

INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE
12:00 P.M.

** **

Meeting Minutes
January 19, 2022

Members Present: MB, JB, RJ, SS, MT, DC, ND, AZ, CM- alternate

Members Absent: DK- alternate, RB, JM, LM

Guests: LC, KL, JV, JK

Review and approve IACUC Meeting Minutes from November and December 2021.
The minutes were approved edited.

Announcements from the Chair: A new ARC Director KJ has been hired. The AV has been working closely with her to prioritize SAFIPR items. Tb tests will be offered in the ARC on January 27th. Coordinate with RB if interested.

I. Protocols Approved Since Last Meeting

Refer...	Approval ...	Protocol #	Protocol Type
135	12/20/2021	2019-135-114	Amendment
148	12/20/2021	2020-148-136	Amendment
73	12/20/2021	2020-73-127	Amendment
158	1/19/2022	2019-158-95	Amendment
94	1/4/2022	2020-94-123	Interim Review
58	1/3/2022	2019-58-120	Amendment
24	1/3/2022	2021-24-02	Amendment
18	1/14/2022	2020-18-53	Interim Review
141	1/6/2022	2020-141-55	Interim Review
60	1/13/2022	2020-60-126	Interim Review
44	1/10/2022	2020-44-132	Interim Review
118	1/14/2022	2021-118-01	Amendment
20	1/14/2022	2020-20-60	Amendment
50	1/14/2022	2019-50-97	Amendment
167	1/14/2022	2021-167	Amendment

- II. Unfinished Business
 - A. Consideration of Sex as a Variable: Updates to the protocol form to include questions regarding sex as a variable were shown to the committee.
 - B. When Power Calculations Won't Do: add to website as a resource: Inadvertently missed and will be discussed at February meeting.
 - C. SAFIPR Report Status Semi Annual Facility Inspection Program Review Update: The status of the report was updated as discussed with the ARC Director.
- III. New Business
 - A. Adverse Events
None
- IV. Full Committee Review
None
- V. PAM
PAM reports of protocols 2020-71-146 and 2021-38-86 were reviewed by the committee and approved as written.
- VI. AV Update
 - A. Primate Status: The logistics for shipment of the primates to the sanctuary have been worked out for January 26th.
 - B. NHP Environmental Enrichment Program: The program had been revised to optimize the variety of enrichment provided to the animals. The AV has observed a multitude of enrichment items being Staff were retrained on primate behavior and enrichment. Positive feedback was received.
 - C. Demodex Treatment: The colony of animals has completed treatment. PCR testing will be scheduled at an appropriate interval in a few months.
 - D. Frog system failure: Xenopus housing system failed. The AV and ARC Director developed interim procedures to care for the animals. The vendor representative is scheduled to arrive today to troubleshoot and fix the system.
- VII. IACUC Update
 - A. Animal Adoption Policy: Animal Adoption Policy was approved as written.
 - B. Reporting Animal Welfare Concerns: Policy was approved as written
 - C. Adverse Event Reporting Policy: Updates include the option of reporting the event verbally and form can be submitted at a later time. Policy was approved as edited.
 - D. Investigating Animal Welfare Concerns and Non-Compliance: Policy was approved as edited and to include definitions of respondent and complainant.
- VIII. Continuing Education:
Animal Welfare Act Amended: Changes to the Animal Welfare Act that affect MSU were reviewed with the committee including:
 - Research facility registrations no longer need to be renewed every three years

- Elimination of the annual review requirement for USDA covered species
- Elimination of the requirement for IO to submit annual report. A designated member of the institution may submit the report.

[OLAW Webinars and Podcasts](#)

[IACUC 101](#)

[ICARE workshops](#)

INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE
12:00 P.M.

** **

Meeting Minutes
February 16, 2022

Members Present: MB,JB, RJ, SS, MT,LM, ND, AZ, CM- alternate, DK- alternate, RB

Members Absent: DC

Guests: LC, KL, JV, JK, KJ

Review and approve IACUC Meeting Minutes from January 2022.

The minutes were approved as written.

Announcements from the Chair: USDA performed an annual inspection on February 2, 2022.

I. Protocols Approved Since Last Meeting

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<input type="checkbox"/>	Approval ...	Protocol #	Protocol Type
<input type="checkbox"/>	2/17/2022	2020-148-136	Interim Review
<input type="checkbox"/>	2/16/2022	2020-73-127	Interim Review
<input type="checkbox"/>	2/17/2022	2019-135-114	Interim Review
<input type="checkbox"/>	2/2/2022	2020-97-128	Interim Review
<input type="checkbox"/>	2/16/2022	2020-71-146	Amendment
<input type="checkbox"/>	2/8/2022	2021-38-86	Amendment
<input type="checkbox"/>	1/28/2022	2020-139-54	Amendment
<input type="checkbox"/>	2/8/2022	2019-134-91	Renewal
<input type="checkbox"/>	1/24/2022	2020-61-125	Interim Review
<input type="checkbox"/>	2/17/2022	2021-155	Interim Review
<input type="checkbox"/>	2/15/2022	2020-150-142	Amendment
<input type="checkbox"/>	2/10/2022	2021-183	Amendment
<input type="checkbox"/>	2/14/2022	2021-174	Amendment
<input type="checkbox"/>	2/7/2022	2021-118-01	Amendment
<input type="checkbox"/>	2/7/2022	2019-50-97	Amendment
<input type="checkbox"/>	1/24/2022	2021-140	Interim Review
<input type="checkbox"/>	1/28/2022	2019-52-110	Amendment

II. Unfinished Business

- A. When Power Calculations Won't Do: added to website as a resource, complete
- B. SAFIPR Report Status Semi Annual Facility Inspection Program Review Update: The status of the report was updated.

III. New Business

- A. Adverse Events
01-2022: The adverse event and associated management plan was reviewed and discussed. A verbal report was submitted to OLAW, and a written response is being drafted.

IV. Full Committee Review

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Motion to return for modification and send to DMR upon resubmission. Approved, unanimous. Items to be addressed included but are not limited to:

- Securing a Montana FWP Scientific Collectors Permit
- Option of nitrile gloves as well as latex
- Completion of funding information
- Completion of required staff training
- Comment on negative effects of transmitters on survival

V. PAM

PAM of breeding colonies is in the process of being scheduled.

VI. AAALAC Program Description:

The program description is being updated by key personnel.

VII. Occupational Health & Safety Program:

The occupational medical surveillance risk assessment process has been revised. Electronic forms have been developed. Part I and Part II forms have been combined and all personnel are required to complete the entire form. Once submitted the form is reviewed by JK or designee. If the person is unpaid and additional follow up is needed, they will be referred to their own medical provider. Also, an Annual Medical Surveillance form been developed. Another meeting has been scheduled to work out the annual form distribution and tracking process. The committee will be updated when the process is finalized.

VIII. AV Update

- A. Non-human primate status: animals arrived at the sanctuary and are doing very well. Non-human primates are no longer housed at MSU.
- B. Emergency Call Out HVAC alarms: ARC Director is verifying the emergency call out process.
- C. CO2 Euthanasia: The ARC procedure for use of CO2, including the percentage used, is being updated. Signage needs updated to reflect the new recommendation of use of a 50% flow rate.
Action Item: AV to provide communication for the IACUC to distribute to investigators and ARC to update signage.
- D. Exemptions to the *Guide*: Cages in the flexible film isolators housing germ-free mice are not sanitized weekly. This is standard practice but is an exemption to the *Guide*. Recommendation is to include the sanitation procedure for cages in the germ-free isolators in the PI's protocol for review and approval by the IACUC.

VII. IACUC Update

IACUC Policy Review: A list of IACUC Policy's and review schedule was shown to the committee. All policies are on a three year review cycle.

- A. Humane Endpoints Policy: Policy was approved as written. **Action Item:** Post to web and send notification.(LC)

VIII. Continuing Education:

[OLAW Webinars and Podcasts](#)

[IACUC 101](#)

[ICARE workshops](#)

INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE
12:00 P.M.

** **

Meeting Minutes
March 30, 2022

Members Present: MB,JB, RJ,SS, MT,LM,DC, ND, AZ, CM- alternate, DK- alternate, RB

Members Absent:

Guests: LC, KL, JV, JK, KJ, AR

Review and approve IACUC Meeting Minutes from February 2022.

The minutes were approved as written.

Announcements from the Chair: none

I. Protocols Approved Since Last Meeting

<input type="checkbox"/>	Approval Date	Protocol #	Protocol Type
<input type="checkbox"/>	2/16/2022	2020-73-127	Interim Review
<input type="checkbox"/>	2/17/2022	2019-135-114	Interim Review
<input type="checkbox"/>	2/17/2022	2020-148-136	Interim Review
<input type="checkbox"/>	3/11/2022	2020-65-140	Interim Review
<input type="checkbox"/>	3/11/2022	2022-190	Original
<input type="checkbox"/>	2/22/2022	2019-58-120	Amendment
<input type="checkbox"/>	3/16/2022	2021-24-02	Interim Review
<input type="checkbox"/>	2/16/2022	2020-71-146	Amendment
<input type="checkbox"/>	3/15/2022	2021-149-69	Interim Review
<input type="checkbox"/>	3/15/2022	2021-25-61	Interim Review
<input type="checkbox"/>	2/17/2022	2021-155	Interim Review
<input type="checkbox"/>	3/11/2022	2020-153-145	Amendment
<input type="checkbox"/>	3/3/2022	2022-143-92	Renewal
<input type="checkbox"/>	3/3/2022	2022-45-93	Renewal
<input type="checkbox"/>	3/24/2022	2022-46-94	Renewal
<input type="checkbox"/>	3/11/2022	2021-174	Amendment
<input type="checkbox"/>	3/10/2022	2021-118-01	Amendment
<input type="checkbox"/>	2/22/2022	2020-62-131	Interim Review
<input type="checkbox"/>	2/25/2022	2022-96-88	Renewal
<input type="checkbox"/>	2/18/2022	2020-8	Interim Review
<input type="checkbox"/>	3/2/2022	2020-64-129	Interim Review
<input type="checkbox"/>	3/25/2022	2022-47-100	Renewal

II. Unfinished Business

A. SAFIPR Report Status Semi Annual Facility Inspection Program Review Update: The status of the report was updated.

B. AAAALAC Program Description: The Program Description has been completed and will be submitted tomorrow.

III. New Business

A. Full Committee Review
3 year Renewal 134

The PI presented a brief overview of the research and fielded questions from committee members. All of the comments from the previous submission have been addressed. Motion to approve as written. Approved, unanimous.

B. Adverse Events

02-2022,03-2022 and 04-2022: The adverse events and associated management plans were reviewed and discussed.

- C. Occupational Health & Safety Program Process Update: An electronic form has been developed for the annual risk assessment, and the work flow was presented to the committee.
- D. PAM: A PAM of three PI's breeding colonies is underway. The intent of the PAM is to provide an objective assessment of the current breeding processes, review data, compile metrics and present the report to the committee. Breeding records have been reviewed and interviews with the PI's and ARC staff are underway.

IV. AV Update.

- A. CO2 Euthanasia: The AV recommends a CO2 (50%) flow rate to be used. The signage has been updated to reflect the new recommendation. Notification will be sent to investigators and to provide updated guidance.
- B. Gas Anesthesia: New equipment has been purchased and additional procedure rooms are being set up for use.
- C. Germ Free Sanitation Exemptions to the *Guide*: The PI has provided sanitation SOPs and attached them to the protocol as requested.
- D. ARC SOPs: Work is underway revising the SOP's.
- E. Rodent Handling: Recently, publications and presentations in professional meetings have indicated that handling mice by the tail is an aversive stimuli for mice. Animal handling techniques such as cupping or transferring the animals through a tunnel will be explored.
- F. Cage Change Frequency for IVC's: A presentation was given regarding the cage changing frequency as defined in the *Guide* and the flexibility to allow an institution to develop performance standards based on the conditions used in the facility. The IACUC can approve an exception to the recommendations of the *Guide* based on objective criteria such as the measurement of ammonia, CO2, temperature and humidity. The AV recommends measuring ammonia levels in the cages and performing an objective analysis of the cage changing intervals and presenting the results to the committee.
- G. Mouse with litter cage change interval: It has been brought to the attention of the AV that ARC staff delays the handling of mice with litters for 3 days after giving birth. As such, this could possibly delay the cage change frequency to 18 days. ARC Director informed the IACUC that ARC staff has adjusted their husbandry practices to identify instances when this may occur and to change the cage prior to parturition.

VII. IACUC Update

- A. Food and/or Fluid Regulation or Restriction: Policy was approved as edited. **Action Item:** Post to web and send notification.
- B. Principal Investigator Criteria and Responsibilities: Policy was tabled to clarify some items and will be reviewed at the April meeting.
- C. Rodent Genotyping: Policy was approved as written. **Action Item:** Post to web and send notification.

VIII. Continuing Education:

[OLAW Webinars and Podcasts](#)
[IACUC 101](#)
[ICARE workshops](#)

INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE

12:00 P.M.

** **

Meeting Minutes

April 20, 2022

Members Present: MB,JB,RJ,SS,MT,DC,ND,AZ,GR,RB,CM- alternate, DK- alternate

Members Absent: LM

Guests: LC,KL,JV,KJ,AR,RB

Review and approve IACUC Meeting Minutes from March 2022.

The minutes were approved as written.

Announcements from the Chair: May meeting has been rescheduled to Thursday May 26th. WebEx only. Welcome GR.

I. Protocols Approved Since Last Meeting

Approval Date	Protocol #	Protocol Type
4/4/2022	2020-68-138	Interim Review
4/7/2022	2021-166	Interim Review
4/16/2022	2022-190	Amendment
3/31/2022	2022-134-91	Renewal
4/19/2022	2020-69-141	Interim Review
4/19/2022	2022-197	Original
4/19/2022	2021-183	Amendment
4/16/2022	2022-50-97	Renewal
4/6/2022	2020-62-131	Amendment
4/19/2022	2019-57-122	Amendment
4/19/2022	2021-173	Amendment
4/19/2022	2020-67-139	Amendment
4/19/2022	2020-64-129	Amendment
4/19/2022	2022-47-100	Amendment
4/19/2022	2021-42-85	Amendment
4/18/2022	2022-106-105	Renewal
4/18/2022	2021-163	Interim Review

II. Unfinished Business

- A. SAFIPR Report Status Semi Annual Facility Inspection Program Review Update: The status of the report was updated.

III. New Business

- A. Full Committee Review
None

- B. Adverse Events
05-2022: The adverse event and associated management plan was reviewed and discussed.

- C. Semi-Annual Facility Inspection/Program Review Schedule
Facilities Inspection
May 9th

- JFLF: 2:00-3:30 pm or virtual
- JRL: 3:00-4:30 pm or virtual

May 10th

- ARC: 9:00-11:30 am, Laboratories – 1:00-3:00 pm
-

Program Review

May 3rd Occ. Health, Vet Care (WebEx) 1:30-3:00 pm

May 27th – Institutional Responsibilities/Disaster Plan (Teams) 9:00-10:30

D. Occupational Health & Safety Program Process Update (LC)

Animal User and PI Training Requirements: Policy was updated to include an annual medical surveillance requirement and approved as written. **Action Item:** Post to web and send notification.

E. PAM Breeding Colony Update: Interviews with the PI's and ARC breeding technicians have been completed. Observations of cage changing to view cage densities and litters and genotyping are scheduled.

IV. AV Update

A. IVC Cage Change Frequency: Equipment has been ordered to measure ammonia levels in the Technoplast cages and results should be ready for the May meeting. Disposable cage company InoVive has published literature on their website indicating a 14 cage change frequency is acceptable. As such, a 14 day cage change frequency is acceptable in the JRL. The AV also mentioned that the activity of changing cages slightly raises heart rate and blood pressure of mice for a short period of time. She does not feel the brief elevated heart rate and blood pressure is of concern. However the ammonia levels need to be evaluated to determine the optimal cage change frequency of the Technoplast cages.

B. Gas Anesthesia: New equipment has been purchased and is expected to arrive this week. Anesthesia machines will be reconfigured, and staff will be retrained.

V. IACUC Update

A. Principal Investigator Criteria and Responsibilities: Policy was tabled to align with the university/OSP criteria to be PI and will be brought to the next meeting.

B. IACUC Member Training & Continuing Education: Policy was approved as written. **Action Item:** Post to web and send notification.

C. Mouse Breeding: The policy was approved as written. **Action Item:** Post to web and send notification.

VI. Continuing Education:

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INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE

12:00 P.M.

** **

Meeting Minutes

May 26, 2022

Members Present: MB,JB,SS,MT,DC,ND, AZ,GR, DK- alternate, RB

Members Absent: LM,RJ,CM- alternate

Guests: LC, KL,JV, KJ, AR, RB2

Review and approve IACUC Meeting Minutes from April 20, 2022.

The minutes were approved as edited.

Announcements from the Chair: The June meeting has been rescheduled to June 7th @ 12:30- 2:30. The meeting will be in person. A new USDA inspector, Dr. Ann Goplen has been assigned to MSU. AAALAC site visit is scheduled for July 11th.

I. Protocols Approved Since Last Meeting

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<input type="checkbox"/>	Approval ...	Protocol #	Protocol Type
<input type="checkbox"/>	5/26/2022	2019-109-112	Renewal
<input type="checkbox"/>	4/26/2022	2022-135-114	Renewal
<input type="checkbox"/>	4/28/2022	2022-202	Original
<input type="checkbox"/>	5/26/2022	2022-158-95	Amendment
<input type="checkbox"/>	4/29/2022	2021-37-83	Amendment
<input type="checkbox"/>	5/5/2022	2020-15-51	Amendment
<input type="checkbox"/>	5/27/2022	2022-197	Amendment
<input type="checkbox"/>	5/4/2022	2020-153-145	Amendment
<input type="checkbox"/>	5/26/2022	2022-200	Amendment
<input type="checkbox"/>	5/26/2022	2021-183	Amendment
<input type="checkbox"/>	5/26/2022	2021-174	Amendment
<input type="checkbox"/>	5/3/2022	2021-118-01	Amendment
<input type="checkbox"/>	5/3/2022	2022-50-97	Amendment
<input type="checkbox"/>	5/20/2022	2022-52-110	Renewal
<input type="checkbox"/>	4/28/2022	2022-182	Original
<input type="checkbox"/>	5/17/2022	2022-186	Original
<input type="checkbox"/>	5/6/2022	2020-36	Amendment
<input type="checkbox"/>	5/6/2022	2019-54-117	Amendment

II. Unfinished Business

- A. SAFIPR Report Status Semi Annual Facility Inspection Program Review Update: The status of the report was updated, two items were carried over.

III. New Business

- A. Full Committee Review
None

- B. Protocol Analgesic Issue

The AV reviewed three Post-Operative Surgical Logs and was concerned the analgesic was not provided as indicated in the protocol and the documentation of post-operative monitoring was incomplete. Further investigation determined the incorrect protocol was written on the Post-Operative Surgical Logs, and the animals were provided analgesics as indicated in the correct protocol. The PI has two protocols with identical surgical procedures, that have different analgesic regimens. As such it was requested the following items to be completed by the PI and provide documentation prior the next surgery:

- Review protocol procedures, monitoring, and documentation with project personnel and provide documentation to the IACUC.
- Schedule and conduct a meeting with the AV and project personnel to review surgical procedures to facilitate compliance with the IACUC Rodent Survival Surgery Policy.
- Ensure all training records for protocol associates listed on protocols are current and provide documentation to the IACUC.
- Work with the AV to amend the analgesic section on protocols to align.

- C. Adverse Events

06-2022: The adverse event and associated management plans were reviewed and discussed.

- C. Occupational Health & Safety Program Process Update: Requested revisions to the forms have been incorporated and the links are ready to be activated.

- D. PAM: PAM of three breeding protocols has been completed. Findings, conclusions and action items were presented to the committee. PAM reports were approved as written.

IV. AV Update.

- A. Cage Change Frequency for IVC's: Ammonia sampling is underway, additional sampling data points are necessary to evaluate the cage microenvironment.
- B. Gas Anesthesia: Equipment has been assembled and ARC staff has been trained. Isoflurane badges will be provided to the ARC to verify the equipment and scavenging is working properly. Machine locations have not been determined, and investigator training will be performed in the future.
- C. Bat Update: Some bats from CSU are pregnant. The AV has consulted the research staff to determine solutions for pregnant animals and pups.
- D. Animal health cases are now logged into a spreadsheet which allows the AV to monitor cases and track trends more effectively.

VII. IACUC Update

- A. USDA Contingency Planning and Training of Personnel Rule Policy: The new contingency planning regulations require all licensees and registrants to develop, document, and follow an appropriate plan to provide for the humane handling, treatment, transportation, housing, and care of their animals in the event of an emergency or disaster. Upon completion of the contingency plan, licensees and registrants must provide training for personnel regarding their roles and responsibilities as described in the plan. MSU's Emergency Response Plan and personnel training aligns with the USDA requirements. No action is required to ensure compliance.
- B. Principal Investigator Criteria and Responsibilities: Policy was approved as edited. **Action Item:** Post to web and send notification.
- C. Use of Non Pharmaceutical Grade Materials: Policy was approved as written. **Action Item:** Post to web and send notification.
- D. Post Approval Monitoring: Policy was approved as written. **Action Item:** Post to web and send notification.

VIII. Continuing Education:

[OLAW Webinars and Podcasts](#)

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INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE

12:00 P.M.

** **

Meeting Minutes

June 6, 2022

Members Present: MB,JB,SS,ND,AZ,GR,RB, RJ,CM- alternate

Members Absent: LM,MT,DC,DK- alternate

Guests: LC,JV,KJ,AR,RB2, LS

Review and approve IACUC Meeting Minutes from May 26, 2022.

The minutes were approved as edited.

Announcements from the Chair: The chair introduced GR to the committee and asked members to introduce themselves. AAALAC site visit will be on July 11, 2022. Lunch will be scheduled with the committee and the AAALAC site visitors.

I. Protocols Approved Since Last Meeting

Approval Date	Protocol #	Protocol Type
6/3/2022	2022-109-112	Renewal
6/3/2022	2021-24-02	Amendment
5/27/2022	2022-197	Amendment
6/6/2022	2022-49-101	Renewal

II. Unfinished Business

None

III. New Business

A. Full Committee Review

None

B. Semi-Annual Facility Inspection Program Review Report to the IO

The report, findings, and correction schedule were reviewed, discussed, and approved as edited. There were no minority views.

C. AAALAC Briefing

AV provided an overview of the AAALAC site visit process and suggested looking at AAALAC FAQ's. Findings and suggestions for improvement from the previous site visit were discussed.

IV. AV Update.

A. Cage Change Frequency for IVCs: Ammonia sampling data was presented to the committee.

Data points were collected from cages with different strains, densities, and sex of animals.

Motion to approve IVC cage change interval at 14 days and present additional data in the future to ensure ammonia parameters remain within acceptable limits. Approved

B. Gas Anesthesia: Training is underway, two sessions are scheduled today.

C. Bat Update: Bats have not given birth but are expected to deliver shortly.

- V. Continuing Education:
[OLAW Webinars and Podcasts](#)
[IACUC 101](#)
[ICARE workshops](#)