

IBC Minutes for August 27, 2019

1:10 pm – 3:30 pm

WSU Pullman: Lighty 401; WSU Spokane: SPBS 204

Meeting ID: 41

Join from PC, Mac, Linux, iOS, or Android: <https://wsu.zoom.us/j/41>

IBC Members Present:

	Member	Affiliation/Role
1.	Alan Goodman	School of Molecular Biosciences; Scientist
2.	Mike Heston	Community Member; Pullman Fire Department
3.	Mike Kluzik	ORA Director; Research Assurances
4.	Rob O'Connor	Chair; Veterinary Microbiology and Pathology,
5.	Levi O'Loughlin	Biosafety Officer; Research Assurances
6.	Nina Woodford	Director, Office of the Campus Veterinarian

Alternate IBC Members Present:

	Member	Affiliation/Role
1.	Ryan Schwager	Research Assurances; Assistant BSO

IBC Members Absent:

	Member	Affiliation/Role
1.	Mark Hubbard	WSU ARC; Senior Manager
2.	Hanu Pappu	Plant Pathology
3.	Bin Shan	Elson S. Floyd College of Medicine
4.	Linda Thomashow	USDA/ARS; Plant Pathology
5.	Nathan Weller	Community Member; Pullman City Council

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Sonja Hartwig	Research Assurances; IBC Coordinator

I. Call to Order:

The meeting came to order at 13:12, with a quorum (6/11 members) present.

II. Announcements:

There were two announcements made by Levi O. Committee membership changed this term, including the appointment of Rob O. as Chair, Alan G. as full member, and Ryan S. as alternate member. Eric S. completed his term as IBC Chair and is no longer an IBC member, although he will be thanked formally for his service. Bin S. will leave WSU following the Sept. meeting and will likely be replaced by Levente Kapas. Additional Spokane representation is being recruited. The second announcement is that 2020 IBC meeting days will be scheduled the 4th Thursday of each month to accommodate member's schedules.

III. Minutes – July 30, 2019

The minutes were approved by consensus.

IV. BSL – 3 BAF None

V. BSL – 2 BAFs

A. New Protocols:

1. *BAF Number:* **1316-001** *Principal Investigator:* **Haverkamp, Hans**
Title: **Effects of a cool down on exercise-induced asthma in adult males and females**
Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Bin S** *Secondary Reviewer:* **Alan G**

Required Changes

- *Section 2B, indicate which cell types are counted in sputum samples and if they are associated with hazards.*

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the BSO.

Proposed Alan G, seconded by Rob O. Motion Carried (6/6)

2. *BAF Number:* **1317-001** *Principal Investigator:* **Islam, Mohammad**
Title: **Exploring the impact of water quality, sanitation and handwashing (WSH) interventions on fecal carriage of antibiotic resistant enteric bacteria among children in rural Bangladesh**

Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Rob O** *Secondary Reviewer:* **Levi O**

Required Changes

- *3A, changed E. coli administratively to an animal hazard.*

IBC Decision

Approve, with the completion of the administrative change

Proposed by Rob O, seconded by Levi O. Motion Carried (6/6).

3. *BAF Number:***1318-001** *Principal Investigator:* **Jackson, Darrell**
Title: **Synaptic Modification of AMPA Receptors Following Oxygen/Glucose Deprivation in U-251MG Cells**

Facilities: **Current**

BSM: **Current**

Primary Reviewer: **Mike K**

Secondary Reviewer: **Levi O**

Required Changes

- *Section 4.C.4: clarify the source of the PCR templates.*

IBC Decision

Defer, pending completion of the required change to the satisfaction of the BSO.

Proposed by Mike K, seconded by Rob O. Motion Carried (6/6)

4. *BAF Number :* **1319-001** *Principal Investigator:* **Schneider, Dave**
Title: **Pathogenesis, transmission and diagnosis of North American ruminant transmissible spongiform encephalopathies**

Facilities: **Current**

BSM: **Current**

Primary Reviewer: **Mark H**

Secondary Reviewer: **Alan G**

Required Changes

- *3B.4 Clarify containment of samples during transportation within WSU and to UI facilities*
- *4C.4 Specify animal tissues or give examples of those referred to as “other”*
- *Administrative change of 2H farm paddock from BSL1 to “other, complies with NSEP standards”*
- *Administrative change of 7A to indicate “This research utilizes only rodents that meets this acceptance”*

IBC Decision

Defer, pending Completion of the required changes to the satisfaction of the BSO.

Proposed by Alan G, seconded by Rob O. Motion Carried (6/6)

B. Amendments:

1. *BAF Number:* **825-010** *Principal Investigator:* **Davis, William C**
Title: **Role IL-17, IL-22, IL-23 and Reg T cells in pathogenesis Johnes's disease and bovine TB**
Facilities: **Current** *BSM:* **Under review**

Primary Reviewer: **Rob O** *Secondary Reviewer* **Levi O**

Required Changes

- *Rewrite the amendment/protocol to include only the current and proposed work, as the committee could not follow the current draft. The NIH needs to be consulted for animal containment with recombinant strains.*

IBC Decision

Deny amendment until a rewrite is submitted.

Proposed by Rob O, seconded by Alan G. Motion Carried (6/6)

VI. **BSL – 1 BAFs**

A. New Protocols:

1. *BAF Number:* **1320-001** *Principal Investigator:* **Bernhardt, Miranda**
Title: **Animal Production Core – Generation of gene edited mice using CRISPR**
Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Levi O** *Secondary Reviewer:* **Rob O**

Required Changes

- *7A, check both statements administratively*

IBC Decision

Approve, pending completion of the required change to the satisfaction of the BSO.

Proposed by Rob O, seconded by Levi O. Motion Carried (6/6)

B. Renewals:

1. *BAF Number:***998-006** *Principal Investigator:* **Steber, Camille**
Title: **Genetic Improvement of Wheat and Barley for Environmental Resilience, Disease Resistance, and End-use Quality**

Facilities: **Requested 8-7-2019** *BSM:* **Current**

Primary Reviewer: **Hanu P** *Secondary Reviewer:* **Andrei S**

Required Changes

- *2B Include brief discussion of all infectious agents listed in Section 3 and all r/sNA work.*
- *4C Complete table*

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the IBC committee at the next scheduled meeting.

Proposed by Levi O, seconded by Rob O Motion Carried (6/6)

2. *BAF Number:***1174-003** *Principal Investigator:* **Lavine, Laura**
Title: **Genetic mechanisms underlying nutrition-dependent trait growth in insects & insecticide resistance**

Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Levi O** *Secondary Reviewer:* **Rob O**

Required Changes

- *2A Clarify if the arthropods listed in 2A are used in research. If so, add narrative in Section 2B.*
- *2B Add brief narrative of the arthropods species listed in 2H are used in research*
- *2.6 Verify plant containment is appropriate and discuss in 2B what the plants are used for in research*

IBC Decision

Defer, pending completion of the required change to the satisfaction of BSO.

Proposed by Mike K seconded by Levi O. Motion Carried (6/6)

3. *BAF Number: 1252-005* *Principal Investigator: Oatley, Jon*
 Title: Gene Editing in Livestock
 Facilities:Current *BSM: Received 7-23-2019*

Primary Reviewer: Nina W

Secondary Reviewer: Mike K

Required Changes

- 2H, Change BSL-P 1 containment to animals
- 4C Clarify *E. coli* use
- 4C Clarify usage of Bovine, porcine, ovine and caprine testicular cells with r/sNA in the narrative of section 2B
- 7B Indicate possible use of STI (if desired)

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the reviewers and BSO.

Proposed by Levi O, seconded by Rob O. Motion Carried (6/6)

VII. BAFs Resolved in the Interim

A. Administrative Approvals:

1. *BAF Number : 1227-003* *Principal Investigator: Kirchhoff, Helmut*
 Title: Study the Dynamics of Photosynthetic Membranes in Plants
 - Personnel changes
2. *BAF Number: 1284-002* *Principal Investigator: Shaw, Dana*
 Title: Tick-Host-Pathogen interactions
 - Personnel changes, addition of HEK-293 (change in kind)
3. *BAF Number: 806-014* *Principal Investigator: White, Stephen*
 Title: Development of genetic and immunologic control measures in ruminant livestock for C. burnetii, OPPV, and B. ovis

- Addition of Facilities-room

B. Other Approvals:

1. *BAF Number: 620-013* *Principal Investigator: Black, M*
Title: Improving Suicide Genes for Cancer Gene Therapy Engineering Enzymes for Anti-tumor Suicide Gene Therapy
2. *BAF Number: 824-007* *Principal Investigator: Baszler, Tim*
Title: National Animal Disease Diagnostic Network:WA

C. Deactivations:

1. *BAF Number: 1248-002* *Principal Investigator: Wayman, Gary*
Title: “Viral expression of Proteins within the hippocampus”
De-activated per PI on 8-9-2019
2. *BAF Number: 1133-004* *Principal Investigator: Davis, Margaret*
Title: “Bacterial genotyping and antimicrobial resistance studies”
De-activated per PI on 8-26-2019

VIII. Deferred BAFs

Deferred BAFs – August 2019:

Review Key for revisions:

- **Green – can be reviewed/approved by BSO.**
- **Blue – to be reviewed and approved by the assigned reviewers.**
- **Purple - to be reviewed and approved by the IBC Chair**
- **Red – must be reviewed by the convened IBC**

1. *BAF Number: 1232-002* *Principal Investigator: Brozik, James*
Title: Model Membrane Assemblies and Membrane Proteins
Facilities: PI notified 9/10/18 *BSM: Requested 9/10/18*
Primary Reviewer: Eric S *Secondary Reviewer: Levi O*
 - 9/25/18: deferred by IBC, pending BAF revision and facility and BSM approval.
 - 1/4/19: followed up with PI.
 - 1/7/19: revised BAF received. Revisions sent to reviewers.

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- 2. **BAF Number: 1235-003** *Principal Investigator: Gerstner, Jason*
Title: Neurogenetics and behavioral analytics in Drosophila melanogaster
Facilities: Current *BSM: requested 9/10/18*
Primary Reviewer: Levi O *Secondary Reviewer: Bin S*
 - 9/25/18: deferred by IBC, pending BAF revision and BSM approval..
 - 1/4/19: followed up with PI
 - .
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- 3. **BAF Number: 1233-003** *Principal Investigator: Piovia-Scott, Jonah*
Title: The effects of chytrid fungal pathogens on amphibian hosts
Facilities: Notified/requested 10/22/18 *BSM: requested 10/22/18*
Primary Reviewer: Eric S *Secondary Reviewer: Nina W*
 - 10/30/18: deferred by IBC, pending BAF revision and facility approval.
 - 11/13/18: revised BAF and MTA received.
 - 11/15/18: revisions to reviewers.
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- 4. **BAF Number: 600-017** *Principal Investigator: Noh, Susan*
Title: Pathogen determinants of vector-borne transmission
Facilities: Under Review *BSM: Under Review*
Primary Reviewer: Nina W *Secondary Reviewer: Rob O.*
 - 12/4/18: Deferred by IBC, pending BAF revision and facility and BSM approval.
 - 12/11/18: BSM requested.
 - 12/18/18: Revised BAF received and forwarded to reviewers.
 - 12/19/18: reviewers had additional comments, which were sent to PI.
 - 1/2/19: Revised BAF and BSM received. Revisions sent to reviewers.
 - 7-1-2019 Rob answered and gave her approval
 - 7-5-2019 sent to Nina for her review
- 5. **BAF Number: 791-008** *Principal Investigator: Kang, Chulhee*
Title: Chemical and Biochemical bases for EDTA biodegradation
Facilities: Under Review *BSM: Under Review*
Primary Reviewer: Mark H *Secondary Reviewer: Bin S*
 - 12/4/18: Deferred by IBC, pending BAF revision and facility and BSM approval.
 - 12/11/18: BSM requested. PI called and requested assistance on transferring the info to the current iteration of the BAF. BSM update received.
 - 12/13/18: Revised BAF received and forwarded to reviewers. FR requested. BAF approved by both reviewers. One (of 2) FR received.
 - Room 264 needs BSO to look at.

- BAF needs reviewed by BSO
- BSM needs reviewed by BSO
- SH needs to request room inspection on Biotech/LSF 443
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6. *BAF Number:* **1300-001** *Principal Investigator:* **Varnum, Michael**
Title: **Molecular mechanisms of retinal photoreceptor function and dysfunction**
Facilities: **Requested 1/14** *BSM:* **Requested 1/14**
Primary Reviewer: **Nina W** *Secondary Reviewer:* **Eric S**

- 1/29/19: Deferred by IBC, pending BAF revision and facility and BSM approval.
- BSM approved
- Facilities have been inspected, need BSO signature
- Newest version of BAF needs BSO to review

7. *Number:* **1244-003** *Principal Investigator:* **Wisor, Jonathan**
Title: **The study of metabolism and Sleep in the Brains of Mice**
Facilities: **Requested 3-15-19** *BSM:* **Current**
Primary Reviewer: **Nina W** *Secondary Reviewer:* **Levi O**

- 3-26-2019 Deferred pending completion of changes to BAF with BSO approval
- BSM approved
- Spokane rooms need approval from BSO
- New BAF needs approval of BAF
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- Revised BAF requested per e-mail. (SH)

8. *BAF Number:* **1304-001** *Principal Investigator:* **Hu, Jinguo**
Title: **Develop and Maintain Superior Crop Genetic Germplasm by Maintaining and Characterizing Plant and Microbial Resources**
Facilities: **Current** *BSM:* **Current**
Primary Reviewer: **Levi O** *Secondary Reviewer:* **Eric S**

- 3-26-2019 deferred pending full committee review
- Needs facilities
- Revised BAF requested per e-mail (SH)
- Second request for info for IBC sent by SH 8-8-2019

9. BAF Number: **1307-001** Principal Investigator: **Peters, John**
*Title: **Synthetic Symbioses: Extending biological nitrogen fixation to a grass crop plant***

*Facilities: **Current** BSM: **Current***

*Primary Reviewer: **Linda T** Secondary Reviewer: **Andrei S***
Defer. Pending completion of required changes subject to BSO Approval

- What entity is supplying the barley for the study
- Facilities complete
- BSM complete
- BAF needs source of barley, then BSO can approve

10. BAF Number: **1308-001** Principal Investigator: **Cornejo, Omar**
*Title: **Neutral rates of recombination in Streptococcus pneumoniae***

*Facilities: **Current** BSM: **Current***
*Primary Reviewer: **Eric S** Secondary Reviewer: **Alan G***

- *Deferred pending required changes, reviewed by full IBC next meeting unless the use of Rifampicin is deleted, in that case the protocol can be cleared by the acceptance of Eric C and Alan G*
- *Defer until completion of the required changes to the satisfaction of the BSO Reviewers*
- *7-1-2019 received new version of BAF*
- *7-5-2019 sent Dr. Cousins new BAF to reviewers*
- *Eric replies that he has concerns, Alan replies that he approves if the changes that Eric requests*
- *BSM completed*
- *Facilities completed*

11. BAF Number: **1313-001** Principal Investigator: **Cunha, Cristina**
*Title: **Immunological intervention of malignant catarrhal fever virus-induced disease in ruminants***

*Facilities: **Current** BSM: **Current***
*Primary Reviewer: **Alan G** Secondary Reviewer: **Nina W***

- 2B.F, 2B.H Change ABSL-1 to ABSL-2
- 2B.1 Clarify procedure as to what is infected / what is challenged

- Risk assessment for PPE from BSO (Check BSM)
- 3B-1 Remove word “initially” (project is with rabbits)
- 4A.D3 Needs to be checked and “No” answered to Experiment is likely to enhance pathogenicity” and “No” to “Experiment extends the host range”
- 4C.4 Indicate BSL-2

Defer, pending the completion of the required changes to the satisfaction of the BSO and the reviewers.

7-5-2019 PI sent BAF

7-5-10 sent to Alan G Nina W and Levi O

7-5 Nina responds, says chart still has blanks and thinks it is an ABSI-2 lab instead of ABSL1

*Levi instigated some changes to the BAF and asked PI to respond, **haven't heard back from PI as of 7-17-19***

Facilities are complete

Need BSM looked at by BSO

12. BAF Number: 1314-001 *Principal Investigator: Cousins, Asaph*

Title: Engineering photosynthesis in *Sorghum bicolor* for improved performance Under water stress and to optimize water relations to enhance drought tolerance and WUE (water use efficiency).

Facilities: Current

BSM: Current

Primary Reviewer: Levi O

Secondary Reviewer: Eric S

Required Changes:

- 4C.1 Specify general category of proteins
- 4C.2 List strains of *E. coli*
- 4B.9 check “yes” or remove question 9
- Is all of the personnel included in the BAF application?
- 2B Define plant assay, define biochemical assay
- Please indicate not generating transgenic plants
- Provide source of transgenic plants

IBC Decision:

Defer, pending completion of required changes to the satisfaction of the reviewers.

- BSM finished
- Facilities Completed
- Need BAF looked at by BSO, Eric S voted ok to pass

13. BAF Number:1315-001

Principal Investigator: **Fry, Lindsay**

Title: **Immunopathogenesis and Vaccine Development of Bovine and Equine Theileriosis**

Facilities: **Current** *BSM:* **Under Review**

Primary Reviewer: **Levi O**

Secondary Reviewer: **Mark H**

Required Changes

- 2D Needs to be a “yes” non vertebrates involved
- 2G.2 Define what “other” means
- 4.A DD4 check both “No”
- 4C.1 Indicate BSL-2

IBC Decision

Defer, pending completion of required changes to the satisfaction of the reviewers

- New BAF for BSO to review (e-mail sent to M Hubbard 8-8-2019)
- Facilities are complete
- BSM needs BSO to review

14. . BAF Number:1250-005

Principal Investigator: **Gibson, Michael**

Title: **Heritable disease and pharmacology**

Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Bin S**

Secondary Reviewer: **Rob O**

Required Changes

- 2B Clarification on CRISPR-Cas9
- 4C Mouse hosts should be listed as well as “human” clarified
- 4C3 Better description of genes
- 5A.6 Check “Yes” to characterized agents

IBC Decision

Defer, pending completion of the required changes to the satisfaction of reviewers

- Facilities are complete
- BSM is complete

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15 *BAF Number:* **1255-002** *Principal Investigator:* **Cheng, Zhaokang**

Title: **Novel regulators of cell death in heart disease**

Facilities: **Current** *BSM:* **Recieved**

Primary Reviewer: **Alan G**

Secondary Reviewer **Rob O**

Required Changes

- 3B.4 What type of containment
- 3B.3 Biosafety Cabinet useage
- 4C.4 clarify getting DNA from other places? BSL should be 2
- 5A.6 Should be “yes”

IBC Decision

Defer, pending completion of the required changes to the satisfaction of reviewers

- Post IBC BAF ready for BSO to review, both Reviewers gave their ok (Rob and Alan)

BSM ready for review of BSO

- Facilities are complete.

16. *BAF Number:* **1054-006** *Principal Investigator:* **Thomashow, Linda**

Title: **Genetic enhancement of wheat to control fungal pathogens**

Facilities: **?**

BSM: **?**

Primary Reviewer: **Andrei S**

Secondary Reviewer: **Hanu P**

Required Changes

- 2B more details needed, explanation of how to analyze microbial genes
- 4C.1 are new lines of trans wheat produced?
- 6B.6 How will the material be decontaminated chemically?

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the reviewer

17. *BAF Number:* **989-010** *Principal Investigator:* **Dhingra, Amit**

Title: **Plant Genomics and Biotechnology for Crop Improvement**

Facilities: **Current** *BSM:* **Under Review**

Primary Reviewer: **Andrei S**

Secondary Reviewer: **Hanu P**

Required Changes

- 3B.2 Source of Erwinia
- 2A Rewrite in lay language so reader outside of the field could understand
- 3B.5 Possible use of chemicals?
- 4C Hosts, stone fruits, not listed
- L4C.4 list species as source of DNA

IBC Decision

Defer, pending completion of required changes to the satisfaction of the reviewers.

- 8-8-2019 BSM waiting for review, facilities are finished and a revised BAF (post IBC) to be review by BSO.

18. . *BAF Number:* 883-008 *Principal Investigator:* **Lange, B**
Title: **Regulation of Isoprenoid Biosynthesis in Plants**
Facilities: **Received** *BSM:* **Current**

Primary Reviewer: **Andrei S** Secondary Reviewer: **Eric S**

Required Changes

- 4C2 Vector examples
- 4C3 Gene examples
- 4c.4 list some species

IBC Decision

Defer, pending completion of required changes to the satisfaction of the reviewers

- 7-5-2019 PI sent facilities, BAF, BSM revised

IX. Biosafety Program Update NO new incidences reported

X. Old Business None

XI. Adjournment

Meeting adjourned at 15:17. Proposed by Levi O and seconded Rob O.

Motion carried (6/6)

2019 Meeting Dates:

January 29, February 26, March 26, April 23, May 21, June 25, July 30, August 27, September 24, October 29, and December 3.

WSU IBC Minutes (draft)
September 24, 2019

IBC Members Present:

	Member	Affiliation/Role
1.	Alan Goodman	School of Molecular Biosciences; Scientist
2.	Mike Heston	Community Member; Pullman Fire Department
3.	Mark Hubbard	WSU ARC; Senior Manager
4.	Mike Kluzik	ORA Director; Research Assurances
5.	Rob O'Connor	IBC Chair; Veterinary Microbiology and Pathology
6.	Levi O'Loughlin	Biosafety Officer; Research Assurances
7.	Nathan Weller	Community Member; Pullman City Council
8.	Nina Woodford	Director, Office of the Campus Veterinarian

Alternate IBC Members Present:

	Member	Affiliation/Role
1.	Ryan Schwager	Research Assurances; Assistant BSO
2.	Andrei Smertenko	Institute of Biological Chemistry; Plant Expert

IBC Members Absent:

	Member	Affiliation/Role
1.	Linda Thomashow	USDA/ARS; Plant Pathology
2.	Bin Shan	Elson S. Floyd College of Medicine
3.	Hanu Pappu	Plant Pathology

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Sonja Hartwig	Research Assurances; IBC Coordinator
2.	Jennifer Kopanke	Associate director, Attending Vet, Spokane (by zoom)
3.	Eric Sheldon	Past IBC Chair

I. Call to Order:

The meeting came to order at 13:13 with a quorum of (9/11 members) present (Andrei S. served as an alternate for Hanu P.).

II. Announcements:

Eric Sheldon was presented with a plaque in recognition of his years of service on the IBC as a member and chair. (He then left the meeting).

Levi reported that the Spokane representative Bin Shan will depart WSU and the IBC in October, but will be replaced by Levente Kapás, Associate Professor in Elson S. Floyd College of Medicine.

III. Minutes – August 27, 2019

The minutes were approved by consensus.

IV. BSL-3 BAFs

A. New Protocols: none

B. Renewals: none

V. BSL-2 BAFs

C. New Protocols:

1. *BAF Number:* **1321-001** *Principal Investigator:* **Phelps, Michael**
Title: **Linking genotype to phenotype in aquatic organisms**
Facilities: **Current** *BSM:* **Requested 8-29-2019**
Primary Reviewer: **Nina W** *Secondary Reviewer:* **Alan G**

Required Changes

- 2B Verify inactivation of modified gametes from all species.
- 3A Indicate that Lentivirus, AAV, and HEK293T are Human Hazards, VHSV is Animal Hazards and AAV is BSL1. Section 3B3 should indicate how these hazards are mitigated (i.e., details of 3rd generation Lentiviral vector that limits replication, etc.)
- 4A Change designation to IIID, D1, D3 (mark “no” to each sub question), D4 (mark “no” to each sub question), IIIE.E1 sub question should be marked “yes,” and remove IIIE.E3 designation.
- 5A Remove 3 and 4 if not using human or primate cells or discuss in section 2B if using
- 7B.2 Likely indicate STI and “Other” to treat gametes with chemicals. Discuss with BSO as needed.
- 7B.1 Discuss whether an FDA INAD is required for shipping animals

IBC Decision

Defer, pending completion of required changes to the satisfaction of Nina W. and Alan G.

Proposed by Nina W., seconded by Alan G. Motion Carried (9-9).

D. Renewals:

BAF Number: **1167-003** *Principal Investigator:* **Lazarus, Philip**
Title: **Exemestane metabolic study for the personal treatment of breast cancer patients.**
Facilities: **Current** *BSM:* **Requested 8-30-2019**
Primary Reviewer: **Bin S** *Secondary Reviewer:* **Rob O**

Required Changes

- 2A Include a description of the drug Exemestane including its purpose and uses.
- 2B Indicate if GST is the only enzyme to be used or discuss others

- 3A Check BSL-1 for *E. coli* and indicate strain(s)
- 4C Complete chart and indicate where human hepatic RNA comes from (i.e., isolated, synthetic)
- 5A.7-D Indicate Hep B vaccination is offered for human blood and body fluids

IBC Decision

Defer, pending completion of required changes to the satisfaction of Levi O. and Rob O.

Proposed by Rob O and seconded by Levi O. Motion carried (9-9).

2. BAF Number: 1180-005

Principal Investigator: Jansen, Heiko

Title: Dissection of bear cellular rhythms and metabolism using lentiviral techniques.

Facilities: Current

BSM: Current

Primary Reviewer: Mark H

Secondary Reviewer: Nina W

Required Changes

- 2B Explain collection frequency of preadipocytes (include safety information)
- 3B.1, 3B.2, 3B.5, 3B.6 Complete sections
- 4A IIID D.1 Category should be marked, IIIE. E.1 needs to be marked “Yes” because you are producing virus
- 4C.3 Remove “Vary, depending on exp. design and goals” and replace with specifics; also indicate biosafety level 1 instead of 2 for genes
- 5A.4 Remove primary cells as they are not human or primate; complete identification of HEK293T

IBC Decision

Defer, pending completion of required changes to the satisfaction of Nina W and Mark H.

Proposed by Mark H and seconded by Mike K. Motion carried (9-9).

3. BAF Number: 825-010

Principal Investigator: Davis, William C

Title: Role IL-17, IL-22, IL-23 and Reg T cells in Pathogenesis Johne’s disease and bovine TB

Facilities: Current

BSM: Current

Primary Reviewer: Rob O

Secondary Reviewer: Levi O

Required Changes

- 2H Remove Vet Large Animal 160 and ABSL1 until approved by NIH
- 3A Indicate Map and BCG are Human Hazards
- 3B.4 Indicate syringes are capped or contained
- 3B.5/6 Bacteria will be decontaminated with chemicals and autoclave. Remove STI and Compost and add to section 6 if applicable (is there data that composting inactivates Map/BCG/BHV4?)

- 4A Remove categories IIIE and IIIE-E1
- 4C Information can be removed, as all cloning is finished
- 5A 7D should be checked “yes,” as WSU policy indicates Hep B should be offered when working with Human Blood

IBC Decision

Defer, pending completion of required changes to the satisfaction of Rob O and Levi O.

Proposed by Rob O and seconded by Nina W. Motion carried (9-9)

VI. BSL-1 BAFs

E. New Protocols:

1. *BAF Number:* **1322-001** *Principal Investigator:* **Griswold, Michael**
Title: **Regulation of retinoid homeostasis during spermatogenesis**
Facilities: **Requested 8-30-2019** *BSM:* **Requested 8-30-2019**
Primary Reviewer: **Alan G** *Secondary Reviewer:* **Levi O**

Required Changes

- Section 2 Insert and complete parts D, E, F and I
- 2A Use present tense to indicate mice are being created.
- Insert and complete Section 4
- 7A Check “This exception does not apply...”

IBC Decision

Defer, pending completion of required changes to the satisfaction of Alan G and Levi O

Proposed by Alan G and seconded by Levi O. Motion carried (9-9).

2. *BAF Number:* **1323-001** *Principal Investigator:* **Appleyard, Suzanne**
Title: **The role of glutamate in the control of food intake**
Facilities: **Current** *BSM:* **Current**
Primary Reviewer: **Levi O** *Secondary Reviewer:* **Mark H**

Required Changes

- 3A AVV is a Human Hazard

IBC Decision

Approve, pending Administrative changes.

Proposed by Levi O and seconded by Alan G. Motion carried (9-9)

F. Renewals: none

VII. BAFs Resolved in the Interim

A. Administrative Approvals:

1. *BAF Number: 1284-003 Principal Investigator: Shaw, Dana*

Title: Tick-Host-Pathogen interactions

- Personnel changes

2. *BAF Number :129:002 Principal Investigator: Minto, Michael*

Title: Validation Studies for Inactivation of Foodborne Pathogens

- Personnel changes

B. Other Approvals:

1. *BAF Number: 1255-002 Principal Investigator: Cheng, Zhaokang*

Title: Novel regulators of cell death in heart disease

2. *BAF Number: 1174-003 Principal Investigator: Lavine, Laura*

Title: Genetic mechanisms underlying nutrition-dependent trait growth in insects & Insecticide resistance

3. *BAF Number: 1319-001 Principal Investigator: Schneider, David*

Title: Pathogenesis, transmission and diagnosis of North American ruminant Transmissible spongiform encephalopathies

4. *BAF Number: 1318-001 Principal Investigator: Jackson, Darrell*

Title: Synaptic Modification of AMPA Receptors Following Oxygen/Glucose Deprivation in U-251MG Cells

5. *BAF Number: 1308-001 Principal Investigator: Cornejo, Omar*
Title: Neutral rates of recombination in Streptococcus pneumonia

6. *BAF Number: 1315-001 Principal Investigator: Fry, Lindsay*
Title: Immunopathogenesis and Vaccine Development of Bovine and Equine Theileriosis

7. *BAF Number: 1313-001 Principal Investigator: Cunha, Cristina*
Title: Immunological intervention of malignant catarrhal fever virus-induced Disease in ruminants

VIII. Deferred BAFs

Deferred BAFs – September 2019:

Review Key for revisions:

- **Green – can be reviewed/approved by BSO.**
- **Blue – to be reviewed and approved by the assigned reviewers.**
- **Purple - to be reviewed and approved by the IBC Chair**
- **Red – must be reviewed by the convened IBC**

1. *BAF Number: 1232-002 Principal Investigator: Brozik, James*
Title: Model Membrane Assemblies and Membrane Proteins
Facilities: PI notified 9/10/18 BSM: Requested 9/10/18
Primary Reviewer: Eric S Secondary Reviewer: Levi O
 - 9/25/18: deferred by IBC, pending BAF revision and facility and BSM approval.
 - 1/4/19: followed up with PI.
 - 1/7/19: revised BAF received. Revisions sent to reviewers.
 -

2. *BAF Number: 1235-003 Principal Investigator: Gerstner, Jason*
Title: Neurogenetics and behavioral analytics in Drosophila melanogaster
Facilities: Current BSM: requested 9/10/18
Primary Reviewer: Levi O Secondary Reviewer: Bin S
 - 9/25/18: deferred by IBC, pending BAF revision and BSM approval..

- 1/4/19: followed up with PI
- .
-

3. **BAF Number: 1233-003** *Principal Investigator: Piovio-Scott, Jonah*

Title: The effects of chytrid fungal pathogens on amphibian hosts

Facilities: Notified/requested 10/22/18 BSM: requested 10/22/18

Primary Reviewer: Eric S

Secondary Reviewer: Nina W

- 10/30/18: deferred by IBC, pending BAF revision and facility approval.
- 11/13/18: revised BAF and MTA received.
- 11/15/18: revisions to reviewers.
-

4. **BAF Number: 600-017** *Principal Investigator: Noh, Susan*

Title: Pathogen determinants of vector-borne transmission

Facilities: Under Review BSM: Under Review

Primary Reviewer: Nina W

Secondary Reviewer: Rob O.

- 12/4/18: Deferred by IBC, pending BAF revision and facility and BSM approval.
- 12/11/18: BSM requested.
- 12/18/18: Revised BAF received and forwarded to reviewers.
- 12/19/18: reviewers had additional comments, which were sent to PI.
- 1/2/19: Revised BAF and BSM received. Revisions sent to reviewers.
- 7-1-2019 Rob answered and gave her approval
- 7-5-2019 sent to Nina for her review

5. **BAF Number: 791-008** *Principal Investigator: Kang, Chulhee*

Title: Chemical and Biochemical bases for EDTA biodegradation

Facilities: Under Review BSM: Under Review

Primary Reviewer: Mark H

Secondary Reviewer: Bin S

- 12/4/18: Deferred by IBC, pending BAF revision and facility and BSM approval.
- 12/11/18: BSM requested. PI called and requested assistance on transferring the info to the current iteration of the BAF. BSM update received.
- 12/13/18: Revised BAF received and forwarded to reviewers. FR requested. BAF approved by both reviewers. One (of 2) FR received.
- Room 264 needs BSO to look at.
- BAF needs reviewed by BSO
- BSM needs reviewed by BSO
- SH needs to request room inspection on Biotech/LSF 443
-

6. **BAF Number: 1300-001** *Principal Investigator: Varnum, Michael*

Title: Molecular mechanisms of retinal photoreceptor function and dysfunction

Facilities: Requested 1/14

BSM: Requested 1/14

Primary Reviewer: Nina W

Secondary Reviewer: Eric S

- 1/29/19: Deferred by IBC, pending BAF revision and facility and BSM approval.
- BSM approved
- Facilities have been inspected, need BSO signature
- Newest version of BAF needs BSO to review

7. BAF Number: 1244-003

Principal Investigator: Wisor, Jonathan

Title: The study of metabolism and Sleep in the Brains of Mice

Facilities: Requested 3-15-19

BSM: Current

Primary Reviewer: Nina W

Secondary Reviewer: Levi O

- 3-26-2019 Deferred pending completion of changes to BAF with BSO approval
- BSM approved
- Spokane rooms need approval from BSO
- New BAF needs approval of BAF
-
- Revised BAF requested per e-mail. (SH)

8 BAF Number: 1304-001

Principal Investigator: Hu, Jinguo

Title: Develop and Maintain Superior Crop Genetic Germplasm by Maintaining and Characterizing Plant and Microbial Resources

Facilities: Current

BSM: Current

Primary Reviewer: Levi O

Secondary Reviewer: Eric S

- 3-26-2019 deferred pending full committee review
- Needs facilities
- Revised BAF requested per e-mail (SH)
- Second request for info for IBC sent by SH 8-8-2019

9. BAF Number:1307-001

Principal Investigator: Peters, John

Title: *Synthetic Symbioses: Extending biological nitrogen fixation to a grass crop plant*

Facilities: Current BSM: Current

Primary Reviewer: Linda T

Secondary Reviewer: Andrei S

Defer. Pending completion of required changes subject to BSO Approval

- What entity is supplying the barley for the study
- Facilities complete
- BSM complete
- BAF needs source of barley, then BSO can approve

10. BAF Number: 1314-001

Principal Investigator: Cousins, Asaph

Title: Engineering photosynthesis in *Sorghum bicolor* for improved performance Under water stress and to optimize water relations to enhance drought and WUE (water use efficiency).

Facilities: Current

BSM: Current

Primary Reviewer: Levi O

Secondary Reviewer: Eric S

Required Changes:

- 4C.1 Specify general category of proteins
- 4C.2 List strains of *E. coli*
- 4B.9 check “yes” or remove question 9
- Is all of the personnel included in the BAF application?
- 2B Define plant assay, define biochemical assay
- Please indicate not generating transgenic plants
- Provide source of transgenic plants
-

IBC Decision:

Defer, pending completion of required changes to the satisfaction of the reviewers.

- BSM finished
- Facilities Completed
- Need BAF looked at by BSO, Eric S voted ok to pass

11. BAF Number: 1250-005

Principal Investigator: Gibson, Michael

Title: Heritable disease and pharmacology

Facilities: Current BSM: Current

Primary Reviewer: Bin S

Secondary Reviewer: Rob O

Required Changes

- 2B Clarification on CRISPR-Cas9
- 4C Mouse hosts should be listed as well as “human” clarified
- 4C3 Better description of genes
- 5A.6 Check “Yes” to characterized agents

IBC Decision

Defer, pending completion of the required changes to the satisfaction of reviewers

- Facilities are complete
- BSM is complete

12. BAF Number: **1054-006** Principal Investigator: **Thomashow, Linda**

Title: **Genetic enhancement of wheat to control fungal pathogens**

Facilities: ? BSM: ?

Primary Reviewer: **Andrei S** Secondary Reviewer: **Hanu P**

Required Changes

- 2B more details needed, explanation of how to analyze microbial genes
- 4C.1 are new lines of trans wheat produced?
- 6B.6 How will the material be decontaminated chemically?

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the reviewer

13. BAF Number: **989-010** Principal Investigator: **Dhingra, Amit**

Title: **Plant Genomics and Biotechnology for Crop Improvement**

Facilities: **Current** BSM: **Under Review**

Primary Reviewer: **Andrei S** Secondary Reviewer: **Hanu P**

Required Changes

- 3B.2 Source of Erwinia
- 2A Rewrite in lay language so reader outside of the field could understand
- 3B.5 Possible use of chemicals?
- 4C Hosts, stone fruits, not listed
- L4C.4 list species as source of DNA

IBC Decision

Defer, pending completion of required changes to the satisfaction of the reviewers.

- 8-8-2019 BSM waiting for review, facilities are finished and a revised BAF (post IBC) to be review by BSO.

14. BAF Number: 883-008 Principal Investigator: **Lange, B**

Title: **Regulation of Isoprenoid Biosynthesis in Plants**

Facilities: **Received** BSM: **Current**

Primary Reviewer: **Andrei S** Secondary Reviewer: **Eric S**

Required Changes

- 4C2 Vector examples
- 4C3 Gene examples
- 4c.4 list some species

IBC Decision

Defer, pending completion of required changes to the satisfaction of the reviewers

- 7-5-2019 PI sent facilities, BAF, BSM revised

15. BAF Number: **1316-001** Primary Investigator: **Haverkamp, Hans**

Title: **Effects of a cool down on exercise-induced asthma in adult males and Females**

Facilities: **Current** BSM: **Current**

Primary Reviewer: **Bin S** Secondary Reviewer: **Alan G**

Required Changes

- Section 2B, indicate which cell types are counted in sputum samples and if they are associated with hazards.
- 8-27-2019 Defer, pending required BAF changes to the satisfaction of BSO
- 8-28-2019 e-mail to PI listing necessary change

16. BAF Number: **825-010** Principal Investigator: **Davis, William C**

Title: **Role IL-17, IL-22, IL-23 and Reg T cells in pathogenesis Johne's disease and bovine TB**

Facilities: **Current** BSM: **Under review**

Primary Reviewer: **Rob O** Secondary Reviewer **Levi O**

Required Changes

- Rewrite the amendment/protocol to include only the current and proposed work, as the committee could not follow the current draft. The NIH needs to be consulted for animal containment with recombinant strains.

IBC Decision

Deny amendment until a rewrite is submitted.

Proposed by Rob O, seconded by Alan G. Motion Carried (6/6)

- 9-4-2019 E mail sent to Dr Davis on denial of BAF
- 9-4-2019 Dr. Davis asks for more information on necessary changes to BAF
-

- 17.** **BAF Number:998-006** *Principal Investigator: Steber, Camille*
 Title: Genetic Improvement of Wheat and Barley for Environmental Resilience, Disease Resistance, and End-use Quality

Facilities: **Requested 8-7-2019** *BSM: Current*

Primary Reviewer: Hanu P *Secondary Reviewer Andrei S*

Required Changes

- 2B Include brief discussion of all infectious agents listed in Section 3 and all r/sNA work.
- 4C Complete table

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the IBC committee at the next scheduled meeting.

- 8-28-2019 send please respond message to PI

- 18.** **BAF Number: 1252-005** *Principal Investigator: Oatley, Jon*
 Title: Gene Editing in Livestock
 Facilities:Current **BSM: Received 7-23-2019**

Primary Reviewer: Nina W *Secondary Reviewer: Mike K*

Required Changes

- *2H, Change BSL-P 1 containment to animals*
- *4C Clarify E. coli use*
- *4C Clarify usage of Bovine, porcine, ovine and caprine testicular cells with r/sNA in the narrative of section 2B*
- *7B Indicate possible use of STI (if desired)*

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the reviewers and BSO.

- 8-28-2019 request for Post IBC meeting
- 8-29-2019 received copy of NIH guidelines on recombinant
- 8-29-2019 received revised BAF from Melissa Oatley

IX. Biosafety Program Update

URL's in protocols will be converted to PDF's and saved in the PI's files to ensure they will be available for future perusal.

X. Adjournment

Meeting adjourned at 14:55.

Proposed by Levi O and seconded by Rob O. Motion carried (9-9).

WSU IBC Minutes
October 29, 2019

IBC Members Present:

	Member	Affiliation/Role
1.	Alan Goodman	School of Molecular Biosciences; Scientist
2.	Mike Heston	Community Member; Pullman Fire Department
3.	Mike Kluzik	ORA Director; Research Assurances
4.	Levente Kapás	Elson S. Floyd College of Medicine
5.	Rob O'Connor	IBC Chair; Veterinary Microbiology and Pathology
6.	Levi O'Loughlin	Biosafety Officer; Research Assurances
7.	Linda Thomashow *	USDA/ARS; Plant Pathology
8.	Nina Woodford	Director, Office of the Campus Veterinarian

Alternate IBC Members Present:

	Member	Affiliation/Role
1.	Jennifer Kopanke	Associate Director Attending Vet
2.	Ryan Schwager	Research Assurances; Assistant BSO

IBC Members Absent:

	Member	Affiliation/Role
1.	Andrei Smertenko	Institute of Biological Chemistry; Plant Expert
2.	Nathan Weller	Community Member; Pullman City Council

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Sonja Hartwig	Research Assurances; IBC Coordinator

* Arrived after the Call To Order.

I. Call to Order:

The meeting came to order at 13:10 with a quorum of (7/10 members) present.

II. Announcements:

Linda T joined the group at 13:13. Quorum of (8/10) present. Mark Hubbard is no longer with WSU and has withdrawn membership. His replacement is being recruited.

III. Minutes – September 24, 2019

The minutes were passed by consensus.

IV. BSL-3 BAFs none

A. Renewals:

V. BSL-2 BAFs

B. New Protocols:

1. *BAF Number:* **1325-001** *Principal Investigator:* **Ahmed Salah**
 Title: **Evaluation of the mechanisms of pathogenesis in rheumatic diseases**
 Facilities: **Current** *BSM:* **Requested 10-14-2019**
 Primary Reviewer: **Rob O** *Secondary Reviewer:* **Levi O**

Required Changes:

- 2B Provide description of processes that could generate aerosols, including whether the centrifuges have seals.
- 2B4 Clarify animal work (the ASAF includes brief description of inducing arthritis)
- 2I Mark “yes” for r/sNA and transgenic animals
- 4A III E.#-3 Mark box
- 4C.4 List the source for the genes (if purchased) or if there is a template being amplified

IBC Decision

Defer, pending completion of the required changes to the Rob O and Levi O

Proposed by Rob O and seconded by Levi O. Motion carried (8-8).

C. Renewals:

1. 1. *BAF Number:* **1108-009** *Principal Investigator:* **Beneyal, Haluk**
 Title: **Multiple projects on biofilms**
 Facilities: **Current** *BSM:* **Current**
 Primary Reviewer: **Alan G** *Secondary Reviewer:* **Mark H**

Required Changes:

- 3A3 Indicate that “Sewage” should be handled according to BSL2 practices.
- 3B4 Indicate that double containment will be used for transfer between all facilities.

IBC Decision

Defer, pending completion of the required change by the BSO.

Proposed by Alan G and seconded by Levi O. Motion carried (8-8).

2. *BAF Number:* **1257-002** *Principal Investigator:* **Wu, Boyang**
Title: **Investigating and Targeting Neuromimicry in Prostate Cancer**
Facilities: **Requested 10-10-2019** *BSM:* **Current**
Primary Reviewer: **Nina W, Jennifer** *Secondary Reviewer:* **Rob O**

Required Changes:

- 2B Describe what containment is used for animals (i.e., when ABSL1 or ABSL2 is used)
- 2E Indicate IRB protocol
- 3A Verify that pLX-Puro(2nd gen) is not producing active virus or indicate measures to test for shedding (is it self inactivating?)
- 3B6 List disposal method (i.e., vivarium standard)

IBC Decision

Defer, pending completion of required change by Nina W / Jen P and Rob O.

Proposed by Nina W seconded by Levi O. Motion carried (8-8).

VI. BSL-1 BAFs

A. New Protocols: none

B. Renewals:

1. *BAF Number:* **1034-007** *Principal Investigator:* **Hellman, Hanjo**
Title: **E3 ligases as Key Regulators of Plant Physiology and Plant Development**
Facilities: **Current** *BSM:* **Current**
Primary Reviewer: **Andrei S** *Secondary Reviewer:* **Linda T**

Required Changes:

- none

IBC Decision:

Approve.

Proposed by Linda T seconded by Levi O. Motion carried (8-8).

2. *BAF Number:* **1047-005** *Principal Investigator:* **Glass, Jenny**

Title: WSU Puyallup plant and insect diagnostic laboratory

Facilities: Current

BSM: Current

Primary Reviewer: Hanu P

Secondary Reviewer: Andrei S

Required Changes:

- none

IBC Decision:

Approve.

Proposed by Linda T seconded by Levi O. Motion carried (8-8).

3. *BAF Number: 1268-002*

Principal Investigator: Sablani, Shyam

*Title: Process validation using nonpathogenic surrogate *Bacillus amyloliquefaciens* Fad 82 and *B. amyloliquefaciens* Fad 11/2.*

Facilities: Current

BSM: Current

Primary Reviewer: Levi O

Secondary Reviewer: Mark H

Required Changes:

- none

IBC Decision:

Approve.

Proposed by Linda T seconded by Levi O. Motion carried (8-8).

VII. BAFs Resolved in the Interim

A. Administrative Approvals:

1. *BAF Number: 1209-003*

Principal Investigator: Fortin Dale

Title: DREADDs and Addiction

Facilities: Current BSM: Current

“Like In Kind”

2. *BAF Number: 982-007*

Principal Investigator: Van Dongen, Hans

Title: Research Studies of Sleep and Performance (Multiple Projects)

Administrative amendment- personnel changes

3. *BAF Number:* **1315-002** *Principal Investigator:* **Fry, Lindsay**
Title: **Immunopathogenesis and Vaccine Development of Bovine and Equine Theileriosis**
“Like in Kind”
4. *BAF Number:* **1284-004** *Principal Investigator:* **Shaw, Dana**
Title: **Tick-Host-Pathogen interactions**
Administrative amendment- personnel changes
5. *BAF Number:***1299-002** *Principal Investigator:* **Bates, Philip**
Title: **Engineering plants to increase vegetable oil content and optimize fatty acid composition**
Administrative amendment- rooms and personnel

B. Other Approvals:

1. *BAF Number:* **1323-001** *Principal Investigator:* **Appleyard, Suzanne**
Title: **The role of glutamate in the control of food intake**
Facilities: **Current** *BSM:* **Current**
2. *BAF Number:* **825-010** *Principal Investigator:* **Davis, William C**
Title: **Role IL-17, IL-22, IL-23 and Reg T cells in pathogenesis Johnes’s disease and bovine TB**
*Facilities:***Current** *BSM:* **Current**
3. *BAF Number:* **1322-001** *Principal Investigator:* **Griswold, Michael**
Title: **Regulation of retinoid homeostasis during spermatogenesis**
Facilities: **Current** *BSM:* **Current**
4. *BAF Number:***791-008** *Principal Investigator:* **Kang, Chulhee**
Title: **Chemical and Biochemical bases for EDTA biodegradation**
Facilities: **Current** *BSM:* **Current**

C. Deactivations

*BAF Number:***1177-006** *Principal Investigator:* **Hardy, Michele**
Title: **Molecular biology of rotavirus replication and immune responses to enteric infection**

VIII. Deferred BAFs

Deferred BAFs – October 2019:

Review Key for revisions:

- **Green – can be reviewed/approved by BSO.**
- **Blue – to be reviewed and approved by the assigned reviewers.**
- **Purple - to be reviewed and approved by the IBC Chair**
- **Red – must be reviewed by the convened IBC**

1. *BAF Number:* **1232-002** *Principal Investigator:* **Brozik, James**

Title: **Model Membrane Assemblies and Membrane Proteins**

Facilities: **PI notified 9/10/18** *BSM:* **Requested 9/10/18**

Primary Reviewer: **Eric S** *Secondary Reviewer:* **Levi O**

- 9/25/18: deferred by IBC, pending BAF revision and facility and BSM approval.
- 1/4/19: followed up with PI.
- 1/7/19: revised BAF received. Revisions sent to reviewers.

•

2. *BAF Number:* **1235-003** *Principal Investigator:* **Gerstner, Jason**

Title: **Neurogenetics and behavioral analytics in *Drosophila melanogaster***

Facilities: **Current** *BSM:* **requested 9/10/18**

Primary Reviewer: **Levi O** *Secondary Reviewer:* **Bin S**

- 9/25/18: deferred by IBC, pending BAF revision and BSM approval..
- 1/4/19: followed up with PI
- .

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3. *BAF Number:* **1233-003** *Principal Investigator:* **Piovia-Scott, Jonah**

Title: **The effects of chytrid fungal pathogens on amphibian hosts**

Facilities: **Notified/requested 10/22/18** *BSM:* **requested 10/22/18**

Primary Reviewer: **Eric S** *Secondary Reviewer:* **Nina W**

- 10/30/18: deferred by IBC, pending BAF revision and facility approval.
- 11/13/18: revised BAF and MTA received.

- 11/15/18: revisions to reviewers.

-

4. *BAF Number:* **600-017** *Principal Investigator:* **Noh, Susan**

Title: **Pathogen determinants of vector-borne transmission**

Facilities: **Under Review** *BSM:* **Under Review**

Primary Reviewer: **Nina W** *Secondary Reviewer:* **Rob O.**

- 12/4/18: Deferred by IBC, pending BAF revision and facility and BSM approval.
- 12/11/18: BSM requested.
- 12/18/18: Revised BAF received and forwarded to reviewers.
- 12/19/18: reviewers had additional comments, which were sent to PI.
- 1/2/19: Revised BAF and BSM received. Revisions sent to reviewers.
- 7-1-2019 Rob answered and gave her approval
- 7-5-2019 sent to Nina for her review

-

5. *BAF Number:* **1300-001** *Principal Investigator:* **Varnum, Michael**

Title: **Molecular mechanisms of retinal photoreceptor function and dysfunction**

Facilities: **Requested 1/14** *BSM:* **Requested 1/14**

Primary Reviewer: **Nina W** *Secondary Reviewer:* **Eric S**

- 1/29/19: Deferred by IBC, pending BAF revision and facility and BSM approval.
- BSM approved
- Facilities have been inspected, need BSO signature
- Newest version of BAF needs BSO to review

6. *Number:* **1244-003** *Principal Investigator:* **Wisor, Jonathan**

Title: **The study of metabolism and Sleep in the Brains of Mice**

Facilities: **Requested 3-15-19** *BSM:* **Current**

Primary Reviewer: **Nina W** *Secondary Reviewer:* **Levi O**

- 3-26-2019 Deferred pending completion of changes to BAF with BSO approval
- BSM approved
- Spokane rooms need approval from BSO
- New BAF needs approval of BAF

-
- Revised BAF requested per e-mail. (SH)

7 BAF Number: **1304-001** Principal Investigator: **Hu, Jinguo**

Title: Develop and Maintain Superior Crop Genetic Germplasm by Maintaining and Characterizing Plant and Microbial Resources

Facilities: Current BSM: Current

Primary Reviewer: Levi O Secondary Reviewer: Eric S

- 3-26-2019 deferred pending full committee review
- Needs facilities
- Revised BAF requested per e-mail (SH)
- Second request for info for IBC sent by SH 8-8-2019

8. BAF Number: **1307-001** Principal Investigator: **Peters, John**

Title: Synthetic Symbioses: Extending biological nitrogen fixation to a grass crop plant

Facilities: Current BSM: Current

Primary Reviewer: Linda T Secondary Reviewer: Andrei S
Defer. Pending completion of required changes subject to BSO Approval

- What entity is supplying the barley for the study
- Facilities complete
- BSM complete
- BAF needs source of barley, then BSO can approve

9. BAF Number: **1314-001** Principal Investigator: **Cousins, Asaph**

*Title: Engineering photosynthesis in *Sorghum bicolor* for improved performance Under water stress and to optimize water relations to enhance drought tolerance and WUE (water use efficiency).*

Facilities: Current BSM: Current
Primary Reviewer: Levi O Secondary Reviewer: Eric S

Required Changes:

- 4C.1 Specify general category of proteins

- 4C.2 List strains of *E. coli*
- 4B.9 check “yes” or remove question 9
- Is all of the personnel included in the BAF application?
- 2B Define plant assay, define biochemical assay
- Please indicate not generating transgenic plants
- Provide source of transgenic plants

IBC Decision:

Defer, pending completion of required changes to the satisfaction of the reviewers.

- BSM finished
- Facilities Completed
- Need BAF looked at by BSO, Eric S voted ok to pass

10. *BAF Number:* **1250-005** *Principal Investigator:* **Gibson, Michael**

Title: **Heritable disease and pharmacology**

Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Bin S** *Secondary Reviewer:* **Rob O**

Required Changes

- 2B Clarification on CRISPR-Cas9
- 4C Mouse hosts should be listed as well as “human” clarified
- 4C3 Better description of genes
- 5A.6 Check “Yes” to characterized agents

IBC Decision

Defer, pending completion of the required changes to the satisfaction of reviewers

- Facilities are complete
- BSM is complete

11. *BAF Number:* **1054-006** *Principal Investigator:* **Thomashow, Linda**

Title: **Genetic enhancement of wheat to control fungal pathogens**

Facilities: ?

BSM: ?

Primary Reviewer: **Andrei S**

Secondary Reviewer: **Hanu P**

Required Changes

- 2B more details needed, explanation of how to analyze microbial genes
- 4C.1 are new lines of trans wheat produced?
- 6B.6 How will the material be decontaminated chemically?

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the reviewer

12. *BAF Number:* **989-010**

Principal Investigator: **Dhingra, Amit**

Title: **Plant Genomics and Biotechnology for Crop Improvement**

Facilities: **Current**

BSM: **Under Review**

Primary Reviewer: **Andrei S**

Secondary Reviewer: **Hanu P**

Required Changes

- 3B.2 Source of Erwinia
- 2A Rewrite in lay language so reader outside of the field could understand
- 3B.5 Possible use of chemicals?
- 4C Hosts, stone fruits, not listed
- L4C.4 list species as source of DNA

IBC Decision

Defer, pending completion of required changes to the satisfaction of the reviewers.

- 8-8-2019 BSM waiting for review, facilities are finished and a revised BAF (post IBC) to be review by BSO.

13. *BAF Number:* **883-008**

Principal Investigator: **Lange, B**

Title: **Regulation of Isoprenoid Biosynthesis in Plants**

Facilities: **Current**

BSM: **Current**

Primary Reviewer:

Andrei S

Secondary Reviewer: **Eric S**

Required Changes

- 4C2 Vector examples
- 4C3 Gene examples
- 4c.4 list some species

IBC Decision

Defer, pending completion of required changes to the satisfaction of the reviewers

- 7-5-2019 PI sent facilities, BAF, BSM revised

14. BAF Number: 1316-001 *Primary Investigator:* **Haverkamp, Hans**

Title: **Effects of a cool down on exercise-induced asthma in adult males and females**

Facilities: **Current**

BSM: **Current**

Primary Reviewer: **Bin S**

Secondary Reviewer: **Alan G**

Required Changes

- *Section 2B, indicate which cell types are counted in sputum samples and if they are associated with hazards.*
- *8-27-2019 Defer, pending required BAF changes to the satisfaction of BSO*
- *8-28-2019 e-mail to PI listing necessary change*

•

15. BAF Number: 998-006 *Principal Investigator:* **Steber, Camille**
Title: **Genetic Improvement of Wheat and Barley for Environmental Resilience, Disease Resistance, and End-use Quality**

Facilities: **Requested 8-7-2019** *BSM:* **Current**

Primary Reviewer: **Hanu P**

Secondary Reviewer: **Andrei S**

Required Changes

- *2B Include brief discussion of all infectious agents listed in Section 3 and all r/sNA work.*
- *4C Complete table*

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the IBC committee at the next scheduled meeting.

- 8-28-2019 send please respond message to PI

16. *BAF Number:* **1252-005** *Principal Investigator:* **Oatley, Jon**

Title: **Gene Editing in Livestock**

Facilities: **Current**

BSM: **Received 7-23-2019**

Primary Reviewer: **Nina W**

Secondary Reviewer: **Mike K**

Required Changes

- 2H, Change BSL-P 1 containment to animals
- 4C Clarify *E. coli* use
- 4C Clarify usage of Bovine, porcine, ovine and caprine testicular cells with r/sNA in the narrative of section 2B
- 7B Indicate possible use of STI (if desired)

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the reviewers and BSO.

- 8-28-2019 request for Post IBC meeting
- 8-29-2019 received copy of NIH guidelines on recombinant
- 8-29-2019 received revised BAF from Melissa Oatley

17. *BAF Number:* **1321-001** *Principal Investigator:* **Phelps, Michael**

Title: **Linking genotype to phenotype in aquatic organisms**

Facilities: **Current**

BSM: **Requested 8-29-2019**

Primary Reviewer: **Nina W**

Secondary Reviewer: **Alan G**

Required Changes

- 2B Verify inactivation of modified gametes from all species.

- 3A Indicate that Lentivirus, AAV, and HEK293T are Human Hazards, VHSV is Animal Hazards and AAV is BSL1. Section 3B3 should indicate how these hazards are mitigated (i.e., details of 3rd generation Lentiviral vector that limits replication, etc.)
- 4A Change designation to IIID, D1, D3 (mark “no” to each sub question), D4 (mark “no” to each sub question), IIIE.E1 sub question should be marked “yes,” and remove IIIE.E3 designation.
- 5A Remove 3 and 4 if not using human or primate cells or discuss in section 2B if using
- 7B.2 Likely indicate STI and “Other” to treat gametes with chemicals. Discuss with BSO as needed.
- 7B.1 Discuss whether an FDA INAD is required for shipping animals

IBC Decision

Defer, pending completion of required changes to the satisfaction of Nina W. and Alan G.

- [IBC request for further data sent on 9-26-2019](#)
-

18. *BAF Number:* **1167-003**

Principal Investigator: **Lazarus, Philip**

Title: **Exemestane metabolic study for the personal treatment of breast cancer**

patients.

Facilities: **Current**

BSM: **Requested 8-30-2019**

Primary Reviewer: **Bin S**

Secondary Reviewer: **Rob O**

Required Changes

- 2A Include a description of the drug Exemestane including its purpose and uses.
- 2B Indicate if GST is the only enzyme to be used or discuss others
- 3A Check BSL-1 for *E. coli* and indicate strain(s)
- 4C Complete chart and indicate where human hepatic RNA comes from (i.e., isolated, synthetic)
- 5A.7-D Indicate Hep B vaccination is offered for human blood and body fluids

IBC Decision

Defer, pending completion of required changes to the satisfaction of Levi O. and Rob O.

- [IBC request for further data sent on 9-25-2019](#)
-

19. *BAF Number:* **1180-005**

Principal Investigator: **Jansen, Heiko**

Title: **Dissection of bear cellular rhythms and metabolism using lentiviral techniques.**

Facilities: **Current**

BSM: **Current**

Primary Reviewer: Mark H

Secondary Reviewer: Nina W

Required Changes

- 2B Explain collection frequency of preadipocytes (include safety information)
- 3B.1, 3B.2, 3B.5, 3B.6 Complete sections
- 4A IIID D.1 Category should be marked, IIIE. E.1 needs to be marked “Yes” because you are producing virus
- 4C.3 Remove “Vary, depending on exp. design and goals” and replace with specifics; also indicate biosafety level 1 instead of 2 for genes
- 5A.4 Remove primary cells as they are not human or primate; complete identification of HEK293T

IBC Decision

Defer, pending completion of required changes to the satisfaction of Nina W and Mark H.

[IBC request for further data sent on 9-25-2019](#)

IX. Biosafety Program Update

Levi O discussed an incident in which a USDA individual is undergoing testing resulting from a potential exposure during field collection trials.

X. Adjournment

Meeting adjourned at 14:12.

Proposed by Linda T seconded by Rob O. Motion carried (8-8).

WSU IBC Minutes
December 3, 2020

IBC Members Present:

	Member	Affiliation/Role
1.	Alan Goodman	School of Molecular Biosciences; Scientist
2.	Mike Heston	Community Member; Pullman Fire Department
3.	Mike Kluzik *13:11	ORA Director; Research Assurances
4.	Rob O'Connor	IBC Chair; Veterinary Microbiology and Pathology
5.	Levi O'Loughlin	Biosafety Officer; Research Assurances
6.	Karen Sanguinet	Crops and Soil; Scientist
7.	Andrei Smertenko	Institute of Biological Chemistry; Plant Expert
8.	Linda Thomashow	USDA/ARS; Plant Pathology
9.	Nathan Weller *13:16	Community Member; Pullman City Council
10	Nina Woodford	Director; Office of the Campus Veterinarian

Alternate IBC Members Present:

	Member	Affiliation/Role
1.	Jennifer Kopanke	Associate Director; Campus Veterinarian
2.	Ryan Schwager	Research Assurances; Assistant BSO

IBC Members Absent:

	Member	Affiliation/Role
1.	Levente Kapas	Elson S. Floyd College of Medicine; Scientist

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Sonja Hartwig	Research Assurances; IBC Coordinator
2.	Megan Chastain	Assistant BSO; WSU Spokane

* Arrived after the Call To Order.

Call to Order:

The meeting was called to order at 13:09 with a quorum of (8/11 members) present.

I. Announcements:

Karen Sanguinet introduced as new member. Open public Meeting Training and Confidentiality Agreements discussed. Sherry Gordon, Senior Attorney General for WSU requested that all IBC members complete and record their training. Levi O refreshed the need for Confidentiality Agreements for all members and Staff of the IBC.
Mike K joined the group at 13:11, and Nathan Weller at 13:16. Quorum now at 10/11.
Linda T was selected as a fellow for the American Association for the Advancement of Science.

II. Minutes – October 29, 2019

The minutes were approved by consensus.

III. BSL-3 BAFs – none

IV. BSL-2 BAFs

A. New Protocols: none

B. Renewals:

1. *BAF Number: 1113-008* *Principal Investigator: Utei, Massaro*
Title: Immunologic and pharmacologic control of tick-borne pathogens that affect horses and cattle
Facilities: Current *BSM: Current*

Primary Reviewer: Rob O *Secondary Reviewer: Nina W*

Required Changes

- 2B Include more details of animal work with pathogens and collaboration with UI, including whether animals are transported between WSU and UI. Include any inter-institutional agreements.
- 2G2 select ABSL-2 if animals are used with pathogens and indicate either protocols they are associated with (i.e., BAF/ASAF) and housing locations for those administered pathogens or r/snap.
- 4A IIID D-1 is likely incorrect, either justify or uncheck designation
- 4C1 Verify only E coli K12 is used or indicate additional strains used for protein expression

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the whole committee

Proposed by Rob O and seconded by Alan G. Motion Carried (10/10)

2. *BAF Number: 1008-006* *Principal Investigator: Bose, Susmita*
*Title: **Developing Materials and Scaffolds for Bone Implants***
Facilities: Current *BSM: Current*

Primary Reviewer: Levente K *Secondary Reviewer: Alan G*

Required Changes

- *None*

IBC Decision

Approve.

Proposed by Alan G and seconded by Linda T. Motion Carried (10/10)

V. BSL-1 BAFs

A New Protocols:

1. *BAF Number:* **1326-001** *Principal Investigator:* **Bernhardt, Miranda**
Title: **Oocyte and embryo biology**
Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Alan G** *Secondary Reviewer:* **Rob O**

Required Changes

- 2B List of oocytes and embryos should match list on 4C4. Indicate use of invertebrates and describe containment
- 2B Indicate that no human/primate cells are used
- 2B Refer to BAF 1320 to assist in the explanation of the research
- 2G2 remove checkmark on “ ABSL-1” as it is not necessary with no animal work on this BAF
- 4C3 List categories for genes to be used
- 4C4 Clarify what constitutes ”direct collection”

IBC Decision

Defer, pending Completion of the required change by the reviewers.

Proposed by Alan G and seconded by Nina W. Motion Carried (10/10)

B. Renewals:

1. *BAF Number:* **1040-009** *Principal Investigator:* **Neff, Michael**
Title: **Translating fundamental plant research into improved agronomic traits in crops**
Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Andrei S** *Secondary Reviewer:* **Linda T**

Required Changes

- 2A Remove last sentences on breeding of plants, as IBC does not have purview

- 3 Complete section 3 for Agrobacterium use
- 4B1 add Agrobacterium to list
- 6B2 remove "Chemical" for treatment of plants or include a description of appropriate use

IBC Decision

Defer, pending completion of the required change to the satisfaction of the reviewers.

Proposed by Andrei S and seconded by Linda T. Motion Carried (10/10)

2. *BAF Number: 1203-002* *Principal Investigator: Smertenko, Andrei*
Title: Identification of novel cellular mechanisms of plant growth and stress tolerance
Facilities: Current *BSM: Current*

Primary Reviewer: Linda T

Secondary Reviewer: Hanu P

Required Changes

- *none*

IBC Decision

Approve

Proposed by Linda T and seconded by Levi O. Motion Carried (9 to 9) (Andrei S exited room for vote.)

3. *BAF Number: 1141-003* *Principal Investigator: Coffin, Allison*
Title: Hair cell death and protection in the zebrafish lateral line
Facilities: Current *BSM: Current*

Primary Reviewer: Levi O

Secondary Reviewer: Nina W/Jenn K

Required Changes

- *none*

IBC Decision

Approve

Proposed by Nina W seconded by Levi O. Motion Carried (10/10)

VI. **BAFs Resolved in the Interim**

A. **Administrative Approvals:** none

B. **Other Approvals:**

1. *BAF Number:* **1034-007** *Principal Investigator:* **Hellman, Hanjo**
Title: **E3 ligases as Key Regulators of Plant Physiology and Plant Development**
2. *BAF Number:* **1047-005** *Principal Investigator:* **Glass, Jenny**
Title: **WSU Puyallup plant and insect diagnostic laboratory**
3. *BAF Number:* **1268-002** *Principal Investigator:* **Sablani, Shyam**
Title: **Process validation using nonpathogenic surrogate *Bacillus amyloliquefaciens* Fad 82 and *B. amyloliquefaciens* Fad 11/2.**
4. *BAF Number:* **1108-009** *Principal Investigator:* **Beneyal, Haluk**
Title: **Multiple projects on biofilms**
5. *BAF Number:* **1316-001** *Primary Investigator:* **Haverkamp, Hans**
Title: **Effects of a cool down on exercise-induced asthma in adult males and females**
6. *BAF Number:* **989-010** *Principal Investigator:* **Dhingra, Amit**
Title: **Plant Genomics and Biotechnology for Crop Improvement**
7. *BAF Number:* **1307-001** *Principal Investigator:* **Peters, John**
Title: ***Synthetic Symbioses: Extending biological nitrogen fixation to a grass crop***
8. *BAF Number:* **883-008** *Principal Investigator:* **Lange, B**
Title: **Regulation of Isoprenoid Biosynthesis in Plants**
9. *BAF Number:* **1314-001** *Principal Investigator:* **Cousins, Asaph**
Title: **Engineering photosynthesis in *Sorghum bicolor* for improved performance Under water stress and to optimize water relations to enhance drought tolerance and WUE (water use efficiency).**

C. **Deactivations:**

BAF Number: **1166-003** *Principal Investigator:* **Court, Michael**

Title: Pharmacogenomic studies of drug response using healthy human tissues, cell lines, and hepatocytes

Deactivated by e-mail from PI on 10-29-2019

BAF Number: 1052-005 Principal Investigator: Niebergs, Holly

Title: Genetic Resistance to Johne's Disease in Cattle

Deactivated by e-mail from PI on 11-12-2019

BAF Number: 1256-002 Principal Investigator: Portfors, Christine

Title: Optogenetics in the Central Auditory Pathway

Deactivated by e-mail from PI on 11-12-2019

VII. Deferred BAFs

Deferred BAFs – December 2019:

Review Key for revisions:

- **Green – can be reviewed/approved by BSO.**
- **Blue – to be reviewed and approved by the assigned reviewers.**
- **Purple - to be reviewed and approved by the IBC Chair**
- **Red – must be reviewed by the convened IBC**

1. *BAF Number: 1232-002 Principal Investigator: Brozik, James*

Title: Model Membrane Assemblies and Membrane Proteins

Facilities: PI notified 9/10/18 BSM: Requested 9/10/18

Primary Reviewer: Eric S Secondary Reviewer: Levi O

- 9/25/18: deferred by IBC, pending BAF revision and facility and BSM approval.
- 1/4/19: followed up with PI.
- 1/7/19: revised BAF received. Revisions sent to reviewers.

2. *BAF Number: 1235-003 Principal Investigator: Gerstner, Jason*

Title: Neurogenetics and behavioral analytics in Drosophila melanogaster

Facilities: Current BSM: requested 9/10/18

Primary Reviewer: Levi O Secondary Reviewer: Bin S

- 9/25/18: deferred by IBC, pending BAF revision and BSM approval.
- 1/4/19: followed up with PI

3. *BAF Number: 1233-003 Principal Investigator: Piovia-Scott, Jonah*

Title: The effects of chytrid fungal pathogens on amphibian hosts

Facilities: **Notified/requested 10/22/18** *BSM:* **requested 10/22/18**

Primary Reviewer: **Eric S**

Secondary Reviewer: **Nina W**

- 10/30/18: deferred by IBC, pending BAF revision and facility approval.
- 11/13/18: revised BAF and MTA received.
- 11/15/18: revisions to reviewers.

4. BAF Number: 600-017

Principal Investigator: **Noh, Susan**

Title: **Pathogen determinants of vector-borne transmission**

Facilities: **Under Review**

BSM: **Under Review**

Primary Reviewer: **Nina W**

Secondary Reviewer: **Rob O.**

- 12/4/18: Deferred by IBC, pending BAF revision and facility and BSM approval.
- 12/11/18: BSM requested.
- 12/18/18: Revised BAF received and forwarded to reviewers.
- 12/19/18: reviewers had additional comments, which were sent to PI.
- 1/2/19: Revised BAF and BSM received. Revisions sent to reviewers.
- 7-1-2019 Rob answered and gave her approval
- 7-5-2019 sent to Nina for her review

5. BAF Number: 1300-001

Principal Investigator: **Varnum, Michael**

Title: **Molecular mechanisms of retinal photoreceptor function and dysfunction**

Facilities: **Requested 1/14**

BSM: **Requested 1/14**

Primary Reviewer: **Nina W**

Secondary Reviewer: **Eric S**

- 1/29/19: Deferred by IBC, pending BAF revision and facility and BSM approval.
- BSM approved
- Facilities have been inspected, need BSO signature
- Newest version of BAF needs BSO to review

6. Number: 1244-003

Principal Investigator: **Wisor, Jonathan**

Title: **The study of metabolism and Sleep in the Brains of Mice**

Facilities: **Requested 3-15-19** *BSM:* **Current**

Primary Reviewer: **Nina W**

Secondary Reviewer: **Levi O**

- 3-26-2019 Deferred pending completion of changes to BAF with BSO approval
- BSM approved
- Spokane rooms need approval from BSO

- New BAF needs approval of BAF
- Revised BAF requested per e-mail. (SH)
-

7 BAF Number: **1304-001** Principal Investigator: **Hu, Jinguo**

Title: **Develop and Maintain Superior Crop Genetic Germplasm by Maintaining and Characterizing Plant and Microbial Resources**

Facilities: **Current** BSM: **Current**

Primary Reviewer: **Levi O** Secondary Reviewer: **Eric S**

- 3-26-2019 deferred pending full committee review
- Needs facilities
- Revised BAF requested per e-mail (SH)
- Second request for info for IBC sent by SH 8-8-2019

8. BAF Number: **1250-005** Principal Investigator: **Gibson, Michael**

Title: **Heritable disease and pharmacology**

Facilities: **Current** BSM: **Current**

Primary Reviewer: **Bin S** Secondary Reviewer: **Rob O**

Required Changes

- 2B Clarification on CRISPR-Cas9
- 4C Mouse hosts should be listed as well as “human” clarified
- 4C3 Better description of genes
- 5A.6 Check “Yes” to characterized agents

IBC Decision

Defer, pending completion of the required changes to the satisfaction of reviewers

- Facilities are complete
- BSM is complete

9. BAF Number: **1054-006** Principal Investigator: **Thomashow, Linda**

Title: **Genetic enhancement of wheat to control fungal pathogens**

Facilities: **Current** BSM: **Current**

Primary Reviewer: **Andrei S** Secondary Reviewer: **Hanu P**

Required Changes

- 2B more details needed, explanation of how to analyze microbial genes
- 4C.1 are new lines of trans wheat produced?

- 6B.6 How will the material be decontaminated chemically?

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the reviewer

10. BAF Number: **998-006** Principal Investigator: **Steber, Camille**
 Title: **Genetic Improvement of Wheat and Barley for Environmental Resilience, Disease Resistance, and End-use Quality**
 Facilities: **Requested 8-7-2019** BSM: **Current**
 Primary Reviewer: **Hanu P** Secondary Reviewer **Andrei S**

Required Changes

- 2B Include brief discussion of all infectious agents listed in Section 3 and all r/snap work.
- 4C Complete table

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the IBC committee at the next scheduled meeting.

- 8-28-2019 send please respond message to PI

11. BAF Number: **1252-005** Principal Investigator: **Oatley, Jon**
 Title: **Gene Editing in Livestock**
 Facilities: **Current** BSM: **Received 7-23-2019**
 Primary Reviewer: **Nina W** Secondary Reviewer: **Mike K**

Required Changes

- 2H, Change BSL-P 1 containment to animals
- 4C Clarify *E. coli* use
- 4C Clarify usage of Bovine, porcine, ovine and caprine testicular cells with r/snap in the narrative of section 2B
- 7B Indicate possible use of STI (if desired)

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the reviewers and BSO.

- 8-28-2019 request for Post IBC meeting
- 8-29-2019 received copy of NIH guidelines on recombinant

- 8-29-2019 received revised BAF from Melissa Oatley

12. **BAF Number: 1321-001** **Principal Investigator: Phelps, Michael**
Title: Linking genotype to phenotype in aquatic organisms
Facilities: Current **BSM: Requested 8-29-2019**
Primary Reviewer: Nina W **Secondary Reviewer: Alan G**

Required Changes

- 2B Verify inactivation of modified gametes from all species.
- 3A Indicate that Lentivirus, AAV, and HEK293T are Human Hazards, VHSV is Animal Hazards and AAV is BSL1. Section 3B3 should indicate how these hazards are mitigated (i.e., details of 3rd generation Lentiviral vector that limits replication, etc.)
- 4A Change designation to IIID, D1, D3 (mark “no” to each sub question), D4 (mark “no” to each sub question), IIIE.E1 sub question should be marked “yes,” and remove IIIE.E3 designation.
- 5A Remove 3 and 4 if not using human or primate cells or discuss in section 2B if using
- 7B.2 likely indicate STI and “Other” to treat gametes with chemicals. Discuss with BSO as needed.
- 7B.1 Discuss whether an FDA INAD is required for shipping animals

IBC Decision

Defer, pending completion of required changes to the satisfaction of Nina W. and Alan G.

- [IBC request for further data sent on 9-26-2019](#)
-

13. **BAF Number: 1167-003** **Principal Investigator: Lazarus, Philip**
Title: Exemestane metabolic study for the personal treatment of breast cancer patients.
Facilities: Current **BSM: Requested 8-30-2019**
Primary Reviewer: Bin S **Secondary Reviewer: Rob O**

Required Changes

- 2A Include a description of the drug Exemestane including its purpose and uses.
- 2B Indicate if GST is the only enzyme to be used or discuss others
- 3A Check BSL-1 for *E. coli* and indicate strain(s)
- 4C Complete chart and indicate where human hepatic RNA comes from (i.e., isolated, synthetic)

- 5A.7-D Indicate Hep B vaccination is offered for human blood and body fluids

IBC Decision

Defer, pending completion of required changes to the satisfaction of Levi O. and Rob O.

- [IBC request for further data sent on 9-25-2019](#)

14. *BAF Number:* **1180-005**

Principal Investigator: **Jansen, Heiko**

Title: **Dissection of bear cellular rhythms and metabolism using lentiviral techniques.**

Facilities: **Current**

BSM: **Current**

Primary Reviewer: **Mark H**

Secondary Reviewer: **Nina W**

Required Changes

- 2B Explain collection frequency of preadipocytes (include safety information)
- 3B.1, 3B.2, 3B.5, 3B.6 Complete sections
- 4A IIID D.1 Category should be marked, IIIE. E.1 needs to be marked “Yes” because you are producing virus
- 4C.3 Remove “Vary, depending on exp. design and goals” and replace with specifics; also indicate biosafety level 1 instead of 2 for genes
- 5A.4 Remove primary cells as they are not human or primate; complete identification of HEK293T
- PI send revisions 10-24-2019, revisions send to reviewers

IBC Decision

Defer, pending completion of required changes to the satisfaction of Nina W and Mark H.

- [IBC request for further data sent on 9-25-2019](#)

15. *BAF Number:* **1257-002**

Principal Investigator: **Wu, Boyang**

Title: **Investigating and Targeting Neuromimicry in Prostate Cancer**

Facilities: **Requested 10-10-2019**

BSM: **Current**

Primary Reviewer:

Nina W, Jennifer

Secondary Reviewer: **Rob O**

Required Changes:

- 2B Describe what containment is used for animals (i.e., when ABSL1 or ABSL2 is used)
- 2E Indicate IRB protocol
- 3A Verify that pLX-Puro (2nd gen) is not producing active virus or indicate measures to test for shedding (is it self inactivating?)
- 3B6 List disposal method (i.e., vivarium standard)

IBC Decision

Defer, pending completion of required change by Nina W / Jen P and Rob O.

- Sent e-mail to Dr. Wu with IBC requests 11-1-2019

Proposed by Nina W seconded by Levi O. Motion carried (8-8).

16. *BAF Number: 1325-001* *Principal Investigator: Ahmed Salah*
 Title: Evaluation of the mechanisms of pathogenesis in rheumatic diseases
 Facilities: Current *BSM: Requested 10-14-2019*
 Primary Reviewer: Rob O *Secondary Reviewer: Levi O*

Required Changes:

- 2B Provide description of processes that could generate aerosols, including whether the centrifuges have seals.
- 2B4 Clarify animal work (the ASAF includes brief description of inducing arthritis)
- 2I Mark “yes” for r/snap and transgenic animals
- 4A IIIE.#-3 Mark box
- 4C.4 List the source for the genes (if purchased) or if there is a template being amplified

IBC Decision

Defer, pending completion of the required changes to the Rob O and Levi O

Proposed by Rob O and seconded by Levi O. Motion carried (8-8).

- Sent e-mail with IBC requests (11-1-2019)

VIII. Biosafety Program Update

IBC meetings scheduled for last Thursday of each month starting January, 2020 and held in Lighty 401: 2020 Meeting dates: January 23, February 27, March 26, April 23, May 28, June 23, July 23, August 27, September 24, October 22, December 10. The submission deadline for BAF is the first day in each month.

Levi O discussed the use of the WSU incinerator and potential agreement with an incinerator operated by Waste Management.

Mike K announced that VPR Keane is making changes to the Responsible Conduct of Research training.

IX. Adjournment 14:57, Proposed by Rob O and seconded by Nathan W. Motion passed (10-10)

WSU IBC Minutes

January 23, 2020

IBC Members Present

	Member	Affiliation/Role
1.	Rob O'Connor	Chair; Veterinary Microbiology and Pathology
2.	Alan Goodman	School of Molecular Biosciences; Scientist
3.	Mike Heston	Community Member; Pullman Fire Department
4.	Levente Kapás	Elson S. Floyd College of Medicine
5. *	Mike Kluzik	ORA Director; Research Assurances
6.	Levi O'Loughlin	Biosafety Officer; Research Assurances
7.	Karen Sanguinet	Crops and Soil Science
8.	Andrei Smertenko	Institute of Biological Chemistry; Plant Expert
9.	Nina Woodford	Director, Office of the Campus Veterinarian

Alternate IBC Members Present:

	Member	Affiliation/Role
1.	Ryan Schwager	Research Assurances; Assistant BSO
2.	Jennifer Kopanke	Associate Director, Attending Vet

IBC Members Absent:

	Member	Affiliation/Role
1.	Linda Thomashow	USDA/ARS; Plant Pathology
2.	Nathan Weller	Community Member; Pullman City Council

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Sonja Hartwig	Research Assurances; IBC Coordinator
2.	Megan Chastain	Assistant BSO, WSU Spokane

* Arrived after the Call to Order

Call to Order:

This meeting was called to order at 13:11 with a quorum of (8/11 members) present.

I. Announcements:

Members were reminded of Open Public Meeting Training and Confidentiality Agreement requirements.

II. Minutes –December 3, 2019

Minutes approved by consensus

III. **BSL – 3 BAFs** None

IV. **BSL – 2 BAFs**

A. New Protocols:

Mike K entered at 13:15. Quorum (9-11).

1. *BAF Number:* **1113-008** *Principal Investigator:* **Ueti, Massaro**
Title: **Immunologic and pharmacologic control of tick-borne pathogens that affect horses and cattle.**
Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Rob O** *Secondary Reviewer:* **Nina W**

Required Changes

- none

IBC Decision

Approve.

Proposed by Rob O seconded by Alan G and motion carried (9 to 9)

B. Renewals:

1. *BAF Number:* **1058-006** *Principal Investigator:* **Alderete, J**
Title: **Characterization of the Trichomonas vaginalis Serodiagnostic Target**
Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Andrei S** *Secondary Reviewer:* **Karen S**

Required Changes

- 2B Expound on process to work with Sera, list the source for Sera, explain how proteins are produced (cloning), and indicate if the pathogen is stored in freezers. Although the lab currently only has two individuals, all language should be more broadly written.
- 2E Indirect samples are still of human origin (mark yes, but not human research)
- Section 3 should be removed if not working directly with Trichomonas and this information should be included in section 2.
- 5A1 Indicate if Wash. U-St. Lewis the only source for Sera or if it is from the federal repository – the relationship wasn't clear to the IBC

IBC Decision

Approve, with administrative changes to be completed.

Proposed by Nina W seconded by Levi O motion Carried (8 to 8)

Rob O entered the room and continued as chair.

V. BSL – 1 BAFs

A. New Protocols: none

B. Renewals:

1. *BAF Number:* **1184-004** *Principal Investigator:* **Fuchs Lokensgard, Rita**
Title: **AAV/CAV-2-induced expression of light-sensitive ion channels and DREADDs**
Facilities: **Current** *BSM:* **Current**
Primary Reviewer: **Alan G** *Secondary Reviewer* **Rob O**

Required Changes

- 2C add ASAF 6255
- 2G2 select animal containment (i.e., ABSL2)
- 2H identify animal rooms
- 3A check that CAV is a BSL1 or BSL2-contained strain
- 3B6 Address disposal of bedding
- 4C1 define type of E. coli
- 4C2 BSL2 may need to be selected depending on 3A

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the reviewers.

Proposed by Alan G seconded by Levi O motion carried (9 to 9)

2. *BAF Number:* **1239-002** *Principal Investigator:* **Peixoto, L**
Title: **Learning and sociability in Shank3 mutant mice**
Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Levi O** *Secondary Reviewer:* **Levente K**

Required Changes

- none

IBC Decision

Approve

Proposed by Alan G seconded by Levi O motion carried (9 to 9)

VI. BAFs Resolved in the Interim

VII.

A. Administrative Approvals:

1. **BAF Number: 1261-002** *Principal Investigator: Chauvin, Ted*
Title: Using Heterologous Cell Lines to Study Proteins That Are in Mouse Sperm
2. **BAF Number: 1139-007** *Principal Investigator: Pru, James*
Title: Mechanisms of Maternal-Embryonic Signaling and Uterine Physiology
“Like in Kind”

B. Other Approvals:

1. **BAF Number: 1040-009** *Principal Investigator: Neff, Michael*
Title: Translating fundamental plant research into improved agronomic traits in crops
2. **BAF Number: 1321-001** *Principal Investigator: Phelps, Michael*
Title: Linking genotype to phenotype in aquatic organisms
3. **BAF Number: 1244-003** *Principal Investigator: Wisor, Jonathan*
Title: The study of metabolism and Sleep in the Brains of Mice
4. **BAF Number: 1231-009** *Principal Investigator: Winuthayanon, Wipawee*
Title: Analysis of Estrogen and Progesterone Mechanisms of Action in Female Reproductive Tract
5. **BAF Number: 1325-001** *Principal Investigator: Ahmed Salah*
Title: Evaluation of the mechanisms of pathogenesis in rheumatic diseases
6. **BAF Number : 600-017** *Principal Investigator: Noh, Susan*
Title: Pathogen determinants of vector-borne transmission

7. *BAF Number:* **1167-003** *Principal Investigator:* **Lazarus, Philip**
Title: **Exemestane metabolic study for the personal treatment of breast cancer patients.**
8. *BAF Number:* **1250-005** *Principal Investigator:* **Gibson, Michael**
Title: **Heritable disease and pharmacology**

B. Deactivations:

1. *BAF Number:* **1118** *Principal Investigator:* **Besser, Thomas**
Title: **Mycoplasma Ovipneumoniae in Domestic and Bighorn Sheep**
2. *BAF Number:* **1114** *Principal Investigator:* **Scoles, Glen A**
Title: **Determinants of Anaplasma marginal Transmission**

VIII. Deferred BAFs

Deferred BAFs – January 2020:

Review Key for revisions:

- **Green – can be reviewed/approved by BSO.**
- **Blue – to be reviewed and approved by the assigned reviewers.**
- **Purple - to be reviewed and approved by the IBC Chair**
- **Red – must be reviewed by the convened IBC**

1. *BAF Number:* **1232-002** *Principal Investigator:* **Brozik, James**
Title: **Model Membrane Assemblies and Membrane Proteins**
Facilities: **Current** *BSM:* **ReCurrent**
Primary Reviewer: **Eric S** *Secondary Reviewer:* **Levi O**
 - 9/25/18: deferred by IBC, pending BAF revision and facility and BSM approval.
 - 1/4/19: followed up with PI.
 - 1/7/19: revised BAF received. Revisions sent to reviewers
 - .
2. *BAF Number:* **1235-003** *Principal Investigator:* **Gerstner, Jason**
Title: **Neurogenetics and behavioral analytics in Drosophila melanogaster**
Facilities: **Current** *BSM:* **requesCurrent**

Primary Reviewer: **Levi O**

Secondary Reviewer: **Bin S**

- 9/25/18: deferred by IBC, pending BAF revision and BSM approval..
- 1/4/19: followed up with PI

3. BAF Number: 1233-003 *Principal Investigator:* **Piovia-Scott, Jonah**

Title: **The effects of chytrid fungal pathogens on amphibian hosts**

Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Eric S**

Secondary Reviewer: **Nina W**

- 10/30/18: deferred by IBC, pending BAF revision and facility approval.
- 11/13/18: revised BAF and MTA received.
- 11/15/18: revisions to reviewers.

4. BAF Number: 1300-001 *Principal Investigator:* **Varnum, Michael**

Title: **Molecular mechanisms of retinal photoreceptor function and dysfunction**

Facilities: **Requested 1/14** *BSM:* **Current**

Primary Reviewer: **Nina W**

Secondary Reviewer: **Eric S**

- 1/29/19: Deferred by IBC, pending BAF revision and facility and BSM approval.
- BSM approved
- Facilities have been inspected, need BSO signature
- Newest version of BAF needs BSO to review

5 BAF Number: 1304-001

Principal Investigator: **Hu, Jinguo**

Title: **Develop and Maintain Superior Crop Genetic Germplasm by Maintaining and Characterizing Plant and Microbial Resources**

Facilities: **Current** *BSM:* **Requested 1-14**

Primary Reviewer: **Levi O**

Secondary Reviewer: **Eric S**

- 3-26-2019 deferred pending full committee review
- Needs facilities
- Revised BAF requested per e-mail (SH)
- Second request for info for IBC sent by SH 8-8-2019

6. BAF Number: 1054-006 *Principal Investigator:* **Thomashow, Linda**

Title: **Genetic enhancement of wheat to control fungal pathogens**

Facilities: **Current**

BSM: **Current**

Primary Reviewer: **Andrei S**

Secondary Reviewer: **Hanu P**

Required Changes

- 2B more details needed, explanation of how to analyze microbial genes
- 4C.1 are new lines of trans wheat produced?
- 6B.6 How will the material be decontaminated chemically?

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the reviewer

7. **BAF Number: 998-006** *Principal Investigator: Steber, Camille*
Title: Genetic Improvement of Wheat and Barley for Environmental Resilience, Disease Resistance, and End-use Quality
Facilities: Requested 8-7-2019 BSM: Current
Primary Reviewer: Hanu P *Secondary Reviewer: Andrei S*

Required Changes

- 2B Include brief discussion of all infectious agents listed in Section 3 and all r/sNA work.
- 4C Complete table

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the IBC committee at the next scheduled meeting.

- 8-28-2019 send please respond message to PI

8. **BAF Number: 1252-005** *Principal Investigator: Oatley, Jon*
Title: Gene Editing in Livestock
Facilities: Current BSM: Current
Primary Reviewer: Nina W *Secondary Reviewer: Mike K*

Required Changes

- 2H, Change BSL-P 1 containment to animals
- 4C Clarify *E. coli* use
- 4C Clarify usage of Bovine, porcine, ovine and caprine testicular cells with r/sNA in the narrative of section 2B
- 7B Indicate possible use of STI (if desired)

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the reviewers and BSO.

- 8-28-2019 request for Post IBC meeting
- 8-29-2019 received copy of NIH guidelines on recombinant
- 8-29-2019 received revised BAF from Melissa Oatley

9. *BAF Number:* **1257-002** *Principal Investigator:* **Wu, Boyang**
Title: **Investigating and Targeting Neuromimicry in Prostate Cancer**
Facilities: **Current** *BSM:* **Current**
Primary Reviewer: **Nina W, Jennifer** *Secondary Reviewer:* **Rob O**

Required Changes:

- 2B Describe what containment is used for animals (i.e., when ABSL1 or ABSL2 is used)
- 2E Indicate IRB protocol
- 3A Verify that pLX-Puro(2nd gen) is not producing active virus or indicate measures to test for shedding (is it self inactivating?)
- 3B6 List disposal method (i.e., vivarium standard)

IBC Decision

Defer, pending completion of required change by Nina W / Jen P and Rob O.

- Sent e-mail to Dr. Wu with IBC requests 11-1-2019

10. *BAF Number:* **1113-008** *Principal Investigator:* **Utei, Massaro**
Title: **Immunologic and pharmacologic control of tick-borne pathogens that affect horses and cattle**
Facilities: **Current** *BSM:* **Current**
Primary Reviewer: **Rob O** *Secondary Reviewer:* **Nina W**

Required Changes

- 2B Include more details of animal work with pathogens and collaboration with UI, including whether animals are transported between WSU and UI. Include any inter-institutional agreements.
- 2G2 select ABSL-2 if animals are used with pathogens and indicate either protocols they are associated with (i.e., BAF/ASAF) and housing locations for those administered pathogens or r/snap.
- 4A IIID D-1 is likely incorrect, either justify or uncheck designation

- 4C1 Verify only E coli K12 is used or indicate additional strains used for protein expression

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the whole committee

- New version of BAF seen in Pre IBC, recommendations sent to PI on 1-9-2020

11. *BAF Number:* **1326-001** *Principal Investigator:* **Bernhardt, Miranda**
Title: **Oocyte and embryo biology**
Facilities: **Current** *BSM:* **Current**
Primary Reviewer: **Alan G** *Secondary Reviewer:* **Rob O**

Required Changes (sent to PI 12-6-2019)

- 2B List of oocytes and embryos should match list on 4C4. Indicate use of invertebrates and describe containment
- 2B Indicate that no human/primate cells are used
- 2B Refer to BAF 1320 to assist in the explanation of the research
- 2G2 remove checkmark on “ ABSL-1” as it is not necessary with no animal work on this BAF
- 4C3 List categories for genes to be used
- 4C4 Clarify what constitutes ”direct collection”

IBC Decision

Defer, pending Completion of the required change by the reviewers

Biosafety Program Update

Levi O informed the committee of deferred protocol activities.

IX. **Old Business** none

X. **New Business**

New Elk facility was briefly discussed. Building has been slowed by weather and completion is TBD.

XI. **Bio-Incident Reports** none

XII. Adjournment

Time 14:43 Proposed by Levi O, seconded by Alan G, motion carried (9 to 9).

2020 Meeting Dates:

January 23, February 27, March 26, April 23, May 28, June 25, July 23, August 27, September 24, October 22, and December 10th.

WSU IBC Minutes
February 27, 2020

IBC Members Present

	Member	Affiliation/Role
1.	Rob O'Connor	Chair; Veterinary Microbiology and Pathology
2.	Alan Goodman	School of Molecular Biosciences; Scientist
3.	Mike Heston	Community Member; Pullman Fire Department
4.	Levi O'Loughlin	Biosafety Officer; Research Assurances
5.	Karen Sanguinet	Crops and Soil Science
6.	Andrei Smertenko	Institute of Biological Chemistry; Plant Expert
7.	Linda Thomashow	USDA/ARS; Plant Pathology
8.	Nina Woodford	Director, Office of the Campus Veterinarian

Alternate IBC Members Present:

	Member	Affiliation/Role
1.	Jennifer Kopanke	Associate Director, Attending Vet
2.	Ryan Schwager	Research Assurances; Assistant BSO

IBC Members Absent:

	Member	Affiliation/Role
1.	Levente Kapás	Elson S. Floyd College of Medicine
2.	Mike Kluzik	ORA Director; Research Assurances
3.	Nathan Weller	Community Member; Pullman City Council

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Sonja Hartwig	Research Assurances; IBC Coordinator
2.	Megan Chastain	Assistant BSO, WSU Spokane

* Arrived after the Call To Order.

I. Call to Order: Time 13:12

II. Announcements:

1. Requests for final Confidentiality and Open Public Meeting documents by Levi O.
2. A pilot trial of utilizing Waste Management Inc. for hazardous waste is ongoing and successful.

III. Minutes – January 23, 2020

The motion was proposed by Alan G and seconded by Karen S. (8-8)

IV. BSL-3 BAFs

A. Renewals:

1. *BAF Number:* **1258-005**

Principal Investigator: **Kawula T.**

Title: Identification of Host-Pathogen Interactions in Francisella Tularensis
Facilities: Current BSM: Current

Primary Reviewer: Levi O.

Secondary Reviewer: Alan G.

Required Change

- 3B2 add source of Burkholderia

IBC Decision

Approve with administrative Change

Proposed by Levi O seconded by Alan G and motion carried (8-8)

V. BSL-2 BAFs

A. Renewal:

1. BAF Number: 1260-004

Principal Investigator: Mousel, Michelle

Title: Quantifying Host Factors in Inherited and Infectious Diseases of Small Ruminants

Facilities: Current

BSM: Current

Primary Reviewer: Rob O.

Secondary Reviewer: Nina W.

Required Changes

- 3B6 Clarify final disposition of animals that have the naturally occurring asymptomatic endemic infection.
- 4C4 List source of r/sNA (i.e., commercial siRNA)

IBC Decision

Defer, pending completion of the required change to the satisfaction of the BSO.

Proposed by Rob O and seconded by Alan G the motion carried (8 to 8)

VI. BSL-1 BAFs

A. New Protocols:

1. BAF Number: **1304-001** Principal Investigator: **Hu, Jinguo**
Title **Develop and Maintain Superior Crop Genetic Germplasm by Maintaining and Characterizing Plant and Microbial Resources:**
Facilities: **Current** BSM: **Current**

Primary Reviewer: **Levi O.** Secondary Reviewer: **Linda T.**

Required Changes

None

IBC Decision

Approve

Proposed by Rob O and seconded by Levi the motion carried (8 to 8)

2. BAF Number: **1327-001** Principal Investigator: **Brueggeman, Robert**
Title: **Functional analysis of innate immunity responses in barley**
Facilities: **Requested 1-22-2020** BSM: **Requested 1-22-2020**

Primary Reviewer: **Karen S.** Secondary Reviewer: **Linda T.**

Required Changes

- *2B edit for Layman's terms to only describe experiments with pathogens and transgenics, rather than the detail provided*
- *3A List other pathogens discussed in 2A and 2B (i.e., Puccinia spp., Pyrenophora spp., etc.)*
- *3B2 List sources of additional pathogens*
- *3B4 Discuss how the transfer of material will be accomplished, specifically between facilities*
- *3B6 Indicate if chemical inactivation will be used*
- *3B7 Permits are likely needed for transport into and out of country, as proposed in 2B*
- *4A-III E-1 likely also marked yes for propagating plasmids and Y2H (and "no" checked)*
- *4C2 List the other vectors as mentioned in 2A, 2B*
- *4C4 Enumerate sources of DNA/RNA listed in 3A*
- *4C For the Y2H screen, add yeast and genes where appropriate*

IBC Decision

Defer, pending full committee reassessment at future meeting

Proposed by Karen S and seconded by Rob O the motion carried (8 to 8)

3. *BAF Number:* **1328-001** *Principal Investigator:* **Wild, Margaret**
Title: **Elk hoof disease natural exposure trial**
Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Nina W** *Secondary Reviewer:* **Rob O**

Required Changes

- *2B Remove references to Shaw lab for possible work – as this will be included in his BAF. Only discuss work that you are performing.*
- *3B5 Housing of animals need to have description of disinfection procedures the same as the transportation vehicles (addressed in section 4, but should be added to section 5)*

IBC Decision

Defer, pending completion of the required change to the satisfaction of the BSO.

Proposed by Nina W seconded by Rob O and motion carried (8 to 8).

B. Renewals:

1. *BAF Number:* **998-006** *Principal Investigator:* **Steber, Camille**
Title: **Genetic Improvement of Wheat and Barley for Environmental Resilience, Disease Resistance, and End-use Quality**
Facilities: **Requested 8-7-2019** *BSM:* **Current**

Primary Reviewer: **Hanu P** *Secondary Reviewer:* **Andrei S**

Required Changes

- *None*

IBC Decision

Approve

Proposed by Andrei S and seconded by Karen S the motion carried (8 to 8).

2. *BAF Number: 1112-005 Principal Investigator: Coyne, Clarice*
Title: Storage and distribution of seed of T-DNA tagged mutant lines of the grass *Brachypodium distachyon*.
Facilities: Requested 1-30-20 BSM: Requested 1-30-20

Primary Reviewer: Karen S

Secondary Reviewer: Andrei S

Required Changes

- 2A Include the origin of the transgenic seeds, goals of the project and history of the work

IBC Decision

Defer, pending completion of the required change to the satisfaction of the reviewers.

Proposed by Karen S seconded by Linda T the motion carried (8 to 8).

VII. **BAFs Resolved in the Interim**

Administrative Approvals:

1. *BAF Number: 730-010 Principal Investigator: Brayton,*
Title: Genomic Analysis of Anaplasma
Like in kind

Other Approvals:

1. *BAF Number: 1113-008 Principal Investigator: Utei, Massaro*
Title: Immunologic and pharmacologic control of tick-borne pathogens that affect horses and cattle
2. *BAF Number: 1239-002 Principal Investigator: Peixoto, L*
Title: Learning and sociability in Shank3 mutant mice
3. *BAF Number: 1259-006 Principal Investigator: O'Connor, R*
Title: New Therapies for Apicomplexan Parasitic Infections
4. *BAF Number: 1233-003 Principal Investigator: Piovia-Scott, Jonah*
Title: The effects of chytrid fungal pathogens on amphibian hosts

Deactivations:

1. *BAF Number: 1114* *Principal Investigator: Scoles, Glen*
*Title: **Determinants of Anaplasma marginale transmission at the vector/pathogen interface AND Immunologic and Pharmacological Interventions of Vector-Borne Babesiosis***
2. *BAF Number: 1118* *Principal Investigator: Besser, Thomas*
*Title: **Mycoplasma Ovipneumoniae in Domestic and Bighorn Sheep***
3. *BAF Number: 1116-003* *Principal Investigator: Jones, Jeffrey*
*Title : **Aldehyde Oxidase***

VIII. Deferred BAFs

Deferred BAFs – February 2020:

Review Key for revisions:

- **Green – can be reviewed/approved by BSO.**
- **Blue – to be reviewed and approved by the assigned reviewers.**
- **Purple - to be reviewed and approved by the IBC Chair**
- **Red – must be reviewed by the convened IBC**

1. *BAF Number: 1232-002* *Principal Investigator: Brozik, James*
*Title: **Model Membrane Assemblies and Membrane Proteins***
*Facilities: **Current*** *BSM: **ReCurrent***
*Primary Reviewer: **Eric S*** *Secondary Reviewer: **Levi O***
 - 9/25/18: deferred by IBC, pending BAF revision and facility and BSM approval.
 - 1/4/19: followed up with PI.
 - 1/7/19: revised BAF received. Revisions sent to reviewers
2. *BAF Number: 1300-001* *Principal Investigator: Varnum, Michael*
*Title: **Molecular mechanisms of retinal photoreceptor function and dysfunction***
*Facilities: **Requested 1/14*** *BSM: **Current***
*Primary Reviewer: **Nina W*** *Secondary Reviewer: **Eric S***

- 1/29/19: Deferred by IBC, pending BAF revision and facility and BSM approval.
- BSM approved
- Facilities have been inspected, need BSO signature
- Newest version of BAF needs BSO to review

3. BAF Number: 1304-001

Principal Investigator: Hu, Jinguo

Title: Develop and Maintain Superior Crop Genetic Germplasm by Maintaining and Characterizing Plant and Microbial Resources

Facilities: Current BSM: Requested 1-14

Primary Reviewer: Levi O

Secondary Reviewer: Eric S

- 3-26-2019 deferred pending full committee review
- Needs facilities
- Revised BAF requested per e-mail (SH)
- Second request for info for IBC sent by SH 8-8-2019

4. BAF Number: 1054-006

Principal Investigator: Thomashow, Linda

Title: Genetic enhancement of wheat to control fungal pathogens

Facilities: Current

BSM: Current

Primary Reviewer: Andrei S

Secondary Reviewer: Hanu P

Required Changes

- 2B more details needed, explanation of how to analyze microbial genes
- 4C.1 are new lines of trans wheat produced?
- 6B.6 How will the material be decontaminated chemically?

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the reviewer

5. BAF Number: 998-006

Principal Investigator: Steber, Camille

Title: Genetic Improvement of Wheat and Barley for Environmental Resilience, Disease Resistance, and End-use Quality

Facilities: Requested 8-7-2019 BSM: Current

Primary Reviewer: Hanu P

Secondary Reviewer: Andrei S

Required Changes

- 2B Include brief discussion of all infectious agents listed in Section 3 and all r/sNA work.
- 4C Complete table

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the IBC committee at the next scheduled meeting.

- 8-28-2019 send please respond message to PI

6. BAF Number: **1257-002** Principal Investigator: **Wu, Boyang**
 Title: **Investigating and Targeting Neuromimicry in Prostate Cancer**
 Facilities: **Current** BSM: **Current**
 Primary Reviewer: **Nina W, Jennifer** Secondary Reviewer: **Rob O**

Required Changes:

- 2B Describe what containment is used for animals (i.e., when ABSL1 or ABSL2 is used)
- 2E Indicate IRB protocol
- 3A Verify that pLX-Puro(2nd gen) is not producing active virus or indicate measures to test for shedding (is it self inactivating?)
- 3B6 List disposal method (i.e., vivarium standard)

IBC Decision

Defer, pending completion of required change by Nina W / Jen P and Rob O.

- Sent e-mail to Dr. Wu with IBC requests 11-1-2019

7. BAF Number: **1058-006** Principal Investigator: **Alderete, J**
 Title: **Characterization of the Trichomonas vaginalis Serodiagnostic Target**
 Facilities: **Current** BSM: **Current**
 Primary Reviewer: **Andrei S** Secondary Reviewer: **Karen S**

Required Changes

- 2B Expound on process to work with Sera, list the source for Sera, explain how proteins and pathogens are produced,
- 2B Take out references to being the only one working on project
- 2B If work is to be done with Trichomonas an amendment will be needed

- 2E These are indirect samples, should state that it is an exempt IRB status
- Section 3 should be removed, not working with Trichomonas
- 5A1 Wash.U-St.Lewis the only source for Sera
- 57D Offer system vaccination to any participants (PI)

IBC Decision

Defer, pending Completion of the required change to the satisfaction of the Reviewers.

8. *BAF Number:* **867-016** *Principal Investigator:* **Konkel, Michael**
 Title: **A novel approach to identify the virulence proteins secreted by**
 Campylobacter Jejuni
 Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Alan G**

Secondary Reviewer: **Karen S**

Required Changes

- 2H Add rooms from McCoy check on removal of Bustad 40H, 40K, 41L(rodents are exempt.
- 3A Human Papillomavirus has an available Vaccine (check yes)
- 3B Blood from Bangladesh is listed in Section 5, but its utilization is not discussed in 3
- 3B6 Disposal of bedding needs to be included
- 4A IIIE4BC3 wording “we will notify IBC” needs to be changed to “an amendment will be filed with IBC”

IBC Decision

Defer, pending completion of the required change to the satisfaction of the Reviewers.

9. *BAF Number:* **1184-004** *Principal Investigator:* **Fuchs Lokensgard, Rita**
 Title: **AAV/CAV-2-induced expression of light-sensitive ion channels and**
 DREADDs
 Facilities: **Current** *BSM:* **Current**
 Primary Reviewer: **Alan G** *Secondary Reviewer* **Rob O**

Required Changes

- 2C add ASAF 6255
- 2G2 select ABSL2 as well
- 2H need animal rooms defined
- 3B6 Bedding needs to be addressed
- 4C1 define type of Ecoli

- *4C2 also needs BSL2 level selected*

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the reviewers.

IX. **Biosafety Program Update** none

X. **Old Business** none

XI. **New Business** none

XII. **Bio-Incident Reports** none

XIII. **Adjournment**

The motion was proposed by Alan G and seconded by Rob O and motion carried (8-8).
Time: **14:55**

WSU IBC Minutes
March 26, 2020

IBC Members Present

	Member	Affiliation/Role
1.	Rob O'Connor	Chair; Veterinary Microbiology and Pathology
2.	Alan Goodman	School of Molecular Biosciences; Scientist
3.	Mike Heston	Community Member; Pullman Fire Department
4.	Levi O'Loughlin	Biosafety Officer; Research Assurances
5.	Karen Sanguinet	Crops and Soil Science
6.	Ryan Schwager	Research Assurances; Assistant BSO (voting for M Kluzik)
7.	Andrei Smertenko	Institute of Biological Chemistry; Plant Expert
8.	Nina Woodford	Director, Office of the Campus Veterinarian

Alternate IBC Members Present:

	Member	Affiliation/Role
1.	Jennifer Kopanke	Associate Director, Attending Vet

IBC Members Absent:

	Member	Affiliation/Role
1.	Levente Kapás	Elson S. Floyd College of Medicine
2.	Mike Kluzik	ORA Director; Research Assurances
3.	Linda Thomashow	USDA/ARS; Plant Pathology
4.	Nathan Weller	Community Member; Pullman City Council

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Megan Chastain	Assistant BSO, WSU Spokane
2.	Sonja Hartwig	Research Assurances; IBC Coordinator

* Arrived after the Call To Order.

- I. **Call to Order:** Time: 13:18
- II. **Announcements:** Levi O voiced that the pandemic is acknowledged by WSU and WSU is running on reduced capacity until further notice.
- III. **Minutes – March 26, 2020**
The motion was proposed by Levi O and seconded by Karen S. (8-8)
- IV. **BSL-3 BAFs**
 - A. **New Protocols:** None

Primary Reviewer:

Secondary Reviewer:

- B. **Renewals:**

V. **BSL-2 BAFs**

C. New Protocols:

1. *BAF Number:* **1329-001**

Principal Investigator: **Prasad, Bhagwat**

Title: **Drug metabolism , transport, proteomics and metabolomic analysis involving tissues, biofluids and cells.**

Facilities: **Current**

BSM: **Current**

Primary Reviewer: **Levente K**

Secondary Reviewer: **Levi O**

Required Changes:

3B5 Treated waste is to be disposed via Spokane Waste Management.

IBC Decision:

Approve with administrative changes.

Proposed by Levi O and seconded by Alan G. (8-8)

2. *BAF Number:* **1330-001**

Principal Investigator: **Gunn, Bronwyn**

Title: **Systems serology analysis of induction of antibody-mediated innate immune effector functions.**

Facilities: **Current**

BSM: **Current**

Primary Reviewer: **Alan G**

Secondary Reviewer: **Rob O**

Required Changes:

- 2A Clarify the use of serum samples from patients with disparate outcomes. Is there risk of disease? Is this IRB exempt?
- 4C3 Are any viral genes being cloned?
- 5A6 Select "Yes"

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the BSO.

Proposed by Alan G and seconded by Levi O. (8-8).

D. Renewals: None

VI. **BSL-1 BAFs**

E. New Protocols: None

F. Renewals:

1. *BAF Number:* **1271-002** *Principal Investigator:* **Driskell, Ryan**
Title: **Investigating Skin Regeneration in Mammalian Systems**
Facilities: **Requested 2-21-20** *BSM:* **Requested 2-21-20**

Animal only protocol to be reviewed and approved by BSO.

VII. **BAFs Resolved in the Interim**

VIII. Administrative Approvals:

IX. Other Approvals:

1. *BAF Number:* **1304-001** *Principal Investigator:* **Hu, Jinguo**
Title: **Develop and Maintain Superior Crop Genetic Germplasm by Maintaining and Characterizing Plant and Microbial Resources**
2. *BAF Number:* **998-006** *Principal Investigator:* **Steber, Camille**
Title: **Genetic Improvement of Wheat and Barley for Environmental Resilience, Disease Resistance, and End-use Quality**

X. **Deferred BAFs**

Deferred BAFs – March 2020:

Review Key for revisions:

- **Green – can be reviewed/approved by BSO.**
- **Blue – to be reviewed and approved by the assigned reviewers.**
- **Purple - to be reviewed and approved by the IBC Chair**
- **Red – must be reviewed by the convened IBC**

1. *BAF Number:* **1232-002** *Principal Investigator:* **Brozik, James**
Title: **Model Membrane Assemblies and Membrane Proteins**
Facilities: **Current** *BSM:* **ReCurrent**
Primary Reviewer: **Eric S** *Secondary Reviewer:* **Levi O**

- 9/25/18: deferred by IBC, pending BAF revision and facility and BSM approval.
- 1/4/19: followed up with PI.
- 1/7/19: revised BAF received. Revisions sent to reviewers

2. *BAF Number:* **1300-001** *Principal Investigator:* **Varnum, Michael**
Title: **Molecular mechanisms of retinal photoreceptor function and dysfunction**
Facilities: **Requested 1/14** *BSM:* **Current**
Primary Reviewer: **Nina W** *Secondary Reviewer:* **Eric S**

- 1/29/19: Deferred by IBC, pending BAF revision and facility and BSM approval.
- BSM approved
- Facilities have been inspected, need BSO signature
- Newest version of BAF needs BSO to review

3. *BAF Number:* **1054-006** *Principal Investigator:* **Thomashow, Linda**
Title: **Genetic enhancement of wheat to control fungal pathogens**
Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Andrei S** *Secondary Reviewer:* **Hanu P**

Required Changes

- 2B more details needed, explanation of how to analyze microbial genes
- 4C.1 are new lines of trans wheat produced?
- 6B.6 How will the material be decontaminated chemically?

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the reviewer

4. *BAF Number:* **1257-002** *Principal Investigator:* **Wu, Boyang**
Title: **Investigating and Targeting Neuromimicry in Prostate Cancer**
Facilities: **Current** *BSM:* **Current**
Primary Reviewer: **Nina W, Jennifer** *Secondary Reviewer:* **Rob O**

Required Changes:

- 2B Describe what containment is used for animals (i.e., when ABSL1 or ABSL2 is used)
- 2E Indicate IRB protocol
- 3A Verify that pLX-Puro(2nd gen) is not producing active virus or indicate measures to test for shedding (is it self inactivating?)
- 3B6 List disposal method (i.e., vivarium standard)

IBC Decision

Defer, pending completion of required change by Nina W / Jen P and Rob O.

- Sent e-mail to Dr. Wu with IBC requests 11-1-2019

5 *BAF Number: 1058-006* *Principal Investigator: Alderete, J*
Title: Characterization of the Trichomonas vaginalis Serodiagnostic Target
Facilities: Current *BSM: Current*

Primary Reviewer: Andrei S *Secondary Reviewer: Karen S*

Required Changes

- 2B Expound on process to work with Sera, list the source for Sera, explain how proteins and pathogens are produced,
- 2B Take out references to being the only one working on project
- 2B If work is to be done with Trichomonas an amendment will be needed
- 2E These are indirect samples, should state that it is an exempt IRB status
- Section 3 should be removed, not working with Trichomonas
- 5A1 Wash.U-St.Lewis the only source for Sera
- 57D Offer system vaccination to any participants (PI)

IBC Decision

Defer, pending Completion of the required change to the satisfaction of the Reviewers.

6 . *BAF Number: 867-016* *Principal Investigator: Konkel, Michael*
Title: A novel approach to identify the virulence proteins secreted by
Campylobacter Jejuni
Facilities: Current *BSM: Current*

Primary Reviewer: Alan G *Secondary Reviewer: Karen S*

Required Changes

- 2H Add rooms from McCoy check on removal of Bustad 40H, 40K, 41L(rodents are exempt.
- 3A Human Papillomavirus has an available Vaccine (check yes)

- 3B Blood from Bangladesh is listed in Section 5, but its utilization is not discussed in 3
- 3B6 Disposal of bedding needs to be included
- 4A IIIE4BC3 wording “we will notify IBC” needs to be changed to “an amendment will be filed with IBC”

IBC Decision

Defer, pending completion of the required change to the satisfaction of the Reviewers.

7 . BAF Number: **1184-004** Principal Investigator: **Fuchs Lokensgard, Rita**
 Title: **AAV/CAV-2-induced expression of light-sensitive ion channels and DREADDs**
 Facilities: **Current** BSM: **Current**
 Primary Reviewer: **Alan G** Secondary Reviewer **Rob O**

Required Changes

- 2C add ASAF 6255
- 2G2 select ABSL2 as well
- 2H need animal rooms defined
- 3B6 Bedding needs to be addressed
- 4C1 define type of Ecoli
- 4C2 also needs BSL2 level selected

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the reviewers.

8. BAF Number : **1112-005** Principal Investigator: **Coyne, Claire**
 Title: **Storage and distribution of seed of T-DNA tagged mutant lines of the grass Brachypodium distachyon.**
 Primary Reviewer: **Karen S** Secondary Reviewer: **Andrei S**

Required changes:

- [2A Include the origin of the transgenic seeds, goals of the project and history of the work](#)
-

11. BAF Number: **1260-004** Principal Investigator: **Mousel, Michelle**
 Title: **Quantifying Host Factors in Inherited and Infectious Diseases of Small Ruminants**
 Facilities: **Current** BSM: **Current**
 Primary Reviewer: **Rob O.** Secondary Reviewer: **Nina W.**

Required Changes

- *3B6 Clarify final disposition of animals that have the naturally occurring asymptomatic endemic infection.*
- *4C4 List source of r/sNA (i.e., commercial siRNA)*

9. BAF Number: **1327-001** Principal Investigator: **Brueggeman, Robert**
Title: **Functional analysis of innate immunity responses in barley**
Facilities: **Requested 1-22-2020** BSM: **Requested 1-22-2020**

Primary Reviewer: **Karen S.**

Secondary Reviewer: **Linda T.**

Required Changes

- *2B edit for Layman's terms to only describe experiments with pathogens and transgenics, rather than the detail provided*
- *3A List other pathogens discussed in 2A and 2B (i.e., Puccinia spp., Pyrenophora spp., etc.)*
- *3B2 List sources of additional pathogens*
- *3B4 Discuss how the transfer of material will be accomplished, specifically between facilities*
- *3B6 Indicate if chemical inactivation will be used*
- *3B7 Permits are likely needed for transport into and out of country, as proposed in 2B*
- *4A-IIIIE E-1 likely also marked yes for propagating plasmids and Y2H (and "no" checked)*
- *4C2 List the other vectors as mentioned in 2A, 2B*
- *4C4 Enumerate sources of DNA/RNA listed in 3A*
- *4C For the Y2H screen, add yeast and genes where appropriate*

10. BAF Number: **1328-001** Principal Investigator: **Wild, Margaret**
Title: **Elk hoof disease natural exposure trial**
Facilities: **Current** BSM: **Current**

Primary Reviewer: **Nina W**

Secondary Reviewer: **Rob O**

Required Changes

- *2B Remove references to Shaw lab for possible work – as this will be included in his BAF. Only discuss work that you are performing.*
- *3B5 Housing of animals need to have description of disinfection procedures the same as the transportation vehicles (addressed in section 4, but should be added to section 5)*

- XI. Biosafety Program Update:** No incidents, however BSO informed IBC that while many buildings were on lock down on campus, any needed supplies could be obtained by contacting M Kluzik.
- XII. Old Business:** None
- XIII. New Business:** None
- XIV. Adjournment**
Adjournment at 13:40.
Proposed by Alan G and seconded by Levi O (8-8)

WSU IBC Minutes
April 23, 2020

IBC Members Present

	Member	Affiliation/Role
1.	Rob O'Connor	Chair; Veterinary Microbiology and Pathology
2.	Alan Goodman	School of Molecular Biosciences; Scientist
3.	Mike Heston	Community Member; Pullman Fire Department
4.	Levente Kapás	Elson S. Floyd College of Medicine
5.	Mike Kluzik	ORA Director; Research Assurances
6.	Levi O'Loughlin	Biosafety Officer; Research Assurances
7.	Karen Sanguinet	Crops and Soil Science
8.	Andrei Smertenko	Institute of Biological Chemistry; Plant Expert
9.	Linda Thomashow	USDA/ARS; Plant Pathology
10	Nina Woodford	Director, Office of the Campus Veterinarian

Alternate IBC Members Present:

	Member	Affiliation/Role
1.	Ryan Schwager	Research Assurances; Assistant BSO
2.	Jennifer Kopanke	Associate Director, Attending Vet

IBC Members Absent:

	Member	Affiliation/Role
1.	Nathan Weller	Community Member; Pullman City Council

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Sonja Hartwig	Research Assurances; IBC Coordinator
2.	Megan Chastain	Assistant BSO, WSU Spokane

* Arrived after the Call To Order.

- I. **Call to Order:** Time 13:06
- II. **Announcements:**
- III. **Minutes – March 26, 2020**
This motion was proposed by Levi O seconded by Alan G.(10-10)
- IV. **BSL-3 BAFs** none
- V. **BSL-2 BAFs**
 - A. **New Protocols:**
 1. ***BAF Number:1332-001*** ***Principal Investigator: Call, Doug***
Title: Detection of SARS-CoV-2 and antimicrobial-resistant bacteria in sewage
Facilities: Requested BSM: Requested

Primary Reviewer: Levi O Secondary Reviewer: Rob O

Required Changes:

- 3A Infectious agents should only indicate sewage samples with the potential for virulence rather than specific examples
- 3B3 Indicate that all fecal isolates will be handled with BSL2 guidelines. The “very low risk” statement needs support or changed
- 3B4 describe the process for obtaining the samples from the sewers and the safety measures taken to transport it to the lab and while in the lab settings

Nina W leaves after the discussion and abstained from voting.

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the reviewers.

Proposed by Levi O seconded by Rob O and motion carried (9-9)

B. Renewals:

1. *BAF Number:* **1267-002** *Principal Investigator:* **Call, Doug**
Title: **Using CRISPR Cas9 for genetic manipulation of Escherichia coli**
Facilities: **Received** *BSM:* **Received**

Primary Reviewer: **Levi O** *Secondary Reviewer:* **Alan G**

Required Changes:

- Needs 4A IIID D2 needs selected
- 3B4 Clarify transportation of agents and containment
- 4D2 “Yes” needs selected
- 4C1 Remove the statement in parentheses, not needed

IBC Decision

Defer, pending completion of required changes to the satisfaction of the reviewers

Proposed by Levi O seconded by Nina W and motion carried (10-10)

2. *BAF Number:* **1265-005** *Principal Investigator:* **Shelden, Eric**
Title: **Stress response signaling and gene regulation**
Facilities: **Requested** *BSM:* **Received**

Primary Reviewer: **Rob O** *Secondary Reviewer* **Levente K**

Required Changes:

- 3A INT407 cells should be listed in the table

- 4C2 Assess BSL2 in the table and ensure it is correct

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the BSO.

Proposed by Rob O seconded by Levi O and motion carried (10-10).

3 *BAF Number:* **1117-004** *Principal Investigator:* **Jasmer, Doug**
Title **Intestinal genes of nematodes**
Facilities: **Requested** *BSM:* **Received**

Primary Reviewer: **Rob O** *Secondary Reviewer:* **Nina W**

Required Changes:

- 2BH rooms need to be verified, if they change and amendment could be submitted
- 3B2 List where original source material is obtained
- 3B4 clarify how animals are contained as they are infected while in the study with a strain found in the wild
- 3B6 If STI is the disposal method for all wastes, most other items do not need to be included
- 2B Clarify how nematode eggs are handled

IBC Decision

Defer, pending completion of required changes to the satisfaction of the reviewers.

Proposed by Rob O seconded by Mike H and motion carried (10-10)

C. Amendments: none

VI. BSL-1 BAFs

A. New Protocols:

1. *BAF Number:* **1269-002** *Principal Investigator:* **Maddison, L**
Title: **Core Facility to Develop Gene Editing Reagents**
Facilities: **Received** *BSM:* **Received**

Primary Reviewer: Alan G

Secondary Reviewer: Karen S

Required Changes:

- 4D2 clarify rational of D2 selection of nucleic acids

IBC Decision

Defer, pending completion of required changes to the satisfaction of the reviewers

Proposed by Alan G seconded by Karen S and motion carried (10-10)

B. Renewals:

1. *BAF Number:* **1115-005** *Principal Investigator:* **Gill, Kulvinder**
Title: **Characterizing genes involved in heat tolerance, stress resistance and yield in wheat and other cereals**
Facilities: **Requested** *BSM:* **Received**

Primary Reviewer: **Andrei S**

Secondary Reviewer: **Linda T**

Required Changes:

- 2I needs to be checked yes, so Section 3 will need to be filled out
- 2H chart needs to be completed in the Species of Plants in rooms
- 4A EIII needs checked as well as E2
- 4C1 host includes Agrobacterium and e coli
- 4C3 List all used
- 6A 6 should be selected as yes
- A co-principal investigator who has access to campus needs to be designated on the BAF.

IBC Decision

Defer to the committee at the May meeting

Proposed by Alan G seconded by Linda T and motion carried (9-10)

VII. **BAFs Resolved in the Interim** none

VIII. Deferred BAFs

Deferred BAFs – April 2020:

Review Key for revisions:

- **Green – can be reviewed/approved by BSO.**
- **Blue – to be reviewed and approved by the assigned reviewers.**
- **Purple - to be reviewed and approved by the IBC Chair**
- **Red – must be reviewed by the convened IBC**

1. BAF Number: 1232-002 Principal Investigator: Brozik, James

Title: Model Membrane Assemblies and Membrane Proteins

Facilities: Current BSM: Recurrent

Primary Reviewer: Eric S Secondary Reviewer: Levi O

- 9/25/18: deferred by IBC, pending BAF revision and facility and BSM approval.
- 1/4/19: followed up with PI.
- 1/7/19: revised BAF received. Revisions sent to reviewers

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2. BAF Number: 1300-001 Principal Investigator: Varnum, Michael

Title: Molecular mechanisms of retinal photoreceptor function and dysfunction

Facilities: Requested 1/14 BSM: Current

Primary Reviewer: Nina W Secondary Reviewer: Eric S

- 1/29/19: Deferred by IBC, pending BAF revision and facility and BSM approval.
- BSM approved
- Facilities have been inspected, need BSO signature
- Newest version of BAF needs BSO to review

3. BAF Number: 1304-001 Principal Investigator: Hu, Jinguo

Title: Develop and Maintain Superior Crop Genetic Germplasm by Maintaining and Characterizing Plant and Microbial Resources

Facilities: Current BSM: Requested 1-14

Primary Reviewer: Levi O Secondary Reviewer: Eric S

- 3-26-2019 deferred pending full committee review
- Needs facilities
- Revised BAF requested per e-mail (SH)

- Second request for info for IBC sent by SH 8-8-2019

4. *BAF Number:* **1054-006** *Principal Investigator:* **Thomashow, Linda**
Title: **Genetic enhancement of wheat to control fungal pathogens**
Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Andrei S** *Secondary Reviewer:* **Hanu P**

Required Changes

- 2B more details needed, explanation of how to analyze microbial genes
- 4C.1 are new lines of trans wheat produced?
- 6B.6 How will the material be decontaminated chemically?

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the reviewer

5. *BAF Number:* **998-006** *Principal Investigator:* **Steber, Camille**
Title: **Genetic Improvement of Wheat and Barley for Environmental Resilience, Disease Resistance, and End-use Quality**
Facilities: **Requested 8-7-2019** *BSM:* **Current**
Primary Reviewer: **Hanu P** *Secondary Reviewer:* **Andrei S**

Required Changes

- 2B Include brief discussion of all infectious agents listed in Section 3 and all r/sNA work.
- 4C Complete table

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the IBC committee at the next scheduled meeting.

- 8-28-2019 send please respond message to PI
-

6. *BAF Number:* **1257-002** *Principal Investigator:* **Wu, Boyang**
Title: **Investigating and Targeting Neuromimicry in Prostate Cancer**
Facilities: **Current** *BSM:* **Current**
Primary Reviewer: **Nina W, Jennifer** *Secondary Reviewer:* **Rob O**

Required Changes:

- 2B Describe what containment is used for animals (i.e., when ABSL1 or ABSL2 is used)
- 2E Indicate IRB protocol
- 3A Verify that pLX-Puro(2nd gen) is not producing active virus or indicate measures to test for shedding (is it self inactivating?)
- 3B6 List disposal method (i.e., vivarium standard)

IBC Decision

Defer, pending completion of required change by Nina W / Jen P and Rob O.

- Sent e-mail to Dr. Wu with IBC requests 11-1-2019

7. BAF Number: 1058-006 *Principal Investigator: Alderete, J*
Title: Characterization of the Trichomonas vaginalis Serodiagnostic Target
Facilities: Current *BSM: Current*

Primary Reviewer: Andrei S *Secondary Reviewer: Karen S*

Required Changes

- 2B Expound on process to work with Sera, list the source for Sera, explain how proteins and pathogens are produced,
- 2B Take out references to being the only one working on project
- 2B If work is to be done with Trichomonas an amendment will be needed
- 2E These are indirect samples, should state that it is an exempt IRB status
- Section 3 should be removed, not working with Trichomonas
- 5A1 Wash.U-St.Lewis the only source for Sera
- 57D Offer system vaccination to any participants (PI)

IBC Decision

Defer, pending Completion of the required change to the satisfaction of the Reviewers.

8. BAF Number: 867-016 *Principal Investigator: Konkel, Michael*
Title: A novel approach to identify the virulence proteins secreted by
Campylobacter Jejuni
Facilities: Current *BSM: Current*

Primary Reviewer: Alan G

Secondary Reviewer: Karen S

Required Changes

- 2H Add rooms from McCoy check on removal of Bustad 40H, 40K, 41L(rodents are exempt.
- 3A Human Papillomavirus has an available Vaccine (check yes)
- 3B Blood from Bangladesh is listed in Section 5, but its utilization is not discussed in 3
- 3B6 Disposal of bedding needs to be included
- 4A IIIE4BC3 wording “we will notify IBC” needs to be changed to “an amendment will be filed with IBC”

IBC Decision

Defer, pending completion of the required change to the satisfaction of the Reviewers.

9. BAF Number:1184-004 *Principal Investigator: Fuchs Lokensgard, Rita*
Title: AAV/CAV-2-induced expression of light-sensitive ion channels and DREADDs
Facilities: Current *BSM: Current*
Primary Reviewer: Alan G *Secondary Reviewer Rob O*

Required Changes

- 2C add ASAF 6255
- 2G2 select ABSL2 as well
- 2H need animal rooms defined
- 3B6 Bedding needs to be addressed
- 4C1 define type of E.coli
- 4C2 also needs BSL2 level selected

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the reviewers.

10. BAF Number : 1112-005 *Principal Investigator: Coyne, Claire*
Title: Storage and distribution of seed of T-DNA tagged mutant lines of the grass Brachypodium distachyon.
Primary Reviewer: Karen S *Secondary Reviewer: Andrei S*

Required changes:

- *2A Include the origin of the transgenic seeds, goals of the project and history of the work*
-

11. BAF Number:1260-004 *Principal Investigator: Mousel, Michelle*

Title: Quantifying Host Factors in Inherited and Infectious Diseases of Small Ruminants

Facilities: Current

BSM: Current

Primary Reviewer: Rob O.

Secondary Reviewer: Nina W.

Required Changes

- *3B6 Clarify final disposition of animals that have the naturally occurring asymptomatic endemic infection.*
- *4C4 List source of r/sNA (i.e., commercial siRNA)*

11. BAF Number: 1327-001 Principal Investigator: Brueggeman, Robert

Title: Functional analysis of innate immunity responses in barley

Facilities: Requested 1-22-2020

BSM: Requested 1-22-2020

Primary Reviewer: Karen S.

Secondary Reviewer: Linda T.

Required Changes

- *2B edit for Layman's terms to only describe experiments with pathogens and transgenics, rather than the detail provided*
- *3A List other pathogens discussed in 2A and 2B (i.e., Puccinia spp., Pyrenophora spp., etc.)*
- *3B2 List sources of additional pathogens*
- *3B4 Discuss how the transfer of material will be accomplished, specifically between facilities*
- *3B6 Indicate if chemical inactivation will be used*
- *3B7 Permits are likely needed for transport into and out of country, as proposed in 2B*
- *4A-IIIE E-1 likely also marked yes for propagating plasmids and Y2H (and "no" checked)*
- *4C2 List the other vectors as mentioned in 2A, 2B*
- *4C4 Enumerate sources of DNA/RNA listed in 3A*
- *4C For the Y2H screen, add yeast and genes where appropriate*

12. BAF Number: 1328-001 Principal Investigator: Wild, Margaret

Title: Elk hoof disease natural exposure trial

Facilities: Current

BSM: Current

Primary Reviewer: Nina W

Secondary Reviewer: Rob O

Required Changes

- *2B Remove references to Shaw lab for possible work – as this will be included in his BAF. Only discuss work that you are performing.*

3B5 Housing of animals need to have description of disinfection procedures the same as the transportation vehicles (addressed in section 4, but should be added to section

IX. Biosafety Program Update

X. Old Business

XI. New Business

XII. Bio Incident Reports

XIII. Adjournment

This motion was proposed by Levi O and seconded by Rob O and motion was carried (10-10) at 14:58.

WSU IBC Minutes
May 28, 2020

IBC Members Present

	Member	Affiliation/Role
1.	Rob O'Connor	Chair; Veterinary Microbiology and Pathology
2.	Alan Goodman	School of Molecular Biosciences; Scientist
3.	Mike Heston	Community Member; Pullman Fire Department
4.	Levente Kapás	Elson S. Floyd College of Medicine
5.	Mike Kluzik	ORA Director; Research Assurances
6.	Levi O'Loughlin	Biosafety Officer; Research Assurances
7.	Andrei Smertenko	Institute of Biological Chemistry; Plant Expert
8.	Linda Thomashow	USDA/ARS; Plant Pathology
9.	Nathan Weller	Community Member; Pullman City Council
10.	Nina Woodford	Director, Office of the Campus Veterinarian

Alternate IBC Members Present:

	Member	Affiliation/Role
1.	Jennifer Kopanke	Associate Director, Attending Vet
2.	Ryan Schwager	Research Assurances; Assistant BSO

IBC Members Absent:

	Member	Affiliation/Role
1.	Karen Sanguinet	Crops and Soil Science

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Sonja Hartwig	Research Assurances; IBC Coordinator
2.	Megan Chastain	Assistant BSO, WSU Spokane

* Arrived after the Call To Order.

- I. **Call to Order:** Time 13:07
- II. **Announcements:**
Levi O gave an update on the progress to returning to on-site research, scholarship and creative activities and the future unused of the on-site incinerator
- III. **Minutes – April 23, 2020**
This motion was proposed by Linda T seconded by Mike H. (10-10)
- IV. **BSL-3 BAFs**
 - A. **New Protocols:**
 1. *BAF Number:***1336-001** *Principal Investigator:* **Bose, S**
Title: **Mechanisms regulating SARS-CoV-2 infection and COVID-19 disease**

Facilities: **Requested** *BSM:* **Requested**

*Primary Reviewer: **Levi O***

*Secondary Reviewer: **Rob O***

Required Changes:

- 3B4 Define layers of containment in leak-proof containers when transporting agents

IBC Decision

Defer, Pending completion of required changes to the satisfaction of the Reviewers

Proposed by Levi O seconded by Rob O and motion carried (10-10)

B. Renewals: none

V. BSL-2 BAFs

A. New Protocols:

1. *BAF Number: **1331-001***
*Title: **Precision Medicine***
*Facilities: **Deferred***

*Principal Investigator: **Clarke, John***

*BSM: **Current***

*Primary Reviewer: **Levente K***

*Secondary Reviewer: **Alan G***

Required Changes:

- Section 2B omit vague language (i.e., ‘but not limited to’...)
- Section 2H identify rooms need for housing rodents (e.g., likely PBS 32C)
- Section 3A Identify biosafety level of Microcystin LR (e.g., BSL2)
- Section 3A list all additional agents needed
- Section 3B4 clarify type of secondary containment is leak-proof
- Section 4C3 define the genes (acronyms)

IBC Decision

Defer, pending the completion of the required changes to the satisfaction of the Biosafety Officer.

Proposed by Alan G seconded by Rob O and motion carried (10-10)

2. *BAF Number: **1334-001***

*Principal Investigator: **Gunn, Bronwyn***

Title: Analysis of antibody-mediated innate immune effector functions induced by COVID-19 convalescent plasma

Facilities: Deferred

BSM: Current

Primary Reviewer: Rob O

Secondary Reviewer: Levi O

Required Changes:

- Section 2B Describe the handling of sera from delivery thru pre-experiment (e.g., is it heat inactivated before opening?)
- Section 2B List the target cells in the cytolytic assay
- Section 5 List the provider of human samples from Seattle
- Section 3A Change “?” to an “x”

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the reviewers.

Proposed by Rob O seconded by Levi O and motion carried (10-10)

B. Renewals:

1. ***BAF Number: 1122-005*** ***Principal Investigator: Brunner, Jesse***
Title: Rhanavirus and chytrid ecology

Facilities: Deferred

BSM: Current

Primary Reviewer: Nina W

Secondary Reviewer: Levi O

Required Changes:

- 2B/2H Since the large tanks outside are not ABSL2, add language to indicate that there are no outdoor exposures of animals.
- 2B and 3B2 should describe the genetically altered rhanavirus used, including containment
- 3B5 Describe terminal inactivation of large volumes of water
- 3B6 STI steam sterilization is appropriate for this work (in addition to incineration)
- 4C Describe genetic modifications or remove until this information and strains are available (can be added as an amendment at a later date)

IBC Decision:

Defer, pending completion of the required changes to the satisfaction of the Reviewers.

Proposed by Nina W seconded by Levi O and motion carried (10-10)

2. *BAF Number: 1197-004* *Principal Investigator: Li, Weimen*
Title: Nuclear signaling regulation of cell growth and tumorigenesis

Facilities: Deferred

BSM: Current

Primary Reviewer: Rob O

Secondary Reviewer: Jennifer K

Required Changes:

- 2B Specifically describe experiments, including matching viral work to experiments
- 2H needs to add facilities (likely PBS 26C) because of genetically altered mice
- Add Section 7 because of genetically altered mice

IBC decision:

Defer, pending completion of the required changes to the satisfaction of the Committee.

Proposed by Rob O seconded by Levi O and motion carried (10-10)

C. Amendments

1. *BAF Number: 1259-007* *Principal Investigator: O'Connor, Rob*
Title: New therapies for Apicomplexan parasitic infections

Facilities: Current

BSM: Current

Primary Reviewer: Levi O

Secondary Reviewer: Nina W

Required Changes:

- Add Section 7 required (administratively)
- ADD IVS machine disinfection SOP in BSM

Rob O exited meeting, Linda T accepted Interm. Chair

IBC Decision:

Approve, pending completion of Required changes to the satisfaction of the BSO

Proposed by Levi O seconded by Nina W and motion carried (9-9)

Rob O was notified and re-entered the meeting.

VI. BSL-1 BAFs

A. New Protocols:

1. *BAF Number:***1327-001** *Principal Investigator:* **Brueggeman, Robert**
Title: **Functional analysis of innate immunity responses in barley**

Facilities: **Current**

BSM: **Current**

Primary Reviewer: **Karen S**

Secondary Reviewer: **Linda T**

Required Changes:

- 3B4 describe the types of impermeable double containment utilized for transportation
- Spelling of “bleach” in section 7 (administratively)

IBC Decision:

Defer, pending completion of required changes to the satisfaction of the reviewers.

Proposed by Linda T seconded by Rob O and motion carried (10-10)

B. Renewals: none

VII. BAFs Resolved in the Interim

1. *BAF Number:* **1332-001** *Principal Investigator:* **Call, Doug**
Title: **Detection of SARS-CoV-2 and antimicrobial-resistant bacteria in sewage**

2. *BAF Number:* **867-016** *Principal Investigator:* **Konkel, Michael**
Title: **A novel approach to identify the virulence proteins secreted by Campylobacter Jejuni**

3. *BAF Number:***1269-002** *Principal Investigator:* **Maddison, L**
Title: **Core Facility to Develop Gene Editing Reagents**

A. Administrative Approvals:

1. *BAF Number:***1313-003** *Principal Investigator:* **Cunha, Cristina**
Title: **Immunological interventions to control malignant catarrhal fever**

B. Other Approvals: none

C. Deactivations: none

VIII. Deferred BAFs

Deferred BAFs – April 2020:

Review Key for revisions:

- **Green – can be reviewed/approved by BSO.**
- **Blue – to be reviewed and approved by the assigned reviewers.**
- **Purple - to be reviewed and approved by the IBC Chair**
- **Red – must be reviewed by the convened IBC**

1. *BAF Number:* **1232-002** *Principal Investigator:* **Brozik, James**

Title: **Model Membrane Assemblies and Membrane Proteins**

Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Eric S** *Secondary Reviewer:* **Levi O**

- 9/25/18: deferred by IBC, pending BAF revision and facility and BSM approval.
- 1/4/19: followed up with PI.
- 1/7/19: revised BAF received. Revisions sent to reviewers

2. *BAF Number:* **1300-001** *Principal Investigator:* **Varnum, Michael**

Title: **Molecular mechanisms of retinal photoreceptor function and dysfunction**

Facilities: **Requested 1/14** *BSM:* **Current**

Primary Reviewer: **Nina W** *Secondary Reviewer:* **Eric S**

- 1/29/19: Deferred by IBC, pending BAF revision and facility and BSM approval.
- BSM approved
- Facilities have been inspected, need BSO signature
- Newest version of BAF needs BSO to review

3. BAF Number: 1304-001

Principal Investigator: Hu, Jinguo

Title: Develop and Maintain Superior Crop Genetic Germplasm by Maintaining and Characterizing Plant and Microbial Resources

Facilities: Current BSM: Requested 1-14

Primary Reviewer: Levi O

Secondary Reviewer: Eric S

- 3-26-2019 deferred pending full committee review
- Needs facilities
- Revised BAF requested per e-mail (SH)
- Second request for info for IBC sent by SH 8-8-2019

4. BAF Number: 1054-006

Principal Investigator: Thomashow, Linda

Title: Genetic enhancement of wheat to control fungal pathogens

Facilities: Current

BSM: Current

Primary Reviewer: Andrei S

Secondary Reviewer: Hanu P

Required Changes

- 2B more details needed, explanation of how to analyze microbial genes
- 4C.1 are new lines of trans wheat produced?
- 6B.6 How will the material be decontaminated chemically?

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the reviewer

5. BAF Number: 998-006

Principal Investigator: Steber, Camille

Title: Genetic Improvement of Wheat and Barley for Environmental Resilience, Disease Resistance, and End-use Quality

Facilities: Requested 8-7-2019 BSM: Current

Primary Reviewer: Hanu P

Secondary Reviewer: Andrei S

Required Changes

- 2B Include brief discussion of all infectious agents listed in Section 3 and all r/sNA work.
- 4C Complete table

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the IBC committee at the next scheduled meeting.

- 8-28-2019 send please respond message to PI
-

6. BAF Number: **1257-002** Principal Investigator: **Wu, Boyang**
 Title: **Investigating and Targeting Neuromimicry in Prostate Cancer**
 Facilities: **Current** BSM: **Current**
 Primary Reviewer: **Nina W, Jennifer** Secondary Reviewer: **Rob O**

Required Changes:

- 2B Describe what containment is used for animals (i.e., when ABSL1 or ABSL2 is used)
- 2E Indicate IRB protocol
- 3A Verify that pLX-Puro(2nd gen) is not producing active virus or indicate measures to test for shedding (is itself inactivating?)
- 3B6 List disposal method (i.e., vivarium standard)

IBC Decision

Defer, pending completion of required change by Nina W / Jen P and Rob O.

- Sent e-mail to Dr. Wu with IBC requests 11-1-2019

7. BAF Number: **1058-006** Principal Investigator: **Alderete, J**
 Title: **Characterization of the Trichomonas vaginalis Serodiagnostic Target**
 Facilities: **Current** BSM: **Current**
 Primary Reviewer: **Andrei S** Secondary Reviewer: **Karen S**

Required Changes

- 2B Expound on process to work with Sera, list the source for Sera, explain how proteins and pathogens are produced,
- 2B Take out references to being the only one working on project

- 2B If work is to be done with Trichomonas an amendment will be needed
- 2E These are indirect samples, should state that it is an exempt IRB status
- Section 3 should be removed, not working with Trichomonas
- 5A1 Wash.U-St.Lewis the only source for Sera
- 57D Offer system vaccination to any participants (PI)

IBC Decision

Defer, pending Completion of the required change to the satisfaction of the Reviewers.

8. BAF Number: 1184-004 *Principal Investigator: Fuchs Lokensgard, Rita*
Title: AAV/CAV-2-induced expression of light-sensitive ion channels and DREADDs
Facilities: Current *BSM: Current*
Primary Reviewer: Alan G *Secondary Reviewer Rob O*

Required Changes

- 2C add ASAF 6255
- 2G2 select ABSL2 as well
- 2H need animal rooms defined
- 3B6 Bedding needs to be addressed
- 4C1 define type of Ecoli
- 4C2 also needs BSL2 level selected

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the reviewers.

9. BAF Number: 1112-005 *Principal Investigator: Coyne, Claire*
Title: Storage and distribution of seed of T-DNA tagged mutant lines of the grass Brachypodium distachyon.
Primary Reviewer: Karen S *Secondary Reviewer: Andrei S*

Required changes:

- *2A Include the origin of the transgenic seeds, goals of the project and history of the work*
-

11. BAF Number: 1260-004 *Principal Investigator: Mousel, Michelle*
Title: Quantifying Host Factors in Inherited and Infectious Diseases of Small Ruminants

Facilities: **Current**

BSM: **Current**

Primary Reviewer: **Rob O.**

Secondary Reviewer: **Nina W.**

Required Changes

- *3B6 Clarify final disposition of animals that have the naturally occurring asymptomatic endemic infection.*
- *4C4 List source of r/sNA (i.e., commercial siRNA)*

10. BAF Number: 1327-001 **Principal Investigator: Brueggeman, Robert**

Title: Functional analysis of innate immunity responses in barley

Facilities: Requested 1-22-2020

BSM: Requested 1-22-2020

Primary Reviewer: **Karen S.**

Secondary Reviewer: **Linda T.**

Required Changes

- *2B edit for Layman's terms to only describe experiments with pathogens and transgenics, rather than the detail provided*
- *3A List other pathogens discussed in 2A and 2B (i.e., Puccinia spp., Pyrenophora spp., etc.)*
- *3B2 List sources of additional pathogens*
- *3B4 Discuss how the transfer of material will be accomplished, specifically between facilities*
- *3B6 Indicate if chemical inactivation will be used*
- *3B7 Permits are likely needed for transport into and out of country, as proposed in 2B*
- *4A-III E-1 likely also marked yes for propagating plasmids and Y2H (and "no" checked)*
- *4C2 List the other vectors as mentioned in 2A, 2B*
- *4C4 Enumerate sources of DNA/RNA listed in 3A*
- *4C For the Y2H screen, add yeast and genes where appropriate*

11. BAF Number: 1328-001 **Principal Investigator: Wild, Margaret**

Title: Elk hoof disease natural exposure trial

Facilities: Current

BSM: Current

Primary Reviewer: **Nina W**

Secondary Reviewer: **Rob O**

Required Changes

- *2B Remove references to Shaw lab for possible work – as this will be included in his BAF. Only discuss work that you are performing.*

- *3B5 Housing of animals need to have description of disinfection procedures the same as the transportation vehicles (addressed in section 4, but should be added to section 5)*

12. *BAF Number:* **1267-002** *Principal Investigator:* **Call, Doug**
Title: **Using CRISPR Cas9 for genetic manipulation of Escherichia coli**
Facilities: **Received** *BSM:* **Received**

Primary Reviewer: **Levi O** *Secondary Reviewer:* **Alan G**

Required Changes:

- Needs 4A IIID D2 needs selected
- 3B4 Clarify transportation of agents and containment
- 4D2 “Yes” needs selected
- 4C1 Remove the statement in parentheses, not needed

13. *BAF Number:* **1265-005** *Principal Investigator:* **Shelden, Eric**
Title: **Stress response signaling and gene regulation**
Facilities: **Requested** *BSM:* **Received**

Primary Reviewer: **Rob O** *Secondary Reviewer* **Levente K**

Required Changes:

- 3A INT407 cells should be listed in the table
- 4C2 Assess BSL2 in the table and ensure it is correct

14. 3 *BAF Number:* **1117-004** *Principal Investigator:* **Jasmer, Doug**
Title **Intestinal genes of nematodes**
Facilities: **Requested** *BSM:* **Received**

Primary Reviewer: **Rob O** *Secondary Reviewer:* **Nina W**

Required Changes:

- 2BH rooms need to be verified, if they change and amendment could be submitted
- 3B2 List where original source material is obtained
- 3B4 clarify how animals are contained as they are infected while in the study with a strain found in the wild
- 3B6 If STI is the disposal method for all wastes, most other items do not need to be included

15. . *BAF Number:* **1115-005** *Principal Investigator:* **Gill, Kulvinder**
Title: **Characterizing genes involved in heat tolerance, stress resistance and yield in wheat and other cereals**
Facilities: **Requested** *BSM:* **Received**

Primary Reviewer: Andrei S

Secondary Reviewer: Linda T

Required Changes:

- 2I needs to be checked yes, so Section 3 will need to be filled out
- 2H chart needs to be completed in the Species of Plants in rooms
- 4A EIII needs checked as well as E2
- 4C1 host includes Agrobacterium and e coli
- 4C3 List all used
- 6A 6 should be selected as yes

A physical supervisor (i.e., co-investigator) must be selected for responsibility

IX. **Biosafety Program Update** none

X. **Biosafety Incident Reports** none

XI. **Adjournment**

Proposed by Linda T, seconded by Rob O and motion carried (10-10) at 14:52.

WSU IBC Minutes
June 25, 2020

IBC Members Present

	Member	Affiliation/Role
1.	Rob O'Connor	Chair; Veterinary Microbiology and Pathology
2.	Alan Goodman	School of Molecular Biosciences; Scientist
3.	Mike Kluzik	ORA Director; Research Assurances
4. +	Levi O'Loughlin	Biosafety Officer; Research Assurances
5.	Karen Sanguinet	Crops and Soil Science
6.	Andrei Smertenko	Institute of Biological Chemistry; Plant Expert
7. *	Linda Thomashow	USDA/ARS; Plant Pathology
8.	Nina Woodford	Director, Office of the Campus Veterinarian

Alternate IBC Members Present:

	Member	Affiliation/Role
1.	Ryan Schwager	Research Assurances; Assistant BSO
2.	Jennifer Kopanke	Associate Director, Attending Vet

IBC Members Absent:

	Member	Affiliation/Role
1.	Mike Heston	Community Member; Pullman Fire Department
2.	Levente Kapás	Elson S. Floyd College of Medicine
3.	Nathan Weller	Community Member; Pullman City Council

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Sonja Hartwig	Research Assurances; IBC Coordinator

* Arrived after the Call To Order. + Left meeting early.

- I. **Call to Order:** Time 13:07
- II. **Announcements:** none
- III. **Minutes – May 28, 2020**

This motion was proposed by Andrei S seconded by Mike K. (9-9)

- IV. **BSL-3 BAFs**
 - A. New Protocols: none
 - B. Renewals: none
 - C. Amendments: none

Linda T joined the group Time 13:11. (10-10).

- V. **BSL-2 BAFs**

A. New Protocols:

1. *BAF Number:* **1333-001** *Principal Investigator:* **Law, Nathan**
Title: **Developmental Trajectories and Fates in the Male Germline**
Facilities: **Requested 5-8-20** *BSM:* **Current**
- Primary Reviewer:* **Nina W** *Secondary Reviewer:* **Alan G**

Required Changes:

- 2B2 Clarify language regarding animal containment. Animals are ABSL1 rated, but stored in ABSL2 housing
- 2G2, 2H ABSL rating should be 1 instead of 2 (see above)
- 3A “Human Hazard “ should be checked for AAV
- Section 4, DIII, D4, remove “No”, “No”

IBC Decision:

Defer, pending completion of required changes to the satisfaction of the BSO.

Proposed by Nina W seconded by Rob O and motion carried (10-10).

2. *BAF Number:* **1335-001** *Principal Investigator:* **MacLean, James**
Title: **Function of RhoX genes in reproduction**
Facilities: **Requested** *BSM:* **Requested**
- Primary Reviewer:* **Rob O** *Secondary Reviewer* **Levi O**

Required Changes:

- 3A Remove all references to BrDU in the protocol. BrDU is a chemical hazard, not a biohazard
- 3A Lentivirus is a Human and Animal Hazard so these should be checked
- 3B1 list all genes to be used and remove wording that is not precise (“additional genes”)
- 3B3 Simply state that lentivirus is handled at a BSL2 level instead of “However, we will treat them as if they pose a significant risk.”
- 3B4 Keep wording focused on the transportation of materials “Dedicated plastic trash beakers with disposable bag liners will be used for viral work” the other additional descriptions of how biohazards will be handled generally should be moved to 3B3
- 3B5 Autoclave OR bleach biohazards, not both. Solid waste is usually autoclaved
- 3B6 Remove all references to BrDU.

- Section 4 IIID, D-4 remove the “No”, “No”.
- 4C3 Please specify genes or gene groups to be targeted (downstream targets are too vague)
- 4C4 Describe plans for Human Testis RNA

IBC Decision:

Defer, ending completion of required changes to the satisfaction of the BSO.

Proposed by Rob O seconded by Levi O and motion carried (10-10).

Levi O left the group. The Quorum is now (9-9)

3. BAF Number: 1337-001 *Principal Investigator: Tymon, Lydia*
Title: Vegetable and small fruit pathology Research & Extension
Facilities: Requested *BSM: Current*

Primary Reviewer: Karen S

Secondary Reviewer: Andrei S

Required Changes:

IBC Decision: Tabled. From what can be ascertained from the protocol, it might be best if diagnostic activities and research activities are split into two protocols. The PI and or post-doctoral associate are strongly encouraged to contact the BSO, Dr. O’Loughlin, for advice on filling out the protocol forms

The List of Points that need to be addressed are as follows: This may not be an exhaustive list, thus it will be important to communicate with the BSO

- Switch PI to Miles
- Differentiate between diagnostic /research activities. Determine if there should be two BAF’s, one for research and one for diagnostics.
- Table H needs to show which facilities are BSL2 and which are BSL1
- 3A Table should be completed listing all pathogens and crops
- 3B In this section all biohazards must be discussed. For example in 3B2 *Pseudomonas aeruginosa* is not your only pathogen. All biohazards must be discussed
- 3B6 Protocol states that plants will be inoculated

IBC Decision:

Table, until completion of required changes. This protocol needs to come back to committee
Proposed by Karen S seconded by Rob O and motion carried (9-9).

4. *BAF Number:* **1338-001** *Principal Investigator:* **White, Stephen**
Title: **Domestic and Wild Small Ruminant Infectious Diseases**
Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Jennifer K** *Secondary Reviewer:* **Levente K**

Required Changes:

Note that protocol was not revised in response to changes requested during pre-review.

- 2C New ASAF needed for wild rabbits-all ASAFs listed are expired
- 2G Experimental work is being done on sheep-ABSL level needs to be indicated
- 2H Rooms 197H, 197E, 197R/Y are no longer in use replace with rooms (188B and 188C ?).
- 3A Cultures are taken from wild rabbits with unknown diseases, most likely infectious agents that might be encountered should be listed on this chart as well as the diseases listed in 2A (ex. bacteria-associated pinkeye, and the blood borne bacterial pathogen *Mycoplasma*).
- 3B1 Mycoplasma needs more description
- 3B3 Pasteurella and Mycoplasma do transmit across species and are a hazard
- 3B6 Infected animals are incinerated

IBC Decision:

Table, until completion of required changes including changes requested in the pre-review. This protocol needs to come back to committee.

Proposed by Jennifer K seconded by Rob O and motion carried (9-9).

B. Renewals: none

VI. BSL-1 BAFs

- A. New Protocols: none
- B. Renewals: none
- C. Amendments: none

VII. BAFs Resolved in the Interim

1. *BAF Number:* **1330-001** *Principal Investigator:* **Gunn, Bronwy**
Title: **Systems serology analysis of induction of antibody-mediated innate immune effector functions.**
2. *BAF Number:* **1334-001** *Principal Investigator:* **Gunn, Bronwyn**
Title: **Analysis of antibody-mediated innate immune effector functions induced by COVID-19 convalescent plasma**

VIII. Deferred BAFs

Deferred BAFs – May 2020:

Review Key for revisions:

- **Green – can be reviewed/approved by BSO.**
- **Blue – to be reviewed and approved by the assigned reviewers.**
- **Purple - to be reviewed and approved by the IBC Chair**
- **Red – must be reviewed by the convened IBC**

1. *BAF Number:* **1232-002** *Principal Investigator:* **Brozik, James**
Title: **Model Membrane Assemblies and Membrane Proteins**
Facilities: **Current** *BSM:* **ReCurrent**
Primary Reviewer: **Eric S** *Secondary Reviewer:* **Levi O**
 - 9/25/18: deferred by IBC, pending BAF revision and facility and BSM approval.
 - 1/4/19: followed up with PI.
 - 1/7/19: revised BAF received. Revisions sent to reviewers
2. *BAF Number:* **1300-001** *Principal Investigator:* **Varnum, Michael**
Title: **Molecular mechanisms of retinal photoreceptor function and dysfunction**
Facilities: **Requested 1/14** *BSM:* **Current**

Primary Reviewer: **Nina W**

Secondary Reviewer: **Eric S**

- 1/29/19: Deferred by IBC, pending BAF revision and facility and BSM approval.
- BSM approved
- Facilities have been inspected, need BSO signature
- Newest version of BAF needs BSO to review

3. *BAF Number:* **1054-006**

Principal Investigator: **Thomashow, Linda**

Title: **Genetic enhancement of wheat to control fungal pathogens**

Facilities: **Current**

BSM: **Current**

Primary Reviewer: **Andrei S**

Secondary Reviewer: **Hanu P**

Required Changes

- 2B more details needed, explanation of how to analyze microbial genes
- 4C.1 are new lines of trans wheat produced?
- 6B.6 How will the material be decontaminated chemically?

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the reviewer

4. *BAF Number:* **1257-002**

Principal Investigator: **Wu, Boyang**

Title: **Investigating and Targeting Neuromimicry in Prostate Cancer**

Facilities: **Current**

BSM: **Current**

Primary Reviewer:

Nina W, Jennifer

Secondary Reviewer: **Rob O**

Required Changes:

- 2B Describe what containment is used for animals (i.e., when ABSL1 or ABSL2 is used)
- 2E Indicate IRB protocol
- 3A Verify that pLX-Puro(2nd gen) is not producing active virus or indicate measures to test for shedding (is it self inactivating?)
- 3B6 List disposal method (i.e., vivarium standard)

IBC Decision

Defer, pending completion of required change by Nina W / Jen P and Rob O.

- Sent e-mail to Dr. Wu with IBC requests 11-1-2019

5. *BAF Number:* **1058-006**

Principal Investigator: **Alderete, J**

Title: **Characterization of the Trichomonas vaginalis Serodiagnostic Target**

Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Andrei S** *Secondary Reviewer:* **Karen S**

Required Changes

- 2B Expound on process to work with Sera, list the source for Sera, explain how proteins and pathogens are produced,
- 2B Take out references to being the only one working on project
- 2B If work is to be done with Trichomonas an amendment will be needed
- 2E These are indirect samples, should state that it is an exempt IRB status
- Section 3 should be removed, not working with Trichomonas
- 5A1 Wash.U-St.Lewis the only source for Sera
- 57D Offer system vaccination to any participants (PI)

IBC Decision

Defer, pending Completion of the required change to the satisfaction of the Reviewers.

6. *BAF Number:* **1184-004** *Principal Investigator:* **Fuchs Lokensgard, Rita**
Title: **AAV/CAV-2-induced expression of light-sensitive ion channels and DREADDs**
Facilities: **Current** *BSM:* **Current**
Primary Reviewer: **Alan G** *Secondary Reviewer* **Rob O**

Required Changes

- 2C add ASAF 6255
- 2G2 select ABSL2 as well
- 2H need animal rooms defined
- 3B6 Bedding needs to be addressed
- 4C1 define type of Ecoli
- 4C2 also needs BSL2 level selected

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the reviewers.

7. *BAF Number :* **1112-005** *Principal Investigator:* **Coyne, Claire**
Title: **Storage and distribution of seed of T-DNA tagged mutant lines of the grass Brachypodium distachyon.**
Primary Reviewer: **Karen S** *Secondary Reviewer:* **Andrei S**

Required Changes

- *2B Remove references to Shaw lab for possible work – as this will be included in his BAF. Only discuss work that you are performing.*
- *3B5 Housing of animals need to have description of disinfection procedures the same as the transportation vehicles (addressed in section 4, but should be added to section 5)*

11. *BAF Number:***1267-002** *Principal Investigator:* **Call, Doug**
 Title: **Using CRISPR Cas9 for genetic manipulation of Escherichia coli**
 Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Levi O** *Secondary Reviewer:***Alan G**

Required Changes:

- Needs 4A IIID D2 needs selected
- 3B4 Clarify transportation of agents and containment
- 4D2 “Yes” needs selected
- 4C1 Remove the statement in parentheses, not needed

12. *BAF Number:***1265-005** *Principal Investigator:* **Shelden, Eric**
 Title: **Stress response signaling and gene regulation**
 *Facilities:**Requested* *BSM:* **Current**

Primary Reviewer: **Rob O** *Secondary Reviewer* **Levente K**

Required Changes:

- 3A INT407 cells should be listed in the table
- 4C2 Assess BSL2 in the table and ensure it is correct

13. *BAF Number:***1117-004** *Principal Investigator:* **Jasmer, Doug**
 Title **Intestinal genes of nematodes**
 Facilities: **Requested** *BSM:* **Current**

Primary Reviewer: **Rob O** *Secondary Reviewer:* **Nina W**

Required Changes:

- 2BH rooms need to be verified, if they change and amendment could be submitted
- 3B2 List where original source material is obtained
- 3B4 clarify how animals are contained as they are infected while in the study with a strain found in the wild
- 3B6 If STI is the disposal method for all wastes, most other items do not need to be included

14. *BAF Number:***1115-005** *Principal Investigator:* **Gill, Kulvinder**

Title: **Characterizing genes involved in heat tolerance, stress resistance and yield in wheat and other cereals**

Facilities: **Requested** *BSM:* **Recieved**

Primary Reviewer: **Andrei S**

Secondary Reviewer: **Linda T**

Required Changes:

- 2I needs to be checked yes, so Section 3 will need to be filled out
- 2H chart needs to be completed in the Species of Plants in rooms
- 4C1 host includes Agrobacterium and e coli
- 4C3 List all used
- 6A 6 should be selected as yes
- A physical supervisor (i.e., co-investigator) must be selected for reitlesponsibility

- 15 *BAF Number:* **1271-002** *Principal Investigator:* **Driskell, Ryan**
Title: **Investigating Skin Regeneration in Mammalian Systems**
Facilities : **Current** *BSM:* **Current**

To be reviewed and approved by BSO

16. *BAF Number:***1336-001** *Principal Investigator:* **Bose, S**
Title: **Mechanisms regulating SARS-CoV-2 infection and COVID-19 disease**

To the Satisfaction of Reviewers, LeviO, Rob O

Required Changes:

- 3B4 Define layers of containment in leak-proof containers when transporting agents
- Revised BAF sent 6-10-20

17. *BAF Number:* **1331-001** *Principal Investigator:* **Clarke, John**
Title: **Precision Medicine**
Facilities: **Deferred** *BSM:* **Current**

Primary Reviewer: **Levente K**

Secondary Reviewer: **Alan G**

Required Changes:

- Section 2B omit vague language (i.e., ‘but not limited to’...)
- Section 2H identify rooms need for housing rodents (e.g., likely PBS 32C)
- Section 3A Identify biosafety level of Microcystin LR (e.g., BSL2)
- Section 3A list all additional agents needed
- Section 3B4 clarify type of secondary containment is leak-proof

- Section 4C3 define the genes (acronyms)

To satisfaction of BSO

18. *BAF Number: 1122-005* *Principal Investigator: Brunner, Jesse*
*Title: **Ranavirus and chytrid ecology***

*Facilities: **Deferred***

*BSM: **Current***

*Primary Reviewer: **Nina W***

*Secondary Reviewer: **Levi O***

Required Changes:

- 2B/2H Since the large tanks outside are not ABSL2, add language to indicate that there are no outdoor exposures of animals.
- 2B and 3B2 should describe the genetically altered ranavirus used, including containment
- 3B5 Describe terminal inactivation of large volumes of water
- 3B6 STI steam sterilization is appropriate for this work (in addition to incineration)
- 4C Describe genetic modifications or remove until this information and strains are available (can be added as an amendment at a later date)

IBC Decision:

Defer, pending completion of the required changes to the satisfaction of the Reviewers.

- 6-16-20 received revised from PI, sent to reviewers
- Requested room inspection from Ryan for Heald 325
-

19. *BAF Number: 1197-004* *Principal Investigator: **Li, Weimen***
*Title: **Nuclear signaling regulation of cell growth and tumorigenesis***

*Facilities: **Deferred***

*BSM: **Current***

*Primary Reviewer: **Rob O***

*Secondary Reviewer: **Jennifer K***

Required Changes:

- 2B Specifically describe experiments, including matching viral work to experiments
- 2H needs to add facilities (likely PBS 26C) because of genetically altered mice
- Add Section 7 because of genetically altered mice

IBC decision:

Defer, pending completion of the required changes to the satisfaction of the Committee.

20. *BAF Number: 1259-007* *Principal Investigator: O'Connor, Rob*
Title: New therapies for Apicomplexan parasitic infections

Facilities: Current

BSM: Current

Primary Reviewer: Levi O

Secondary Reviewer: Nina W

Required Changes:

- Add Section 7 required (administratively)
- ADD IVS machine disinfection SOP in BSM

Satisfaction of BSO

21. *BAF Number:1327-001* *Principal Investigator: Brueggeman, Robert*
Title: Functional analysis of innate immunity responses in barley

Facilities: Current

BSM: Current

Primary Reviewer: Karen S

Secondary Reviewer: Linda T

Required Changes:

- 3B4 describe the types of impermeable double containment utilized for transportation
- Spelling of “bleach” in section 7 (administratively)

IBC Decision:

Defer, pending completion of required changes to the satisfaction of the reviewers.

IX. Biosafety Program Update

X. Biosafety Incident Reports

XI. Adjournment

Proposed by Karen S seconded by Mike K and motion carried (9-9) at 14:56.

WSU IBC Minutes
July 23, 2020

IBC Members Present

	Member	Affiliation/Role
1.	Rob O'Connor	Chair; Veterinary Microbiology and Pathology
2.	Alan Goodman	School of Molecular Biosciences; Scientist
3.	Mike Heston	Community Member; Pullman Fire Department
4.	Levente Kapás	Elson S. Floyd College of Medicine
5.	Mike Kluzik* (13:59)	ORA Director; Research Assurances
6.	Levi O'Loughlin	Biosafety Officer; Research Assurances
7.	Karen Sanguinet	Crops and Soil Science
8.	Andrei Smertenko	Institute of Biological Chemistry; Plant Expert
9.	Linda Thomashow	USDA/ARS; Plant Pathology
10	Nathan Weller	Community Member; Pullman City Council
11	Nina Woodford	Director, Office of the Campus Veterinarian

Alternate IBC Members Present:

	Member	Affiliation/Role
1.	Ryan Schwager	Research Assurances; Assistant BSO
2.	Jennifer Kopanke	Associate Director, Attending Vet

IBC Members Absent:

	Member	Affiliation/Role
1.	None	

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Sonja Hartwig	Research Assurances; IBC Coordinator

* Arrived after the Call To Order.

- I. **Call to Order:** Time 13:08
- II. **Announcements:**
A records request for IBC minutes was received and submitted to the Public Records office.
- III. **Minutes – June 25, 2020**
- IV. Motion made to approve minutes by Linda T seconded by Karen S. (10-10)
- V. **BSL-3 BAFs**
 - A. New Protocols: none
 - B. Renewals: none
- VI. **BSL-2 BAFs**
 - A. New Protocols:

1. *BAF Number: 1339-001* *Principal Investigator: Chen, Laura*
Title: Microbiologic Properties of Raw Chicken Eggs Sourced from Conventional vs. Alternative Housing Conditions
Facilities: Current *BSM: Current*

Primary Reviewer: Jennifer K *Secondary Reviewer: Ryan S*

Required Changes (completed on PIs behalf):

- 3B2 Specified leak-proof containers when transporting agents
- 3B5 Added chemical inactivation (if used)
- 3A Micrococcus was corrected to BSL1

IBC Decision

Approve, following administrative amendments.

Proposed by Jennifer K seconded by Linda T and motion carried (10-10)

2. *BAF Number: 1337-001* *Principal Investigator: Tymon, Lydia*
Title: Vegetable and small fruit pathology Research & Extension
Facilities: Requested *BSM: Current*

Primary Reviewer: Karen S *Secondary Reviewer: Andrei S*

This protocol was reviewed in June and tabled till the July meeting for additional clarification, including PI change to Miles.

Required Changes (completed on PIs behalf):

- The protocol has been revised to be BSL1
- Section 4 is not necessary and has been removed
- 3B3 was revised to have consistent wording in regards to health and safety

IBC Decision:

Approve, following administrative amendments.

Proposed by Levi O seconded by Andrei S and motion carried (10-10)

B. Amendments:

1. *BAF Number: 1243-003* *Principal Investigator: Goodman, Alan*
Title: Identifying host genetic determinants of pathogenesis in Drosophila
Facilities: Current *BSM: Current*

Primary Reviewer: Mike K *Secondary Reviewer: Rob O*

Alan G exited the meeting for voting.

Required Changes (completed on PIs behalf)::

- 4C1 remove mice as transgenic host
- Change language to euthanized

IBC Decision

Approved, following administrative changes.

Proposed by Rob O seconded by Levi O and motion carried (9-9)

Alan returned to meeting.

C. Renewals:

1. *BAF Number: 1193-004* *Principal Investigator: Zhu, Jiyue*
Title: Regulation of the human telomerase reverse transcriptase gene
Facilities: Current *BSM: Current*

Primary Reviewer: Levi O *Secondary Reviewer: Jennifer K*

Required Changes:

- 2B Describe usage of mice in protocol and list all relevant new ASAF numbers (if using the transgenic core in Pullman, please add this to the description)
- 2H Recheck list of rooms (PBS RM, 19, 23, 26C, and 25)
- 3A List only cell lines transformed with infective agents, otherwise list only in 5C
- 3B6 List incineration for animals and bedding
- 4A Mark IIID D4 “no”, “no” and mark IIID D1
- 7B2 STI should be unmarked and incineration should be listed, as this is protocol in Spokane

IBC Decision

Defer, Pending completion of required changes to the satisfaction of the Reviewers and BSO

Proposed by Levi O seconded by Linda T and motion carried (9-9)

Mike Kluzik joined the meeting at 1:58.

2. *BAF Number: 1063-009* *Principal Investigator: Bankhead, Troy*
Title: Studies on infectivity and persistence in Lyme disease and Relapsing fever spirochetes.
Facilities: Current *BSM: Received*

Primary Reviewer: Nina W

Secondary Reviewer: Levente K

Required Changes:

- 2B Expand on use of rats and *Borrelia*. Animal welfare concerns (and associated details) are pertinent to IACUC. IBC purview is safe practices and containment with potentially infectious agents. Discuss work with agents isolated from animals.
- 3A Complete table for all species of *Borrelia* used (look in 4C)
- 3B1 Describe use of *Borrelia* not in animals
- 3B6 Disposal STI
- 4 IIID D2 needs to be selected
- 4C3 category of *Borrelia* genes need representative examples listed
- Section 7 – mark exempt and check STI.

IBC Decision

Defer, Pending completion of required changes to the satisfaction of the Reviewers and BSO

Proposed by Nina W seconded by Levi O and motion carried (9-9)

3. *BAF Number: 1195-003* *Principal Investigator: Bose, Santanu*
Title: Viral innate immunity
Facilities: Current *BSM: Current*

Primary Reviewer: Rob O

Secondary Reviewer: Karen S

Required Changes:

- 1B Change personnel from “performing experiments” to title (e.g., student, postdoc)
- 2B Change language regarding “incarnate” to incinerate in both instances
- 2B Autoclaving after bleach treatment is not necessary. Revise language to indicate bleach or autoclave inactivation.
- 2I Transgenic needs to be checked yes (mice)
- 3A Indicate that lentivirus is a human and animal hazard since it can infect regardless of being replication deficient.

- 3B2 Change “They were shipped to WSU (in Feb, 2014) from my previous institution by an individual trained by DOT to ship hazardous and biological materials” to “Established lines from my lab” or other explanatory language
- 3B3 Elaborate on “minimal biohazard” using pathogens and vectors (lentivirus and adenovirus).
- 3B4 Clarify secondary containment (remove cardboard description)
- 7 animal use meet NIH exception

IBC Decision

Defer, Pending completion of required changes to the satisfaction of the Reviewers and BSO

Proposed by Rob O seconded by Karen S and motion carried (9-9)

4. *BAF Number:* **1123-004** *Principal Investigator:* **Nicola, Anthony**
Title: **Herpes simplex virus entry into host cells**
Facilities: **Current** *BSM:* **Received 6-29-20**

Primary Reviewer : **Alan G**

Secondary Reviewer: **Rob O**

Required Changes:

- 3A Complete table listing characterized agents in HeLa cells (HPV fragment) and all other viruses (e.g., BHV1, PRV1)
- 3B1 Include all viruses (as above)
- 3B2 State where all viruses were obtained (e.g., HPV)
- 3B3 Include all viruses (as above)
- 3B4 Describe double containment utilized
- 4A Mark 3D DIII, “No”, “No”

IBC Decision

Defer, Pending completion of required changes to the satisfaction of the Reviewers and BSO

Proposed by Alan G seconded by Rob O and motion carried (9-9)

5. *BAF Number:* **981-006** *Principal Investigator:* **Haseltine, Cynthia**
Title: **Mechanism of Recombination in Sulfolobus solfataricus and Archaeal derived antimicrobials**
Facilities: **Requested 6-16-20** *BSM:* **Current**

Primary Reviewer: **Levi O**

Secondary Reviewer: **Levente K**

Required Changes:

- 3A Complete all columns on the table (e.g., human/animal/plant hazards)
- 4A Mark IIIIE, E1, “No”
- 4C1 Add E. Coli as a host for plasmids.

IBC Decision

Defer, Pending completion of required changes to the satisfaction of the BSO

Proposed by Levi O seconded by Rob O and motion carried (9-9)

6. *BAF Number:* **1126-007** *Principal Investigator:* **Oatley, Jon**
Title: **Mechanisms of Spermatogonial Stem Cell Fate Decisions**
Facilities: **Requested 6-16-20** *BSM:* **Current**

Primary Reviewer: **Nina W**

Secondary Reviewer: **Andrei S**

Required Changes:

- 2B Add information for transplanting tissue into mice, describe work with human testicular samples, add description of BACs/plasmid use
- 2G and 2H mice are housed as ABSL1
- 3A Describe use of adenovirus (AAV?) use in 2B
- 3C6 Add STI as an option for animal waste
- 4A IIIIE E1 needs checked and D4 can be removed (already covered in E3)
- 4C/D Provide representative examples of genes and specify what DNA/RNA sources (mouse, human) used.

IBC Decision

Defer, Pending completion of required changes to the satisfaction of the Reviewers and BSO

Proposed by Nina W seconded by Rob O and motion carried (9-9)

VII. BSL-1 BAFs

- A. New Protocols: none
B. Renewals:

1. *BAF Number:* **1182-003** *Principal Investigator:* **McCubbin, Andrew**
2. *Title:* **Investigation into the molecular regulation of floral heteromorphic self-incompatibility in *Primula* and *Turnera* sp.**

Facilities: **Received 6-29-20** *BSM:* **Received 6-29-20**

Primary Reviewer: **Andrei S**

Secondary Reviewer: **Karen S**

Required Changes:

- 2A Use plural “genes” (minor typo)
- 2I needs to be checked (infection)
- Need to add Section 3, as even disarmed strains of *Agrobacterium* are infectious agents
- 4C BioSafety level chart needs to be filled with BSL1 on all of them
- 6B1 complete to indicate plant housing

IBC Decision

Defer, Pending completion of required changes to the satisfaction of the BSO

Proposed by Andrei S seconded by Karen S and motion carried (9-9)

B. Renewals: none

C. Amendments: none

VIII. BAFs Resolved in the Interim

Deferred BAFs – June 2020:

Review Key for revisions:

- **Green – can be reviewed/approved by BSO.**
- **Blue – to be reviewed and approved by the assigned reviewers.**
- **Purple - to be reviewed and approved by the IBC Chair**
- **Red – must be reviewed by the convened IBC**

1. BAF Number: 1232-002 Principal Investigator: Brozik, James

Title: Model Membrane Assemblies and Membrane Proteins

Facilities: Current BSM: ReCurrent

Primary Reviewer: Eric S

Secondary Reviewer: Levi O

- 9/25/18: deferred by IBC, pending BAF revision and facility and BSM approval.
- 1/4/19: followed up with PI.
- 1/7/19: revised BAF received. Revisions sent to reviewers

2. *BAF Number:* **1300-001** *Principal Investigator:* **Varnum, Michael**
Title: **Molecular mechanisms of retinal photoreceptor function and dysfunction**
Facilities: **Requested 1/14** *BSM:* **Current**
Primary Reviewer: **Nina W** *Secondary Reviewer:* **Eric S**

- 1/29/19: Deferred by IBC, pending BAF revision and facility and BSM approval.
- BSM approved
- Facilities have been inspected, need BSO signature
- Newest version of BAF needs BSO to review

3. *BAF Number:* **1054-006** *Principal Investigator:* **Thomashow, Linda**
Title: **Genetic enhancement of wheat to control fungal pathogens**
Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Andrei S** *Secondary Reviewer:* **Hanu P**

Required Changes

- 2B more details needed, explanation of how to analyze microbial genes
- 4C.1 are new lines of trans wheat produced?
- 6B.6 How will the material be decontaminated chemically?

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the reviewer

4. *BAF Number:* **1257-002** *Principal Investigator:* **Wu, Boyang**
Title: **Investigating and Targeting Neuromimicry in Prostate Cancer**
Facilities: **Current** *BSM:* **Current**
Primary Reviewer: **Nina W, Jennifer** *Secondary Reviewer:* **Rob O**

Required Changes:

- 2B Describe what containment is used for animals (i.e., when ABSL1 or ABSL2 is used)

- 2E Indicate IRB protocol
- 3A Verify that pLX-Puro(2nd gen) is not producing active virus or indicate measures to test for shedding (is it self inactivating?)
- 3B6 List disposal method (i.e., vivarium standard)

IBC Decision

Defer, pending completion of required change by Nina W / Jen P and Rob O.

- Sent e-mail to Dr. Wu with IBC requests 11-1-2019

5. BAF Number: 1058-006 *Principal Investigator: Alderete, J*
Title: Characterization of the Trichomonas vaginalis Serodiagnostic Target
Facilities: Current *BSM: Current*

Primary Reviewer: Andrei S *Secondary Reviewer: Karen S*

Required Changes

- 2B Expound on process to work with Sera, list the source for Sera, explain how proteins and pathogens are produced,
- 2B Take out references to being the only one working on project
- 2B If work is to be done with Trichomonas an amendment will be needed
- 2E These are indirect samples, should state that it is an exempt IRB status
- Section 3 should be removed, not working with Trichomonas
- 5A1 Wash.U-St.Lewis the only source for Sera
- 57D Offer system vaccination to any participants (PI)

IBC Decision

Defer, pending Completion of the required change to the satisfaction of the Reviewers.

6. BAF Number: 1184-004 *Principal Investigator: Fuchs Lokensgard, Rita*
Title: AAV/CAV-2-induced expression of light-sensitive ion channels and DREADDs

Facilities: Current *BSM: Current*

Primary Reviewer: Alan G *Secondary Reviewer Rob O*

Required Changes

- 2C add ASAF 6255
- 2G2 select ABSL2 as well

- 2H need animal rooms defined
- 3B6 Bedding needs to be addressed
- 4C1 define type of Ecoli
- 4C2 also needs BSL2 level selected

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the reviewers.

7. BAF Number : **1112-005** Principal Investigator: **Coyne, Claire**
 Title: **Storage and distribution of seed of T-DNA tagged mutant lines of the grass**
 Brachypodium
 distachyon.
 Primary Reviewer: **Karen S** Secondary Reviewer: **Andrei S**

Required changes:

- *2A Include the origin of the transgenic seeds, goals of the project and history of the work*
-

11. BAF Number: **1260-004** Principal Investigator: **Mousel, Michelle**
 Title: **Quantifying Host Factors in Inherited and Infectious Diseases of Small**
 Ruminants
 Facilities: **Current** BSM: **Current**
 Primary Reviewer: **Rob O.** Secondary Reviewer: **Nina W.**

Required Changes

- *3B6 Clarify final disposition of animals that have the naturally occurring asymptomatic endemic infection.*
- *4C4 List source of r/sNA (i.e., commercial siRNA)*

8. BAF Number: **1327-001** Principal Investigator: **Brueggeman, Robert**
 Title: **Functional analysis of innate immunity responses in barley**
 Facilities: **Requested 1-22-2020** BSM: **Requested 1-22-2020**
 Primary Reviewer: **Karen S.** Secondary Reviewer: **Linda T.**

Required Changes

- *2B edit for Layman's terms to only describe experiments with pathogens and transgenics, rather than the detail provided*
- *3A List other pathogens discussed in 2A and 2B (i.e., Puccinia spp., Pyrenophora spp., etc.)*
- *3B2 List sources of additional pathogens*

- *3B4 Discuss how the transfer of material will be accomplished, specifically between facilities*
- *3B6 Indicate if chemical inactivation will be used*
- *3B7 Permits are likely needed for transport into and out of country, as proposed in 2B*
- *4A-IIIE E-1 likely also marked yes for propagating plasmids and Y2H (and “no” checked)*
- *4C2 List the other vectors as mentioned in 2A, 2B*
- *4C4 Enumerate sources of DNA/RNA listed in 3A*
- *4C For the Y2H screen, add yeast and genes where appropriate*

9. BAF Number: **1328-001** Principal Investigator: **Wild, Margaret**
 Title: **Elk hoof disease natural exposure trial**
 Facilities: **Current** BSM: **Current**

Primary Reviewer: **Nina W** Secondary Reviewer: **Rob O**

Required Changes

- *2B Remove references to Shaw lab for possible work – as this will be included in his BAF. Only discuss work that you are performing.*
- *3B5 Housing of animals need to have description of disinfection procedures the same as the transportation vehicles (addressed in section 4, but should be added to section 5)*

10. BAF Number: **1267-002** Principal Investigator: **Call, Doug**
 Title: **Using CRISPR Cas9 for genetic manipulation of Escherichia coli**
 Facilities: **Current** BSM: **Current**

Primary Reviewer: **Levi O** Secondary Reviewer: **Alan G**

Required Changes:

- Needs 4A IIID D2 needs selected
- 3B4 Clarify transportation of agents and containment
- 4D2 “Yes” needs selected
- 4C1 Remove the statement in parentheses, not needed

11. BAF Number: **1265-005** Principal Investigator: **Shelden, Eric**
 Title: **Stress response signaling and gene regulation**
 Facilities: **Requested** BSM: **Current**

Primary Reviewer: **Rob O** Secondary Reviewer **Levente K**

Required Changes:

- **3A INT407 cells should be listed in the table**

- 4C2 Assess BSL2 in the table and ensure it is correct

12. 3 *BAF Number:***1117-004** *Principal Investigator:* **Jasmer, Doug**
Title **Intestinal genes of nematodes**
Facilities: **Requested** *BSM:* **Current**

Primary Reviewer: **Rob O** *Secondary Reviewer:* **Nina W**

Required Changes:

- 2BH rooms need to be verified, if they change and amendment could be submitted
- 3B2 List where original source material is obtained
- 3B4 clarify how animals are contained as they are infected while in the study with a strain found in the wild
- 3B6 If STI is the disposal method for all wastes, most other items do not need to be included

13. . *BAF Number:***1115-005** *Principal Investigator:* **Gill, Kulvinder**
Title: **Characterizing genes involved in heat tolerance, stress resistance and yield in wheat and other cereals**
Facilities: **Requested** *BSM:* **Recieved**

*Primary Reviewer:***Andrei S** *Secondary Reviewer:* **Linda T**

Required Changes:

- 2I needs to be checked yes, so Section 3 will need to be filled out
- 2H chart needs to be completed in the Species of Plants in rooms
- 4C1 host includes Agrobacterium and e coli
- 4C3 List all used
- 6A 6 should be selected as yes
- A physical supervisor (i.e., co-investigator) must be selected for reitlesponsibility

14 *BAF Number:* **1271-002** *Principal Investigator:* **Driskell, Ryan**
Title: **Investigating Skin Regeneration in Mammalian Systems**
Facilities : **Current** *BSM:* **Current**

To be reviewed and approved by BSO

15. *BAF Number:***1336-001** *Principal Investigator:* **Bose, S**
Title: **Mechanisms regulating SARS-CoV-2 infection and COVID-19 disease**

To the Satisfaction of Reviewers, LeviO, Rob O

Required Changes:

- 3B4 Define layers of containment in leak-proof containers when transporting agents
- Revised BAF sent 6-10-20

16. . BAF Number: **1331-001** Principal Investigator: **Clarke, John**
Title: **Precision Medicine**
Facilities: **Deferred** BSM: **Current**
Primary Reviewer: **Levente K** Secondary Reviewer: **Alan G**

Required Changes:

- Section 2B omit vague language (i.e., ‘but not limited to’...)
- Section 2H identify rooms need for housing rodents (e.g., likely PBS 32C)
- Section 3A Identify biosafety level of Microcystin LR (e.g., BSL2)
- Section 3A list all additional agents needed
- Section 3B4 clarify type of secondary containment is leak-proof
- Section 4C3 define the genes (acronyms)

To satisfaction of BSO

17. . BAF Number: **1122-005** Principal Investigator: **Brunner, Jesse**
Title: **Ranavirus and chytrid ecology**
Facilities: **Deferred** BSM: **Current**
Primary Reviewer: **Nina W** Secondary Reviewer: **Levi O**

Required Changes:

- 2B/2H Since the large tanks outside are not ABSL2, add language to indicate that there are no outdoor exposures of animals.
- 2B and 3B2 should describe the genetically altered ranavirus used, including containment
- 3B5 Describe terminal inactivation of large volumes of water
- 3B6 STI steam sterilization is appropriate for this work (in addition to incineration)
- 4C Describe genetic modifications or remove until this information and strains are available (can be added as an amendment at a later date)

IBC Decision:

Defer, pending completion of the required changes to the satisfaction of the Reviewers.

- 6-16-20 received revised from PI, sent to reviewers
- Requested room inspection from Ryan for Heald 325
-

18. . *BAF Number: 1197-004* *Principal Investigator: Li, Weimen*
Title: Nuclear signaling regulation of cell growth and tumorigenesis

Facilities: Deferred

BSM: Current

Primary Reviewer: Rob O

Secondary Reviewer: Jennifer K

Required Changes:

- 2B Specifically describe experiments, including matching viral work to experiments
- 2H needs to add facilities (likely PBS 26C) because of genetically altered mice
- Add Section 7 because of genetically altered mice

IBC decision:

Defer, pending completion of the required changes to the satisfaction of the Committee.

19. *BAF Number: 1259-007* *Principal Investigator: O'Connor, Rob*
Title: New therapies for Apicomplexan parasitic infections

Facilities: Current

BSM: Current

Primary Reviewer: Levi O

Secondary Reviewer: Nina W

Required Changes:

- Add Section 7 required (administratively)
- ADD IVS machine disinfection SOP in BSM

Satisfaction of BSO

20. *BAF Number:1327-001* *Principal Investigator: Brueggeman, Robert*
Title: Functional analysis of innate immunity responses in barley

Facilities: Current

BSM: Current

Primary Reviewer: Karen S

Secondary Reviewer: Linda T

Required Changes:

- 3B4 describe the types of impermeable double containment utilized for transportation
- Spelling of “bleach” in section 7 (administratively)

IBC Decision:

Defer, pending completion of required changes to the satisfaction of the reviewers.

20. BAF Number: 1335-001 *Principal Investigator: MacLean, James*

Title: Function of Rhox genes in reproduction

Facilities: Requested *BSM: Requested*

Primary Reviewer: Rob O

Secondary Reviewer Levi O

Required Changes:

- 3A Remove all references to BrDU in the protocol. BrDU is a chemical hazard, not a biohazard
- 3A Lentivirus is a Human and Animal Hazard so these should be checked
- 3B1 list all genes to be used and remove wording that is not precise (“additional genes”)
- 3B3 Simply state that lentivirus is handled at a BSL2 level instead of “However, we will treat them as if they pose a significant risk.”
- 3B4 Keep wording focused on the transportation of materials “Dedicated plastic trash beakers with disposable bag liners will be used for viral work” the other additional descriptions of how biohazards will be handled generally should be moved to 3B3
- 3B5 Autoclave OR bleach biohazards, not both. Solid waste is usually autoclaved
- 3B6 Remove all references to BrDU.
- Section 4 IIID, D-4 remove the “No”, “No”.
- 4C3 Please specify genes or gene groups to be targeted (downstream targets are too vague)
- 4C4 Describe plans for Human Testis RNA

21. BAF Number: 1337-001 *Principal Investigator: Tymon, Lydia*

Title: Vegetable and small fruit pathology Research & Extension

Facilities: Requested *BSM: Current*

Primary Reviewer: Karen S

Secondary Reviewer: Andrei S

Required Changes:

IBC Decision: Tabled. From what can be ascertained from the protocol, it might be best if diagnostic activities and research activities are split into two protocols. The PI and or post-doctoral associate are strongly encouraged to contact the BSO, Dr. O'Loughlin, for advice on filling out the protocol forms

The List of Points that need to be addressed are as follows: This may not be an exhaustive list, thus it will be important to communicate with the BSO

- Switch PI to Miles
- Differentiate between diagnostic /research activities. Determine if there should be two BAF's, one for research and one for diagnostics.
- Table H needs to show which facilities are BSL2 and which are BSL1
- 3A Table should be completed listing all pathogens and crops
- 3B In this section all biohazards must be discussed. For example in 3B2 *Pseudomonas aeruginosa* is not your only pathogen. All biohazards must be discussed
- 3B6 Protocol states that plants will be inoculated

IBC Decision:

Table, until completion of required changes. This protocol needs to come back to committee Proposed by Karen S seconded by Rob O and motion carried (9-9).

23. *BAF Number:***1338-001** *Principal Investigator:* **White, Stephen**
Title: **Domestic and Wild Small Ruminant Infectious Diseases**
Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Jennifer K** *Secondary Reviewer:* **Levente K**

Required Changes:

Note that protocol was not revised in response to changes requested during pre-review.

- 2C New ASAF needed for wild rabbits-all ASAFs listed are expired
- 2G Experimental work is being done on sheep-ABSL level needs to be indicated
- 2H Rooms 197H, 197E, 197R/Y are no longer in use replace with rooms (188B and 188C ?).
- 3A Cultures are taken from wild rabbits with unknown diseases, most likely infectious agents that might be encountered should be listed on this chart as well as the diseases listed in 2A (ex. bacteria-associated pinkeye, and the blood borne bacterial pathogen *Mycoplasma*).

- 3B1 Mycoplasma needs more description
- 3B3 Pasteurella and Mycoplasma do transmit across species and are a hazard
- 3B6 Infected animals are incinerated

VIII. Old Business none

IX. New Business none

X. Biosafety Program Update none

XI. Biosafety Incident Reports none

XII. Adjournment

Meeting adjourned by consensus at 14:58.

WSU IBC Minutes
August 27, 2020

IBC Members Present

	Member	Affiliation/Role
1.	Rob O'Connor	Chair; Veterinary Microbiology and Pathology
2.	Alan Goodman	School of Molecular Biosciences; Scientist
3.	Mike Heston	Community Member; Pullman Fire Department
4.	Mike Kluzik	ORA Director; Research Assurances
5.	Levi O'Loughlin	Biosafety Officer; Research Assurances
6.	Karen Sanguinet	Crops and Soil Science
7.	Andrei Smertenko	Institute of Biological Chemistry; Plant Expert
8.	Linda Thomashow	USDA/ARS; Plant Pathology
9.	Nathan Weller	Community Member; Pullman City Council
10	Nina Woodford	Director, Office of the Campus Veterinarian

Alternate IBC Members Present:

	Member	Affiliation/Role
1.	Jennifer Kopanke	Associate Director, Attending Vet
2.	Ryan Schwager	Research Assurances; Assistant BSO

IBC Members Absent:

	Member	Affiliation/Role
1.	Levente Kapás	Elson S. Floyd College of Medicine
2.	Hanu Pappu	Plant Pathology

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Sonja Hartwig	Research Assurances; IBC Coordinator

* Arrived after the Call To Order.

- I. **Call to Order:** Meeting called to order 13:11, with a quorum of (10-10) members present.
- II. **Announcements:**
Stage 2 of the return to research is going well. Progression to allow more research is being discussed by the implementation team. A near miss was identified with incorrect disposal of sharps, but the lab and vivarium employees were retrained on sharps safety. A new version of the BAF was discussed to help PIs complete more accurately.
- III. **Minutes – July 23, 2020**
Minutes were amended for accuracy and the amended minutes were motioned to be approved by Linda T and seconded by Alan G with the motion carrying (10-10).
- IV.
 - A. **New Protocols:**

1. *BAF Number:* **1343-001** *Principal Investigator:* **Gunn, Bronwyn**
Title: **Analysis of antibody-mediated antiviral activity against the novel coronavirus, SARS-CoV-2**
Facilities: **Requested 8-18-20** *BSM:* **Received 8-3-20**

Primary Reviewer: **Rob O**

Secondary Reviewer: **Levi O**

Required Changes:

- 2G, 2H Select BSL2 in addition to BSL3 and identify all labs used (including flow cytometry rooms)
- 3A / 5 Confirm if the cell lines have characterized agents that need included in the table of 3A (HEK293f cells have adenovirus 5 fragments)
- Suggestion: The PI may want to consider having the virus or infectious clone sequenced or confirmed by PCR.

IBC Decision

Defer to the satisfaction of the BSO.

Proposed by Rob O seconded by Levi O and motion carried (10 to 10).

B. Renewals: none

C. Amendments: none

V. **BSL-2 BAFs**

A. New Protocols:

1. *BAF Number:* **1342-001** *Principal Investigator:* **Letko, Michael**
Title: **High-throughput screening of viral proteins for functions related to zoonosis**
Facilities: **Current** *BSM:* **Received 7-31-20**

Primary Reviewer: **Levi O**

Secondary Reviewer: **Rob O**

Required Changes:

- 2B Name the lab (presumably RML) when discussing where samples were obtained
- 3B3 Describe the screen for the cell lines that were screened
- 4A IIID D3 needs to be checked
- 4C1/3 Hosts and Genes are likely both BSL1 and BSL2

IBC Decision

Defer, pending completion of required changes to the satisfaction of the BSO.

Proposed by Levi O and seconded by Linda T motion carried (10-10).

2. *BAF Number:***1338-001** *Principal Investigator:* **White, Stephen**
Title: **Domestic and Wild Small Ruminant Infectious Diseases -**
Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Jennifer K** *Secondary Reviewer:* **Levi O**

Required Changes:

- 2B Describe use of *E. coli* cloning strains
- 2H Add Flow Cytometry location
- 2G2 Remove ABSL2 and leave “others”
- 3A Ensure table is accurate (*Mannheimia* and *Pasteurella* are likely BSL2 and human hazards, *E. coli* cloning strains are BSL1)
- 3B4 agents are likely “transported from farm to lab” rather than as written
- 4 Mark III E-1 and remove F
- 4C *E. coli* should be marked BSL1

IBC Decision

Defer pending completion of the required changes to the satisfaction of the BSO

Proposed by Jennifer K seconded by Rob O and motion carried (10-10).

B. Renewals:

1. *BAF Number:***1260-002** *Principal Investigator:* **Suarez, Carlos**
Title: **Immunologic and pharmacologic control of tick-borne pathogens that affect horses and cattle**
Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Rob O** *Secondary Reviewer:* **Nina W**

Required Changes:

- 2H list Bustad

- 2B Add UI IBC approval
- 3B6 Add “bedding” in animal waste
- 4A Mark III-D, D4, “no”, “no”, remove D1, F1

IBC Decision

Approve, with Administrative changes by the BSO

Proposed by Rob O seconded by Nina W and motion carried (10-10).

C. Amendments: none

VI. BSL-1 BAFs

A. New Protocols: none

B Renewals:

1. *BAF Number:***1200-005** *Principal Investigator:* **Tanaka, Kiwamu**
Title: **Investigation of plant-microbe interactions and plant-insect interactions**
Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Andrei S**

Secondary Reviewer: **Hanu P**

Required Changes:

- 2A Add details of all aspects of project (typically at least a paragraph)
- 2B Add details of all aspects of projects. Define the scale/volume of experiments using biohazardous materials. Describe experiments.
- 2H Describe which facilities have insects and plants with biohazardous materials.
- 3B1 Consider using a table listing pathogens and the experiments they are used for, where they are from (collaborator or local isolate), and how each are to be isolated from each other. Describe decontamination of tools used.
- 3B2 Describe source of all pathogens (where are they from and how are the collected, especially with insects)
- 3B5 Replace “killed” with “euthanized” in this section and all others.
- 3B5 Suggestion – add chemical inactivation too

IBC Decision

Defer pending completion of the required changes to the satisfaction of the reviewers

Proposed by Andrei S seconded by Linda T and motion carried (10-10).

- 2.. *BAF Number:* **1069-008** *Principal Investigator:* **Lewis, Norm**
Title: **Product Diversification Strategies for a New Generation of Biofuels/Bioproducts and Medicinals**
Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Karen S**

Secondary Reviewer; **Andrei S**

Required Changes:

- 1B List participants by positions (e.g., postdoc, grad student)
- 2A/2B Reduce to concepts using lay language and concise descriptions (sample language will be provided)
- 2I Select “yes”
- 3B2 Check spelling of *Agrobacterium tumefaciens* (throughout)
- 3B4 Describe double containment used (e.g., bagged and placed in bins)
- 3B5 Suggestion – include composting

IBC Decision

Defer, pending the completion of the required changes to the satisfaction of Rob O and Levi O

Proposed by Karen S seconded by Linda T and motion carried (10-10).

Andrei S and Nathan W left the meeting at 15:01. Quorum was maintained (8).

3. *BAF Number:* **891-009** *Principal Investigator:* **Rayapathi, Naidu**
Title: **Characterization, Diagnosis, Molecular Biology, and Epidemiology of Viral Diseases in Horticultural Crops**
Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Linda T**

Secondary Reviewer: **Karen**

Required Changes:

- 2A Remove language regarding “deploying strategies...crops” as it is not discussed in the BAF (alternatively, provide description).
- 2B, Page 3 complete or remove “If” at end of second to last paragraph

- 2B, Page 4 “import plant/leaf samples from different states in the US and abroad” verify disposal methods and quarantine of plants.
- 2B/3B3 Describe containment of insects (e.g., mealybugs) and disposal
- 2G Mark BSL1-P
- 3B4 Describe double containment
- 6B1 Containment needs to be described; verify only transient transformations

IBC Decision

Defer, pending the completion of the required changes to the satisfaction of Rob O and Levi O

Proposed by Linda T seconded by Karen S and motion carried (8-8).

4. *BAF Number:* **1115-005** *Principal Investigator:* **Gill, Kulvinder**
Title: **Characterizing genes involved in heat tolerance, stress resistance and yield**
In wheat and other cereals
Facilities: **Requested 8-3-20** *BSM:* **Received March 2020**

Primary Reviewer: **Andrei S**

Secondary Reviewer: **Linda T**

Required Changes: None

IBC Decision

Approved

Proposed by Linda T seconded by Karen S and motion carried (8-8).

C. Amendments: none

VII. BAFs Resolved in the Interim

A. Administrative Approvals:

1. *BAF Number:* **1127-005** *Principal Investigator:* **Du, Min**
Title: **AMPK in fetal development**
Like in kind amendment
2. *BAF Number:* **1126-010** *Principal Investigator:* **Winuthayanon, Wipawee**
Title: **Analysis of Estrogen and Progesterone Mechanisms of Action in Female Reproductive Tract**
Personnel Amendment

B. Other Approvals:

1. *BAF Number:* **1339-001** *Principal Investigator:* **Chen, Laura**
Title: **Microbiologic Properties of Raw Chicken Eggs Sourced from Conventional vs. Alternative Housing Conditions**
2. *BAF Number:* **1328-001** *Principal Investigator:* **Wild, Margaret**
Title: **Elk hoof disease natural exposure trial**
3. *BAF Number:* **1337-001** *Principal Investigator:* **Miles, Carol**
Title: **Vegetable and small fruit pathology Research & Extension**
4. *BAF Number:* **1243-003** *Principal Investigator:* **Goodman, Alan**
Title: **Identifying host genetic determinants of pathogenesis in Drosophila**
5. *BAF Number:* **1327-001** *Principal Investigator:* **Brueggeman, Robert**
Title: **Functional analysis of innate immunity responses in barley**
6. *BAF Number:* **1252-006** *Principal Investigator:* **Oatley, Jon**
Title: **Gene Editing in Livestock**
7. *BAF Number:* **1195-00** *Principal Investigator:* **Bose Santanu**
Title: **Viral innate immunity**

VIII. Deferred BAFs

Deferred BAFs – July 2020:

Review Key for revisions:

- **Green – can be reviewed/approved by BSO.**
- **Blue – to be reviewed and approved by the assigned reviewers.**
- **Purple - to be reviewed and approved by the IBC Chair**
- **Red – must be reviewed by the convened IBC**

1. *BAF Number:* **1232-002** *Principal Investigator:* **Brozik, James**
Title: **Model Membrane Assemblies and Membrane Proteins**
Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Eric S**

Secondary Reviewer: **Levi O**

- 9/25/18: deferred by IBC, pending BAF revision and facility and BSM approval.
- 1/4/19: followed up with PI.
- 1/7/19: revised BAF received. Revisions sent to reviewers
- Last requirement is for the biosafety cabinet to be certified, e-mail sent to Brozik and Kang 8-13-20

2. *BAF Number:* **824-008** *Principal Investigator:* **Baszler, Tim**

Title: **NAHLN:WA**

Facilities: **Current** *BSM:* **Current**

Primary Reviewer: *Secondary Reviewer:*

- *Amendment for BAF*
- *Request for update by Levi 7-21-20*
- *Request for update repeated 7-31-20 to Kevin Snekvik*

3. *BAF Number:* **1300-001** *Principal Investigator:* **Varnum, Michael**

Title: **Molecular mechanisms of retinal photoreceptor function and dysfunction**

Facilities: **Requested 1/14** *BSM:* **Current**

Primary Reviewer: **Nina W** *Secondary Reviewer:* **Eric S**

- 1/29/19: Deferred by IBC, pending BAF revision and facility and BSM approval.
- BSM approved
- Facilities have been inspected, need BSO signature
- Newest version of BAF needs BSO to review, BSM needs to be submitted

4. *BAF Number:* **1054-006** *Principal Investigator:* **Thomashow, Linda**

Title: **Genetic enhancement of wheat to control fungal pathogens**

Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Andrei S**

Secondary Reviewer: **Hanu P**

Required Changes

- 2B more details needed, explanation of how to analyze microbial genes
- 4C.1 are new lines of trans wheat produced?
- 6B.6 How will the material be decontaminated chemically?

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the reviewer
This BAF was withdrawn by the PI

5. *BAF Number:* **1257-002** *Principal Investigator:* **Wu, Boyang**
 Title: **Investigating and Targeting Neuromimicry in Prostate Cancer**
 Facilities: **Current** *BSM:* **Current**
 Primary Reviewer: **Nina W, Jennifer** *Secondary Reviewer:* **Rob O**

Required Changes:

- 2B Describe what containment is used for animals (i.e., when ABSL1 or ABSL2 is used)
- 2E Indicate IRB protocol
- 3A Verify that pLX-Puro(2nd gen) is not producing active virus or indicate measures to test for shedding (is it self inactivating?)
- 3B6 List disposal method (i.e., vivarium standard)

IBC Decision

Defer, pending completion of required change by Nina W / Jen P and Rob O.

- Sent e-mail to Dr. Wu with IBC requests 11-1-2019

6. *BAF Number:* **1058-006** *Principal Investigator:* **Alderete, J**
 Title: **Characterization of the Trichomonas vaginalis Serodiagnostic Target**
 Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Andrei S** *Secondary Reviewer:* **Karen S**

Required Changes

- 2B Expound on process to work with Sera, list the source for Sera, explain how proteins and pathogens are produced,
- 2B Take out references to being the only one working on project
- 2B If work is to be done with Trichomonas an amendment will be needed
- 2E These are indirect samples, should state that it is an exempt IRB status
- Section 3 should be removed, not working with Trichomonas
- 5A1 Wash.U-St.Lewis the only source for Sera
- 57D Offer system vaccination to any participants (PI)

IBC Decision

Defer, pending Completion of the required change to the satisfaction of the Reviewers.

7. *BAF Number:* **1184-004** *Principal Investigator:* **Fuchs Lokensgard, Rita**
 Title: **AAV/CAV-2-induced expression of light-sensitive ion channels and DREADDs**

Facilities: **Current** *BSM:* **Current**
Primary Reviewer: **Alan G** *Secondary Reviewer* **Rob O**

Required Changes

- 2C add ASAF 6255
- 2G2 select ABSL2 as well
- 2H need animal rooms defined
- 3B6 Bedding needs to be addressed
- 4C1 define type of *E. coli*
- 4C2 also needs BSL2 level selected

IBC Decision

Defer, pending completion of the required changes to the satisfaction of the reviewers.

BAF Number : **1112-005** *Principal Investigator:* **Coyne, Claire**
Title: **Storage and distribution of seed of T-DNA tagged mutant lines of the grass *Brachypodium distachyon*.**
Primary Reviewer: **Karen S** *Secondary Reviewer:* **Andrei S**

Required changes:

- *2A Include the origin of the transgenic seeds, goals of the project and history of the work*

8. *BAF Number:***1260-004** *Principal Investigator:* **Mousel, Michelle**
Title: **Quantifying Host Factors in Inherited and Infectious Diseases of Small Ruminants**
Facilities: **Current** *BSM:* **Current**
Primary Reviewer: **Rob O.** *Secondary Reviewer:* **Nina W.**

Required Changes

- *3B6 Clarify final disposition of animals that have the naturally occurring asymptomatic endemic infection.*
- *4C4 List source of r/sNA (i.e., commercial siRNA)*

9. *BAF Number:***1267-002** *Principal Investigator:* **Call, Doug**
Title: **Using CRISPR Cas9 for genetic manipulation of *Escherichia coli***
Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Levi O** *Secondary Reviewer:* **Alan G**

Required Changes:

- Needs 4A IIID D2 needs selected
- 3B4 Clarify transportation of agents and containment
- 4D2 “Yes” needs selected
- 4C1 Remove the statement in parentheses, not needed

10. *BAF Number:* **1265-006** *Principal Investigator:* **Shelden, Eric**
Title: **Stress response signaling and gene regulation**
Facilities: **Requested** *BSM:* **Current**

Primary Reviewer: **Rob O** *Secondary Reviewer* **Levente K**

Required Changes:

- 3A INT407 cells should be listed in the table
- 4C2 Assess BSL2 in the table and ensure it is correct

11. *BAF Number:* **1117-004** *Principal Investigator:* **Jasmer, Doug**
Title **Intestinal genes of nematodes**
Facilities: **Requested** *BSM:* **Current**

Primary Reviewer: **Rob O** *Secondary Reviewer:* **Nina W**

Required Changes:

- 2BH rooms need to be verified, if they change and amendment could be submitted
- 3B2 List where original source material is obtained
- 3B4 clarify how animals are contained as they are infected while in the study with a strain found in the wild
- 3B6 If STI is the disposal method for all wastes, most other items do not need to be included

12. *BAF Number:* **1115-005** *Principal Investigator:* **Gill, Kulvinder**
Title: **Characterizing genes involved in heat tolerance, stress resistance and Yield In wheat and other cereals**
Facilities: **Requested** *BSM:* **Received**

Primary Reviewer: **Andrei S** *Secondary Reviewer:* **Linda T**

Required Changes:

- 2I needs to be checked yes, so Section 3 will need to be filled out
- 2H chart needs to be completed in the Species of Plants in rooms
- 4C1 host includes Agrobacterium and e coli
- 4C3 List all used

- | | |
|-----|--|
| 13. | <i>BAF Number:</i> 1271-002 <i>Principal Investigator:</i> Driskell, Ryan
<i>Title:</i> Investigating Skin Regeneration in Mammalian Systems
<i>Facilities:</i> Current <i>BSM:</i> Current
To be reviewed and approved by BSO |
| 14. | <i>BAF Number:</i> 1331-001 <i>Principal Investigator:</i> Clarke, John
<i>Title:</i> Precision Medicine
<i>Facilities:</i> Deferred <i>BSM:</i> Current

<i>Primary Reviewer:</i> Levente K <i>Secondary Reviewer:</i> Alan G |

- Section 2B omit vague language (i.e., ‘but not limited to’...)
- Section 2H identify rooms need for housing rodents (e.g., likely PBS 32C)
- Section 3A Identify biosafety level of Microcystin LR (e.g., BSL2)
- Section 3A list all additional agents needed
- Section 3B4 clarify type of secondary containment is leak-proof
- Section 4C3 define the genes (acronyms)

15. *BAF Number:* **1122-005** *Principal Investigator:* **Brunner, Jesse**
Title: **Ranavirus and chytrid ecology**
Facilities: **Deferred** *BSM:* **Current**
Primary Reviewer: **Nina W** *Secondary Reviewer:* **Levi O**

- 2B/2H Since the large tanks outside are not ABSL2, add language to indicate that there are no outdoor exposures of animals.
- 2B and 3B2 should describe the genetically altered ranavirus used, including containment
- 3B5 Describe terminal inactivation of large volumes of water
- 3B6 STI steam sterilization is appropriate for this work (in addition to incineration)
- 4C Describe genetic modifications or remove until this information and strains are available (can be added as an amendment at a later date)

Defer, pending completion of the required changes to the satisfaction of the Reviewers.

- 6-16-20 received revised from PI, sent to reviewers

- Requested room inspection from Ryan for Heald 325
 -
16. *BAF Number: 1197-004* *Principal Investigator: Li, Weimen*
 Title: Nuclear signaling regulation of cell growth and tumorigenesis
 Facilities: Deferred *BSM: Current*
- Primary Reviewer: Rob O* *Secondary Reviewer: Jennifer K*

Required Changes:

- 2B Specifically describe experiments, including matching viral work to experiments
- 2H needs to add facilities (likely PBS 26C) because of genetically altered mice
- Add Section 7 because of genetically altered mice

IBC decision:

Defer, pending completion of the required changes to the satisfaction of the Committee.(5-28-20)

- E-mail to BSO regarding contact 8-26-20

17. *BAF Number: 1259-007* *Principal Investigator: O'Connor, Rob*
 Title: New therapies for Apicomplexan parasitic infections
 Facilities: Current *BSM: Current*
- Primary Reviewer: Levi O* *Secondary Reviewer: Nina W*

Required Changes:

- Add Section 7 required (administratively)
- ADD IVS machine disinfection SOP in BSM

Satisfaction of BSO

18. *BAF Number:1338-001* *Principal Investigator: White, Stephen*
 Title: Domestic and Wild Small Ruminant Infectious Diseases
 Facilities: Current *BSM: Current*
- Primary Reviewer: Jennifer K* *Secondary Reviewer: Levente K*

- BAF was deferred to the whole committee at June meeting
- 7-31-20 PI sent revised BAF to be seen at August meeting
-

19. *BAF Number: 1258-005* *Principal Investigator: Kawula, T*

Title: Identification of Host-Pathogen Interactions in Francisella Tularensis
Facilities: Current BSM: Current
Primary Reviewer: Levi O Secondary Reviewer: Alan G

- *Deferred to BSO, just needs source of Burkholderia*

BAF Number: 1335-001 Principal Investigator: MacLean, James
Title: Function of Rhox genes in reproduction
Facilities: Current BSM: Requested
Primary Reviewer: Rob O Secondary Reviewer: Levi O

- *IBC deferred to satisfaction of BSO*
- *7-10-20 request to PI for version*

21. *BAF Number: 1193-004 Principal Investigator: Zhu, Jiyue*
Title: Regulation of the human telomerase reverse transcriptase gene
Facilities: Current BSM: Current
Primary Reviewer: Levi O Secondary Reviewer: Jennifer K
- *Deferred to the satisfaction of reviewers, waiting for BSO review*
22. *BAF Number: 1182-003 Principal Investigator: McCubbin, Andrew*
Title: Investigation into the molecular regulation of floral heteromorphic self-incompatibility in Primula and Turnera sp.
Facilities: Current BSM: Current
Primary Reviewer: Andrei S Secondary Reviewer: Karen S
- *Deferred to the satisfaction of the BSO, sent to BSO 8-11-20*
23. *BAF Number: 1126-007 Principal Investigator: Oatley, Jon*
Title: Mechanisms of Spermatogonial Stem Cell Fate Decisions
Facilities: Current BSM: Current
Primary Reviewer: Nina W Secondary Reviewer: Andrei S
- *Deferred to reviewers and BSO, sent to them 8-12-20*
24. *BAF Number: 1123-004 Principal Investigator: Nicola, Anthony*
Title: Herpes simplex Virus, Bovine herpesvirus 1, and Pseudorabies Virus entry into host cells
Facilities: Current BSM: Current
Primary Reviewer: Alan G Secondary Reviewer: Rob O
- *Deferred to the reviewers and BSO in July meeting 7-23-20*
 - *Approved by Reviewers 8-12-20, sent to BSO for final approval*

25. *BAF Number: 1063-009* *Principal Investigator: Bankhead, Troy*
Title: Studies on infectivity and persistence in Lyme disease and Relapsing fever spirochetes.
Facilities: Current *BSM: Current*
Primary Reviewer: Nina W *Secondary Reviewer: Levente K*

- Deferred to BSO and reviewer
- Received post IBC revise from PI 7-14-20
- 8-4-20 sent revised to BSO and reviewers for approval

26. *BAF Number: 981-006* *Principal Investigator: Haseltine, Cynthia*
Title: Mechanism of Recombination in Sulfolobus solfataricus and Archaeal derived antimicrobials
Facilities: Current *BSM: Current*
Primary Reviewer: Levi O *Secondary Reviewer: Levente K*

- Deferred by IBC on 7-23-20, received revised from PI waiting for approval from BSO

IX. **Biosafety Program Update:** none

X. **Biosafety Incident Reports:** *In announcements.*

XI. **Adjournment**

Adjournment proposed by Linda T and seconded by Levi O.

Meeting adjourned at 15:24