgesics and Experimental Agents

Add human PBMCs to your existing list of agents.

Project Number: [REDACTED]

Approval Type: Modification

Title: Hypothalamic control of long-term energy homeostasis

PI: [REDACTED]

Species: Mouse

Results: **Approved**

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Project Number: [REDACTED]

Approval Type: Modification

Title: Hypothalamic regulation of energy metabolism

PI: [REDACTED]

Species: Mouse

Results: **Approved**