

WSU IBC Minutes
August 16, 2016

IBC Members Present:

	Member	Affiliation/Role
1.	Levi O'Loughlin	Interim Chair; Biosafety Officer; Research Assurances
2.	Mike Heston	Community Member; Pullman Fire Department
3.	Mike Kluzik	ORA Director; Research Assurances
4.	Hanu Pappu	Plant Pathology
5.	Steve Russell	Office of the Campus Vet
6.	Nathan Weller	Community Member; Pullman City Council

IBC Members Absent:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Phillip Butterfield	College of Nursing
3.	Laura Lavine	USDA/ARC; Entomology
4.	Linda Thomashow	USDA/ARS; Plant Pathology
5.	Nina Woodford	Office of the Campus Vet

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Patrick Conner	Research Assurances; IBC Coordinator
2.	Richard Partain	USDA

* Arrived after the Call To Order.

I. Call to Order:

The meeting was called to order at 13:14, with a quorum (6 of 11 members) present. All members and guests were at the Pullman location, with the exception of Hanu P, who attended by phone.

II. Announcements:

- A. The ORA has received a public records request from a researcher, requesting all documentation regarding any changes to his APHIS Permit.
- B. The ORA, in addition to recruiting new IBC members, will also look to add alternate members. This may facilitate attaining quorum.

III. Minutes – July 19, 2016

Approve. The motion was made by Mike H, and seconded by Mike K.

Total: 6 In favor: 6 Opposed: 0 **Motion Carried (6-0)**

IV. BSL – 2 BAFs

A. New Protocols:

- 1. *BAF Number:* **1255-001**

Principal Investigator: **Cheng, Zhaokang**

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

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

Primary Reviewer: **Phil B**

Secondary Reviewer: **Eric S**

Discussion:

The BAF is complete and there were only two minor, technical, concerns. Section 3 must indicate that HEK 293 is a human hazard. The plasmid vectors do not require BSL-2 containment and may be changed to BSL-1 in Section 4. These can be revised administratively, with PI agreement.

Required Changes:

- Section 3: Change the human hazard designation to ‘Yes.’
- Section 4: Change the BSL of the plasmid vectors to 1.

IBC Decision:

Approve with the changes to Sections 3 and 4. The motion was proposed by Mike K and seconded by Nathan W.

Total: 6 In favor: 6 Opposed: 0 **Motion Carried (6-0)**

B. **Renewals:**

1. *BAF Number:* **1173-003** *Principal Investigator:* **Nicola, Anthony**

Title: **Bovine herpesvirus 1 entry into host cells**

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

Primary Reviewer: **Phil B**

Secondary Reviewer: **Levi O**

Discussion:

There were no concerns, nor changes required.

IBC Decision:

Approve. The motion was proposed by Mike K and seconded by Mike H.

Total: 6 In favor: 6 Opposed: 0 **Motion Carried (6-0)**

2. *BAF Number:* **871-006** *Principal Investigator:* **Knowles, Donald**

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

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

Primary Reviewer: **Steve R**

Secondary Reviewer: **Mike K**

Discussion:

This is a broad protocol, covering all the potential work that may occur with spongiform encephalopathies. The aim of the research is to improve diagnosis and detection of the disease in the environment. The major concern was the transportation procedures described in section 3 of the BAF. There is no information on the transport of tissue samples between facilities. Additionally, the live animal transport procedures indicate that animals will be transported in “sealed” trucks. The board felt that “covered” or “enclosed bed/trailer” was more appropriate, as “sealed” may be interpreted as air and water tight. In Section 7, the PI could have checked that the animals meet the exception,

and left the additional questions blank. However, this merely supplied more information and is not a problem or required change.

Required Changes:

- Section 3.4: Add a description of the procedures employed to contain tissue samples when transported between your research facilities. Recommended: “Tissue samples will be transported within a sealed [dish/tube/flask etc.], placed within a secondary, leak-proof container.” You may copy/paste this text, replacing the bracketed examples with your preferred container.
- Section 3.4: clarify what is meant by “sealed trucks.” Are they sealed to the extent of being air and watertight, or would “trucks with an enclosed and covered bed” be a more accurate description?

IBC Decision:

Defer, pending completion of the required changes. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Mike K and seconded by Steve R.

Total: 6 In favor: 6 Opposed: 0 **Motion Carried (6-0)**

3. *BAF Number: 1170-002* *Principal Investigator: Chandra, Murali*
Title: Mechanistic understanding of troponin T role in cardiac thin filament activation
Facilities: Current *BSM: Current*

Primary Reviewer: Eric S *Secondary Reviewer: Mike K*

Discussion:

The only concern was that the Plan of Work did not describe the role of the human heart tissue in the research.

Required Changes:

- Section 2B: Revise to include a description of the procedures involving the human heart tissue.

IBC Decision:

Defer, pending completion of the required changes. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Mike K and seconded by Mike H.

Total: 6 In favor: 6 Opposed: 0 **Motion Carried (6-0)**

V. **BSL – 1 BAFs**

A. **Renewals:**

1. *BAF Number: 1172-002* *Principal Investigator: Ritter, Robert*
Title: The role of glutamate in the control of food intake
Facilities: Current *BSM: Current*

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

Discussion:

The use of Adeno-Associated Virus (AAV) necessitates the inclusion of Section 3 of the BAF

Required Changes:

- Complete and submit Section 3 of the BAF for the use of AAV.

IBC Decision:

Defer, pending completion of the required changes and approval of the facilities and BSM. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Levi O and seconded by Mike K.

Total: 6 In favor: 6 Opposed: 0 Motion Carried (6-0)

2. *BAF Number:* **989-009** *Principal Investigator:* **Dhingra, Amit**

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

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

Primary Reviewer: **Hanu P**

Secondary Reviewer **Linda T**

Discussion:

The only concern was the lack of detail in the Genes to be cloned and source of DNA for cloning. The BAF can be approved once examples are provided

Required Changes:

- Section 4: Provide some examples of the Genes to be cloned (“Genes involved in metabolic pathways for food and bioenergy production”) and the DNA/RNA source (“Plants and microbes”).

IBC Decision:

Approve upon completion of the required change. The motion was proposed by Hanu P and seconded by Mike K.

Total: 6 In favor: 6 Opposed: 0 Motion Carried (6-0)

3. *BAF Number:* **1112-003** *Principal Investigator:* **Bradley, Vicki**

Title: **Storage and distribution of seed of T-DNA tagged mutant lines of the grass *Brachypodium distachyon*.**

Facilities: **N/A** *BSM:* **N/A**

Primary Reviewer: **Linda T**

Secondary Reviewer **Hanu P**

Discussion:

This is not a research BAF, but cold storage of transgenic seeds. The PI must retain IBC approval in order to continue the storage. Room inspections and a BSM are not needed for this research. There were a couple of issues with the BAF. Since Section 2H indicates use of (transgenic) plants, 2E should also indicate plant use. Additionally, section 4 should indicate that the work is storing transgenic seeds, and that questions do not apply, rather than leaving them blank. These changes can be made administratively, with PI approval.

Required Changes:

- Section 2E: check 'Yes,' that plants will be used, in order to be consistent with 2H.
- Section 4: Indicate that the Host/Vector matrix does not apply, rather than leaving blank.

IBC Decision:

Approve with the above administrative changes. The motion was proposed by Hanu P and seconded by Mike K.

Total: 6 In favor: 6 Opposed: 0 **Motion Carried (6-0)**

VI. Old Business

- A.** The coordinator and BSO will be working to eliminate the deferred list in the next few months.

VII. Adjournment

The meeting was adjourned at 14:16

WSU IBC Minutes
September 20, 2016

IBC Members Present:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Phillip Butterfield	College of Nursing
3.	Mark Hubbard	USDA/ARC; Grant and Proposal Specialist
4.	Mike Kluzik*	ORA Director; Research Assurances
5.	Levi O'Loughlin	Biosafety Officer; Research Assurances
6.	Steve Russell	Office of the Campus Vet
7.	Nathan Weller	Community Member; Pullman City Council

Alternate IBC Members Present:

	Member	Affiliation/Role
1.	Laura Lavine	USDA/ARC; Entomology. CAHNRS Alternate

IBC Members Absent:

	Member	Affiliation/Role
1.	Mike Heston	Community Member; Pullman Fire Department
2.	Hanu Pappu	Plant Pathology
3.	Linda Thomashow	USDA/ARS; Plant Pathology
4.	Nina Woodford	Office of the Campus Vet

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Patrick Conner	Research Assurances; IBC Coordinator
2.	Richard Partain	USDA

* Arrived after the Call To Order.

I. Call to Order:

The meeting was called to order at 12:09, with a quorum (6 of 11) members present.

II. Announcements:

- A. Mark Hubbard of CAHNRS has been appointed to the IBC. Mark has a deep background in work with biological materials. Laura L. has been made an alternate for Mark H. For this reason, the membership remains at 11, with 6 needed to attain quorum.

Mike K arrived at 12:11, bringing the number of members present to 7.

- B. In addition to recruiting full members, the ORA will seek to add additional alternates. The plan is to obtain alternates that can substitute for fields of expertise, such as veterinary medicine, rather than for a specific member. Levi O provided a proposed amendment to the IBC manual, describing the role of alternate members

- C. The NIH has issued advice that laboratories should have contingency plans in place in the event of power outages, and that backup power alone should not be relied upon.
- D. The NIH has once again declared October is National Biosafety Stewardship Month. Levi O is drafting several announcements to circulate in the WSU Biological community.
- E. Patrick C is making an attempt to resolve the Deferred List by the end of the year.

III. Minutes – August 16, 2016

Approve. The motion was proposed by Nathan W and seconded by Levi O.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

IV. BSL – 2 BAFs

A. Amendments:

1. *BAF Number:* **1237-002** *Principal Investigator:* **Rossi, David**

Title: **Brain malfunction and damage during ischemia and drug abuse**

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

Primary Reviewer: **Eric S.**

Secondary Reviewer: **Levi O**

Discussion:

The main concern was the characterization of the Herpes virus as not a human hazard and the appropriate biosafety level of Pseudorabies (given as BSL-1). The BSO will verify with the supplier of these agents whether the BAF is correct.

Required Changes:

There were no changes required at this time. Section 3 will need to be updated if this strain of Herpes is a human hazard and the Pseudorabies is not BSL-1.

IBC Decision:

Defer, pending completion of the BSO's inquiry and any necessary updates to Section 3 of the BAF. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Eric S and seconded by Levi O.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

2. *BAF Number:* **1198-003** *Principal Investigator:* **Fuchs Lokensgard, Rita**

Title: **Viral tracing of relapse circuitry**

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

Primary Reviewer: **Phil B.**

Secondary Reviewer: **Mike K.**

Discussion:

There is some incorrect and missing information in the vector list in Section 4 of the BAF.

Required Changes:

- Section 4: Change the BSL of the vectors to 2
- Section 4: List all of the vectors used.

IBC Decision:

Defer, pending completion of the required changes. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Phil B and seconded by Mike K.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

V. BSL – 1 BAFs

A. New Protocols:

1. *BAF Number:* **1256-001** *Principal Investigator:* **Portfors, Christine**

Title: **Optogenetics in the central auditory pathway**

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

Primary Reviewer: **Steve R**

Secondary Reviewer: **Eric S**

Discussion:

The only barrier to approval was the Table at Section 4.C was left blank.

Required Changes:

- Section 4: Complete Table C.

IBC Decision:

Defer, pending completion of the required changes. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Steve R and seconded by Eric S.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

B. Renewals:

1. *BAF Number:* **1174-002** *Principal Investigator:* **Lavine, Laura**

Title: **Genetic mechanisms underlying nutrition-dependent trait growth in insects**

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

Primary Reviewer: **Linda T**

Secondary Reviewer: **Hanu P**

Alternate Member Laura L. recused herself from the meeting for the review and action on the BAF. Quorum was not affected.

Discussion:

The committee did not agree that cloning DNA within bacteria was exempt under NIH Guidelines (III-F) and had difficulty determining the purpose of the cloning.

Required Changes:

- Section 2A: Clarify the cloning materials and the reason this research includes cloning.
- Section 4: Change the NIH Category to III-E-1, without helper viruses.

IBC Decision:

Defer, pending completion of the required changes and approval of the facilities and BSM. The BAF may be approved when these conditions are completed, to the satisfaction of the IBC Chair. The motion was proposed by member and seconded by member.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

Alternate member Laura L returned, Quorum was unaffected.

2. *BAF Number:* **1039-006** *Principal Investigator:* **Wang, Susan**
Title: **Radical Enzymatic Reaction Mechanisms**
Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Levi O** *Secondary Reviewer* **Phil B**

Discussion:

There were no real concerns, other than the table at Section 4C did not indicate the BSL of the Source of DNA/RNA. BSL-1 can be checked administratively.

Required Changes:

- Section 4C: Check BSL-1 for the level of Source of DNA/RNA.

IBC Decision:

Approve with the administrative change. The motion was proposed by Levi O and seconded by Phil B.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

VI. Adjournment

The meeting was adjourned at 13:11.

WSU IBC Minutes
October 18, 2016

IBC Members Present:

	Member	Affiliation/Role
1.	Levi O'Loughlin	Interim Chair; Biosafety Officer; Research Assurances
2.	Phillip Butterfield	College of Nursing
3.	Mike Heston	Community Member; Pullman Fire Department
4.	Mark Hubbard	USDA/ARC; Grant and Proposal Specialist
5.	Mike Kluzik	ORA Director; Research Assurances
6.	Steve Russell	Office of the Campus Vet
7.	Nina Woodford	Office of the Campus Vet

Alternate IBC Members Present: None

IBC Members Absent:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Hanu Pappu	Plant Pathology
3.	Linda Thomashow	USDA/ARS; Plant Pathology
4.	Nathan Weller	Community Member; Pullman City Council

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Patrick Conner	Research Assurances; IBC Coordinator
2.	Ryan Schwager	Research Assurances; Assistant BSO

* Arrived after the Call to Order.

I. Call to Order:

The meeting was called to order at 12:23, with a quorum (7 of 11 members) present. In the absence of Eric S, Levi O served as Chair.

II. Announcements:

A. 2017 IBC Meeting schedule set.

- January 24, February 21, March 21, April 25, May 23, June 27, July 25, August 29, September 26, October 24 and December 5

Discussion: The members debated changing the start time to 13:30, but decided to continue to start meetings at 13:10 in 2017.

III. Minutes – September 20, 2016

Approve as presented. The motion was proposed by Mike H and seconded by Mike K.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

IV. BSL – 2 BAFs

A. Renewals:

1. *BAF Number:* **1177-006**

Principal Investigator: **Hardy, Michele**

Title: **Molecular biology of rotavirus replication and immune responses to enteric infection**

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

Primary Reviewer: **Steve R** *Secondary Reviewer:* **Phil B**

Discussion:

This is a rotavirus study, utilizing both cell cultures and in vivo studies (mouse). There was some confusion over the biosafety levels listed in the application, but this is due to the use of human cells. The other materials are BSL-1, but the impossibility of completely ruling out all potentially infectious agents in human samples requires BSL-2 containment. There was a question regarding the hazard of the rotavirus and availability of human vaccines, but it was not a concern due to the changes in the virus that has made them cell line-specific and decreased the virulence. The only controverted issues could be rectified by administrative changes to the BAF, without requiring any procedural changes.

Required Changes:

- Section 4.B.1: Change to 'Yes.'
- Section 4.B.9: Change to 'Yes.'
- Section 4.C.1: Add CaCo2 to the list of hosts.
- Section 5.5: Add COS cells to the Established Cell Line list.

IBC Decision:

Defer, pending administrative completion of the required changes. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Steve R and seconded by Nina W.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

2. *BAF Number:* **1180-002**

Principal Investigator: **Jansen, Heiko**

Title: **Dissection of cellular rhythms using lentiviral techniques**

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

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

Discussion:

During the discussion, Mark H excused himself for about 5 minutes. Quorum was maintained (6 members present), and Mark returned prior to the IBC decision.

The research uses bear and HEK cells. The cells are modified with lentiviral constructs in order to measure circadian rhythms. The only controverted issue was the omission of the ASAF number.

Required Changes:

- Section 2.C: List the ASAF number

IBC Decision:

Approve with the above administrative change. The motion was proposed by Levi O and seconded by Nina W.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

The agenda was rearranged in order to accommodate Steve R, who was under time constraints and needed to leave soon.

B. Amendments:

1. **BAF Number: 1196-002**

Principal Investigator: Crespo, Rocio

Title: Inactivation of infectious bursal disease virus through compost of litter from poultry houses

Facilities: Current BSM: Current

Primary Reviewer: Steve R Secondary Reviewer: Levi O

Discussion:

The facilities were approved shortly before the meeting. The use of composting as a means of deactivation was called into question. There was also a concern that the respiratory hazards and flammability of the diatomaceous earth were not addressed in the BSM.

Required Changes:

- Section 3.5: Clarify that materials will only be sent for composting after deactivation by chemicals or autoclave.
- Biosafety Manual: The BSO will ensure that all concerns are addressed (respiratory hazards and flammability of the diatomaceous earth).

IBC Decision:

Defer, pending completion of the required changes and approval of the BSM (if necessary). The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Steve R and seconded by Mike K.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

Steve R left the meeting. Quorum was maintained (6 of 11 members).

C. Renewal and Amendment:

1. **BAF Number: 1181-004**

Principal Investigator: Beyenal, Haluk

Title: Receptor Signaling Pathways in Mammary Epithelial Cells

Facilities: Current BSM: Current

Primary Reviewer: Mike K Secondary Reviewer: Eric S

Discussion:

The amendment is to change PI, as the former PI has left WSU, and the approval is merely to store the samples until the graduate student has successfully defended. The only concern was that the person with direct oversight over the storage location was not listed on the BAF, just that there would be VSCEB Personnel involved

Required Changes:

- Section 1.B: list the specific personnel who will maintain oversight (Billy Schmuck?).

IBC Decision:

Defer, pending completion of the required changes. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Mike K and seconded by Nina W.

Total: 6 In favor: 6 Opposed: 0 **Motion Carried (6-0)**

V. BSL – 1 BAFs

A. Renewals:

1. *BAF Number:* **1034-006** *Principal Investigator:* **Hellmann, Hanjo**
Title: **E3 ligases as Key Regulators of Plant Physiology and Plant Development**
Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Hanu P** *Secondary Reviewer:* **Mike K**

Discussion:

The research looks at transcription controls in Arabidopsis and relatives of tobacco. There were no concerns regarding procedures, containment or deactivation.

Required Changes:

- Section 2.F.1: indicate BSL-1 laboratory containment. This may be done administratively.

IBC Decision:

Approve with the administrative change. The motion was proposed by Mike K and seconded by Phil B.

Total: 6 In favor: 6 Opposed: 0 **Motion Carried (6-0)**

VI. Discussion of BAFs Approved in the Interim

Levi O gave a short summary of all approvals granted between meetings. There were no concerns nor objections. There was a question of whether Kara Vogel (BAF 1250) was still at WSU. The Coordinator will follow up.

VII. Discussion of deferred BAFs

1. *BAF Number:* **1248-001** *Principal Investigator:* **Wayman, Gary**
Title: **Viral expression of Proteins within the hippocampus**

Discussion: This one can be removed, as soon as the BSM is approved.

VIII. Adjournment

The meeting was adjourned at 12:58.

1257WSU IBC Minutes
December 6, 2016

IBC Members Present:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Phillip Butterfield	College of Nursing
3.	Mike Heston	Community Member; Pullman Fire Department
4.	Mark Hubbard	USDA/ARC; Grant and Proposal Specialist
5.	Mike Kluzik	ORA Director; Research Assurances
6.	Levi O'Loughlin	Biosafety Officer; Research Assurances
7.	Linda Thomashow	USDA/ARS; Plant Pathology
8.	Nathan Weller	Community Member; Pullman City Council
9.	Nina Woodford	Office of the Campus Vet

IBC Members Absent:

	Member	Affiliation/Role
1.	Hanu Pappu	Plant Pathology
2.	Steve Russell	Office of the Campus Vet

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Patrick Conner	Research Assurances; IBC Coordinator
2.	Richard Partain	USDA

I. Call to Order:

The meeting was called to order at 12:06, with a quorum (9 of 11) of members present.

II. Announcements:

Eric S, Nina W, and Levi O will be presenting at the “Three I’s” (IACUC, IBC, IRB) conference in Spokane, WA on December 7, 2016.

III. Minutes – October 18, 2016

Approve. The motion was proposed by Levi O and seconded by Mike H.

Total: 9 In favor: 9 Opposed: 0 **Motion Carried (9-0)**

IV. BSL – 3 BAFs

A. New Protocols:

1. *BAF Number:* **1258-001** *Principal Investigator:* **Kawula, Thomas**
Title: **Identification of Host-Pathogen Interactions in Francisella Tularensis**
Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Mike K**

Secondary Reviewer: **Levi O**

During the discussion, Nathan W was absent from the meeting from 12:08 to 12:09 and Mike H was absent 12:18-12:21. Quorum was maintained during each of their separate absences, 8 members remaining present each time.

Discussion:

The main concerns were that there was insufficient detail in the description of the work being performed and the purpose of the work. There was also a concern that there may be gain of function as a result of the mutation.

Required Changes:

- **Section 2:**
 - Specify what you hope to learn from the research (the goal or hypothesis)
 - Clarify how the mutagenesis is performed.
 - Clarify how the biochemical assays are performed.
 - Specify the procedures that will involve human blood.
 - Specify the purpose of cloning procedures and what will be done with the cloned materials.
 - Explain whether the mutations are likely to result in gain of function, and, if so, procedures in place to limit this potential.

IBC Decision:

Defer, pending completion of the required changes. The revised BAF will be reviewed by the convened IBC.

The motion was proposed by Eric S and seconded by Mike K.

Nathan W was absent from the meeting 12:31 to 12:33, and was not present for the vote. Quorum was maintained (8 members present)

Total: 8 In favor: 8 Opposed: 0 Motion Carried (8-0)

V. BSL – 2 BAFs

A. New Protocols:

1. BAF Number: 1257-001 Principal Investigator: Wu, Boyang (Jason)

Title: Targeting Neuromimicry in Prostate Cancer Metastasis

Facilities: Spo PBS 404A is not approved BSM: Current

Primary Reviewer: **Phil B**

Secondary Reviewer: **Nina W**

Discussion:

The major concern with the BAF was that the recombinant DNA procedures were not well described. There was also a concern regarding the facilities. One of the laboratories is a former conference room that has been retro-fitted to a BSL-2 lab. While it has 4

approved BSCs, it lacks many of the features that the BMBL requires in biological laboratories (sinks, eyewash stations, in particular). The department has requested the installation of a sink, and the BSO will work with the PI to obtain other necessities, such as bottle eyewashes.

Required Changes:

- **Section 2:**
 - Specify the work that you are performing with recombinant DNA.

IBC Decision:

Defer, pending completion of the required changes and approval of the facilities.

The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Phil B and seconded by Levi O.

Total: 9 In favor: 9 Opposed: 0 Motion Carried (9-0)

2. *BAF Number:* **1259-001** *Principal Investigator:* **O'Connor, Roberta**
Title: **New Therapies for Apicomplexan Parasitic Infections**
Facilities: **Assigned to ORA 11/21/16 BSM: Requested 11/21/16**

Primary Reviewer: **Mark H** *Secondary Reviewer:* **Nina W**

The PI was unprepared for the review and requested that the review be delayed until the January IBC Meeting.

B. **Renewals:**

1. *BAF Number:* **1008-004** *Principal Investigator:* **Bose, Susmita**
Title: **Developing Materials and Scaffolds for Bone Implants**
Facilities: **Current BSM: Under Review**

Primary Reviewer: **Eric S** *Secondary Reviewer:* **Phil B**

Discussion:

The research involves SV 40, an infectious agent. The PI must complete Section 3 and incorporate it into the BAF.

Patrick C recommended, in the interests of efficiency and expedience, that motions to defer placed the approvals, following revisions, in the hands of either the BSO or the convened IBC, and no longer to assigned reviewers.

Required Changes:

- **Section 3:**
 - Complete the section for SV 40 use and submit for inclusion into the BAF.

IBC Decision:

Defer, pending completion of the required changes and approval of BSM. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Levi O and seconded by Phil B.

Total: 9 In favor: 9 Opposed: 0 **Motion Carried (9-0)**

2. *BAF Number: 1113-006* *Principal Investigator: Ueti, Massaro*
Title: Immunologic and pharmacologic control of tick-borne pathogens that affect horses and cattle.
Facilities: Current *BSM: Under Review*

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

Discussion:

The WSU IBC only oversees the laboratory work, as all *in vivo* work (ticks and cattle), is conducted at the University of Idaho, overseen by their IBC (and IACUC). The BAF does not clearly explain what is cloned, or for what purpose. It is also unclear why the agents used are not considered human hazards, yet the assessment of the biohazardous potential says there is danger to humans, despite classifying it as “minimal.”

Required Changes:

- **Section 2:**
 - Identify the cloned materials and why they are being cloned.
- **Section 3:**
 - Revise item #3 to clarify whether or not the agents involved are pathogenic to humans (even if only slightly). If so, describe any available vaccines, whether lab personnel will be required to be vaccinated (or just given the option), and indicate that they are Human Hazards in the Agents’ Table above.

IBC Decision:

Defer, pending completion of the required changes and approval of the BSM. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Levi O and seconded by Eric S.

Total: 9 In favor: 9 Opposed: 0 **Motion Carried (9-0)**

3. *BAF Number: 1114-005* *Principal Investigator: Scoles, Glen*
Title: Determinants of Anaplasma marginale transmission at the vector/pathogen interface AND Immunologic and Pharmacological Interventions of Vector-Borne Babesiosis
Facilities: Current *BSM: Update Requested 11/2/16 &12/6/16*

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

Discussion:

The WSU IBC only oversees the laboratory work, as all *in vivo* work (ticks and cattle), is conducted at the University of Idaho, overseen by their IBC (and IACUC). The BAF does not clearly explain what is cloned, or for what purpose.

Required Changes:

- **Section 2:**

- In Item A, explain how the cloned genes will help achieve the aim of the research.
- **Section 4:**
 - In item C.3, specify “Various pathogen and tick genes of interest.”

IBC Decision:

Defer, pending completion of the required changes and approval of the BSM. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers.

The motion was proposed by Eric S and seconded by Levi O.

Total: 9 In favor: 9 Opposed: 0 **Motion Carried (9-0)**

C. **Amendments:**

1. *BAF Number:* **1250-002** *Principal Investigator:* **Gibson, Mike (formerly K Vogel)**

Title: **Heritable disease and pharmacology**

Facilities: **Current** *BSM:* **Update requested 11/1/16**

Primary Reviewer: **Mike K**

Secondary Reviewer: **Levi O**

Discussion:

Nathan W was absent during the discussion 13:13 to 13:15. Quorum was maintained (8 members present).

There were no concerns regarding the BAF, nor changes required. The BSO is engaged in dialogue with the researchers regarding the BSM, and it has not been approved yet.

IBC Decision:

Defer, pending approval of the BSM. The BAF may be approved when this condition is completed, to the satisfaction of the BSO.

The motion was proposed by Levi O and seconded by Phil B.

Total: 9 In favor: 9 Opposed: 0 **Motion Carried (9-0)**

VI. **BSL – 1 BAFs**

A. **Renewals:**

1. *BAF Number:* **1040-008** *Principal Investigator:* **Neff, Michael**
Title: **Translating fundamental plant research into improved agronomic traits in crops**
Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Hanu P**

Secondary Reviewer: **Mark H**

Discussion:

There were no concerns regarding approval, nor changes required.

IBC Decision:

Approve. The motion was proposed by Linda T and seconded by Mark H.

Total: 9 In favor: 9 Opposed: 0 **Motion Carried (9-0)**

2. *BAF Number:* **1047-004** *Principal Investigator:* **Glass, Jenny**
Title: **WSU Puyallup plant and insect diagnostic laboratory**
Facilities: **Current** *BSM:* **Current**

Primary Reviewer: **Hanu P** *Secondary Reviewer:* **Levi O**

Discussion:

There was a question regarding the disposal of the samples into the municipal waste stream. BSO clarified that all samples were of native, ubiquitous, organisms; this is the equivalent to throwing a commercially purchased bouquet in the trash. There were no other concerns regarding approval, nor changes required.

IBC Decision:

Approve. The motion was proposed by Levi O and seconded by Linda T.

Total: 9 In favor: 9 Opposed: 0 **Motion Carried (9-0)**

VII. BAFs Approved in the Interim

Levi O informed the committee that Patrick C had made substantial progress in resolving outstanding BAFs.

VIII. Deferred BAFs

The coordinator is currently attempting to resolve all outstanding BAFs prior to the end of the year, and has been following up to accomplish this.

IX. Adjournment

The meeting was adjourned at 13:27.

WSU IBC Minutes
January 24, 2017

IBC Members Present:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Phillip Butterfield	College of Nursing
3.	Mike Heston	Community Member; Pullman Fire Department
4.	Mark Hubbard	USDA/ARC; Grant and Proposal Specialist
5.	Mike Kluzik	ORA Director; Research Assurances
6.	Levi O'Loughlin	Biosafety Officer; Research Assurances
7.	Steve Russell	Office of the Campus Vet
8.	Nathan Weller	Community Member; Pullman City Council
9.	Nina Woodford	Office of the Campus Vet

IBC Members Absent:

	Member	Affiliation/Role
1.	Hanu Pappu	Plant Pathology
2.	Linda Thomashow	USDA/ARS; Plant Pathology

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Patrick Conner	Research Assurances; IBC Coordinator
2.	Ryan Schwager	Research Assurances; Assistant BSO

I. Call to Order:

The meeting was called to order at 13:06, with a quorum (9 of 11) of members present.

II. Announcements:

A new faculty member in Veterinary Microbiology and Pathology, Roberta “Rob” O’Connor, was a member of the IBC at her former Institution and has expressed interest in joining the WSU IBC.

III. Minutes – December 6, 2016

Approve. The motion was proposed by Nathan W and seconded by Mike K.

Total: 9 In favor: 9 Opposed: 0 **Motion Carried (9-0)**

IV. BSL – 3 BAFs

A. Resubmission:

1. **BAF Number: 1258-001** *Principal Investigator: Kawula, Thomas*
Title: Identification of Host-Pathogen Interactions in Francisella Tularensis
Facilities: Current BSM: Update Needed

Primary Reviewer: Mike K

Secondary Reviewer: Levi O

Discussion:

This BAF was initially reviewed at the December 2016 meeting, where it was deferred, pending re-review by the full committee. The committee discussed the major concerns surrounding select agent use and determined that the PI has addressed them. The research involves other agents that are BSL-2, but the Biosafety Manual covers only the level 3 work. As the level 2 work will occur in other labs, the Manual must address these lower level agents and work, or a the PI must have second manual (BSL-2). Additionally, the NIH category III-D-4 should be selected, but this can be done administratively.

Required Changes:

- Section 4: Administratively check NIH Category III-D, D-4.

IBC Decision:

Defer, pending completion of the required changes and approval of Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers.

The motion was proposed by Mike K and seconded by Levi O.

Total: 9 In favor: 9 Opposed: 0 Motion Carried (9-0)

V. BSL – 2 BAFs

A. New Protocols:

1. **BAF Number: 1259-001** *Principal Investigator: O'Connor, Roberta (Rob)*
Title: New Therapies for Apicomplexan Parasitic Infections
Facilities: Current BSM: Current

Primary Reviewer: Steve R

Secondary Reviewer: Mark H

Discussion:

The only concerns were some things that were left out of the BAF, both procedural descriptions and specifics regarding facilities, PPE and deactivation.

Required Changes:

- Section 2B: Discuss the procedures that will limit the hazards of the mutagen.
- Section 2C: Provide ASAF number or 'Pending.' This can be changed administratively.
- Section 2H: List mouse facilities
- Section 3B.2: Revise to include the source(s) of the Toxoplasma and Sarcocystis.
- Section 3B.3: Revise to include the biohazard potential of the Sarcocystis.
- Section 3B.4: Revise to describe the personal protective equipment (PPE) used and any training you will offer (i.e. sharps handling) your personnel.
- Section 3B.5: Revise to include how long the disinfectant will be applied to surfaces and implements in order to deactivate the characterized/select agents.

IBC Decision:

Defer, pending completion of the required changes and approval of the facilities. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO.

The motion was proposed by Steve R. and seconded by Mark H.

Total: 9 In favor: 9 Opposed: 0

Motion Carried (9-0)

2. *BAF Number: 1260-001* *Principal Investigator: Mousel, Michelle*
Title: Identification of Host Factors and Immunopathogenesis of Pneumonia in Domestic and Bighorn Sheep
Facilities: Current *BSM: Current*

Primary Reviewer: Nina W

Secondary Reviewer: Eric S

Discussion:

The committee was not able to determine the specific process of the research. Some of the r/sNA information was too vague. Additionally, the sheep involved are from a USDA “pool” of research animals, so the IBC was unclear whether some of the animal information, like housing and disposition, were specific to this research or applied to the population in general.

Required Changes:

- Section 2B: Specify the viral procedures, explaining what is cloned, and why it is cloned.
- Section 2H: Specify where the sheep are housed.
- Section 3B.6: Include the rationale for incinerating the sheep. If they are returned to the USDA flock, and this is the final deactivation method for the flock, you can say that the sheep will be transferred to other researchers.
- Section 4C: elaborate on your responses to items 1-4; i.e. distinguish the viral vectors from the OPPV use.

IBC Decision:

Defer, pending completion of the required changes. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Eric S and seconded by Nina W.

Total: 9 In favor: 9 Opposed: 0

Motion Carried (9-0)

3. *BAF Number: 1261-001* *Principal Investigator: Chauvin, Theodore*
Title: Using Heterologous Cell Lines to Study Proteins That Are in Mouse Sperm
Facilities: Current *BSM: Requested 1/9*

Primary Reviewer: Phil B

Secondary Reviewer: Levi O

Discussion:

There was a question regarding the PIs use of breast cancer cells to test motility in mouse sperm. The only other concerns were that there were some details left out of the BAF

Required Changes:

- Section 2B: Revise to explain the rationale for using human breast cancer cells to test motility in mouse sperm.
- Section 2C: Check 'Yes' to animal use, and list the ASAF number. *The ASAF number was found to be 4351.*
- Section 2H: List all lab spaces where biological work is performed and animals are housed.
- Section 4: Administratively check NIH category III-E, E-1 (also indicating that no, the cells do not contain helper viruses).

IBC Decision:

Defer, pending completion of the required changes and approval of the Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers.

The motion was proposed by Levi O and seconded by Phil B.

Total: 9 In favor: 9 Opposed: 0 Motion Carried (9-0)

B. Renewals:

1. **BAF Number: 867-014** *Principal Investigator: Konkel, Michael*

Title: A novel approach to identify the virulence proteins secreted by Campylobacter jejuni

Facilities: PI notified/request sent 1/4 BSM: Current

Primary Reviewer: Levi O

Secondary Reviewer: Steve R

Discussion:

The only concern was that one of the rooms listed in Section 2H, Eastlick B56A, is not current in its approval, and is not actually used in the research

Required Changes:

- Section 2H: Verify biosafety level and animal use in Eastlick B56A.

IBC Decision:

Defer, pending completion of the required changes and approval of the facilities.

The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Steve R and seconded by Levi O.

Total: 9 In favor: 9 Opposed: 0 Motion Carried (9-0)

2. **BAF Number: 1052-005** *Principal Investigator: Neiberghs, Holly*

Title: Genetic Resistance to Johne's Disease in Cattle

Facilities: Inspected 1/10 BSM: Current

Primary Reviewer: Nina W

Secondary Reviewer: Mark H

Discussion:

There were no concerns regarding approval, nor changes required.

Approve. The motion was proposed by Nina W and seconded by Mike K.

Total: 9 In favor: 9 Opposed: 0 **Motion Carried (9-0)**

3. *BAF Number: 1117-003* *Principal Investigator: Jasmer, Douglas*

Title: Intestinal genes of nematodes

Facilities: PI notified 1/5 *BSM: Current*

Primary Reviewer: Eric S

Secondary Reviewer: Phil B

Discussion:

The committee could not understand what the phrase "...gene expression and functional assays" was referring to. The reported BSL of the characterized agents was questioned. Additionally, the NIH category III-E-1 looks to apply to the research (as well as III-D, which is marked)

Required Changes:

- Section 2B: Clarify what is meant by the phrase "...gene expression and functional assays." For example, does it mean biological or biochemical assays?
- Section 3A: Verify that the BSL indicated for each agent listed in the table is correct.
- Section 4: Administratively check NIH category III-E, E-1 (also indicating that no, the cells do not contain helper viruses).

IBC Decision:

Defer, pending completion of the required changes and approval of the facilities.

The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers.

The motion was proposed by Eric S and seconded by Phil B.

Total: 9 In favor: 9 Opposed: 0 **Motion Carried (9-0)**

4. *BAF Number: 1186-002* *Principal Investigator: Van Wie, Bernie*

Title: A Novel Centrifugal Bioreactor for Investigating Synergistic Influences of Pressure and Growth Factor on Chondrogenesis, and for Establishing Laboratory Cell Lines for Prostate Cancer Therapy Studies

Facilities: Current *BSM: Update requested 1/6*

Primary Reviewer: Mike K

Secondary Reviewer: Mark H

Discussion:

There was concern and discussion about a seal on the bioreactor or a component failing at the high pressures used, and the containment and PPE being sufficient to prevent exposure.

Required Changes:

- Section 2A: Add a description of the procedures used to maintain containment when transporting biological materials between laboratories, the Personal Protective Equipment (PPE) worn by lab personnel to prevent exposure (in the event of a failure of a seal or component of the reactor resulting in the blood being aerosolized), and the procedures that will be followed in the event of exposure.
 - Note: the Biosafety Manual must also address these issues.

IBC Decision:

Defer, pending completion of the required changes and approval of the Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers.

Prior to the vote, Steve R left the meeting. Quorum was maintained (8 of 11 members).

The motion was proposed by Eric S and seconded by Mike K.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

VI. BSL – 1 BAFs

A. Renewals:

1. **BAF Number: 1184-003** *Principal Investigator: Fuchs Lokensgard, Rita*
Title: AAV/CAV-2-induced expression of light-sensitive ion channels and DREADDs
Facilities: Current BSM: Current

Primary Reviewer: Eric S

Secondary Reviewer: Levi O

Discussion:

There was no real concern with the BAF, other than the ASAF number(s) was not listed in Section 2.

Approve with the administrative addition of the ASAF number(s) to section 2.

The motion was proposed by Eric S and seconded by Levi O.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

2. **BAF Number: 1058-005** *Principal Investigator: Alderete, John*
Title: The study of Trichomonas vaginalis Serodiagnostic Targets
Facilities: Current BSM: Update requested 1/4

Primary Reviewer: Levi O

Secondary Reviewer: Phil B

Discussion:

There was concern over the use of human blood serum. The IBC decided that the research is better described as BSL-2 and the NIH category for r/sNA should be changed to III-E-1. The BAF must also be updated to include Section 5, due to the use of human blood serum.

Required Changes:

- Section 2G: Change the Biosafety Level to BSL-2.
- Section 2I: Check that the research does involve “human or primate blood, body fluids, cells, cell-lines and tissues.”
- Section 4A: change the NIH category of recombinant/synthetic nucleic acids to III-E, E-1 (also indicating that no, the cells do not contain helper viruses).
- Complete Section 5 of the BAF.
- Complete and submit a BSL-2 Biosafety Manual. *Coordinators note: John’s BSM from 2014 for this research is a Level 2 Manual. –PC 1/27/17.*

IBC Decision:

Defer, pending completion of the required changes and approval of the Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers.

The motion was proposed by Levi O and seconded by Mark H.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

VII. Adjournment

The meeting adjourned at 15:08.

WSU IBC Minutes
February 21, 2017

IBC Members Present:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Phillip Butterfield	College of Nursing
3.	Mike Heston	Community Member; Pullman Fire Department
4.	Mark Hubbard	USDA/ARC; Grant and Proposal Specialist
5.	Mike Kluzik	ORA Director; Research Assurances
6.	Levi O'Loughlin	Biosafety Officer; Research Assurances
7.	Steve Russell	Veterinarian, Office of the Campus Vet
8.	Linda Thomashow	USDA/ARS; Plant Pathology

IBC Members Absent:

	Member	Affiliation/Role
1.	Hanu Pappu	Plant Pathology
2.	Nathan Weller	Community Member; Pullman City Council
3.	Nina Woodford	Veterinarian, Office of the Campus Vet

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Patrick Conner	Research Assurances; IBC Coordinator

I. Call to Order:

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

II. Minutes – January 24, 2017

Approve. The motion was proposed by Mike H and seconded by Levi O.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

III. BSL – 2 BAFs

A. New Protocols:

1. **BAF Number: 1262-001** *Principal Investigator: Suarez, Carlos*
Title: Immunologic and pharmacologic control of tick-borne pathogens that affect horses and cattle
Facilities: Current *BSM: Requested 2/15/17*
Primary Reviewer: Mark H *Secondary Reviewer: Levi O*

Discussion:

The BAF does not indicate vertebrate animal use in Section 2, likely because animals are housed at another university. There is also no source for the ticks or disposition method for those not subjected to the research procedures.

Required Changes:

- Section 2B: List the source of your ticks and the disposal method of those not inoculated.
- Section 2C: Change the indication of vertebrate animal use to 'Yes,' and indicate that they are housed at University of Idaho.

IBC Decision:

Defer, pending completion of the required changes and approval of the Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Levi O and seconded by Linda T.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

2. *BAF Number: 1263-001* *Principal Investigator: James, Allison*
Title: Relapsing Fever as a Cause of Undiagnosed Febrile Illness in Western Kenya
Facilities: Current *BSM: Requested 2/15/17*
Primary Reviewer: Phil B *Secondary Reviewer: Mike K*

Discussion:

There were no concerns regarding the BAF, nor changes required

IBC Decision:

Defer, pending approval of the Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Phil B and seconded by Mike K.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

B. Renewals:

1. *BAF Number: 1094-005* *Principal Investigator: Wayman, Gary*
Title: Viral Expression of Proteins within the Hippocampus
Facilities: Current *BSM: Requested 1/11/17*
Primary Reviewer: Eric S *Secondary Reviewer: Steve R*

Discussion:

There is a discrepancy in Sections 2 and 3 of the BAF, regarding the time points between when the animals are inoculated and when they are euthanized. Section 3.3 only addresses the biohazardous potential of the Herpes Simplex Virus (HSV). The sub-category III-D-4 was not checked, although the follow-up questions were answered.

Required Changes:

- Sections 2 and 3: Resolve the discrepancy in the time points in which the animals are euthanized.
- Section 3.3: Address the biohazardous potential for all of the agents in the Infectious Agents table at S3.1 (in addition to HSV).
- Section 4.1: Check NIH sub-category D-4. This can be done administratively.

IBC Decision:

Defer, pending completion of the required changes and approval of the Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Steve R and seconded by Eric S.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

2. **BAF Number: 1116-003** *Principal Investigator: Jones, Jeffrey*
Title: Aldehyde Oxidase
Facilities: Awaiting Inspection BSM: Requested 2/3
Primary Reviewer: Levi O *Secondary Reviewer: Mike H*

Discussion:

There are a couple of typos in the BAF. Other than correction of the typos, there were no concerns regarding the BAF, nor changes required

Required Changes:

- Section 3.3: Change “Hep C Vaccine” to “Hep B Vaccine,” and “rick” to “risk.” These can be done administratively.

IBC Decision:

Defer, pending completion of the required changes and approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Levi O and seconded by Linda T.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

3. **BAF Number: 1171-002** *Principal Investigator: Liu, David*
Title: Regulation and function of ATF5
Facilities: Awaiting Inspection BSM: Update requested 2/15/17
Primary Reviewer: Steve R *Secondary Reviewer: Mark H*

Discussion:

The inoculation of vertebrate animals with the materials described in the BAF requires Animal Biosafety containment (ABSL), in addition to BSL-2 containment. The Plan of Work does not adequately describe the procedures performed on inoculated animals. Section 3 does not describe the methods of disposal of inoculated animals and unfixed human materials. Section 4.B contains some confusing answers to the questions.

Required Changes:

- Section 2.B: Describe your work with inoculated animals and unfixed human samples.
- Section 2.G.2: check “ABSL-2.” This can be done administratively.
- Section 2.H: Change the vivarium containment level to “ABSL-2.” This can be done administratively.
- Section 3.5: Describe the disposal methods for both inoculated animals and the human materials.
- Section 4.B: Review the responses to questions 1-9 and revise where necessary to reflect the research materials and procedures.

IBC Decision:

Defer, pending completion of the required changes and approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by member and seconded by member.

Total: 8 In favor: 8 Opposed: 0 Motion Carried (8-0)

4. **BAF Number: 1191-002** *Principal Investigator: Ritter, Sue*
Title: Neural Pathways for Metabolic Controls of Ingestion (R01 DK040498); Mechanisms of Fatty Acid Control of Feeding Behavior (R01 DK097437-01)
Facilities: Current *BSM: Update requested 2/15/17*
Primary Reviewer: Phil B *Secondary Reviewer: Steve R*

Discussion:

The research involves the use of transgenic animals, this should be checked at S2.I and Section 7 added to the BAF. The committee was not clear on descriptions of what seem to be helper viruses and reproductive competence in the discussion of Adeno-Associated Virus (AAV). In Section 4, the BAF indicates that the recombinant work involves greater than 2/3 of a viral genome, but the IBC was not certain if the rest of the BAF supported this. The BAF also does not indicate NIH category III-E, most likely due to an oversight.

Required Changes:

- Section 2.A: Clarify what is meant by use of “helper viruses” and the reproductive competence in the discussion of AAV use.
- Section 2.H: Check ‘Yes’ regarding transgenic animal use. This can be done administratively.
- Section 4: Check NIH category III-E. This can be done administratively.
- Section 4: Verify that “Recombinant DNA, or DNA or RNA molecules derived there from; source is greater than 2/3 eukaryotic viral genome” (III-D-4) is correct. Revise if necessary.
- Complete Section 7 of the BAF.

IBC Decision:

Defer, pending completion of the required changes and approval of the Biosafety Manual. The BAF may be approved when these conditions are completed, to the

satisfaction of the BSO. The motion was proposed by Phil B and seconded by Levi O.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

IV. BSL – 1 BAFs

A. Renewals:

1. *BAF Number: 1118-004* *Principal Investigator: Besser, Thomas*
Title: Mycoplasma Ovipneumoniae in Domestic and Bighorn Sheep
Facilities: Current BSM: Requested 2/3
Primary Reviewer: Mark H *Secondary Reviewer: Steve R*

Discussion:

The only concern was that “respiratory epithelial cells” not be human sourced

Required Changes:

- Verify that the “respiratory epithelial cells” are not human sourced.

IBC Decision:

Defer, pending verification that the “respiratory epithelial cells” are not human sourced and approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Mark H and seconded by Eric S.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

2. *BAF Number: 1182-002* *Principal Investigator: McCubbin, Andrew*
Title: Investigation into the molecular regulation of floral heteromorphy in Primula vulgaris
Facilities: checklists requested 2/16/17 BSM: Requested 2/15/17
Primary Reviewer: Hanu P *Secondary Reviewer: Linda T*

Discussion:

There were no concerns regarding the BAF, nor changes required

IBC Decision:

Defer, pending approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Linda T. and seconded by Levi O.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

3. *BAF Number: 1183-002* *Principal Investigator: Fuchs Lokensgard, Rita*
Title: Gene silencing using intra-cranial infusion of siRNA
Facilities: Clarification requested 2/15/17 BSM: Clarification requested 2/15/17
Primary Reviewer: Eric S *Secondary Reviewer: Levi O*

Discussion:

The table regarding host and vector in Section 4.C.1-2 for silencing RNA (siRNA) is not consistent with the description of work in Section 2.B.

Required Changes:

- Section 4.C.1: List Rats as the host for siRNA. This can be done administratively.
- Section 4.C.2: Indicate that there is no vector for siRNA ('N/A'). This can be done administratively.

IBC Decision:

Defer, pending completion of the required changes and approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Eric S and seconded by Levi O.

Total: 8 In favor: 8 Opposed: 0 Motion Carried (8-0)

V. BAFs Approved in the Interim

A. Other Approvals:

1. BAF Number: 1058-005 Principal Investigator: Alderete, John

Title: The study of Trichomonas vaginalis Serodiagnostic Targets

Facilities: Current BSM: Update requested 1/4/17

Primary Reviewer: Levi O Secondary Reviewer: Phil B

- 1/24/16: Deferred by IBC, pending revision to the BAF and BSM approval
- 2/7/17: BSL-2 BSM template sent to PI.
- 2/8/17: Revised BAF and BSM received.
- 2/9/17: Completed Biosafety Manual sent to BSO for review. Revised BAF sent to reviewers.
- 2/14/17: Reviewer had a question about a statement that the research does not involve human blood (only plasma). Followed up with BSO, who indicated approval (conditional upon BSM approval).
- 2/20/17: BSM Approved.
- 2/21/17: BAF approved.

VI. Adjournment

The meeting adjourned at 14:19.

WSU IBC Minutes
March 21, 2017

IBC Members Present:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Mark Hubbard	USDA/ARC; Grant and Proposal Specialist
3.	Mike Kluzik	ORA Director; Research Assurances
4.	Levi O'Loughlin	Biosafety Officer; Research Assurances
5.	Steve Russell	Veterinarian, Office of the Campus Vet
6.	Nina Woodford	Veterinarian, Office of the Campus Vet

IBC Members Absent:

	Member	Affiliation/Role
1.	Phillip Butterfield	College of Nursing
2.	Mike Heston	Community Member; Pullman Fire Department
3.	Hanu Pappu	Plant Pathology
4.	Linda Thomashow	USDA/ARS; Plant Pathology
5.	Nathan Weller	Community Member; Pullman City Council

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Patrick Conner	Research Assurances; IBC Coordinator
2.	Ryan Schwager	Research Assurances; Assistant BSO
3.	Richard Partain	USDA

I. Call to Order:

The meeting was called to order at 13:05, with a quorum (6 of 11 members) present.

II. Minutes – February 21, 2017

Approve. The motion was proposed by Levi O and seconded by Mark H.

Total: 6 In favor: 6 Opposed: 0 **Motion Carried (6-0)**

III. BSL – 2 BAFs

A. New Protocols:

1. *BAF Number: 1265-001* *Principal Investigator: Shelden, Eric*

Title: Stress response signaling and gene regulation

Facilities: Current BSM: Requested 3/6

Primary Reviewer: Mark H *Secondary Reviewer: Levi O*

Discussion:

As Eric S has a Conflict of Interest in the review, he must recuse himself from the review and decision. However, this would have resulted in a loss of quorum and there could be no meaningful review or action by the committee. The review was tabled, by consensus, until a quorum of voting members could be present.

B. Renewals:

1. **BAF Number: 1054-005** *Principal Investigator: Thomashow, Linda*
Title: Biological control and molecular genetics of root diseases of wheat, barley and biofuel brassicas
Facilities: Requested/Assigned 3/6 **BSM: Requested 3/6**
Primary Reviewer: Levi O **Secondary Reviewer: Hanu P**

Discussion:

Hanu P was not present, but had no concerns (via email). The PI has not addressed the recommendations from the Pre-IBC, has not completed the updated Biosafety Manual and the BSO has not been able to perform the facility inspections. Additionally, there was concern over the specific strains of *Fusarium* used.

Required Changes:

- Clarify the strains of *Fusarium* employed in this research. This does not yet require a change to the BAF, but may result in a revision to Section 3.
- Section 3.A: Add *Burkholderia cepacia* to the table of Agents, its hazard potential, vaccine availability and Biosafety Level. If this agent is no longer used, remove its mention from Section 2.G.
- Section 3.B.6: Add that “ Cultures, plants and soil are autoclaved prior to disposal.” This may be performed administratively.
- Section 4.B.9: Change the response to ‘Yes,’ as the host(s) are not exempt from the NIH guidelines. This may be performed administratively.
- Section 4.C.1: Change “...other than K2,” to “...other than K12.” This may be performed administratively

IBC Decision:

Defer, pending completion of the required changes and approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers.

The motion was proposed by Levi O and seconded by Eric S.

Total: 6 In favor: 6 Opposed: 0 **Motion Carried (6-0)**

IV. **BSL – 1 BAFs**

A. New Protocols:

1. **BAF Number: 1264-001** *Principal Investigator: Peters, John*
Title: John W. Peters’ Lab
Facilities: Requested 3/6 **BSM: Requested 3/6**
Primary Reviewer: Eric S **Secondary Reviewer: Phil B**

Discussion:

The major concerns were the lack of clarity in several points of the BAF. The Biosafety Manual and facilities have not been approved yet. Phil B was not present, but submitted comments via email, read into the record by Patrick C.

Required Changes:

- Section 1: Revise the title to refer to pertain to the project, rather than the laboratory.
- Section 2.A: Provide more details on what the goal of the research is and list the specific stain(s) of E.coli used.
- Section 2.B: Provide more details regarding the procedures performed.

IBC Decision:

Defer, pending completion of the required changes and approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers.

The motion was proposed by Eric S and seconded by Levi O.

Total: 6 In favor: 6 Opposed: 0 **Motion Carried (6-0)**

2. *BAF Number: 1266-001* *Principal Investigator: McLaughlin, Ryan*
Title: Viral knockdown of monoacylglycerol lipase in the rat brain: effects on stress and cognition
Facilities: Requested 3/6 *BSM: Requested 3/6*
Primary Reviewer: Steve R *Secondary Reviewer: Mike K*

Discussion:

The committee could not determine how some equipment was cleaned, when the listed cleaning methods could not be used on specific apparatus. Disposal of animal waste and bedding was also an area of concern. The IBC had trouble determining the specifics of the cloning procedures and paraformaldehyde treatment. Section 3 mentions of a BSL-2 agent (CAV-2), not mentioned elsewhere and may have been added in error. The Biosafety Manual and facilities have not been approved yet.

Required Changes:

- Section 2.B: Include the cleaning procedures for the cryostat (which cannot be steam-cleaned), the method of cloning, and duration of the paraformaldehyde treatment.
- Section 3.B.4: Clarify the CAV-2 use, or delete it if it was included erroneously.
- Section 3.B.6: Describe how inoculated animal waste and bedding will be deactivated and disposed of.

IBC Decision:

Defer, pending completion of the required changes and approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO.

The motion was proposed by Steve R and seconded by Mike K.

Total: 6 In favor: 6 Opposed: 0 **Motion Carried (6-0)**

B. Renewals:

1. *BAF Number: 1192-002* *Principal Investigator: Karatsoreos, Ilia*
Title: Genetic Control of Homeostatic Function
Facilities: Awaiting inspection BSM: Current
Primary Reviewer: Nina W *Secondary Reviewer: Levi O*

Discussion:

The major concerns were the provisions for the containment of the animals after injections and disposal of bedding. The facilities have not been approved yet.

Required Changes:

- Section 2.B: add a description of how animals will be contained after receiving injections and disposal of the bedding used by inoculated animals.
- Section 3.B.6: Add you procedures for disposal of the bedding used by inoculated animals.
- Section 4.C.1: Add mouse to the list of hosts. This may be performed administratively.

IBC Decision:

Defer, pending completion of the required changes and approval of the facilities.

The BAF may be approved when these conditions are completed, to the satisfaction of the BSO.

The motion was proposed by Nina W and seconded by Levi O.

Total: 6 In favor: 6 Opposed: 0 Motion Carried (6-0)

V. **BAFs Approved in the Interim**

Discussion: None

VI. **Deferred BAFs**

Discussion: None

VII. **Bio-Incident Reports**

A. Potential exposure to mycobacterium

- A technician experienced a face splash of reverse osmosis water while cleaning aquatic housing systems. The water was potentially contaminated with a zoonotic strain of mycobacterium. The BSO investigated and determined that there was no contamination.

Discussion: None

VIII. **Adjournment**

The meeting adjourned at 13:55.

WSU IBC Minutes
April 25, 2017

IBC Members Present:

	Member	Affiliation/Role
1.	Phillip Butterfield	Interim Chair; College of Nursing
2.	Mark Hubbard	USDA/ARC; Grant and Proposal Specialist
3.	Mike Kluzik	ORA Director; Research Assurances
4.	Levi O'Loughlin	Biosafety Officer; Research Assurances
5.	Steve Russell	Veterinarian, Office of the Campus Vet
6.	Linda Thomashow	USDA/ARS; Plant Pathology
7.	Nina Woodford	Veterinarian, Office of the Campus Vet

IBC Members Absent:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Mike Heston	Community Member; Pullman Fire Department
3.	Hanu Pappu	Plant Pathology
4.	Nathan Weller	Community Member; Pullman City Council

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Patrick Conner	Research Assurances; IBC Coordinator
2.	Ryan Schwager	Research Assurances; Assistant BSO

I. Call to Order:

The meeting was called to order at 13:10, with a quorum of voting members (7 of 11) present. In the absence of Eric S, Phil B was selected by consensus to serve as interim Chair of the IBC.

II. Announcements:

The ORA has moved from the Albrook Hydraulics Lab to the fourth floor of Neill Hall.

III. Minutes – March 21, 2017

Approve. The motion was proposed by Levi O and seconded by Mark H.
Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

IV. BSL – 2 BAFs

A. New Protocols:

1. **BAF Number:1265-001** *Principal Investigator: Shelden, Eric*
Title: Stress response signaling and gene regulation

Primary Reviewer: Mark H Secondary Reviewer: Levi O

Controverted Issues:

- None

IBC Decision:

Approve. The motion was proposed by Mark H and seconded by Linda T.

Total: 7 In favor: 7 Opposed: 0 Motion Carried (7-0)

2. *BAF Number:1267-001 Principal Investigator: Call, Douglas*
Title: Using CRISPR Cas9 for genetic manipulation of Escherichia coli
Primary Reviewer: Levi O Secondary Reviewer: Mark H

Controverted Issues:

- In section 4, under NIH category III-E-2, the BAF indicates that there are 'helper' viruses in the rDNA used. This is incorrect. This change may be made administratively and need not delay approval.

IBC Decision:

Approve with the administrative change to section 4. The motion was proposed by Mark H and seconded by Linda T. Nina W abstained from the vote, due to a personal relationship with the PI.

Total: 7 In favor: 6 Opposed: 0 Abstained: 1 Motion Carried (6-0-1)

3. *BAF Number:1268-001 Principal Investigator: Sablani, Shyam*
Title: Isolation of Lactobacillus rhamnosus and determination of its antimicrobial activity against foodborne pathogens
Primary Reviewer: Phil B Secondary Reviewer: Mike K

Controverted Issues:

- The Agents table in Section 3 must be completed.

IBC Decision:

Defer, pending resolution of the controverted issue. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO.

The motion was proposed by Phil B and seconded by Mike K.

Total: 7 In favor: 7 Opposed: 0 Motion Carried (7-0)

Mike K departed the meeting. Quorum was maintained with 6 of 11 voting members present.

4. *BAF Number:1269-001 Principal Investigator: Maddison, Lisette*
Title: Core Facility to Develop Gene Editing Reagents

Primary Reviewer: Mark H

Secondary Reviewer: Levi O

Controverted Issues:

- None

IBC Decision:

Approve. The motion was proposed by Mark H and seconded by Levi O.

Total: 6 In favor: 6 Opposed: 0 **Motion Carried (6-0)**

B. Renewals:

1. *BAF Number: 1190-003* *Principal Investigator: Desouza, Cleverson*

Title: Immunological studies with Mycobacterium avium subspecies paratuberculosis

Primary Reviewer: Nina W

Secondary Reviewer: Phil B

Controverted Issues:

- The indication is that this is an initial submission (new BAF), but is listed on the agenda as a renewal. The coordinator will verify which is correct and administratively update the BAF or re-classify.
 - *Follow-up: the title is identical to the initially submitted BAF 1190 in 2014 and the information on the form is consistent with that of the 2014 submission. The BAF will be administratively updated.*
- The research uses animal blood, but the BAF does not indicate vertebrate animal use or list the ASAF under which the blood is drawn. Revise Section 2 to include the pertinent ASAF.
- Section 2 needs more detail on the procedures used to meet the research goals. Revise Section 2 to provide more details on the procedures utilized in this research.
- Section 3.1: needs more detail on the procedures used to block MAPKp38 pathway. Revise Section 3.1 to provide more details on the procedures used to block MAPKp38 pathway.

IBC Decision:

Defer, pending resolution of the controverted issues. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Levi O and seconded by Phil B.

Total: 6 In favor: 6 Opposed: 0 **Motion Carried (6-0)**

2. *BAF Number: 1193-003* *Principal Investigator: Zhu, Jiyue*

Title: Repression of hTERT gene during cell differentiation

Primary Reviewer: Levi O

Secondary Reviewer: Steve R

Controverted Issues:

- The Biosafety Manual and animal housing facilities are in need of approval.
- Section 2.B merely re-states the goals and aims, and must be revised to describe the procedures used in the research.
- Section 3.A is not specific enough regarding the retroviruses, lentiviruses, and fibroblasts.
- Section 3.B.1 does not adequately describe the procedures regarding the agent use.

IBC Decision:

Defer, pending resolution of the controverted issues and approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Levi O and seconded by Nina W.

Total: 6 In favor: 6 Opposed: 0 **Motion Carried (6-0)**

3. BAF Number: 1121-005 Principal Investigator: Brown, R Lane

Title: Retinal & Brain Circuitry

Primary Reviewer: Steve R

Secondary Reviewer: Nina W

Controverted Issues:

- The Biosafety Manual has not been received nor approved.
- Adeno-associated Virus (AAV) and Modified PseudoRabies Virus (PRV) are BSL-1, rather than 2, as indicated in section 3A.1 of the BAF. This can be accomplished administratively.
- HEK293 (with adeno viral fragments) must be included in the table in section 3A.1. This can be accomplished administratively.
- The committee had concerns about the NIH category indications in section 4A (III-D-1, III-D-3 and III-D-4) and the indication that the s/rNA source is greater than 2/3 eukaryotic viral genome, as this was not described in section 2B.
- Section 4B.5 indicates that the s/rNA encodes a control element that may extend the host range, but this was not indicated in section 4A (III-D-3), nor discussed in section 2B.

IBC Decision:

Defer, pending resolution of the controverted issues and approval of the Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Steve R. and seconded by Levi O.

Total: 6 In favor: 6 Opposed: 0 **Motion Carried (6-0)**

V. BSL – 1 BAFs

Mike K Returned to the meeting (7 of 11 voting members present).

A. New Protocols:

1. *BAF Number: 1270-001* *Principal Investigator: Carpenter-Boggs, Lynne*

Title: Mortality Composting

Primary Reviewer: Levi O

Secondary Reviewer: Nina W

Controverted Issues:

- There was concern about prions in animal carcasses. Section 2B must specify that composting will be restricted to species that are free of known pathogens and do not carry prions.

IBC Decision:

Defer, pending resolution of the controverted issues. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers.

Approve. The motion was proposed by Levi O and seconded by Mike K.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

2. *BAF Number: 1271-001* *Principal Investigator: Driskell, Ryan*

Title: Investigating Skin Regeneration in Mammalian Systems

Primary Reviewer: Levi O

Secondary Reviewer: Nina W

Controverted Issues:

- None.

IBC Decision:

Approve. The motion was proposed by Nina W and seconded by Levi O.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

B. Renewals:

1. *BAF Number: 891-008* *Principal Investigator: Rayapati, Naidu*

Title: Characterization, Diagnosis, Molecular Biology, and Epidemiology of Viral Diseases in Horticultural Crops

Primary Reviewer: Hanu P

Secondary Reviewer: Linda T

Controverted Issues:

- The BAF includes several projects, some of which are insufficiently described.
- The insect procedures are not described in Section 2B. This research must be severed from the rest and submitted on a new BAF.
- Section 2B must provide a better description of the imported plants as well as the viral genome.
- Section 2G must indicate BSL-1P, as opposed to the current indication of BSL-1. This change may be completed administratively.
- The NIH category in Section 4 must be changed to III-E-2. This change may be completed administratively.

IBC Decision:

Defer, pending resolution of the controverted issues and resubmission of the insect research on a separate BAF. The revised BAF and new asubmission will be reviewed by the convened IBC. The motion was proposed by Linda T and seconded by Mark H.

Total: 7 In favor: 7 Opposed: 0 Motion Carried (7-0)

2. *BAF Number: 1115-003 Principal Investigator: Gill, Kulvinder*
Title: Characterizing genes involved in heat tolerance, stress resistance and yield in wheat and other cereals
Primary Reviewer: Linda T Secondary Reviewer: Hanu P

Controverted Issues:

- The NIH category in section 4 should be changed to III-E-2. . This change may be completed administratively.
- The indication that the hosts for s/rRNA are not exempt (K12 or derivative strains) should be changed to 'yes.' This change may be completed administratively.

IBC Decision:

Approve upon completion of the administrative changes. The motion was proposed by Linda T and seconded by Levi O.

3. *BAF Number: 981-005 Principal Investigator: Haseltine, Cynthia*
Title: Mechanism of Recombination in Sulfolobus sulfataricus
Primary Reviewer: Phil B Secondary Reviewer: Mike K

Controverted Issues:

- The agents table in section 3A must be completed.

IBC Decision:

Defer, pending resolution of the controverted issue. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Mike K and seconded by Phil B.

Total: 7 In favor: 7 Opposed: 0 Motion Carried (7-0)

VI. Bio-Incident Reports

A custodian in the School of Molecular Biosciences was requested to empty trash in a laboratory area. This was a task outside of his assigned duties. When throwing the trash bag into a dumpster, a sharp object in the trash bag poked through the side of the bag and scratched his leg, breaking the skin. The lab does use tissue culture(without characterized agents), but the trash was not in a biohazard disposal bag and there is no indication that the

sharp object was used with the cultured materials. Facility Operations has re-trained the custodian only perform tasks for which he has been specifically trained and assigned in laboratory areas. This has been classified as a 'near-miss.' Environmental Health and Safety and the BSO have reviewed the incident and follow-up, and consider the matter resolved.

VII. Adjournment

The meeting was adjourned at 15:03.

WSU IBC Minutes
May 23, 2017

IBC Members Present:

	Member	Affiliation/Role
1.	Eric Shelden*	IBC Chair; School of Molecular Biosciences
2.	Phillip Butterfield	Interim Chair; ES Floyd College of Medicine
3.	Mark Hubbard	USDA/ARC; Grant and Proposal Specialist
4.	Mike Kluzik	ORA Director; Research Assurances
5.	Levi O'Loughlin	Biosafety Officer; Research Assurances
6.	Steve Russell	Veterinarian, Office of the Campus Vet
7.	Nina Woodford	Veterinarian, Office of the Campus Vet

IBC Members Absent:

	Member	Affiliation/Role
1.	Hanu Pappu	Plant Pathology
2.	Linda Thomashow	USDA/ARS; Plant Pathology
3.	Nathan Weller	Community Member; Pullman City Council
4.	Mike Heston	Community Member; Pullman Fire Department

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Patrick Conner	Research Assurances; IBC Coordinator
2.	Ryan Schwager	Research Assurances; Assistant BSO
3.	Richard Partain	USDA

* Arrived after the Call To Order.

I. Call to Order:

The meeting was called to order at 13:13, with a quorum (6 of 11 members) present. In the absence of Eric S, Phil B was selected by consensus to serve as interim Chair of the IBC.

Eric S arrived at the meeting at 13:14, at which time Mike K departed. Quorum was maintained at 6 of 11 members. Eric S suggested Phil B continue serve as Chair, to which Phil B agreed. There were no objections.

II. Minutes – April 25, 2017

Approve. The motion was proposed by Levi O and seconded by Eric S.

Total: 6 In favor: 6 Opposed: 0 **Motion Carried (6-0)**

III. BSL – 2 BAFs

A. Renewals:

1. **AF Number: 1122-004** *Principal Investigator:* **Brunner, Jesse**

Title: **Ranavirus ecology**

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

Primary Reviewer: Steve R

Secondary Reviewer: Levi O

Controverted Issues:

- Levi O clarified that the growth tank facilities had been classified as ‘Other, rather than ABSL-2. There were no concerns or objections to the renewal of the approval.

IBC Decision:

Approve. The motion was proposed by Steve R and seconded by Levi O.

Total: 6 In favor: 6 Opposed: 0 **Motion Carried (6-0)**

2. *BAF Number: 1197-003* *Principal Investigator: Li, Weimin*
Title: Nuclear signaling regulation of cell growth and tumorigenesis
Facilities: review needed *BSM: Current*
Primary Reviewer: Nina W *Secondary Reviewer: Phil B*

Controverted Issues:

- In Section 3.B.6, the disposal method of inoculated animals is missing. Levi O offered that the PI follows standard vivarium practice with contracted biological disposal company. This can be added administratively.
- In the interests of completeness in Section 4.A, the NIH category III-E-1 (without ‘helper’ viruses) should be added. This can be added administratively.

IBC Decision:

Defer, pending administrative resolution of the controverted issues and approval of the facilities. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Nina W and seconded by Phil B.

Total: 6 In favor: 6 Opposed: 0 **Motion Carried (6-0)**

IV. Adjournment

The meeting was adjourned at 13:36

WSU IBC Minutes
June 27, 2017

IBC Members Present:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Mark Hubbard	USDA/ARC; Grant and Proposal Specialist
3.	Mike Kluzik	ORA Director; Research Assurances
4.	Levi O'Loughlin	Biosafety Officer; Research Assurances
5.	Steve Russell	Veterinarian, Office of the Campus Vet
6.	Linda Thomashow	USDA/ARS; Plant Pathology

IBC Members Absent:

	Member	Affiliation/Role
1.	Phillip Butterfield	ES Floyd College of Medicine
2.	Mike Heston	Community Member; Pullman Fire Department
3.	Hanu Pappu	Plant Pathology
4.	Nathan Weller	Community Member; Pullman City Council
5.	Nina Woodford	Veterinarian, Office of the Campus Vet

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Patrick Conner	Research Assurances; IBC Coordinator

I. Call to Order:

The meeting was called to order at 13:11, with a quorum (6 of 11 members) present.

II. Minutes – May 23, 2017

Approve. The motion was proposed by Linda T, and seconded by Levi O.

Total: 6 In favor: 6 Opposed: 0 **Motion Carried (6-0)**

III. BSL – 2 BAFs

A. New Protocols:

1. *BAF Number:* **1272-001** *Principal Investigator:* **Highland, Margaret**

Title: **Domestic and Wild Small Ruminant Infectious Diseases**

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

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

Controverted Issues:

- There were no controverted issues or barriers to approval.

IBC Decision:

Approve. The motion was proposed by Levi O and seconded by Eric S.

Total: 6 In favor: 6 Opposed: 0 **Motion Carried (6-0)**

B. Renewals:

1. *BAF Number:* **1063-007**

Principal Investigator: **Bankhead, Troy**

Title: **Studies on Infectivity and Persistence in Lyme Disease and Relapsing Fever Spirochetes.**

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

Primary Reviewer: **Steve R** *Secondary Reviewer* **Phil B**

Controverted Issues:

- The Goals and Aims in Section 2 are presented in highly technical language and the Plan of Work is merely copied and pasted from the Goals and Aims.
- The methods of sterilizing the equipment in section 3 was not well described.

IBC Decision:

Defer, pending resolution of the controverted issues. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Steve R and seconded by Eric S.

Total: 6 In favor: 6 Opposed: 0 **Motion Carried (6-0)**

2. *BAF Number:* **1195-002**

Principal Investigator: **Bose, Santanu**

Title: **Viral innate immunity**

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

Primary Reviewer: **Eric S** *Secondary Reviewer* **Mark H**

Controverted Issues:

- The Plan of Work in Section 2 does not include the procedures involving mice. The mouse cell lines do not belong in Section 5, however, as that section is specific to human and other primate materials.
- There was concern about the use of HEK-293, as it is a “helper” to make attenuated lentivirus into replication-competent virus. The HEK-293 use with lentiviral vectors needs additional justification.
- Section 3 needs to clarify if “Human respiratory syncytial virus” is an attenuated strain.

IBC Decision:

Defer, pending resolution of the controverted issues. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Eric S and seconded by Levi O.

Total: 6 In favor: 6 Opposed: 0 **Motion Carried (6-0)**

3. *BAF Number:* **1123-003**

Principal Investigator: **Nicola, Anthony**

Title: **Herpes simplex virus entry into host cells**

Facilities: **Current** *BSM:* **Current**
Primary Reviewer: **Mark H** *Secondary Reviewer* **Mike K**

Controverted Issues:

- The statement of Goals and Aims in section 2 is insufficient.
- The Plan of Work is not clear if the virus is being concentrated or not and does not describe the recombinant work performed.
- The PPE described in the Plan of Work is insufficient to protect lab personnel in the event of splashes or aerosolized virus.
- The assessment in Section 3.B.3 that risk of infection from exposure to HSV is minimal needs citation or additional support in the BAF.
- Section 3.B.4 must indicate double-containment.

IBC Decision:

Defer, pending resolution of the controverted issues. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Mark H and seconded by Mike K.

Total: 6 In favor: 6 Opposed: 0 **Motion Carried (6-0)**

C. **Amendments:**

1. *BAF Number:* **1270-002** *Principal Investigator:* **Carpenter-Boggs, Lynne**

Title: **Mortality Composting**

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

Primary Reviewer: **Eric S** *Secondary Reviewer:* **Phil B**

Controverted Issues:

- The use of unfixed human tissues requires BSL-2 containment.
- The BAF only addresses successful composting of the cadavers, does not address unsuccessful outcomes.
- The PI has expressed a willingness to autoclave the final product. The IBC, however, noted that prions are not destroyed by autoclave alone. The IBC requested justification for not incinerating the final product. Incineration would also resolve the concern about unsuccessful outcomes.

IBC Decision:

Defer, pending resolution of the controverted issues and approval of the facilities. The revised BAF will be reviewed by the convened IBC. The motion was proposed by Eric S and seconded by Linda T.

Total: 6 In favor: 6 Opposed: 0 **Motion Carried (6-0)**

IV. **BSL – 1 BAFs**

A. **Renewals:**

1. *BAF Number:* **1048-004** *Principal Investigator:* **Inglis, Debra**

Title: **Biology and control of soil borne fungal and Oomycete pathogens effecting Washington's specialty potato industry**

Facilities: **Current** *BSM:* **New BSM requested 6/16**

Primary Reviewer: **Linda T** *Secondary Reviewer* **Hanu P**

Controverted Issues:

- The Plan of Work does not describe the work with r/sNA.

IBC Decision:

Defer, pending resolution of the controverted issues and approval of the Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Linda T and seconded by Levi O.

Total: 6 In favor: 6 Opposed: 0 **Motion Carried (6-0)**

V. Biosafety Program Update

Levi O informed the committee that WSU would be receiving a shipment of Select Agents 6/27/2017.

VI. Open Discussion

There was discussion of the RCW regarding open public meetings and how discussions and Meeting Minutes could adhere to the RCW, while still protecting intellectual property and biosecurity concerns. Mike K offered to provide materials that have been developed during IACUC consideration of the same concerns.

VII. Adjournment

The meeting adjourned at 14:42.

WSU IBC Minutes
July 25, 2017

IBC Members Present:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Phillip Butterfield	ES Floyd College of Medicine
3.	Mike Heston	Community Member; Pullman Fire Department
4.	Mark Hubbard	USDA/ARC; Grant and Proposal Specialist
5.	Mike Kluzik	ORA Director; Research Assurances
6.	Levi O'Loughlin	Biosafety Officer; Research Assurances
7.	Hanu Pappu	Plant Pathology
8.	Steve Russell*	Veterinarian, Office of the Campus Vet
9.	Nina Woodford*	Veterinarian, Office of the Campus 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.	Patrick Conner	Research Assurances; IBC Coordinator
2.	Dan Montonye	Veterinarian, Office of the Campus Vet
3.	Ryan Schwager	Research Assurances; Assistant BSO
4.	Lynne Carpenter-Boggs*	PI, BAF #1270

* Arrived after the Call To Order.

I. Call to Order:

The meeting was called to order at 13:06, with a quorum (7 of 11) of voting members present.

II. Announcements:

- A. Dan Montonye, Clinical Veterinarian, was introduced by Phil B. Dan is a Spokane faculty in the OCV, and will be appointed to the IBC in the near future.
- B. Mike K presented the IACUC protocols regarding open public meetings, which will be adapted for the IBC. He also led a discussion of the NIH preference for transparency and public input, and the challenges in promoting this, while protecting intellectual property rights.

III. Minutes – June 27, 2017

Approve as submitted. The motion was proposed by Mike H and seconded by Hanu P.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

IV. BSL – 2 BAFs

A. New Protocols:

1. *BAF Number:* **1273-001**

Principal Investigator: **Eckstrand, Chrissy**

Title: **RNAscope as a novel in situ diagnostic tool for the diagnosis of Clostridium difficile enterocolitis in**

Facilities: **Not Identified**

BSM: **requested 7/6/2017**

Primary Reviewer: **Phil B**

Secondary Reviewer: **Eric S**

Required Changes:

- **Section 2.H:** Identify and list the facilities in which this research will occur.
- **Section 2.B:**
 - a) Describe your research and procedures in greater detail.
 - b) Provide justification for the use of the HEK-293T cells.
- **Section 3:** Complete this Section because of human cell line use with characterized agents (HEK 293T Cells with Adenovirus 5 fragments).
- **Section 5:** Complete section 5
- **Section 4.C.4:** Specify source of DNA (Horse).

IBC Decision:

Defer, pending resolution of the Required Changes and approval of the facilities and Biosafety Manual. The revised BAF will be reviewed by the convened IBC. The motion was proposed by Phil B and seconded by Eric S.

Total: 7 In favor: 7 Opposed: 0 Motion Carried (7-0)

B. **Amendments:**

1. *BAF Number:***1270-002** *Principal Investigator:* **Carpenter-Boggs, Lynne**

Title: **Mortality Composting**

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

Primary Reviewer: **Eric S**

Secondary Reviewer: **Phil B**

During the discussion, Steve R and Nina W arrived at the meeting (9 members).

Required Changes:

- **Section 2.B:**
 - a) Describe how the human remains will be received by the lab, specifying the containment (BSL-2) practices (e.g., double contained).
 - b) Describe how the In-Vessel Composter (IVC) will be decontaminated after trials are completed (20% Bleach).
 - c) Describe the tests (e.g., cultivating pathogens in BSL2 conditions) that will be performed on the final materials and where these will occur. If performed in a location other than Vogel 333, describe the containment practices that will be used when in transit.
 - d) All materials must be deactivated by incineration, unless other evidence-based justification is presented.

IBC Decision:

Defer, pending resolution of the Required Changes. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Eric S and seconded by Mike K.

Total: 9 In favor: 9 Opposed: 0 **Motion Carried (9-0)**

C. Renewals:

1. *BAF Number:* **1046-004** *Principal Investigator:* **Dutoit, Lindsey**
Title: **Vegetable seed pathology Research and Extension Program at the WSU Mount Vernon, NWREC**
Facilities: **Requested/Notified 7/11/17** *BSM:* **Under review**
Primary Reviewer: **Linda T** *Secondary Reviewer:* **Hanu P**

Required Changes:

The only barrier to approval was the outstanding facility inspections and biosafety manual.

IBC Decision:

Defer, pending approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Hanu P and seconded by Eric S.

Total: 9 In favor: 9 Opposed: 0 **Motion Carried (9-0)**

2. *BAF Number:* **1126-005** *Principal Investigator:* **Oatley, Jon**
Title: **Mechanisms of Spermatogonial Stem Cell Fate Decisions**
Facilities: **Current** *BSM:* **Under review**
Primary Reviewer: **Nina W** *Secondary Reviewer:* **Mark H**

Required Changes:

- **Section 3.B.6:** Administratively revise to read that animals will be incinerated.
- **Section 4.C.1:** Administratively check BSL-2, in addition to BSL-1.

IBC Decision:

Defer, pending resolution of the Required Changes. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Mark H and seconded by Nina W.

Total: 9 In favor: 9 Opposed: 0 **Motion Carried (9-0)**

3. *BAF Number:* **1127-005** *Principal Investigator:* **Du, Min**
Title: **AMPK in fetal development**
Facilities: **Notified 7/11/17** *BSM:* **Under Review**
Primary Reviewer: **Steve R** *Secondary Reviewer:* **Mark H**

Required Changes:

- **Section 2.G2:** Clarify that animals are only used as a tissue source.
- **Section 3.A:** Add the “Expression Vectors” to the table.

- **Section 3.B.6:** Administratively delete the second sentence.
- **Section 4.B.6:** Administratively check no.
- **Section 4.C.1:** Administratively change “C#H” to “C3H.”
- **Section 5.7:** Administratively check ‘yes’ to a-c and delete final sentences.

IBC Decision:

Defer, pending resolution of the Required Changes and approval of the Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Steve R and seconded by Eric S.
Total: 9 In favor: 9 Opposed: 0 **Motion Carried (9-0)**

4. *BAF Number:* **1128-004** *Principal Investigator:* **Aguilar-Carreno, Hector**
Title: **Role of Nipah and Hendra virus F and G genes in viral entry into host cells**
Facilities: **Current** *BSM:* **Under Review**
Primary Reviewer: **Eric S** *Secondary Reviewer:* **Levi O**

Required Changes:

- **Section 2.B:** Clarify why the addition of the virus to HeLa and HEK-293T cells will not inadvertently result in recombination of viral particles into replication-competent viruses (e.g., including adenovirus or Human Papilloma Virus with G glycoproteins).
- **Section 3.A:** Administratively add IHNV (this was present in earlier iterations, but was inadvertently deleted).
- **Section 4.C.1:** list all host cell lines (see section 5A5)
- **Section 4.C.2:** list all vectors.

IBC Decision:

Defer, pending resolution of the Required Changes and approval of the Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Eric S and seconded by Levi O.
Total: 9 In favor: 9 Opposed: 0 **Motion Carried (9-0)**

V. BSL – 1 BAFs

A. New Protocols:

1. *BAF Number:* **1274-001** *Principal Investigator:* **Chowdhury, Indranil**
Title: **Antifouling and antibacterial properties of two dimensional nanomaterials for water filtration**
Facilities: **Under review** *BSM:* **requested 7/12/17**
Primary Reviewer: **Mark H** *Secondary Reviewer:* **Mike K**

Required Changes:

- **Section 2.A:** Define/provide examples of “Natural Organic Matter.”
- **Section 2.B:** Describe where the microscopy preparation is performed (if this occurs in the FMIC microscopy center, the center must be added to the facilities list at Section 2.H).

IBC Decision:

Defer, pending resolution of the Required Changes and approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Mike K and seconded by Mark H.

Total: 9 In favor: 9 Opposed: 0 Motion Carried (9-0)

VI. Adjournment

The meeting adjourned at 14:45.

WSU IBC Agenda (Interim Meeting)
August 2, 2017

IBC Members Present:

	Member	Affiliation/Role
1.	Mark Hubbard	USDA/ARC; Grant and Proposal Specialist
2.	Mike Kluzik	ORA Director; Research Assurances
3.	Levi O'Loughlin	Biosafety Officer; Research Assurances
4.	Hanu Pappu	Plant Pathology
5.	Steve Russell	Veterinarian, Office of the Campus Vet
6.	Linda Thomashow	USDA/ARS; Plant Pathology
7.	Nina Woodford	Veterinarian, Office of the Campus Vet

IBC Members Absent:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Phillip Butterfield	ES Floyd College of Medicine
3.	Mike Heston	Community Member; Pullman Fire Department
4.	Nathan Weller	Community Member; Pullman City Council

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Patrick Conner	Research Assurances; IBC Coordinator
2.	Ryan Schwager	Research Assurances; Assistant BSO

I. Call to Order:

The meeting was called to order at 13:07, with a quorum of members (7 of 11) present. In the absence of Eric S, Mark H served as Chair of the meeting.

II. BSL – 1 BAFs

A. New Protocols:

1. **BAF Number: 1275-001** *Principal Investigator: Robbins, Charles*
Title: Susceptibility of Interior Grizzly Bears (Ursus Arctos Horribilis) To Salmon Poisoning Disease and the Implications for Population Recovery
Facilities: OK BSM: Under Review

Primary Reviewer: Steve R

Secondary Reviewer: Mark H

Required Changes:

- **Section 3A:**
 - a) Check BSL-1 regarding Neorickettsia.
 - b) Add *Nanophyetus salmincola* to the agents table, indicating its hazard potential, if there is a vaccine and check BSL-1.

- **Section 3B1:** change the final sentence to read: "... make no effort to isolate or extract *live* neorickettsia."
- **Section 3B4:** Add: "There will be no transporting of live samples" after the final sentence.

IBC Decision:

Defer, pending resolution of the controverted issues and verification (via Literature search by the BSO) that the agents are not zoonotic. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Mark H and seconded by Steve R.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

III. Adjournment

The meeting was adjourned at 13:34.

WSU IBC Minutes
August 29, 2017

IBC Members Present:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Phillip Butterfield	ES Floyd College of Medicine
3.	Mike Heston	Community Member; Pullman Fire Department
4.	Mark Hubbard	USDA/ARC; Grant and Proposal Specialist
5.	Mike Kluzik*	ORA Director; Research Assurances
6.	Levi O'Loughlin	Biosafety Officer; Research Assurances
7.	Hanu Pappu*	Plant Pathology
8.	Linda Thomashow	USDA/ARS; Plant Pathology
9.	Nina Woodford	Veterinarian, Office of the Campus Vet

IBC Members Absent:

	Member	Affiliation/Role
1.	Steve Russell	Veterinarian, Office of the Campus Vet
2.	Nathan Weller	Community Member; Pullman City Council

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Patrick Conner	Research Assurances; IBC Coordinator
2.	Ryan Schwager	Research Assurances; Assistant BSO
3.	Richard Partain	USDA
4.	Daniel Montonye	Veterinarian, Office of the Campus Vet
5.	Erica Crespi	Observer

* Arrived after the Call To Order.

I. Call to Order:

The meeting was called to order at 13:09, with a quorum (7 of 11 members) present. Also present was Dr. Erica Crespi.

II. Announcements:

Levi O informed the committee that the CDC/APHIS had visited last week for an unannounced audit of the Select Agent program.

MK arrived at 13:11 (8 of 11 members).

III. Minutes – July 25 and August 2, 2017

August 2 – **Approve.** The motion was proposed by Mike K and seconded by Linda T.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

July 25 - **Approve.** The motion was proposed by Lervi O and seconded by Mike H.

Total: 8 In favor: 8 Opposed: 0 Motion Carried (8-0)

Hanu P arrived at 13:14 (9 of 11 members).

IV. BSL – 2 BAFs

A. New Protocols:

1. *BAF Number: 1276-001 Principal Investigator: Owen, Jeb*
Title: An ecological approach to disease risk management on organic poultry farms
Facilities: Expired BSM: Current
Primary Reviewer: Mark H Secondary Reviewer: Nina W

Required Changes:

- **Section 2H:** Upgrade all facilities to BSL-2 and approve at that level. The change on the BAF can be done administratively and inspections can be done by the BSO.
- **Section 3A:** Switch the human hazard response regarding Newcastle disease to 'yes.' This can be done administratively.
- **Section 3B.5:**
 - Clearly state that the only work done in the Food Science and Human Nutrition building is ELISA testing. This can be done administratively.
 - Remove the mention of EH&S as the entity doing incineration. EH&S does not collect biological waste. This can be done administratively.

IBC Decision:

Defer, pending resolution of the controverted issues and approval of the facilities. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Mark H and seconded by Eric S.

Total: 9 In favor: 9 Opposed: 0 Motion Carried (9-0)

V. BSL – 1 BAFs

A. New Protocols:

1. *BAF Number: 1277-001 Principal Investigator: Porter, Stephanie*
Title: Using fluorescently labeled beneficial rhizobium bacteria in leguminous plants
Facilities: Unapproved BSM: Under review
Primary Reviewer: Eric S Secondary Reviewer: Linda T

IBC Decision:

Defer, pending approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Eric S and seconded by Linda T.

Total: 9 In favor: 9 Opposed: 0 Motion Carried (9-0)

2. *BAF Number: 1278-001 Principal Investigator: Porter, Stephanie*

Title: **Do disease-resistant transgenic soy plants form effective symbioses with beneficial nitrogen-fixing rhizobium bacteria?**

Facilities: **Unapproved** *BSM:* **Under review**
Primary Reviewer: **Eric S** *Secondary Reviewer:* **Linda T**

Required Changes:

- The research does not involve the creation of transgenic plants or the use of pathogenic bacteria. This does not appear to need IBC review and approval. The PI must clarify the reasoning for IBC oversight in Section 2.

IBC Decision:

Defer, pending resolution of the controverted issues and approval of the facilities and Biosafety Manual. The revised BAF will be reviewed by the convened IBC, if IBC oversight is needed. Otherwise, the BAF will be deactivated. The motion was proposed by Eric S and seconded by Linda T.

Total: 9 In favor: 9 Opposed: 0 **Motion Carried (9-0)**

B. **Renewals:**

1. *BAF Number:* **1069-007** *Principal Investigator:* **Lewis, Norman**

Title: **Product Diversification Strategies for a New Generation of Biofuels/Bioproducts and Medicinals**

Facilities: **Current** *BSM:* **Current**
Primary Reviewer: **Hanu P** *Secondary Reviewer:* **Mike K**

Required Changes:

- **Section 2B:** Provide a more detailed Plan of Work. Be sure to use lay language, as the extended summary is too technical for community members and others not as conversant with plants.

IBC Decision:

Defer, pending resolution of the controverted issues. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Mike K and seconded by Linda T.

Total: 9 In favor: 9 Opposed: 0 **Motion Carried (9-0)**

2. *BAF Number:* **1131-006** *Principal Investigator:* **Kostyukova, Alla**

Title: **Structural-functional relationship in protein-protein interactions**

Facilities: **under review** *BSM:* **Update requested 8/7**
Primary Reviewer: **Phil B** *Secondary Reviewer:* **Levi O**

Required Changes:

- **Section 2B:** Provide examples of the “functional assays.”
- **Section 4A:** check NIH category III-D. This can be done administratively.

- **Section 4B.9:** Change the response to 'yes' (the host is not an exempt strain of E coli). This can be done administratively.

IBC Decision:

Defer, pending resolution of the controverted issues and approval of the Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Levi O and seconded by Phil B.

Total: 9 In favor: 9 Opposed: 0 **Motion Carried (9-0)**

3. *BAF Number:* **1200-004** *Principal Investigator:* **Tanaka, Kiwamu**
Title: **Investigation of plant-microbe interactions and plant-insect interactions**
Facilities: **OK** *BSM:* **Under review**
Primary Reviewer: **Hanu P** *Secondary Reviewer:* **Mark H**

Required Changes:

- **Section 2A:** revise the plan of work to include your methods of confining live insects to the lab.

IBC Decision:

Defer, pending resolution of the controverted issues and approval of the Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO, assisted by Laura L. The motion was proposed by Linda T and seconded by Mike K.

Total: 9 In favor: 9 Opposed: 0 **Motion Carried (9-0)**

VI. Adjournment

The meeting adjourned at 14:01.

WSU IBC Minutes
September 26, 2017

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Mark Hubbard	USDA/ARC; Grant and Proposal Specialist
3.	Mike Kluzik	ORA Director; Research Assurances
4.	Levi O'Loughlin	Biosafety Officer; Research Assurances
5.	Steve Russell	Veterinarian, Office of the Campus Vet
6.	Linda Thomashow	USDA/ARS; Plant Pathology
7.	Nathan Weller	Community Member; Pullman City Council
8.	Nina Woodford	Veterinarian, Office of the Campus Vet

IBC Members Absent:

	Member	Affiliation/Role
1.	Phillip Butterfield	ES Floyd College of Medicine
2.	Mike Heston	Community Member; Pullman Fire Department
3.	Hanu Pappu	Plant Pathology

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Patrick Conner	Research Assurances; IBC Coordinator
2.	Ryan Schwager	Research Assurances; Assistant BSO
3.	Richard Partain	USDA
4.	Daniel Montonye*	Veterinarian, Office of the Campus Vet
5.	Ze Liu*	Assistant BSO, WSU Spokane

* Arrived after the Call To Order.

I. Call to Order:

The Meeting convened at 13:07, with a quorum (7 of 11 members) present.

II. Minutes – August 29, 2017:

The discussion of the results of the CDC/APHIS audit should be removed, as the report has not been received yet.

Approve with the above change. The motion was proposed by Levi O and seconded by Nina O.

Total: 7 In favor: 7 Opposed: 0 Motion Carried (7-0)

Nathan W arrived at 13:10 (8 of 11 members). The PolyCom connection was completed at 13:18 (during the review of BAF 1279, below) and Dan M and Ze L joined the meeting as well.

III. BSL – 2 BAFs

A. New Protocols:

1. *BAF Number: 1279-001* *Principal Investigator: Smith, Stephanie*
Title: Listeria Contamination in Apples
Facilities: Uninspected *BSM: requested 9/18*
Primary Reviewer: Levi O *Secondary Reviewer Eric S*

Required Changes: None.

IBC Decision:

Defer, pending approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Levi O and seconded by Mark H.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

2. *BAF Number: 1280-001* *Principal Investigator: Chai, Weihang*
Title: Molecular Mechanism for Telomere and Genome Maintenance in Human Cells
Facilities: Current *BSM: Under review*
Primary Reviewer: Steve R *Secondary Reviewer Nina W*

Required Changes:

- Section 2B: Clarify the genetic work that you are performing.
- Section 4A: Check the E-1 subcategory and change the follow-up answer regarding helper viruses to ‘no.’
- Section 4B.9: change this response to ‘yes.’

IBC Decision:

Defer, pending completion of the required changes and approval of the Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Mike K and seconded by Eric S.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

3. *BAF Number: 1281-001* *Principal Investigator: Sanz, Macarena*
Title: Equine Immunology and Infectious Disease
Facilities: Current *BSM: Under review*
Primary Reviewer: Eric S *Secondary Reviewer Levi O*

Required Changes:

- Section 2G.2: Mark ‘Other’ and ‘N/A’ in the explanation field regarding animal containment.

IBC Decision:

Defer, pending completion of the required changes and approval of the Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Eric S and seconded by Levi O.
Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

B. Renewals:

1. *BAF Number: 1133-004* *Principal Investigator: Davis, Margaret*

Title: Bacterial genotyping and antimicrobial resistance studies

Facilities: Expired *BSM: requested 9/18*

Primary Reviewer: Mark H *Secondary Reviewer Mike K*

Required Changes:

- Section 3B.1: Verify that the reference to human isolates is correct. If so, complete and submit section 5.
- Section 3B.2: Clarify the source of the animal feces and if there is manipulation of the animal in collecting these samples.
- Section 3B.3: Change 'Basic' to 'Universal' in relation to precautions.
- Section 3B.4: Select an alternative to Styrofoam, better suited to sterilization, for containing materials during transport between facilities.
- Section 4C.1: Change the BSL of the hosts to 1.
- Clarify if the research involves cloning of functional antibiotic resistant genes, and if the cloning of antibiotic resistant genes will promote resistance to drugs that are clinically useful.

IBC Decision:

Defer, pending completion of the required changes and approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Mark H and Mike K, and seconded by Eric S.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

2. *BAF Number: 1134-003* *Principal Investigator: Mealey, Robert*

Title: Immune Control of Theileria equi

Facilities: Current *BSM: Under review*

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

Required Changes:

- Section 2G: Change the animal containment level to 'other.'
- Section 3A: Add Equine Herpes Virus (EHV1) to the list of agents in the table.
- Section 3B.4: Describe how the agents will be contained during transport between facilities.

- Section 3B.6: Elaborate on how the inoculated animals will be transferred to WADDL and what the intended means of disposal is (incineration, composting, etc).

IBC Decision:

Defer, pending completion of the required changes and approval of the Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Nina W and seconded by Eric S.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

3. *BAF Number: 1198-004* *Principal Investigator: Fuchs Lokensgard, Rita*
Title: Viral tracing of relapse circuitry
Facilities: Current *BSM: Under review*
Primary Reviewer: Steve R *Secondary Reviewer Mark H*

Required Changes:

- As there is no recombination of DNA, change that indication in Section 2I to 'no,' and remove Section 4 entirely.

IBC Decision:

Defer, pending completion of the required changes and approval of the Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by member and seconded by member.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

IV. BSL – 1 BAFs

A. Renewals:

1. *BAF Number: 1104-003* *Principal Investigator: Chen, Shulin*
Title: Washington State Algae Alliance: Algae Biofuels Research
Facilities: requested 9/19 *BSM: Under Review*
Primary Reviewer: Hanu P *Secondary Reviewer Phil B*

Required Changes:

- Clarify if the research involves cloning of functional antibiotic resistant genes.
- Clarify if the strains of algae and bacteria used are toxin producing.

IBC Decision:

Defer, pending completion of the required changes and approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by member and seconded by member.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

2. **BAF Number: 891-008**

Principal Investigator: Rayapati, Naidu

Title: Characterization, Diagnosis, Molecular Biology, and Epidemiology of Viral Diseases in Horticultural Crops

Facilities: Under Review

BSM: Under Review

Primary Reviewer: Linda T.

Secondary Reviewer: Mark H

Required Changes:

- Section 2G: Indicate ABSL-1 as your level of insect containment.
- Section 4A: Change the NIH category to III-D-5, as this best reflects the recombinant work in microorganisms.
- Section 4B.3: Change the response to 'yes.'
- Section 4B.9: Change the response to 'yes.'

IBC Decision:

Defer, pending completion of the required changes and approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Linda T and seconded by Mark H.

Total: 8 In favor: 8 Opposed: 0 Motion Carried (8-0)

V. **Adjournment**

The meeting adjourned at 14:43.

WSU IBC Minutes
October 24, 2017

IBC Members Present:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Mike Kluzik	ORA Director; Research Assurances
3.	Levi O'Loughlin	Biosafety Officer; Research Assurances
4.	Steve Russell	Veterinarian, Office of the Campus Vet
5.	Linda Thomashow	USDA/ARS; Plant Pathology
6.	Nathan Weller	Community Member; Pullman City Council

Alternate IBC Members Present:

	Member	Affiliation/Role
1.	Laura Lavine	USDA/ARC; Entomology. CAHNRS Alternate

IBC Members Absent:

	Member	Affiliation/Role
1.	Phillip Butterfield	ES Floyd College of Medicine
2.	Mike Heston	Community Member; Pullman Fire Department
3.	Mark Hubbard	USDA/ARC; Grant and Proposal Specialist
4.	Hanu Pappu	Plant Pathology
5.	Nina Woodford	Veterinarian, Office of the Campus Vet

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Patrick Conner	Research Assurances; IBC Coordinator
2.	Ze Liu	Assistant BSO, WSU Spokane
3.	Richard Partain	USDA
4.	Daniel Montonye	Veterinarian, Office of the Campus Vet

I. Call to Order:

The meeting was called to order at 13:08, with a quorum (7 of 12 members) present. In the absence of Mark H, his alternate, Laura L, became a voting member and a part of quorum.

II. Announcements:

Patrick C reported that the 2018 IBC meeting schedule had been set.

III. Minutes – September 26, 2017

Approve. The motion was proposed by Levi O and seconded by Eric S.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

IV. **BSL – 1 BAFs**

A. **New Protocols:**

1. **BAF Number: 1282-001** *Principal Investigator: Harper, Scott*
Title: Production and distribution of foundation plant material at the Clean Plant Center Northwest
Facilities: Approved BSM: Approved

Primary Reviewer: Hanu P

Secondary Reviewer: Linda T

Required Changes:

- Section 3A: Add the list of viruses from the Biosafety Manual. This may be completed administratively.

IBC Decision:

Approve after administrative revision. The motion was proposed by Linda T and seconded by Levi O.

Total: 7 In favor: 7

Opposed: 0

Motion Carried (7-0)

V. **Adjournment**

The meeting adjourned at 13:19.

WSU IBC Minutes
December 5, 2017

IBC Members Present:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Phillip Butterfield	ES Floyd College of Medicine
3.	Mark Hubbard	USDA/ARC; Grant and Proposal Specialist
4.	Mike Kluzik	ORA Director; Research Assurances
5.	Levi O'Loughlin	Biosafety Officer; Research Assurances
6.	Steve Russell	Veterinarian, Office of the Campus Vet
7.	Nathan Weller	Community Member; Pullman City Council
8.	Nina Woodford	Veterinarian, Office of the Campus Vet

IBC Members Absent:

	Member	Affiliation/Role
1.	Mike Heston	Community Member; Pullman Fire Department
2.	Hanu Pappu	Plant Pathology
3.	Linda Thomashow	USDA/ARS; Plant Pathology

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Patrick Conner	Research Assurances; IBC Coordinator
2.	Ryan Schwager	Research Assurances; Assistant BSO
3.	Ze Liu	Assistant BSO, WSU Spokane
4.	Daniel Montonye	Veterinarian, Office of the Campus Vet

I. Call to Order:

The meeting came to order at 13:10, with a quorum (8 of 11) of members present.

II. Announcements:

Mike K reminded members to direct any public or media inquiries about "Mortality Composting to the CAHNRS Media Relations person.

III. Minutes – October 24, 2017

Approve. The motion was proposed by Levi O and seconded by Eric S.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

IV. BSL – 2 BAFs

A. Renewals:

1. **BAF Number: 793-009** *Principal Investigator: Wyrick, John*
Title: Gene-specific and Genome-wide Analysis of Chromatin, Histone Modifications, and DNA repair
Primary Reviewer: Phil B *Secondary Reviewer: Mike K*

There were no areas of concern, nor changes required.

IBC Decision:

Approve. The motion was proposed by Phil B and seconded by Mike K.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

2. BAF Number: 1204-004 *Principal Investigator: Zambriski, Jennifer*

Title: Pharmacokinetics, Efficacy, and Synergism of Nitazoxanide and Azithromycin in the Treatment of Cryptosporidiosis

Primary Reviewer: Eric S

Secondary Reviewer: Steve R

Required Changes:

- **Section 2:** List all ASAF numbers related to this research
- **Section 3:**
 - Revise the dosage to be consistent with your ASAF coving this research.
 - Provide more details on size of the fecal and blood samples, how samples are handled and what is the method of sample disposal.
 - Describe what assays are performed, and address any procedures that may involve culture or growth of the pathogens
 - Specify what equipment will be sterilized with the 6% H₂O₂ solution.
 - Clarify PPE used, both in the animal housing and in the lab.
 - Clarify if a biosafety cabinet is used in the lab.
 - Remove “and within/between facilities” from the transport procedures, as the calves are not moved after exposure to crypto.

IBC Decision:

Defer, pending resolution of the controverted issues and approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Steve R and seconded by Eric S.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

3. BAF Number: 1205-005 *Principal Investigator: Roberts, Steven*

Title: Environmentally-modulated cytosine deamination in genome instability and cancer

Primary Reviewer: Mark H

Secondary Reviewer: Levi O

There were no areas of concern, nor changes required.

IBC Decision:

Approve. The motion was proposed by Mark H and seconded by Levi O.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

V. Biosafety Program Update

Levi O completed the IBC self-assessment checklist and gave a summary of strengths of the WSU IBC, as well as opportunities for improvement. Levi O and Patrick C will prepare a Plan of action.

VI. Adjournment

The meeting adjourned at 14:20.

WSU IBC Minutes
January 30, 2018

IBC Members Present:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Phillip Butterfield	ES Floyd College of Medicine
3.	Mark Hubbard	USDA/ARC; Grant and Proposal Specialist
4.	Mike Kluzik*	ORA Director; Research Assurances
5.	Levi O'Loughlin	Biosafety Officer; Research Assurances
6.	Steve Russell	Veterinarian, Office of the Campus Vet
7.	Nina Woodford	Veterinarian, Office of the Campus Vet

IBC Members Absent:

	Member	Affiliation/Role
1.	Mike Heston	Community Member; Pullman Fire Department
2.	Hanu Pappu	Plant Pathology
3.	Linda Thomashow	USDA/ARS; Plant Pathology
4.	Nathan Weller	Community Member; Pullman City Council

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Patrick Conner	Research Assurances; IBC Coordinator
2.	Ryan Schwager	Research Assurances; Assistant BSO
3.	Ze Liu	Assistant BSO, WSU Spokane
4.	Daniel Montonye	Veterinarian, Office of the Campus Vet

* Arrived after the Call To Order.

I. Call to Order:

The meeting was called to order at 13:08, with a quorum (6 of 11 members) present.

II. Announcements:

WSU has purchased a Biosafe STI (Sterilized Technologies Incorporated) Unit for agent deactivation, as an alternative to incineration.

Mike K arrived at the meeting at 13:10, bringing the number of members present to 7 of 11.

III. Minutes – December 5, 2017

Approve. The motion was proposed by Steve R and seconded by Mike K.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

IV. BSL – 2 BAFs

A. New Protocols:

1. *BAF Number: 1284-001* *Principal Investigator: Shaw, Dana*
Title: Tick-Host-Pathogen interactions
Facilities: current *BSM: current*
Primary Reviewer: Mark H *Secondary Reviewer: Nina W*

Required Changes:

- Section 2B: Specify which pharmacological substance would be injected into tics.
- Section 4A: Change the responses to the follow-up questions regarding NIH category III-D-4 to 'No.' This may be completed administratively by the IBC Coordinator.
- Section 4C.3: List all of the genes that you will clone.
- Section 4C.4: Verify that all species providing DNA/RNA are listed. If not, revise to list all species.
- Section 5A.3: List the cells/tissues used and the source (vender/collaborator)

IBC Decision:

Defer, pending resolution of the controverted issues. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO.

The motion was proposed by Mark H and seconded by Levi O.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

B. Renewals:

1. *BAF Number: 1206-002* *Principal Investigator: Zhang, Hui*
Title: Effects of Alcohol consumption on NK cells and anti-CMV immune response
Facilities: current *BSM: current*
Primary Reviewer: Phil B *Secondary Reviewer: Steve R*

Required Changes:

- Section 3B.1: Specify if the mice are caged in the BSL-2 compliant cages.
- Section 3B.2: List the source from which the Mouse cytomegalovirus and NrHV are procured.
- Section 3B.4: describe how living mice will be transported between listed facilities and that mice will be double-bagged when being transported to the freezer.
- Section 3B.5: specify if bedding and cages will also be subjected to bleach and/or autoclave.

IBC Decision:

Defer, pending resolution of the controverted issues. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers.

The motion was proposed by Steve R and seconded by Phil B.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

2. *BAF Number: 1207-002* *Principal Investigator: Mealey, Robert*

Title: Etiology of viral hepatitis in horses

Facilities: current BSM: current

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

Required Changes:

- The Goals and Aims, as well as the Plan of Work, are not consistent with the information in Section 3. Revise Section 3 to reflect the same sort of research described in Section 2.
- Section 3B.6: Describe how animal carcasses will be disposed of by WADDL (incineration, rendering, etc.).

IBC Decision:

Defer, pending resolution of the controverted issues. The revised BAF will be reviewed by the convened IBC.

The motion was proposed by Nina W and seconded by Levi O.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

V. **BSL – 1 BAFs**

A. **New Protocols:**

1. *BAF Number: 1283-001* *Principal Investigator: Davis, Jon*

Title: AAV-induced expression of calcium sensitive proteins

Facilities: current BSM: current

Primary Reviewer: Eric S *Secondary Reviewer: Steve R*

Required Changes:

- Section 2A: clarify if the AAV is being propagated, or if it is the plasmids that are propagated in E. coli. Also clarify if your lab is doing the propagation, or if it is complete when you acquire the AAV. If you are not propagating either virus or plasmid, Section 4 is not necessary.
- Section 3A: indicate that AAV is a human hazard and remove the indication of the presence of a human vaccine. These may be completed administratively by the IBC Coordinator.
- Section 3B.3: Discuss the level of human hazard

IBC Decision:

Defer, pending resolution of the controverted issues. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers.

The motion was proposed by Eric S and seconded by Nina W.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

B. Renewals:

1. *BAF Number: 1043-003* *Principal Investigator: McCubbin, Andrew*
Title: Investigation into the role of calcium-dependent protein kinases in pollen tube growth and pollen-pistil interactions
Facilities: Current BSM: Current
Primary Reviewer: Linda T Secondary Reviewer: Hanu P

IBC Decision:

As both plant experts were absent, Eric S moved that the review be tabled until the February meeting. Phil B seconded the motion.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

2. *BAF Number: 325-007* *Principal Investigator: Navarre, Duroy*
Title: Developing New Potatoes with Improved Quality, Disease Resistance, and Nutritional Content
Facilities: clarification request 1/22/18 BSM: Current
Primary Reviewer: Hanu P Secondary Reviewer: Linda T

IBC Decision:

As both plant experts were absent, Eric S moved that the review be tabled until the February meeting. Phil B seconded the motion.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

VI. **Adjournment**

The meeting adjourned at 14:25

WSU IBC Minutes
February 27, 2018

IBC Members Present:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Phillip Butterfield	ES Floyd College of Medicine
3.	Mike Kluzik*	ORA Director; Research Assurances
4.	Levi O'Loughlin	Biosafety Officer; Research Assurances
5.	Hanu Pappu	Plant Pathology
6.	Linda Thomashow	USDA/ARS; Plant Pathology
7.	Nathan Weller	Community Member; Pullman City Council
8.	Nina Woodford*	Veterinarian, Office of the Campus Vet

IBC Members Absent:

	Member	Affiliation/Role
1.	Mike Heston	Community Member; Pullman Fire Department
2.	Mark Hubbard	USDA/ARC; Grant and Proposal Specialist
3.	Steve Russell	Veterinarian, Office of the Campus Vet

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Patrick Conner	Research Assurances; IBC Coordinator
2.	Daniel Montonye	Veterinarian, Office of the Campus Vet

* Arrived after the Call To Order.

I. Call to Order:

The meeting came to order at 14:05, with a quorum (6 of 11 members) present.

II. Announcements:

Levi O has been contacting plant pathology and horticulture departments to recruit additional plant experts to serve on the committee, or alternate with the existing plant experts.

III. Minutes – January 30, 2018

Approve. The motion was proposed by Nathan W and seconded by Levi O.

Total: 6 In favor: 6 Opposed: 0 **Motion Carried (6-0)**

In order to accommodate Hanu P's schedule, the agenda was re-arranged.

IV. BSL – 1 BAFs

A. Renewals:

1. **BAF Number: 1043-003**

Principal Investigator: McCubbin, Andrew

Title: Investigation into the role of calcium-dependent protein kinases in pollen tube growth and pollen-pistil interactions

Facilities: Current BSM: Current

Primary Reviewer: Linda T

Secondary Reviewer: Hanu P

Required Changes:

- Section 2B: Add a description of the containers that you will employ when transporting transgenic plants to and from the microscopy center.

IBC Decision:

Defer, pending resolution of the controverted issues. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO.

The motion was proposed by member and seconded by member.

Total: 6 In favor: 6 Opposed: 0 Motion Carried (6-0)

2. BAF Number: 325-007

Principal Investigator: Navarre, Duroy

Title: Developing New Potatoes with Improved Quality, Disease Resistance, and Nutritional Content

Facilities: Current BSM: Current

Primary Reviewer: Hanu P

Secondary Reviewer: Linda T

Mike K and Nina W arrived at 14:20 (8 members). Invited guest Dan M also arrived at 14:20.

Required Changes:

- Section 2A: Expand on the “field trials” that are mentioned. If you are not planting in the field, remove this mention.
- Section 3B.5: Expand on the amount of plant material that you are sending to the landfill. The IBC also wanted to know if you have the capability to autoclave all plants and requested that you consider composting the plant materials, rather than putting them in a landfill.
- Section 4C.1: List the strains of your host bacteria, paying particular attention to E. coli (pathogenic versus non-pathogenic).

IBC Decision:

Defer, pending resolution of the controverted issues. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers.

The motion was proposed by Eric S and seconded by Linda T.

Total: 8 In favor: 8 Opposed: 0 Motion Carried (8-0)

3. BAF Number: 1124-003

Principal Investigator: Cousins, Asaph

Title: Creating the Second Green Revolution by Supercharging Photosynthesis: C₄-Rice

Facilities: **under review**
Primary Reviewer: **Linda T**

BSM: **under review**
Secondary Reviewer: **Hanu P**

Required Changes:

- Submit the APHIS permit(s) for importation of the transgenic seed.
- Section 2A:
 - Add the pertinent information from the Abstract and Specific Objectives to your Goals and Aims.
 - Revise to express the Goals and Aims in Lay Language, defining all technical terms and spelling out acronyms.
 - Add the sources of each strain of mutants/transgenic plant species.
- Section 2B:
 - Add the pertinent information from the Abstract and Specific Objectives to your Plan of Work.
 - Revise to express the Plan of Work in Lay Language, defining all technical terms and spelling out acronyms.
 - Add a description of the containers that you will employ when transporting transgenic plants to and from the microscopy center.
- Section 2H: add the room(s) where microscopy will occur.
- Complete Section 4 (recombinant DNA) and add to the BAF.
- You may remove the Appendices: Abstract, Specific Objectives, and SOPs.

IBC Decision:

Defer, pending resolution of the controverted issues and approval of the facilities and Biosafety Manual. The revised BAF will be reviewed by the convened IBC. The motion was proposed by Linda T and seconded by Eric S.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

4. *BAF Number:* **1056-005** *Principal Investigator:* **Chen, Shulin**
Title: **Biofuel and Biochemical Production**
Facilities: **current** *BSM:* **current**
Primary Reviewer: **Hanu P** *Secondary Reviewer:* **Linda T**

IBC Decision:

Approve. The motion was proposed by Hanu P and seconded by Linda T.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

V. BSL – 3 BAFs

Hanu P departed at 14:42. Quorum was maintained (7 Members).

A. Renewals:

1. *BAF Number:* **1176-005** *Principal Investigator:* **Omsland, Anders**

Title: Coxiella and Chlamydia Metabolism, Physiology and ex vivo Virulence
Facilities: current BSM: current
Primary Reviewer: Mike K Secondary Reviewer Levi O

Required Changes:

- Section 2A: Add a description of your Goals and Aims of the work with Legionella.
- Section 5A.6: Change the answer to ‘Yes,’ as at least some of your human materials do contain characterized agents.

IBC Decision:

Defer, pending resolution of the controverted issues. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Levi O and seconded by Mike K.

Total: 7 In favor: 7 Opposed: 0 Motion Carried (7-0)

VI. BSL – 2 BAFs

A. Amendments:

1. *BAF Number: 980-009 Principal Investigator: Abu-Lail, Nehal*
Title: Nanoscale interactions between microbes and soil as well as microbes and antimicrobial compounds
Facilities: pending re-inspection BSM: current
Primary Reviewer: Phil B Secondary Reviewer: Levi O

Required Changes:

- Section 2A and 2B: Revise to clearly differentiate and explain the 4 types of research contained in this BAF
- Section 3.1: Revise to clearly differentiate and explain the 4 types of research.
- Section 3.2: Add the sources of bacteria for the third and fourth projects.
- Section 3.3: Add your assessment of the additional strains of bacteria.
- Section 5.4: Remove HaCaT and move it to #5, as it is an established cell line.

IBC Decision:

Defer, pending resolution of the controverted issues and approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Levi O and seconded by Phil B.

Total: 7 In favor: 7 Opposed: 0 Motion Carried (7-0)

B. Renewals:

1. *BAF Number: 1207-002 Principal Investigator: Mealey, Robert*
Title: Etiology of viral hepatitis in horses
Facilities: current BSM: current
Primary Reviewer: Levi O Secondary Reviewer: Nina W

IBC Decision:

Approve. The motion was proposed by Nina W and seconded by Levi O.
Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

2. **BAF Number: 1186-003** *Principal Investigator: Vanwie, Bernard*
Title: A Novel Centrifugal Bioreactor for Investigating Synergistic Influences of Pressure and Growth Factor on Chondrogenesis, and for Establishing Laboratory Cell Lines for Prostate Cancer Therapy Studies
Facilities: current BSM: current
Primary Reviewer: Mark H Secondary Reviewer: Mike K

Required Changes:

- Section 1: Add all personnel who have contact with the agents.
- Section 2A: Select a container for transport appropriate for decontamination rather than Styrofoam.
- Section 2B: If using mice (i.e., Co-PI Berkman), change to 'Yes' to reflect the use of mice and list the ASAF number.
- Section 2C: Provide a current IRB number, as 12636 expired in 2014. Note that you only need this if you are collecting new samples from living humans or are using previously existing samples that are identifiable. If using previously existing samples that have had all identities removed/destroyed, you will not need IRB approval.

IBC Decision:

Defer, pending resolution of the controverted issues. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Levi O and seconded by Nina W.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

3. **BAF Number: 1285-001** *Principal Investigator: Her, Chengtao*
Title: Functional analysis of human MSH4 and MSH5 and their associated pathways
Facilities: current BSM: requested 2/13/18
Primary Reviewer: Eric S. Secondary Reviewer: Mark H.

Required Changes:

- Section 2H: remove the Albrook Lab example from the facility list.
- Section 2H (should be 2I): check yes to infectious agent use.
- Section 3A:
 - Check yes to Human Vaccines Available for HeLa.
 - Add HEK293 to the agents list.
- Section 3B.5: Change 'boiling' to 'autoclave.'
- Section 4C.1: Check BSL-2 for the biosafety level of the hosts.

IBC Decision:

Defer, pending resolution of the controverted issues and approval of the Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Eric S and seconded by Levi O.

Total: 7 In favor: 7 Opposed: 0 Motion Carried (7-0)

VII. Biosafety Program Update

Levi O presented validation and commissioning data on the Biosafe STI unit as an additional waste treatment option. Although the committee does not set policy for waste streams, they are willing to consider it as it relates to projects.

VIII. Adjournment

The meeting adjourned at 15:37.

WSU IBC Minutes
March 27, 2018

IBC Members Present:

	Member	Affiliation/Role
1.	Eric Shelden*	IBC Chair; School of Molecular Biosciences
2.	Phillip Butterfield	ES Floyd College of Medicine
3.	Mark Hubbard	USDA/ARC; Grant and Proposal Specialist
4.	Mike Kluzik	ORA Director; Research Assurances
5.	Levi O'Loughlin	Biosafety Officer; Research Assurances
6.	Hanu Pappu	Plant Pathology
7.	Steve Russell	Veterinarian, Office of the Campus Vet
8.	Nathan Weller	Community Member; Pullman City Council
9.	Nina Woodford	Veterinarian, Office of the Campus Vet

IBC Members Absent:

	Member	Affiliation/Role
1.	Mike Heston	Community Member; Pullman Fire Department
2.	Linda Thomashow	USDA/ARS; Plant Pathology

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Patrick Conner	Research Assurances; IBC Coordinator
2.	Daniel Montonye	Veterinarian, Office of the Campus Vet

* Arrived after the Call To Order.

I. Call to Order:

The meeting was called to order at 13:11, with a quorum (8 of 11 members) present. Nathan W was selected to serve as chair, in the absence of Eric S.

II. Minutes – February 27, 2018

Approve. The motion was proposed by Mike K and seconded by member.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

III. BSL – 3 BAFs

A. Renewals:

1. **BAF Number: 806-013**

Principal Investigator: White, Stephen

Title: Development of genetic and immunologic control measures in ruminant livestock for *C. burnetii*, OPPV, and *B. ovis*

Facilities: current BSM: current

Primary Reviewer: Levi O

Secondary Reviewer Mike K

During the discussion, Eric S arrived at the meeting (9 members present).

Required Changes:

- Section 3B.6: Clearly state that all inoculated animal carcasses will be autoclaved, followed by incineration. This can be completed administratively.
- ~~Submit the APHIS permit for the transport of the agents from Idaho to Washington.~~

IBC Decision:

Approve after the above conditions are met. The motion was proposed by Mike K and seconded by Mark H.

Total: 9 In favor: 9 Opposed: 0 **Motion Carried/Failed (9-0)**

Eric S resumed the Chair.

IV. BSL – 2 BAFs

A. Renewals:

1. **BAF Number: 923-024** *Principal Investigator: Call, Douglas*
Title: Detection and Characterization of Bacterial Isolates and Comparative Genomics
Facilities: current BSM: current
Primary Reviewer: Mark H Secondary Reviewer Eric S

Required Changes:

- Section 3A: add HPV/[Adeno virus](#) to the agents table ([HeLa/HEK](#)).
- Section 3B.2: provide more detail on the use of the human fecal samples ([and the role of the IRB-approved research](#)).
- Section 3B.4: Elaborate on “secondary containment.”
- Section 4C.4: Provide examples of the DNA sources.

IBC Decision:

Defer, pending resolution of the controverted issues. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Eric S and seconded by Levi O.

Total: 9 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

Nina W abstained from the vote due to a personal relationship with the PI.

2. **BAF Number: 1079-004** *Principal Investigator: Watts, Jennifer*
Title: Molecular Genetics of Lipid Synthesis in C. elegans
Facilities: current BSM: current
Primary Reviewer: Phil B Secondary Reviewer Mark H

Required Changes:

- Section 2G.2: check BSL-2 regarding lab containment. This can be completed administratively.

IBC Decision:

Approve after the above conditions are met. The motion was proposed by Mark H and seconded by Levi O.

Total: 9 In favor: 9 Opposed: 0 **Motion Carried/Failed (9-0)**

V. BSL – 1 BAFs

A. Renewals:

1. BAF Number: 1209-002 *Principal Investigator: Ingermann, Barbara Sorg*

Title: DREADDs and Addiction

Facilities: update requested 3/19/18 *BSM: current*

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

Required Changes:

- Transfer the information to the current iteration of the BAF.
- Section 2H: check ‘Yes’ regarding infectious agent use (AAV)
- Complete section 3 for the use of adeno-associated virus.
- The majority of the information at the end of the BAF may be transferred to Section 3, but ~~increase-change~~ the bleach concentration to 20% for 20 min for both surface and liquid decontamination.

IBC Decision:

Defer, pending resolution of the controverted issues and approval of the facilities. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers.

The motion was proposed by Eric S and seconded by Nina W.

Total: 9 In favor: 9 Opposed: 0 **Motion Carried/Failed (9-0)**

2. BAF Number: 915-006 *Principal Investigator: Chen, Weidong*

Title: Genetic Transformation of Fungal Pathogens of Cool Season Grain Legumes

Facilities: current *BSM: current*

Primary Reviewer: Hanu P *Secondary Reviewer: Phil B*

IBC Decision:

Approve. The motion was proposed by Hanu P and seconded by Phil B.

Total: 9 In favor: 9 Opposed: 0 **Motion Carried/Failed (9-0)**

3. BAF Number: 1124-003 *Principal Investigator: Cousins, Asaph*

Title: Creating the Second Green Revolution by Supercharging Photosynthesis: C₄-Rice

Facilities: current *BSM: current*

Primary Reviewer: Hanu P *Secondary Reviewer: Levi O*

Required Changes:

- Section 4C.1-4: Complete this table.

IBC Decision:

Defer, pending resolution of the controverted issues. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO.

The motion was proposed by Levi O and seconded by Hanu P.

Total: 9 In favor: 9 Opposed: 0 **Motion Carried/Failed (9-0)**

VI. Adjournment

The meeting adjourned at 14:23.

WSU IBC Minutes
April 24, 2018

IBC Members Present:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Phillip Butterfield	ES Floyd College of Medicine
3.	Mike Heston	Community Member; Pullman Fire Department
4.	Mark Hubbard	USDA/ARC; Grant and Proposal Specialist
5.	Mike Kluzik	ORA Director; Research Assurances
6.	Levi O'Loughlin	Biosafety Officer; Research Assurances
7.	Hanu Pappu	Plant Pathology
8.	Steve Russell	Veterinarian, Office of the Campus Vet
9.	Linda Thomashow	USDA/ARS; Plant Pathology
10	Nathan Weller	Community Member; Pullman City Council
11	Nina Woodford	Veterinarian, Office of the Campus Vet

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Patrick Conner	Research Assurances; IBC Coordinator
2.	Daniel Montonye	Veterinarian, Office of the Campus Vet

I. Call to Order:

The meeting came to order at 13:07, with all members present.

II. Minutes – March 27, 2018

Approve. The motion was proposed by Nathan W and seconded by Steve R.

Total: 11 In favor: 11 Opposed: 0 **Motion Carried (11-0)**

III. BSL – 2 BAFs

A. Renewals:

1. **BAF Number: 1215-005** **Principal Investigator: Goodman, Alan**

Title: Conserved Immune Response to Sensing Cytosolic DNA

Facilities: current BSM: current

Primary Reviewer: Eric S Secondary Reviewer: Phil B

During the discussion, Steve R was absent from 13:13 to 13:16. Quorum was maintained throughout. He returned for the end of the discussion, as well as the motion and vote.

Required Changes:

- Section 2F.2: Check ABSL-2.
- Section 4: Under NIH category III-E-1, change the response to the yes/no question to indicate that, yes, the cells do contain helper viruses.

IBC Decision:

Defer, pending resolution of the controverted issues. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Eric S and seconded by Linda T.

Total: 11 In favor: 11 Opposed: 0 **Motion Carried (11-0)**

IV. BSL – 1 BAFs

A. Renewals:

1. BAF Number: 1218-006 *Principal Investigator: Frank, Marcos*

Title: Mouse Transgenics Sleep and Plasticity

Facilities: current BSM: current

Primary Reviewer: Steve R Secondary Reviewer: Nina W

Required Changes:

- Section 2B: There is a contradiction regarding whether the research involves the creation of transgenic rodents. Resolve the contradiction. If the research does result in the creation of transgenic rodents, revise Section 7, as this will not meet the exception for rodents.
- Section 3B.5: Reference that an SOP will be followed for animals administered AAV.

IBC Decision:

Defer, pending resolution of the controverted issues. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Steve R and seconded by Levi O.

Total: 11 In favor: 11 Opposed: 0 **Motion Carried (11-0)**

V. Adjournment

The meeting adjourned at 13:34.

WSU IBC Minutes
May 22, 2018

IBC Members Present:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Levi O'Loughlin	Biosafety Officer; Research Assurances
3.	Hanu Pappu	Plant Pathology
4.	Steve Russell	Veterinarian, Office of the Campus Vet
5.	Linda Thomashow	USDA/ARS; Plant Pathology
6.	Nathan Weller	Community Member; Pullman City Council
7.	Nina Woodford	Veterinarian, Office of the Campus Vet

IBC Members Absent:

	Member	Affiliation/Role
1.	Phillip Butterfield	ES Floyd College of Medicine
2.	Mike Heston	Community Member; Pullman Fire Department
3.	Mark Hubbard	USDA/ARC; Grant and Proposal Specialist
4.	Mike Kluzik	ORA Director; Research Assurances

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Patrick Conner	Research Assurances; IBC Coordinator
2.	Ryan Schwager	Research Assurances; Assistant BSO
3.	Ze Liu	Assistant BSO, WSU Spokane
4.	Daniel Montonye	Veterinarian, Office of the Campus Vet

I. Call to Order:

The meeting came to order at 13:07, with a quorum (7 of 11 members) present.

II. Announcements:

Eric S has agreed to serve another term as Chair of the IBC. Linda T and Nathan W have agreed to serve additional 3-year terms as IBC members.

III. Minutes – April 24, 2018

Approve. The motion was proposed by Nathan W and seconded by Linda T.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

IV. BSL – 2 BAFs

A. New Protocols:

1. *BAF Number: 1286-001*

Principal Investigator: Njenga, M Kariuki

Title: Surveillance for Middle East Respiratory Syndrome Corona Virus and other camel associated zoonotic pathogens in camels and persons exposed to camels

Facilities: N/A BSM: Current

Primary Reviewer: **Nina W**

Secondary Reviewer: **Mark H**

Required Changes:

- Section 3.B.3: Add clarification on PPE specifics and use. Reference the BSM.
- Section 3.B.5: Remove the parenthetical examples to reduce confusion.

IBC Decision:

Defer, pending resolution of the controverted issues. The BAF may be approved when these conditions are completed, to the satisfaction of the Chair and BSO. The motion was proposed by Eric S and seconded by Linda T.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

2. **BAF Number: 1288-001**

Principal Investigator: **Osoro, Eric**

Title: Surveillance for Avian Influenza Virus Among Poultry and Workers in Live Bird Markets, and Among Migratory Wild Birds in Kenya

Facilities: **N/A** *BSM:* **Current**

Primary Reviewer: **Mark H**

Secondary Reviewer: **Nina W**

Required Changes:

- Section 3.B.3: Add clarification on PPE specifics and use. Reference the BSM.
- Section 3.B.5: Remove the parenthetical examples to reduce confusion.

IBC Decision:

Defer, pending resolution of the controverted issues. The BAF may be approved when these conditions are completed, to the satisfaction of the Chair and BSO. The motion was proposed by Eric S and seconded by Linda T.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

V. **BSL – 1 BAFs**

A. **Renewals:**

1. **BAF Number: 1217-003**

Principal Investigator: **Miller, Lindsey**

Title: Epigenetic regulation of hyperglycemia-induced cardiac inflammation in cultured cells

Facilities: **Current**

BSM: **Current**

Primary Reviewer: **Eric S**

Secondary Reviewer: **Levi O**

IBC Decision:

Approve. The motion was proposed by Eric S and seconded by Linda T.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

2. **BAF Number: 1219-002**

Principal Investigator: **Tang, Juming**

Title: Enhancing Low-Moisture Food Safety by Improving Development and Implementation of Pasteurization Techniques

Facilities: **Current**

BSM: **Current**

Primary Reviewer: **Levi O**

Secondary Reviewer: **Nathan W**

IBC Decision:

Approve. The motion was proposed by Levi O and seconded by Nathan W.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

VI. Biosafety Program Update

Nina W announced that the ORA had hired Alan Ekstrand as Animal Welfare Program Assistant Director.

VII. Bio-Incident Reports

Levi O reported that, in the past year, two graduate assistants had cut their hands while dissecting human samples. These incidents were not reported as potential exposures. The root cause has been identified and corrective measures were implemented. The IBC did not require any further action.

VIII. Adjournment

The meeting adjourned at 13:39.

WSU IBC Minutes
June 26, 2018

IBC Members Present:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Mike Heston	Community Member; Pullman Fire Department
3.	Mark Hubbard*	USDA/ARC; Grant and Proposal Specialist
4.	Levi O'Loughlin	Biosafety Officer; Research Assurances
5.	Steve Russell	Veterinarian, Office of the Campus Vet
6.	Linda Thomashow	USDA/ARS; Plant Pathology
7.	Nina Woodford	Veterinarian, Office of the Campus Vet

IBC Members Absent:

	Member	Affiliation/Role
1.	Phillip Butterfield	ES Floyd College of Medicine
2.	Mike Kluzik	ORA Director; Research Assurances
3.	Hanu Pappu	Plant Pathology
4.	Nathan Weller	Community Member; Pullman City Council

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Patrick Conner	Research Assurances; IBC Coordinator
2.	Daniel Montonye	Veterinarian, Office of the Campus Vet

* Arrived after the Call To Order.

I. Call to Order:

The meeting came to order at 13:07, with a quorum (6 of 11 members) present.

II. Minutes – May 22, 2018

Approve. The motion was proposed by Levi O and seconded by Linda T.

Total: 6 In favor: 6 Opposed: 0 **Motion Carried (6-0)**

III. BSL – 2 BAFs

A. New Protocols:

1. **BAF Number: 1287-001** *Principal Investigator: Crespi, Erica*
Title: Experimental Infection of Amphibians with Batrachochytrium dendrobatidis and B. salamandrivorans
Facilities: Current BSM: Requested 6/8
Primary Reviewer: Mark H Secondary Reviewer: Nina W

Mark H arrived at 13:22 (7 members) and was present for the vote on this BAF

Required Changes:

- Section 1a: Revise title to reflect all three projects.
- Section 2.B:
 - Revise your Plan of Work to include the third project.
 - Change your in-lab containment from “laminar flow fume hood” to a biosafety cabinet.
- Section 2.H: Specify what “Room A” is.
- Section 3.B.5: Add your method of deactivating water waste.

IBC Decision:

Defer, pending resolution of the controverted issues and approval of the Biosafety Manual. The revised BAF will be reviewed by the convened IBC.

The motion was proposed by Nina W and seconded by Linda T.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

2. *BAF Number: 1292-001* *Principal Investigator: Miller, Lindsey*
Title: The effect of methylsulfonylmethane (MSM) on cardiometabolic health
Facilities: Requested 6/8 *BSM: Current*
Primary Reviewer: Eric S *Secondary Reviewer: Levi O*

Required Changes:

- Section 2.B: Describe phlebotomy personnel and their training. If also part of the research team, they must be listed in Section 1b.
- Section 5.A.6: check ‘No.’ The IBC coordinator can do this administratively.
- Section 5.A.7, both a & b: check that the BBP ECP is complete and has been reviewed by the BSO. The IBC coordinator can do this administratively.

IBC Decision:

Defer, pending resolution of the controverted issues and approval of the facilities. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO.

The motion was proposed by Eric S and seconded by Linda T.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

B. Renewals:

1. *BAF Number: 957-006* *Principal Investigator: Chastagner, Gary*
Title: Sudden Oak Death (Phytophthora ramorum)
Facilities: Approved by APHIS *BSM: Current*
Primary Reviewer: Linda T *Secondary Reviewer: Levi O*

IBC Decision:

Approve. The motion was proposed by Linda T and seconded by Levi O.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

C. Amendments:

1. **BAF Number: 1234-003** *Principal Investigator: Mancini, Rock*
Title: A Molecular Approach to Subunit Vaccine Development
Facilities: Current **BSM: Current**
Primary Reviewer: Steve R **Secondary Reviewer: Nina W**

Required Changes:

- Section 3.B.6: Delete all but ‘incineration.’ The IBC coordinator can do this administratively.

IBC Decision:

Approve with the administrative update. The motion was proposed by Steve R and seconded by Nina W.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

IV. **BSL – 1 BAFs**

A. New Protocols:

1. **BAF Number: 1289-001** *Principal Investigator: Tegeder, Mechthild*
Title: Understanding the role of ureide partitioning in the physiology and productivity of nitrogen-fixing and non-fixing soybean
Facilities: Requested 6/6 **BSM: Current**
Primary Reviewer: Hanu P **Secondary Reviewer: Phil B**

IBC Decision:

Defer, pending approval of the facilities. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Levi O and seconded by Linda T.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

2. **BAF Number: 1290-001** *Principal Investigator: Tegeder, Mechthild*
Title: Development of high-yielding, high-protein germplasm by enhancing nitrogen acquisition and its transport to seed
Facilities: Requested 6/6 **BSM: Current**
Primary Reviewer: Hanu P **Secondary Reviewer: Phil B**

IBC Decision:

Defer, pending approval of the facilities. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Levi O and seconded by Linda T.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

B. Renewals:

1. *BAF Number: 1223-002* *Principal Investigator: Tegeder, Mechthild*
Title: Integrating Photoassimilate Source To Sink Transport In Legumes To Enhance Seed Development And Nutrition
Facilities: Requested 6/6 *BSM: Current*
Primary Reviewer: Hanu P *Secondary Reviewer: Phil B*

IBC Decision:

Defer, pending approval of the facilities. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Levi O and seconded by Linda T.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

C. New Protocols (Continued):

3. *BAF Number: 1291-001* *Principal Investigator: Vanderheyden, William*
Title: The Role of Sleep in Mediating Post-Traumatic Stress Disorder
Facilities: Requested 6/8 *BSM: Requested 6/8*
Primary Reviewer: Nina W *Secondary Reviewer: Steve R*

Required Changes:

- Section 3.B.6: Delete all but ‘incineration.’ The IBC coordinator can do this administratively.
- Section 4.A: Remove III-E-3, as III-E-1 is sufficient and more accurate. The IBC coordinator can do this administratively.

IBC Decision:

Defer, pending the administrative changes and approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Steve R and seconded by Levi O.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

4. *BAF Number: 1293-001* *Principal Investigator: Davis, Christopher*
Title: Sleep loss impairs cognitive flexibility in rodents
Facilities: Requested 6/8 (same rooms as 1291) *BSM: Under review*
Primary Reviewer: Nina W *Secondary Reviewer: Steve R*

Required Changes:

- Section 3.B.6: Delete all but ‘incineration.’ The IBC coordinator can do this administratively.

- Section 4.A: Remove III-E-3, as III-E-1 is sufficient and more accurate. The IBC coordinator can do this administratively.

IBC Decision:

Defer, pending the administrative changes and approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Steve R and seconded by Levi O.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

D. **Renewals (Continued):**

2. **BAF Number: 961-006** *Principal Investigator: Chen, Xianming*

Title: Improved Control of Stripe Rust in Cereal Crops

Facilities: Current

BSM: Current

Primary Reviewer: Linda T

Secondary Reviewer: Eric S

Required Changes:

- Section 2.B: Describe your procedures used to generate transgenic plants. If you are not generating transgenic plants (or other organisms), uncheck 'Transgenic Plants' in Section 2.I (Section 6 would also be unnecessary).
- Section 3.B.6: Change to 'Autoclave,' and utilize this for all plant disposal.
- Section 4.B.6: Check 'No.' The IBC coordinator can do this administratively.
- Section 4.C.1: add your plant species to the list of hosts, unless you are not generating transgenic plants (see above).
- Section 4.C.3: List the characteristics that would lead you to classify a gene as 'interesting.'

IBC Decision:

Defer, pending resolution of the controverted issues. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Eric S and seconded by Levi O.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

V. **Deferred BAFs**

1. **BAF Number: 1121-005** *Principal Investigator: Brown, R Lane*

Title: Retinal & Brain Circuitry

Primary Reviewer: Steve R

Secondary Reviewer: Nina W

- 4/25/17: deferred by IBC, pending BAF revision, and approval of BSM.
- 8/4/17: reminder sent to PI.
- 10/17/17: Followed up with PI
- 11/8/17: Followed up with PI.
- 12/13/17: Followed up with PI

- 2/8/18: Followed up with PI
 - 4/4/18: Followed up with PI
 - 4/15/18: BSO followed up with PI, who responded that revisions will be forthcoming.
 - 5/15/18: BSO followed up with PI, who responded that revisions will be forthcoming
 - 6/1/18: PI submitted revisions. Revisions sent to Steve & Nina.
 - 6/26/18: BSO has approved the BSM.
2. *BAF Number: 1209-002* *Principal Investigator: Ingermann, Barbara Sorg*
Title: DREADDs and Addiction
Facilities: update requested 3/19/18 *BSM: current*
Primary Reviewer: Eric S *Secondary Reviewer: Nina W*
- 3/27/18: deferred by IBC, pending BAF revision and facility approval.
 - 5/15/18: BSO followed up with PI regarding the required changes.
 - 5/16/18: BSO followed up with PI regarding the required changes
 - 5/23/18: PI submitted revised BAF. Revisions sent to reviewers. FR requested again (BSL-1).
 - 6/26/18: BSO will again follow-up with PI, as the facility approvals are the only remaining barrier to approval.

VI. Adjournment

The meeting adjourned at 14:20.

WSU IBC Minutes
July 31, 2018

IBC Members Present:

	Member	Affiliation/Role
1.	Nathan Weller	Interim Chair; Community Member; Pullman City Council
2.	Phillip Butterfield	ES Floyd College of Medicine
3.	Mike Heston	Community Member; Pullman Fire Department
4.	Mark Hubbard	USDA/ARC; Grant and Proposal Specialist
5.	Mike Kluzik	ORA Director; Research Assurances
6.	Levi O'Loughlin	Biosafety Officer; Research Assurances
7.	Steve Russell	Veterinarian, Office of the Campus Vet

IBC Members Absent:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Hanu Pappu	Plant Pathology
3.	Linda Thomashow	USDA/ARS; Plant Pathology
4.	Nina Woodford	Veterinarian, Office of the Campus Vet

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Patrick Conner	Research Assurances; IBC Coordinator
2.	Daniel Montonye	Veterinarian, Office of the Campus Vet

I. Call to Order:

The meeting came to order at 13:10, with a quorum (7 of 11 voting members) present. In the absence of Eric S, Nathan W consented to serve as Chair.

II. Announcements:

Phil B is retiring from WSU and will also resign the IBC. Thank You for your long time service to the IBC and best wishes on your new endeavor as a vintner.

III. Minutes – June 26, 2018

Approve. The motion was proposed by Mike H and seconded by Levi O.

Total: 7 In favor: 7 Opposed: 0

Motion Carried (7-0)

IV. BSL – 2 BAFs

A. New Protocols:

1. *BAF Number: 1287-001 (Resubmission)* *Principal Investigator: Crespi, Erica*
Title: Experimental Infection of Amphibians with Batrachochytrium dendrobatidis and B. salamandrivorans

Facilities: **Current** *BSM:* **Current**
Primary Reviewer: **Mark H** *Secondary Reviewer:* **Nina W**

Required Changes:

- Update the title to reflect the transgenic amphibians. This can be completed administratively by the IBC coordinator.
- **Section 2A:** there are 2 mentions of ***laminar flow hood*** remaining. Replace with ***Biosafety Cabinet***. This can be completed administratively by the IBC coordinator.
- **Section 2H:** change the Vivarium room name to ***B74A***. This can be completed administratively by the IBC coordinator.

IBC Decision:

Approve with the above administrative changes. The motion was proposed by Mark H and seconded by Levi O.

Total: 7 In favor: 7 Opposed: 0 Motion Carried (7-0)

B. **Renewals:**

1. *BAF Number:* **1194-003** *Principal Investigator:* **Wang, Zhenjia**

Title: **Nanoparticle Drug Delivery**

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

Primary Reviewer: **Levi O** *Secondary Reviewer:* **Steve R**

Required Changes:

- **Section 2A:** Add the specific goals of this research.
- **Section 2A:** Revise the Plan of Work to include the route of infection, the tumor work with humanized mice, the outcomes you anticipate and exposure controls.
- **Section 2G:** Specify the rooms that will have infected mice inside.
- **Section 5.4 & 5:** Verify if HUVECs are primary cell lines. If they are established cell lines, transfer the information in #4 to #5.

IBC Decision:

Defer, pending resolution of the controverted issues and approval of the Biosafety Manual. The revised BAF will be reviewed by the convened IBC.

The motion was proposed by Levi O and seconded by Steve R.

Total: 7 In favor: 7 Opposed: 0 Motion Carried (7-0)

2. *BAF Number:* **1208-002** *Principal Investigator:* **Jones, Jonathan**

Title: **Keratinocyte Migration and Wound Healing**

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

Primary Reviewer: **Levi O** *Secondary Reviewer:* **Mark H**

IBC Decision:

Approve. The motion was proposed by Levi O and seconded by Mark H.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

3. *BAF Number: 1228-002* *Principal Investigator: Carabeo, Rey*

Title: Chlamydia interactions with epithelial cells

Facilities: Current BSM: Current

Primary Reviewer: Mark H Secondary Reviewer: Levi O

Required Changes:

- **Section 2.B:** Revise the Plan of Work to better organize the narrative and better describe the fibroblast culture work.
- **Section 3.A:** Indicate that Chlamydia muridarum is an animal hazard.
- **Section 3.B.4:** If live cells will be brought to the IPN imaging center in VBRB, specify how the samples for imaging will be contained.
- **Section 3.B.3:** Add your practices designed to prevent infection of lab personnel.
- **Section 4.C.4:** Expand “GMM,” so that the IBC is certain what this refers to.
- **Section 5.A.7:** Complete this question. This can be completed administratively by the IBC coordinator.

IBC Decision:

Defer, pending resolution of the controverted issues. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Levi O and seconded by Mark H.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

4. *BAF Number: 1225-003* *Principal Investigator: Tanner, Bertrand*

Title: Cardiac and Skeletal Muscle Kinetics

Facilities: Current BSM: Under review

Primary Reviewer: Nina W Secondary Reviewer: Steve R

Required Changes:

- **Section 2.F:** check ABSL-1. This can be completed administratively by the IBC coordinator.
- **Section 2.G:** Add the vivarium to the table (ABSL-1). This can be completed administratively by the IBC coordinator.

IBC Decision:

Defer, pending completion of the administrative changes and approval of the Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Steve R and seconded by Mike K.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

V. BSL – 1 BAFs

A. Renewals:

1. *BAF Number:* **1153-006** *Principal Investigator:* **Kahn, Michael**
Title: **Unbalancing Symbiotic Nitrogen Fixation: Can We Make Effectiveness more Effective**
Facilities: **Current** *BSM:* **Current**
Primary Reviewer: **Linda T** *Secondary Reviewer:* **Hanu P**
2. *BAF Number:* **1227-004** *Principal Investigator:* **Kirchhoff, Helmut**
Title: **Study the Dynamics of Photosynthetic Membranes in Plants**
Facilities: **Under review** *BSM:* **Under review**
Primary Reviewer: **Linda T** *Secondary Reviewer:* **Hanu P**
3. *BAF Number:* **589-008** *Principal Investigator:* **Murray, Timothy**
Title: **Controlling Diseases of Wheat: Eyespot, Caphalosporium Stripe, Speckled Snow Mold and Wheat Streak Mosaic**
Facilities: **Under review** *BSM:* **Under review**
Primary Reviewer: **Hanu P** *Secondary Reviewer:* **Linda T**

As no plant experts were present, these reviews were tabled until the August 28 meeting

VI. Old Business

- A.** The Mortality Composting project is nearing completion following successful trials.

VII. Bio-Incident Reports

- A.** A BSL2 lab processing samples of bovine origin had an incidence resulting from scalpel misuse. The root cause was identified and a corrective action was implemented, including new mounting vices for sample hold and cut-resistant gloves. The next procedure will be witnessed by Voiland Safety, EHS, and the BSO. Additionally, the surgeon providing human knees will collect the cell samples, rather than providing whole knee joints, thereby avoiding the hazard.

VIII. Adjournment

The meeting adjourned at 14:04.

WSU IBC Minutes
August 28, 2018

IBC Members Present:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Mike Heston*	Community Member; Pullman Fire Department
3.	Mark Hubbard	USDA/ARC; Grant and Proposal Specialist
4.	Mike Kluzik	ORA Director; Research Assurances
5.	Levi O'Loughlin	Biosafety Officer; Research Assurances
6.	Hanu Pappu	Plant Pathology
7.	Steve Russell	Veterinarian, Office of the Campus Vet
8.	Bin Shan	Elson S. Floyd College of Medicine
9.	Nathan Weller*	Community Member; Pullman City Council
10.	Nina Woodford	Director, Office of the Campus Veterinarian

IBC Members Absent:

	Member	Affiliation/Role
1.	Rob O'Connor	Veterinary Microbiology and Pathology
2.	Linda Thomashow	USDA/ARS; Plant Pathology

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Patrick Conner	Research Assurances; IBC Coordinator
2.	Ryan Schwager	Research Assurances; Assistant BSO

* Arrived after the Call To Order.

I. Call to Order:

1. The meeting came to order at 13:09, with a quorum (8 of 12 members) present. Hanu P attended the meeting by phone and Bin S attended at the Spokane location. The other members attended at the Pullman location. Mike H arrived at 13:11 and Nathan W at 13:12, both at the Pullman location (10 of 12 members). Both arrived prior to any deliberations or actions. New member Bin S was introduced to the Committee and they introduced themselves to him.

II. Announcements:

1. The IBC has two new members, Dr. Bin Shan, of the Elson S. Floyd College of Medicine, and Dr. Roberta "Rob" O'Connor, Veterinary Microbiology and Pathology.
2. This will be Steve R's final meeting of the WSU IBC, as he has accepted a position at another institution. Steve has been serving the WSU Community and the IBC and IACUC for over 15 years. Thank you Steve and we will miss you!
3. All BAFs on the Deferred List have been resolved.

III. Minutes – July 31, 2018

Approve. The motion was proposed by Nathan W and seconded by Mike H.

Total: 10 In favor: 10 Opposed: 0 **Motion Carried (10-0)**

The agenda was re-arranged to accommodate the time constraints of two members

I. BSL – 1 BAFs

A. New Protocols:

1. **BAF Number: 1294-001** *Principal Investigator: Sankaran, Sindhuja*
Title: Potato and Onion Post-Harvest & Loss Management in Bulk Storage
Facilities: Requested 8/10 *BSM: Current*
Primary Reviewer: Hanu P *Secondary Reviewer: Levi O*

IBC Decision:

Defer, pending approval of the facilities. The BAF may be approved when this condition is completed, to the satisfaction of the BSO. The motion was proposed by Hanu P and seconded by Levi O.

Total: 10 In favor: 10 Opposed: 0 **Motion Carried (10-0)**

B. Renewals:

1. **BAF Number: 1153-006** *Principal Investigator: Kahn, Michael*
Title: Unbalancing Symbiotic Nitrogen Fixation: Can We Make Effectiveness more Effective
Facilities: Current *BSM: Current*
Primary Reviewer: Linda T *Secondary Reviewer: Hanu P*

Required Changes:

- **Section 4B.9:** Change to ‘yes,’ regarding use of hosts other than K-12 E-Coli or derivatives. This change can be completed administratively by the IBC Coordinator.

IBC Decision:

Approve, with the above administrative change. The motion was proposed by Hanu P and seconded by Levi O.

Total: 10 In favor: 10 Opposed: 0 **Motion Carried (10-0)**

2. **BAF Number: 1227-004**

Principal Investigator: Kirchhoff, Helmut
Title: Study the Dynamics of Photosynthetic Membranes in Plants
Facilities: Current *BSM: Current*
Primary Reviewer: Linda T *Secondary Reviewer: Hanu P*

IBC Decision:

Approve. The motion was proposed by Hanu P and seconded by Eric S.
Total: 10 In favor: 10 Opposed: 0 **Motion Carried (10-0)**

3. **BAF Number: 589-008** *Principal Investigator: Murray, Timothy*
Title: Controlling Diseases of Wheat: Eyespot, Caphalosporium Stripe, Speckled Snow Mold and Wheat Streak Mosaic
Facilities: Under review BSM: Under review
Primary Reviewer: Hanu P Secondary Reviewer: Linda T

Required Changes:

- Verify that the PI has a valid APHIS permit for the receipt of the agents used.

IBC Decision:

Defer, pending resolution of the permit question. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Hanu P and seconded by Levi O.

Total: 10 In favor: 10 Opposed: 0 **Motion Carried (10-0)**

C. **New Protocols (Cont.):**

2. **BAF Number: 1295-001** *Principal Investigator: Tang, Juming*
Title: Genetic engineering of oleaginous yeast Yarrowia lipolytica for production of biopolymer
Facilities: Current BSM: Same as 1219?
Primary Reviewer: Linda T Secondary Reviewer: Levi O

IBC Decision:

Approve. The motion was proposed by Levi O and seconded by Nina W.

Total: 10 In favor: 10 Opposed: 0 **Motion Carried (10-0)**

D. **Renewals (cont.)**

4. **BAF Number: 1212-002** *Principal Investigator: Sanguinet, Karen*
Title: Investigation root development and architecture in Brachypodium distachyon and wheat
Facilities: Under Review BSM: Requested 8/14
Primary Reviewer: Linda T Secondary Reviewer: Levi O

Required Changes:

- **Section 2B:** Provide more specific details regarding your planned procedures.

IBC Decision:

Defer, pending completion of the required changes and approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Levi O and seconded by Eric S.

Total: 10 In favor: 10 Opposed: 0

Motion Carried (10-0)

II. BSL – 2 BAFs

A. Renewals:

1. *BAF Number: 1194-003* *Principal Investigator: Wang, Zhenjia*

Title: Nanoparticle Drug Delivery

Facilities: Current BSM: Current

Primary Reviewer: Levi O

Secondary Reviewer: Steve R

Required Changes:

- **Clarify** if, in section 5, ‘donors’ as a source of human materials, refers to the same sources as the umbilical blood, or if you are collecting blood from other individuals via venipuncture, finger stick or other procedures. If this is different than the umbilical blood, update Section 2B to describe these donors, the procedures used to obtain samples and work performed with the samples.
- **Section 3A:** Add the agent(s) found in your HeLa cells to the table and indicate their hazard/vaccine availability and Biosafety Level.
- **Section 3A:** Check ‘no’ regarding human vaccine availability for the agents listed. This change can be completed administratively by the IBC Coordinator.
- **Section 3B.5:** Delete the final sentence. This change can be completed administratively by the IBC Coordinator.
- **Section 3B.6:** Delete all but “incineration.”
- **Section 5.5:** Add the cell lines that are listed in Section 2.

IBC Decision:

Defer, pending clarification and completion of the required changes. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO and Campus Veterinarian. The motion was proposed by Levi O and seconded by Steve R.

Total: 10 In favor: 10 Opposed: 0

Motion Carried (10-0)

2. *BAF Number: 1152-005* *Principal Investigator: Tang, Juming*

Title: Factors Affecting Pasteurization Efficacy for Salmonella in Low-Moisture Foods

Facilities: Current BSM: Current

Primary Reviewer: Mark H

Secondary Reviewer: Eric S

Required Changes:

- **Section 2B:** Specify the type of glove box employed in your lab (filtration, isolation, etc.).
- **Section 2B:** Revise to indicate that a BSC or glove box will be used consistently, rather than only when aerosols are ‘likely.’
- **Section 3A:** Check ‘yes’ regarding animal hazards for the listed agents. This change can be completed administratively by the IBC Coordinator.

- **Section 3B.1:** Delete the final sentence, as it is related to the procedures that have already been removed from S2B. This change can be completed administratively by the IBC Coordinator.
- **Section 3B.3:** Change “Ordinary precautions” to “Standard precautions.” This change can be completed administratively by the IBC Coordinator.
- **Section 3B.4:** Change to “Transported in sealed containers, placed within secondary, leak-proof containers.” This change can be completed administratively by the IBC Coordinator.
- **Section 3B.5:** Remove “...and disposed of in outside garbage dumpster.” This change can be completed administratively by the IBC Coordinator.
- **Section 3B.5:** Change ‘desanitized’ to ‘sanitized.’ This change can be completed administratively by the IBC Coordinator.
- **Section 3B.5:** Add your procedures for deactivating liquid waste.

IBC Decision:

Defer, pending completion of the required changes. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Mark H and seconded by Mike H.

Total: 10 In favor: 10 Opposed: 0 **Motion Carried (10-0)**

3. **BAF Number: 1139-006** *Principal Investigator: Pru, James*
Title: Mechanisms of Maternal-Embryonic Signaling and Uterine Physiology
Facilities: Notified 8/16/18 *BSM: Update requested 8/16/18*
Primary Reviewer: Nina W *Secondary Reviewer: Steve R*

Required Changes:

- **Section 2B:** The IBC would like more details regarding the research plan. Elaborate on your procedures.
- **Section 2G:** Check ABSL-1, rather than ABSL-2. This change can be completed administratively by the IBC Coordinator.
- **Section 2H:** Verify that the tumor experiments are occurring in EALB, rather than Eastlick, as in the past. If not, update the facility list.
- **Section 4A:** Change the NIH category to III-E-1 (no). This change can be completed administratively by the IBC Coordinator.
- **Section 5A.6:** Answer ‘no’ to this question. This change can be completed administratively by the IBC Coordinator.

IBC Decision:

Defer, pending pending completion of the required changes and approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO and Campus Veterinarian. The motion was proposed by Nina W and seconded by Levi O.

Total: 10 In favor: 10 Opposed: 0 **Motion Carried (10-0)**

4. **BAF Number: 982-006** *Principal Investigator: Van Dongen, Hans*

Title: Research Studies of Sleep and Performance (Multiple Projects)
Facilities: Notified 8/16/18 BSM: Under Review
Primary Reviewer: Levi O Secondary Reviewer Mark H

IBC Decision:

Approve. The motion was proposed by Levi O and seconded by Mark H.
Total: 10 In favor: 10 Opposed: 0 **Motion Carried (10-0)**

III. BSL – 1 BAFs (Cont.)

A. Renewals:

5. BAF Number: 800-008 Principal Investigator: Gloss, Lisa
Title: Histone and nucleosome stability and dynamics.
Facilities: reinspection needed BSM: under review
Primary Reviewer: Eric S Secondary Reviewer Mark H

IBC Decision:

Defer, pending approval Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Eric S and seconded by Levi O.
Total: 10 In favor: 10 Opposed: 0 **Motion Carried (10-0)**

IV. BAFs Approved in the Interim

There were 7 BAFs approved after revisions by the PI. There was no discussion or any objection.

V. Biosafety Program Update

The Baker Company, used by the University, among other institutions, for rendering euthanized animals has instituted a new policy of refusing animal carcasses euthanized by barbiturates or containing “other hazardous chemicals.”

VI. Adjournment

The meeting adjourned at 14:38.

WSU IBC Minutes
September 25, 2018

IBC Members Present:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Mark Hubbard	WSU ARC; Research Development Specialist
3.	Mike Kluzik	ORA Director; Research Assurances
4.	Rob O'Connor	Veterinary Microbiology and Pathology
5.	Levi O'Loughlin	Biosafety Officer; Research Assurances
6.	Hanu Pappu	Plant Pathology
7.	Nathan Weller*	Community Member; Pullman City Council
8.	Nina Woodford	Director, Office of the Campus Veterinarian

IBC Members Absent:

	Member	Affiliation/Role
1.	Mike Heston	Community Member; Pullman Fire Department
2.	Bin Shan	Elson S. Floyd College of Medicine
3.	Linda Thomashow	USDA/ARS; Plant Pathology

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Patrick Conner	Research Assurances; IBC Coordinator
2.	Ryan Schwager	Research Assurances; Assistant BSO
3.	Ze Liu	Assistant BSO, WSU Spokane
4.	Andrei Smertenko	Institute of Biological Chemistry; Plant Science
5.	Sherry Gordon	Office of the Attorney General

* Arrived after the Call To Order.

I. Call to Order:

The meeting came to order at 13:09, with a quorum (7 of 11 members) present. Hanu P attended the meeting by telephone. Nathan W arrived at 13:11 (8 Members), prior to any deliberation or action.

II. Announcements:

Sherry Gordon, OAG, was present at the meeting and provided training to the IBC on the Open Public Meeting Act. Sherry G departed at the conclusion of the training (13:53).

III. Minutes – August 28, 2018

Approve. The motion was proposed by Levi O and seconded by Nathan W.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

IV. BSL – 2 BAFs

A. Renewals:

1. *BAF Number: 814-016* *Principal Investigator: Call, Doug*
Title: Gene Knockouts and Recombinant Proteins
Facilities: Current BSM: Current
Primary Reviewer: Eric S *Secondary Reviewer: Mark H*

Required Changes:

- **Section 2A:**
 - Clarify the procedures used to assess phenotypes.
 - Remove the final two sentences in the first paragraph
 - Specify that cloning will not result in bacteria resistant to antibiotics used for treatment.
- **Section 3B.4:** Add the international transportation containment procedures (you may copy/paste). This change can be completed administratively by the IBC Coordinator.
- **Section 4C.3:** Provide representative examples of the Genes to be cloned.

IBC Decision:

Defer, pending completion of the required changes. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Eric S and seconded by Mike K.

Total: 8 In favor: 7 Opposed: 0 Abstained: 1 **Motion Carried (7-0)**
Nina W. abstained from the vote due to COI (PI is her spouse).

2. *BAF Number: 1158-004* *Principal Investigator: Vadyvaloo, Viveka*
Title: Mechanisms of Yersinia pestis transmission from its flea vector
Facilities: PI notified 9/10/18 BSM: Requested 9/10/18
Primary Reviewer: Levi O *Secondary Reviewer: Mark H*

Required Changes:

- **Section 2B:** Add your procedures for containing the fleas and preventing them from escaping the lab.
- **Section 3A:**
 - Remove the 'no' indication regarding human hazard in the first row. This change can be completed administratively by the IBC Coordinator.
 - Change the BSL of the agents listed in the bottom 2 rows to 2. This change can be completed administratively by the IBC Coordinator.
- **Section 3B.4:** Add "All agents will be transported within sealed containers, placed within a secondary leak-proof container." This change can be completed administratively by the IBC Coordinator.
- **Section 3B.5:** Change "lab trash" to lab waste." This change can be completed administratively by the IBC Coordinator.
- **Section 4B.9:** Change this answer to 'yes,' as your hosts for rDNA are not restricted to exempt strains of E.coli. This change can be completed administratively by the IBC Coordinator.

- **Section 4C.1-4:** indicate the BSL for each response. This change can be completed administratively by the IBC Coordinator.

IBC Decision:

Defer, pending completion of the required changes and approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Levi O and seconded by Mark H.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

3. *BAF Number: 1230-002* *Principal Investigator: Sun, Jingru*
Title: Neural regulation of innate immunity to microbial infection in C. elegans
Facilities: PI notified 9/10/18 BSM: Under review
Primary Reviewer: Eric S *Secondary Reviewer: Bin S*

Required Changes:

- **Section 2A&2B:** Revise to use lay language.
- **Section 2B:**
 - Discuss your procedures for preventing exposures related to sharps.
 - Clarify what “abu genes” are. Is this a typo?
- **Section 3B.3:** Discuss your procedures for preventing exposures related to sharps.
- **Section 4A:** Check NIH category III-E-1 (without helper viruses). This change can be completed administratively by the IBC Coordinator.
- **Section 4C.1:** List all hosts for rDNA.
- **Section 4C.3:** Provide representative examples of the Genes to be cloned.
- **Section 4C.4:** Specify the source of your DNA/RNA.

IBC Decision:

Defer, pending completion of the required changes and approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the Chair. The motion was proposed by Eric S and seconded by Rob O.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

4. *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*

Required Changes:

- **Section 2A:** Elaborate on your Goals and Aims in Lay Language
- **Section 2B:** Elaborate on you Plan of Work, describing the procedures and practices you will utilize in Lay Language.
- **Section 4C.3:** Clarify what “RECAL®” is.

- **Section 4B.9:** Change this answer to ‘yes,’ as your hosts for rDNA are not restricted to exempt strains of E.coli. This change can be completed administratively by the IBC Coordinator.

IBC Decision:

Defer, pending completion of the required changes and approval of the facilities and Biosafety Manual. The revised BAF will be reviewed by the convened IBC. The motion was proposed by Levi O and seconded by Nina W.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

V. BSL – 1 BAFs

A. Renewals:

1. **BAF Number: 808-008** *Principal Investigator: Pappu, Hanu*
Title: Biological and Molecular Studies on Viruses affecting Annual and Perennial Crops
Facilities: Current *BSM: Requested 9/10/18*
Primary Reviewer: Linda T *Secondary Reviewer: Mark H*

Due to the COI, Hanu P disconnected from the meeting (14:29) for the deliberation and vote on his BAF. Quorum was maintained (7 members)

Required Changes:

- **Section 1:** Indicate the proficiency of Richard Manasseh (Intermediate). This change can be completed administratively by the IBC Coordinator.
- **Section 2H:** Change the BSL of Vogel 123 from BSL-! To BSL-1. This change can be completed administratively by the IBC Coordinator.

IBC Decision:

Defer, pending completion of the required changes. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Mark H and seconded by Levi O.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

Hanu P returned to the meeting (8 members) at 14:41.

2. **BAF Number: 964-006** *Principal Investigator: Carris, Lori*
Title: Systematics and biology of Smut Fungi (Ustilaginomycota) and Morel Mushrooms (Morchella spp)
Facilities: Requested 9/10/18 *BSM: Current*
Primary Reviewer: Hanu P *Secondary Reviewer: Nathan W*

IBC Decision:

Defer, pending approval of the facilities. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Levi O and seconded by Eric S.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

3. BAF Number: 1147-003 Principal Investigator: Tegeder, Mechthild

Title: Essential Roles of Organic Nitrogen Transporters In Whole Plant Physiology

Facilities: Current BSM: Current

Primary Reviewer: Linda T Secondary Reviewer: Hanu P

As Section 2A & 2B were left blank and the PI had not responded to Coordinator requests for a completed BAF, this review was tabled and will be rescheduled until the October 30 Meeting.

Mark H departed at 14:50 due to a prior commitment. Quorum was maintained (7 members). Andrei S also departed.

4. 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

Required Changes:

- **Section 2B:** Clarify if your research involves cloning or micro-injections. If cloning, describe the procedures you will use to clone. If micro-injecting, discuss your procedures for preventing exposures related to sharps.

IBC Decision:

Defer, pending completion of the required changes and approval of the Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the Chair. The motion was proposed by Levi O and seconded by Rob O.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

VI. Adjournment

The meeting adjourned at 15:00.

WSU IBC Minutes
October 30, 2018

IBC Members Present:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Mark Hubbard	WSU ARC; Research Development Specialist
3.	Mike Kluzik*	ORA Director; Research Assurances
4.	Rob O'Connor	Veterinary Microbiology and Pathology
5.	Levi O'Loughlin	Biosafety Officer; Research Assurances
6.	Bin Shan	Elson S. Floyd College of Medicine
7.	Nina Woodford	Director, Office of the Campus Veterinarian

IBC Members Absent:

	Member	Affiliation/Role
1.	Mike Heston	Community Member; Pullman Fire Department
2.	Hanu Pappu	Plant Pathology
3.	Linda Thomashow	USDA/ARS; Plant Pathology
4.	Nathan Weller	Community Member; Pullman City Council

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Patrick Conner	Research Assurances; IBC Coordinator
2.	Ryan Schwager	Research Assurances; Assistant BSO
3.	Kreta Johnson	Research Assurances; Radiation Safety
4.	Andrei Smertenko	Institute of Biological Chemistry
5.	Alan Goodman	School of Molecular Biosciences

* Arrived after the Call To Order.

I. Call to Order:

The meeting came to order at 13:10, with a quorum (6 of 11 members) present. Kreta Johnson of Radiation Safety attended to sample how other committee meetings are conducted. Alan Goodman and Andrei Smertenko are potential committee members, and attended to get a feel for the IBC

II. Minutes – September 25, 2018

Approve. The motion was proposed by Rob O and seconded by Levi O.

Total: 6 In favor: 6 Opposed: 0 **Motion Carried (6-0)**

III. BSL – 2 BAFs

A. New Protocols:

1. **BAF Number: 1298-001** *Principal Investigator: Michael, Minto*
Title: Validation Studies for Inactivation of Foodborne Pathogens
Facilities: Current *BSM: Current*
Primary Reviewer: Mark H *Secondary Reviewer: Eric S*

Required Changes:

- **Section 2B:**
 - Clarify the procedures used to enumerate bacterial reduction (PCR? Assay? Other?).
 - Clarify the procedures that will determine the effectiveness of your disinfectant.
- **Section 3A:**
 - List your BSL-1 strains of E.coli in a separate row from your BSL-2 strains.
 - Change human and animal hazard indications of *Clostridium sporogenes* to 'no.' This change can be completed administratively by the IBC Coordinator.
- **Section 3B.1:** Remove “taking to the main trash bins” from the final sentence. This change can be completed administratively by the IBC Coordinator.
- **Section 3B.3:**
 - Change “bruises” to “cutaneous exposure.” This change can be completed administratively by the IBC Coordinator.
 - Remove the sentence “Eventually these incidences will be reported to the WSU Biosafety Officer.” This change can be completed administratively by the IBC Coordinator.

Mike K arrived during the discussion at 13:19 (7 members).

IBC Decision:

Defer, pending completion of the required changes. The BAF may be approved when these conditions are completed, to the satisfaction of the Chair. The motion was proposed by Mark H and seconded by Levi O.

Total: 7 In favor: 7 Opposed: 0 Motion Carried (7-0)

B. Renewals:

1. **BAF Number: 1160-006** *Principal Investigator: Zhu, Meijun*
Title: Pathogen Prevalence, Host Immune Responses and Their Interaction As Well As Safety of Foods
Facilities: update needed BSM: current
Primary Reviewer: Levi O Secondary Reviewer: Rob O

Required Changes:

- Clarify why you indicated in Section 4B that the DNA/RNA to be cloned is from a Risk Group 3 agent. If you are not using DNA/RNA from a RG3 agent and this was checked in error, change the response to the second question in Section 4B.
- **Section 2A:** in your item #3, expand upon what the “natural components” are.
- **Section 3B.5:** Specify the contact time for disinfection.

- **Section 4C.1, .2 &.3:** Specify the host organisms, vectors and the genes to be cloned.

IBC Decision:

Defer, pending completion of the required changes and approval of the facilities.

The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Levi O and seconded by Rob O.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

2. *BAF Number:* **1231-009** *Principal Investigator:* **Winuthayanon, Joy**
Title: **Analysis of Estrogen and Progesterone Mechanisms of Action in Female Reproductive Tract**
Facilities: **Current** *BSM:* **Current**
Primary Reviewer: **Nina** *Secondary Reviewer:* **Bin S**

Required Changes:

- **Section 2B:** Clarify the blood-borne pathogen risk mitigation from the human fluids.

IBC Decision:

Defer, pending completion of the required changes. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Nina W and seconded by Levi O.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

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**

Required Changes:

- **Section 2B:**
 - Clarify the disinfectant/disposal procedures for the pathogen and microorganisms.
 - Revise to use the boot bath consistently (including for Bd).
- **Section 3B.4:** Add you containment procedures when transporting animals and tissues between facilities.
- **Section 3B.7:** List and provide any permits needed to import your pathogens, or provide documentation why the pathogens may be imported without permits.

IBC Decision:

Defer, pending completion of the required changes and approval of the Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Eric S and seconded by Levi O.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

4. *BAF Number: 1237-003* *Principal Investigator: Rossi, David*
Title: Brain Malfunction and Damage During Ischemia and Drug Abuse
Facilities: Current *BSM: requested 10/22/18*
Primary Reviewer: Rob O *Secondary Reviewer: Mark H*

Required Changes:

- **Section 2A:** Clearly explain how your use of Tetrodotoxin is exempt from the Select Agent regulations, due to the amount (<500ml).
- **Section 2B:**
 - Add a description of your cloning work, especially with E.coli and vectors.
 - Clarify that all viruses are replication incompetent.
 - Change “Institute of Biochemical Safety” to “Biosafety Officer.”
- **Section 2G:** Change the ABSL to 2. This change can be completed administratively by the IBC Coordinator.
- **Section 2H:** List all of your facilities that house animals.
- **Section 3A:** Indicate BSL-2 for Tetrodotoxin. This change can be completed administratively by the IBC Coordinator.
- **Section 7.3:** Clarify your crosses.

IBC Decision:

Defer, pending completion of the required changes and approval of the Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Rob O and seconded by Levi O.

Total: 7 In favor: 7 Opposed: 0 **Motion Carried (7-0)**

IV. BSL – 1 BAFs

A. New Protocols:

1. *BAF Number: 1297-001* *Principal Investigator: Wall, Nathalie*
Title: Microbially Mediated Surface Adsorption (Biosorption) Of Rare Earth Elements
Facilities: Requested 10/23/18 *BSM: Requested 10/23/18*
Primary Reviewer: Bin S *Secondary Reviewer: Levi O*

Required Changes:

- **Section 1B:** Specify the PI’s level of experience.
- **Section 2A:**

- Expand the initials “LBT” to clarify what this refers to.
- Define what REE’s are and if they are radioactive and/or hazardous.
- **Section 2B:**
 - Specify the concentration of ethanol used for disinfection.
 - Clarify the reason for the use of Caulobacter.

IBC Decision:

Defer, pending completion of the required changes and approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Levi O and seconded by Eric S.

Total: 7 In favor: 7 Opposed: 0 Motion Carried (7-0)

B. Renewals:

1. *BAF Number: 533-012 Principal Investigator: Kim, Kwanhee*
Title: Retinoid Signaling and Phthalate Effects on the Testis
Facilities: Update needed BSM: Requested 10/23/18
Primary Reviewer: Eric S Secondary Reviewer: Nina W

Required Changes:

- **Section 2H:** Update the mouse housing room in the vivarium (B12C is currently out of commission, per the OCV).
- **Section 4B.9:** Change this answer to ‘yes,’ as your hosts are not restricted to exempt strains of E.coli. This change can be completed administratively by the IBC Coordinator.
- **Section 4C.1:** List Sertoli cells among hosts. This change can be completed administratively by the IBC Coordinator.

IBC Decision:

Defer, pending completion of the administrative changes and approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO. The motion was proposed by Eric S and seconded by Rob O.

Total: 7 In favor: 7 Opposed: 0 Motion Carried (7-0)

C. Amendments:

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

IBC Decision:

The committee required additional guidance from the FDA or NIH regarding this proposed amendment and unanimously voted to table the review of this amendment until the December 4 meeting.

V. BAFs Resolved in the Interim

There were 2 BAFs Resolved in the Interim on the agenda. There were no deliberations or controverted issues.

VI. Deferred BAFs

There were 11 BAFs that remain unresolved from prior meetings on the agenda. There was no discussion regarding them.

VII. Adjournment

The meeting adjourned at 14:57.

WSU IBC Minutes
December 4, 2018

IBC Members Present:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Mike Heston*	Community Member; Pullman Fire Department
3.	Mark Hubbard	WSU ARC; Research Development Specialist
4.	Mike Kluzik	ORA Director; Research Assurances
5.	Levi O'Loughlin	Biosafety Officer; Research Assurances
6.	Nathan Weller*	Community Member; Pullman City Council
7.	Nina Woodford	Director, Office of the Campus Veterinarian

Alternate IBC Members Present:

	Member	Affiliation/Role
1.	Andrei Smertenko	Institute of Biological Chemistry; Plant Expert

IBC Members Absent:

	Member	Affiliation/Role
1.	Rob O'Connor	Veterinary Microbiology and Pathology
2.	Hanu Pappu	Plant Pathology
3.	Bin Shan	Elson S. Floyd College of Medicine
4.	Linda Thomashow	USDA/ARS; Plant Pathology

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Ken Gordon	NWABR Director
2.	Patrick Conner	Research Assurances; IBC Coordinator
3.	Ryan Schwager	Research Assurances; Assistant BSO
4.	Ze Liu	Assistant BSO, WSU Spokane

* Arrived after the Call To Order.

I. Call to Order:

The meeting came to order at 13:07, with a quorum (6 of 11 members) present. In the absence of Hanu P, Alternate Andrei S became a voting member and part of quorum.

II. Announcements:

1. Alan Goodman and Andrei Smertenko have been appointed by the Vice President of Research as alternate members of the IBC.
2. Mike K has been appointed to the Board of the Northwest Association for Biomedical Research (NWABR). Ken Gordon, NWABR Director, is here to provide orientation to Mike and is present as observer at the IBC meeting.
3. The University's Select Agent registration will be expiring in March 2019. The NIH will be here to audit the Select Agent Program during the second full week of February, 2019.

Nathan W arrived at 13:13, and Mike H arrived at 13:14, during the announcements (8 Members). Nathan W was absent from 13:17-13:18; quorum was maintained and no actions were proposed or taken in his absence.

III. Minutes – October 30, 2018

Approve. The motion was proposed by Nathan W and seconded by Levi O.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

IV. BSL – 2 BAFs

A. Renewals:

1. *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.*

Required Changes:

- Section 2.B: Provide more details on your gene manipulations and work with rabbits.
- Section 2.C: Remove the ASAF numbers (both are inactive) and replace with 'Pending.' This change can be completed administratively by the IBC Coordinator.
- Section 2.H: Remove the BSL-P (1) in the ADBF rooms in the first row (probably left over when the example was deleted). This change can be completed administratively by the IBC Coordinator.
- Section 3.B.6: Remove rendering as a disposal method and change to either incineration or STI.
- Section 4.A: Change the NIH category to III-D-4, with the answers to both follow-up questions being 'no.' This change can be completed administratively by the IBC Coordinator.
- Section 4.C.3: Give specific examples of the genes cloned.

IBC Decision:

Defer, pending completion of the required changes and approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Nina W and seconded by Levi O.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

2. *BAF Number: 620-013* *Principal Investigator: Black, Margaret*
Title: Improving Suicide Genes for Cancer Gene Therapy Engineering Enzymes for Anti-tumor Suicide Gene Therapy
Facilities: Under Review *BSM: Under Review*
Primary Reviewer: Eric S *Secondary Reviewer: Nina W*

Required Changes:

- Section 2.A: Expand your Goals and Aims, using non-technical, lay language.
- Section 2.B: Expand your description of the Work, including all cloning work, and remove work that that is not being performed currently or is not ready to initiate (can be added by amendment later when you are ready to initiate the work).
- Section 4.A: Change the supplemental question for category III-E-1 to ‘no.’ This change can be completed administratively by the IBC Coordinator.
- Section 4.C.1: Add “see Section 5” to direct to the full list of hosts.

IBC Decision:

Defer, pending completion of the required changes and approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Nina W and seconded by Eric S.

Total: 8 In favor: 8 Opposed: 0 Motion Carried (8-0)

3. *BAF Number: 730-009 Principal Investigator: Brayton, Kelly*
Title: Genomic Analysis of Anaplasma
Facilities: Under Review BSM: Under Review
Primary Reviewer: Mark H Secondary Reviewer: Levi O

Required Changes:

- Section 2.A: Expand the description of goals and aims.
- Section 2.B: In (B), expand upon the legionella system description. In (D), expand upon the CrispR CAS-9 experiments.
- Section 2.C, E and F: Invert/flip answers. This change can be completed administratively by the IBC Coordinator.
- Section 3.A: There are three agents (described elsewhere) that were not included in this table. Add the missing Infectious Agents.
- Section 3.B.1-6: update to reflect the additional agents listed in table A.
- Section 3.B.3: Clarify the specific measures in “rigorous control” and “routine BSL-2 practices.”
- Section 3.B.6: Change the methods of disposal to STI for transgenics, and composting for wild type. Describe the practices used to dispose of ticks.
- Section 5.A.6: change to ‘no.’ This change can be completed administratively by the IBC Coordinator.

IBC Decision:

Defer, pending completion of the required changes and approval of the facilities and Biosafety Manual. The revised BAF will be reviewed by the Assigned reviews, unless the research includes work with *Rickettsia rickettsii* (Rocky Mountain Spotted

Fever). If the latter, the revisions will be reviewed by the Convened IBC. The motion was proposed by Mark H and seconded by Levi O.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

4. *BAF Number: 1163-005* *Principal Investigator: Knodler, Leigh*
Title: Pathogenesis of enteric bacteria
Facilities: Under Review *BSM: Under Review*
Primary Reviewer: Levi O *Secondary Reviewer: Eric S*

Required Changes:

- Section 1b: Add levels of expertise for personnel.
- Section 3.A:
 - Change the indication regarding animal hazards for Shigella and Typhi to ‘yes.’ This change can be completed administratively by the IBC Coordinator.
 - Add the HeLa cells to the table.
- Section 3.B.3: Clarify the specific measures in “BSL-2 practices.”
- Section 3.B.5: Add bleach (and specify concentration) to deactivation methods.
- Section 4.C.3 & 4: check BSL-2. This change can be completed administratively by the IBC Coordinator.

IBC Decision:

Defer, pending completion of the required changes and approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Levi O and seconded by Eric S.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

V. **BSL – 1 BAFs**

A. **Renewals:**

1. *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*

Required Changes:

- General: Resubmit on the current iteration of the BAF, found at <https://biosafety.wsu.edu/forms-templates-inspection-checklists/>.
- Section 2.B: expand the Plan of Work and the disposal methods
- Section 4.B.9: change this answer to ‘yes.’ This change can be completed administratively by the IBC Coordinator.

IBC Decision:

Defer, pending completion of the required changes and approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers. The motion was proposed by Mark H and seconded by Eric S.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

B. Amendments:

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

Title: Oatley, Jon

Facilities: Current BSM: Current

Primary Reviewer: Eric S Secondary Reviewer: Levi O

Required Changes:

- Section 7.A.2: Change ‘hay’ to ‘food’ to include fields/plots where produce is grown among prohibited locations for compost use. This change can be completed administratively by the IBC Coordinator.

IBC Decision:

Approve with the above administrative change. The motion was proposed by Levi O and seconded by Mike H.

Total: 8 In favor: 8 Opposed: 0 **Motion Carried (8-0)**

VI. **Deferred BAFs**

There were 15 Deferred BAFs listed. There was no discussion regarding any.

VII. **Biosafety Program Update**

1. The 2019 IBC meeting schedule is out (bottom of the agenda)
2. CrispR CAS-9 has, allegedly, been used in China to modify the human genome in order to provide resistance to HIV. There appears to have been no ethical or IBC review or approval prior to implementation.

VIII. **Adjournment**

The meeting adjourned at 14:43.

WSU IBC Minutes
January 29, 2019

IBC Members Present:

	Member	Affiliation/Role
1.	Mike Heston	Community Member; Pullman Fire Department
2.	Mark Hubbard	WSU ARC; Research Development Specialist
3.	Mike Kluzik	ORA Director; Research Assurances
4.	Levi O'Loughlin	Biosafety Officer; Research Assurances
5.	Bin Shan*	Elson S. Floyd College of Medicine
6.	Linda Thomashow	USDA/ARS; Plant Pathology
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.	Andrei Smertenko	Institute of Biological Chemistry; Plant Expert
2.	Alan Goodman	School of Molecular Biosciences; Scientist

IBC Members Absent:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Rob O'Connor	Veterinary Microbiology and Pathology
3.	Hanu Pappu	Plant Pathology

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Patrick Conner	Research Assurances; IBC Coordinator
2.	Ryan Schwager	Research Assurances; Assistant BSO
3.	Sonja Hartwig	Research Assurances; IBC Coordinator

* Arrived after the Call To Order.

I. Call to Order:

The Meeting came to order at 13:08, with a quorum (8 of 11 members) present. In the absence of Eric S and Hanu P, alternates A Goodman and A Smertenko assumed voting membership and were counted towards quorum. . In the absence of Eric S, Linda T agreed to serve as Chair (approved by consensus).

II. Announcements:

The USDA performed a BISHOP Inspection. They were complimentary regarding the level of integration between WSU and the USDA personnel.

Bin S arrived at 13:10 (9 Members).

III. Minutes – December 4, 2018

Approve. The motion was proposed by Levi O and seconded by Mark H.
Total: 9 In favor: 9 Opposed: 0 **Motion Carried (9-0)**

Nathan W Arrived at 13:13 (10 Members)

IV. **BSL – 3 BAFs**

A. Renewals:

1. *BAF Number:* **1164-003** *Principal Investigator:* **Celli, Jean**
Title: **Molecular mechanisms of Brucella abortus intracellular pathogenesis**
Facilities: **Current** *BSM:* **Current**
Primary Reviewer: **Mark H** *Secondary Reviewer:* **Levi O**

Required Changes:

- Section 3A: Add Lentivirus to the table of agents. This change can be completed administratively by the IBC Coordinator.
- Section 3B.4: Add 'Double Containment' to the final sentence. This change can be completed administratively by the IBC Coordinator.

IBC Decision:

Approve with administrative changes. The motion was proposed by Levi O and seconded by Mark H.

Total: 10 In favor: 10 Opposed: 0 **Motion Carried (10-0)**

V. **BSL – 1 BAFs**

A. New Protocols:

1. *BAF Number:* **1299-001** *Principal Investigator:* **Bates, Phil**
Title: **Engineering plants to increase vegetable oil content and optimize fatty acid composition**
Facilities: **Current** *BSM:* **Current**
Primary Reviewer: **Andrei S** *Secondary Reviewer:* **Linda T**

Required Changes:

- Section 2B: Expand the description of the Plan of Work, including how you are transforming the *Nicotiana*.
- Section 4C.2: Provide a more detailed list of your vectors, and clarify if T-DNA is a binary vector.

IBC Decision:

Defer, pending completion of the required changes. The BAF may be approved when these conditions are completed, to the satisfaction of the Assigned Reviewers.

The motion was proposed by Linda T and seconded by Andrei S.

Total: 10 In favor: 10 Opposed: 0 **Motion Carried (10-0)**

2. *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*

Required Changes:

- Section 2B: Change the second to last sentence to “After sacrifice, zebrafish embryos and larvae in water will be treated with 20% bleach for 30 minutes; all adult zebrafish carcasses (and) will be incinerated.”*
 - Section 4B.9: Change to ‘yes,’ as your hosts for rDNA are not restricted to exempt strains of E-Coli.
 - Section 7B.2: Check ‘Other’ and add “soaked in 20% bleach.”*
- * Unless this is not the case. If you are incinerating larvae and embryos, these changes are not necessary.

IBC Decision:

Defer, pending completion of the required changes and approval of the facilities and Biosafety Manual. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO.

The motion was proposed by Nina W and seconded by Levi O.

Total: 10 In favor: 10 Opposed: 0 **Motion Carried (10-0)**

VI. BAFs Resolved in the Interim

There were 5 BAFs resolved in the interim. The IBC did not discuss.

VII. Deferred BAFs

There were 17 Deferred BAFs. The IBC did not discuss.

VIII. Biosafety Program Update

Richard Partain of the USDA/ARS is registering the IBC with the IBC-RMS. This is a redundancy with the ORA registration.

IX. Adjournment

The meeting adjourned at 13:54.

WSU IBC Minutes
February 26, 2019

IBC Members Present:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Mike Heston	Community Member; Pullman Fire Department
3.	Mark Hubbard (at home)	WSU ARC; Research Development Specialist
4.	Mike Kluzik*	ORA Director; Research Assurances
5.	Levi O'Loughlin	Biosafety Officer; Research Assurances
6.	Linda Thomashow	USDA/ARS; Plant Pathology
7.	Nina Woodford	Director, Office of the Campus Veterinarian

Alternate IBC Members Present:

	Member	Affiliation/Role
1.	Andrei Smertenko	Institute of Biological Chemistry; Plant Expert
2.	Alan Goodman	School of Molecular Biosciences; Scientist

IBC Members Absent:

	Member	Affiliation/Role
1.	Rob O'Connor	Veterinary Microbiology and Pathology
2.	Hanu Pappu	Plant Pathology
3.	Bin Shan	Elson S. Floyd College of Medicine
4.	Nathan Weller	Community Member; Pullman City Council

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Patrick Conner	Research Assurances; IBC Coordinator
2.	Ryan Schwager	Research Assurances; Assistant BSO
3.	Sonja Hartwig	Research Assurances; IBC Coordinator

* Arrived after the Call To Order.

I. Call to Order:

The meeting came to order at 13:08, with a quorum ((8 of 11 members) present. In the absence of Rob O'Connor and Hanu Pappu, Alan Goodman and Andrei Smertenko assumed voting membership and were counted towards quorum.

II. Announcements:

Levi O and Ryan S were able to review the IBC documents verify that all links and applications were in working order.

Levi O announced that an Audit of Select Agents was accomplished by the USDA and the CDC over a three day period (12-14, 2019). This audit was for the registration renewal due March 31, 2019. The visit went smoothly and WSU anticipates full renewal.

III. **Minutes – January 29, 2019**

Approve. The motion was proposed by Levi O and seconded by Linda T.

Total : 8 In favor: 8 Opposed : 0 Motion Carried (8-0)

IV. Mike Kluzik arrived at 13:17 (9 members)

V. **BSL – 2 BAFs**

A. New Protocols: None

B. Renewal:

1. *BAF Number:1146-003 Principal Investigator: Shah, Devendra*

Title: Patho-genomics and proteomics of enteric bacteria

Facilities: current BSM: Under review

Primary Reviewer: Nina W

Secondary Reviewer: Mark H

Required Changes:

Section 2A: Clarify objectives and flesh out in layman's terms.

Section 3.6: Animal disposal to go to STI?

Section III-D-4: Genes to be cloned specified

Section 5.5: HD-11 cell line to be deleted (non human) as only human or primate for this section.

IBC Decision:

Defer, pending items completed and reviewed by Reviewers.

Motion proposed by Nina W and seconded by Mark Hubbard.

TOTAL : 9 In favor: 9 Opposed: 0 Motion carried (9-0)

C: Amendments: None

VI. BSL – 1 BAFs

A. New Protocols: None

B. Renewals:

1. **BAF Number: 1241-002** *Principal Investigator: Szentirmai, Eva*
Title: Characterizing the role of the nucleus of the solitary tract in the brainstem sleep-promoting circuit
Facilities: Current **BSM: Requested 2/4**

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

Bin S was not present so Eric S participated as second reviewer

Required Changes:

2B.C ASAF number outdated, new number is supposed to be 6013 and can be done administratively.

IBC Decision:

Approve with the above administrative change. The motion was proposed by Nina W and seconded by Linda T.

Total: 9 In favor:9 Opposed: 0. **Motion Carried (9-0)**

2. **BAF Number: 953-006** *Principal Investigator: Dong, Wenji*
Title: Kinetic of Cardiac Myofilament Activation
Facilities: Requested 2/14 **BSM: Requested 2/14**

Primary Reviewer: Eric S *Secondary Reviewer: Mike K*

Required Changes:

- Section 2.C: ASAF should be 4956
- Section 4.A: Check NIH category III-E1
- The above changes can be made administratively.

IBC Decision:

Approve with the above administrative changes.

The motion was proposed by Eric Sheldon and seconded by Levi O.

Total: 9 In favor: 9 Opposed: 0

Motion Carried (9-0)

C. Amendment: None

VII. Adjournment

The meeting adjourned at 1:39.

WSU IBC Minutes
March 26, 2019

IBC Members Present:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences; Scientist
2.	Mike Heston*(13:05)	Pullman Fire Department; Community Member
3.	Mark Hubbard	CAHNRS ARC; Research Development Specialist
4.	Mike Kluzik	Research Assurances; Director
5.	Rob O'Connor	Veterinary Microbiology and Pathology; Scientist
6.	Levi O'Loughlin	Research Assurances; Assistant Director/BSO
7.	Bin Shan	Elson S. Floyd College of Medicine; Scientist
8.	Nathan Weller * (13:22)	Pullman City Council; Community Member
9.	Nina Woodford	Office of the Campus Veterinarian; Director

Alternate IBC Members Present:

	Member	Affiliation/Role
1.	Andrei Smertenko	Institute of Biological Chemistry; Plant Expert
2.	Alan Goodman	School of Molecular Biosciences; Scientist

IBC Members Absent:

	Member	Affiliation/Role
1.	Linda Thomashow	USDA/ARS; Plant Expert
2.	Hanu Pappu	Plant Pathology; Plant Expert

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Patrick Conner	Research Assurances; IBC Coordinator
2.	Ryan Schwager	Research Assurances; Assistant BSO
3.	Sonja Hartwig	Research Assurances; IBC Coordinator
4.	Ze Liu	WSU Spokane; Core Research Supervisor

* Arrived after the Call To Order.

I. Call to Order:

The meeting came to order at 13:03, with a quorum (11 of 11 members) present. In the absence of Linda T and Hanu P, Alan G and Andrei S assumed voting membership.

II. Announcements:

- Patrick C, the IBC coordinator for the past decade, announced his departure from WSU effective 4-29-2019.
- Department of Health (Air Emissions) completed their annual inspection of the program.
- The Federal Select Agent Program at WSU was reviewed by CDC DSAT and USDA AgSAS for WSU's three year renewal, to be renewed 3-29-2019.
- AAALAC granted WSU renewal of full accreditation status.

III. Minutes – February 26, 2018

Approve. The motion was proposed by Eric S and seconded by Levi O.
Motion Carried (11-0)

IV. BSL-3 BAFs – no protocols

V. BSL-2 BAFs

A. New Protocols:

1. *BAF Number:* **1302-001** *Principal Investigator:* **Gardner, Courtney**

Title: **Influence of Heat Stress of Microbial Nutrient Cycling**

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

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

Required Changes:

Section 2B.2: Clarify Batch Reactor volumes.

Section 2B: Work with r/sNA, Section 4 may need to be updated to reflect changes.

Section 3B.3: Biohazard potential of strains likely infect individuals.

Section 3B.3: While a good idea, remove HepB vaccinations; otherwise, it becomes a standard.

Section 3B.5: All sharps are incinerated at WSU.

Section 4C.4: Clarify source of DNA.

Section 6: If not growing plants, this section is unnecessary.

IBC Decision:

Defer, pending completion of the required changes. The BAF may be approved when these conditions are completed, to the satisfaction of the Chair and BSO.

The motion was proposed by Eric S and seconded by Levi O.

Motion Carried (11-0)

2. *BAF Number:* **1303-001** *Principal Investigator:* **Chen, Kuen-Ren (Roland)**

Title: **3D bioprinting of scaffolds and vascular structures**

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

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

Required Changes:

- Section 2B: Administratively add contact time for bleach when used as a disinfectant

IBC Decision:

Approve, with administrative edit.

The motion was proposed by Rob O and seconded by Levi O.

Motion Carried (11-0)

B. Renewals:

1. *BAF Number:* **1003-006** *Principal Investigator:* **Sischo, William**
Title: **Emergence of Zoonotic Food and Water-Borne MDR-Salmonella, E coli, Campylobacter, and Cryptosporidia**
Facilities: **Current** *BSM:* **Current**
Primary Reviewer: **Mark H** *Secondary Reviewer:* **Alan G**

Required Changes:

- Section 3B.2: Clarify what is meant by ‘other secretions’ and how will they be collected.
- Section 3B.3: Describe the plans to mitigate exposure for humans.
- Section 3B.4: Describe the secondary containment.
- Section 3B.5: Describe the types of chemical disinfectant.
- Section 4: Should PCR be used, please complete section.

IBC Decision:

Defer, pending completion of the required changes.

The motion was proposed by Alan G and seconded by Rob O.
Motion Carried (11-0)

VI. **BSL – 1 BAFs**

A. New Protocols:

1. *BAF Number:* **1301-001** *Principal Investigator:* **Madsen-Bouterse, Sally**
Title: **Development of reagents for the study of infectious diseases of cattle, horses, and small ruminants**
Facilities: **Current** *BSM:* **Current**
Primary Reviewer: **Rob O** *Secondary Reviewer:* **Bin S**

Required Changes:

- None

IBC Decision:

Approve.

The motion was proposed by Rob O and seconded by Bin S.
Motion Carried (11-0)

2. *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

Required Changes:

- Section 2B: Section needs completed describing plan of work with the long list of pathogens. Is the list diagnostic or is there research involving each species listed?
- Section 3A Double check list of Agents and toxins

IBC Decision:

Defer, pending Full Committee review.

The motion was proposed by Eric S. and seconded by Rob O.

Motion Carried (11-0)

B. Renewals:

1. 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

Required Changes:

- Section 2B: Update the IACUC number to 6229.
- Section 4, Gene(s) to be cloned: If generating AAV, describe in Section 2B narrative or if purchased, indicate so. If no cloning is performed, this section can likely be removed.

IBC Decision:

Defer, pending completion of the required changes. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO.

The motion was proposed by Nina W and seconded by Rob O.

Motion Carried (11-0)

2. BAF Number: 1222-002

Principal Investigator: Kunz, Hans Henning

Title: Ion Transport of Plant Chloroplasts

Facilities: Requested 3/8/19 BSM: Requested 3/8/19

Primary Reviewer: Anderi S

Secondary Reviewer: Hanu P

Required Changes:

- Section 2B: Describe the experimental design for your plan of work in greater detail.
- Section 4, host: Add yeast strains.
- Section 4, Gene(s) to be cloned: Add broader class of genes to provide flexibility.

IBC Decision:

Defer, pending completion of the required changes. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO.

The motion was proposed by Andrei S. and seconded by Eric O.

Motion Carried (11-0)

VII. BAFs Resolved in the Interim

There was 1 BAF resolved in the interim.

VIII. Deferred BAFs

There are multiple deferred BAFs in various stages of approval.

IX. Biosafety Program Update

Richard Partain of the USDA/ARS has registered the IBC with the IBC-RMS in addition to our registration. With Patrick C departure, the biosafety program will be in transition to Sonja H as coordinator.

X. Adjournment

The meeting adjourned at 14:23.

WSU IBC Minutes

April 23, 2019

IBC Members Present:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Mike Heston	Pullman Fire Department; Community Member
3.	Mark Hubbard	WSU ARC; Research Development Specialist
4.	Levi O'Loughlin	Research Assurances; Biosafety Officer
5.	Linda Thomashow* (13:11)	USDA/ARS; Plant Pathology
6.	Nathan Weller* (13:12)	Pullman City Council; Community Member
7.	Nina Woodford	Office of the Campus Veterinarian; Director

Alternate IBC Members Present:

	Member	Affiliation/Role
1.	Alan Goodman	School of Molecular Biosciences; Scientist

IBC Members Absent:

	Member	Affiliation/Role
1.	Hanu Pappa	Plant Pathology; Plant Expert
2.	Bin Shan	Elson S. Floyd College of Medicine; Scientist
3.	Mike Kluzik	Research Assurances; Director
4.	Rob O'Connor	Veterinary Microbiology and Pathology; Scientist

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 (8 of 11 members) present. In the absence of voting members, Alan G assumed voting membership.

II. Announcements:

- The Federal Select Agent Program at WSU received the registration renewal at the end of March.

III. Minutes – March 26, 2019

Approve. The motion was proposed by Mike H and seconded by Levi O.
Motion Carried (8/8)

IV. BSL-3 BAFs – no protocols

V. BSL-2 BAFs

A. New Protocols:

1. *BAF Number:* **1306-001** *Principal Investigator:* **Critzer, Faith**
Title: **Food Microbiology and Food Safety Lab**
Facilities: **scheduled 4-30-2019** *BSM:* **Current**
Primary Reviewer: **Eric S** *Secondary Reviewer:* **Rob O**

Required Changes:

- Complete the table in Section 3A.
- Although scheduled, facility inspection reports need to be completed prior to approval.

IBC Decision:

Defer, pending completion of the required changes. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO.

The motion was proposed by Eric S and seconded by Levi O.
Motion Carried (8/8)

VI. BSL – 1 BAFs

A. New Protocols:

1. *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**

Required Changes:

- The source of the barley should be included in the BAF.

IBC Decision:

Defer, pending completion of the required changes. The BAF may be approved when these conditions are completed, to the satisfaction of the BSO.

The motion was proposed by Linda T and seconded by Eric S.
Motion Carried (8/8)

VII. BAFs Resolved in the Interim

There was 2 BAFs resolved and 3 administrative amendments in the interim.

VIII. Deferred BAFs

There are multiple deferred BAFs in various stages of approval.

IX. Adjournment

The meeting adjourned at 13:25 Proposed by Linda T, Seconded by Nina W.

Motion Carried (8/8).

WSU IBC Minutes
May 21, 2019

IBC Members Present:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Mark Hubbard	WSU ARC; Research Development Specialist
3.	Mike Kluzik *(13:09)	ORA Director; Research Assurances
4.	Rob O'Connor	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.	Andrei Smertenko	Institute of Biological Chemistry; Plant Expert
2.	Alan Goodman	School of Molecular Biosciences; Scientist

IBC Members Absent:

	Member	Affiliation/Role
1.	Mike Heston	Pullman Fire Department; Community Member
2.	Bin Shan	Elson S. Floyd College of Medicine; Scientist
3.	Nathan Weller	Pullman City Council; Community Member
4.	Hanu Pappu	Plant Pathology; Plant Expert
5.	Linda Thomashow	USDA/ARS; Plant Pathology

IBC Invited Guests:

	Guest	Affiliation/Role
1.	Ryan Schwager	Research Assurances; Assistant BSO
2.	Sonja Hartwig	Research Assurances; IBC Coordinator

* Arrived after the Call To Order.

I. Call to Order:

The meeting came to order at 13:07, with a quorum (7 of 11 members) present. In the absence of Linda T and Hanu P, Alan G and Andrei S assumed voting membership.

II. Announcements:

There were no announcements.

Mike K entered the meeting at 13:09. (Quorum now 8 of 11 members present.)

III. Minutes – February 26, 2018

Approve. The motion was proposed by Levi O and seconded by Mark H.

Motion carried (7-8) Rob O abstained as she was missing at April meeting.

IV. BSL-3 BAFs-no protocols

V. **BSL-2 BAFs**

A. New Protocols:

1. **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

Required Changes

- Section 2B: Describe inactivation procedures for liquid media
- Section 2B: Discuss the use of Rifampicin and indicate other clinically relevant drugs for an infection with Rif^R bacteria. Elaborate on experimental design for creation of drug resistant strains
- Section 2H: Indicate lab is BSL2, delete bacteria from plants section and write none
- Section 2I: Mark that you will be performing Recombinant experiments and complete section 4
- Section 3B.3: Gloves should be required for this work, regardless of flame, biosafety cabinet, or bench use
- Section 3B.3: Discuss biohazard potential of drug-resistant strains
- Section 3B.4: Remove “not anticipated to be transported” and indicate double containment for transportation
- Section 4: Complete section 4

IBC Decision:

Defer, pending completion of the required changes. The revised BAF will be reviewed by the convened IBC. However, if the usage of Rifampicin was eliminated, and the required changes have been made to the satisfaction of the assigned reviewers and BSO, the protocol can be approved in the interim.

The motion was proposed by Eric S and seconded by Mark H.

Motion Carried (8-8)

2. **BAF Number: 1309-001**

Principal Investigator: Kopper, Jamie

Title: Identification of Antimicrobial Resistant Genes in Veterinary Probiotics

Facilities: **Current**

BSM: **Current**

Primary Reviewer: **Mark H**

Secondary Reviewer: **Rob O**

Required Changes:

- Section 2B: List probiotics used
- Section 2B: List volumes of cultures used
- Section 2H: Remove Albroom example from chart
- Section 3A: Describe permutations of the 40 strains purchased; creation of a table in 2B may be helpful to discuss strain and resistance cassette present
- Section 3B.4: Indicate “leak proof” double containment procedures and remove “is not anticipated but would,” as transportation to the autoclave is anticipated
- Section 3B.5: Indicate chemical inactivation for liquids

IBC Decision:

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

The motion was proposed by Mark H and seconded by Rob O.

Motion Carried (8-8)

B. **Renewals:**

BAF Number: **1243-002**

Principal Investigator: **Goodman, Alan**

Title: **Identifying host genetic determinants of pathogenesis in *Drosophila***

Facilities: **Current**

BSM: **Current**

Primary Reviewer: **Eric S**

Secondary Reviewer: **Levi O**

Alan G. described his research and answered questions regarding the protocol. Alan left the meeting at 13:59.

Required Changes:

- Section 2B: Clarification of procedures (i.e., how Zika, Kunjin, *C. burnetii* are used) and use of mammalian cells
- Section 3A: Indicate Kunjin and Zika are animal hazards and E.Coli K-12 is not a human or animal hazard.

- Section 4C: Indicate how the bone marrow derived mouse macrophages are obtained. Describe if animals are used for this procedure.

IBC Decision:

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

The motion was proposed by Eric S and seconded by Rob O.

Motion Carried (8-8)

VI. BSL-1 BAFs no protocols

VII. BAFs Resolved in the Interim

Administrative Approvals:

BAF Number: 867-015

Principal Investigator: Konkel, Michael

BAF Number: 1259-005

Principal Investigator: OConnor, R

. Other Approvals:

BAF Number: 1306-001

Principal Investigator: Critzer, Faith

BAF Number: 1241-002

Principal Investigator: Szentirmai, Eva

BAF Number: 1297-001

Principal Investigator: Wall, Nathalie

BAF Number: 1003-006

Principal Investigator: Sischo, William

BAF Number: 1299-001

Principal Investigator: Bates, Phil

Deactivations:

BAF Number: 1109-14

Principal Investigator: Trobridge, Grant

BAF Number: 1249 *Principal Investigator: Kelley, Joanna*

VIII. Deferred BAFs

There are multiple deferred BAG's in various stages of approval

IX. Adjournment

Meeting adjourned at 14:13. Proposed by Mark H seconded by Rob O.

Motion carried (8-8)

WSU IBC Minutes
June 25, 2019

IBC Members Present:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Mike Heston * (13:13)	Community Member; Pullman Fire Department
3.	Mark Hubbard	WSU ARC; Research Development Specialist
4.	Mike Kluzik * (13:13)	ORA Director; Research Assurances
5.	Rob O'Connor	Veterinary Microbiology and Pathology
6.	Linda Thomashow *(13:15)	USDA/ARS; Plant Pathology
7.	Nina Woodford	Director, Office of the Campus Veterinarian

Alternate IBC Members Present:

	Member	Affiliation/Role
1.	Andrei Smertenko	Institute of Biological Chemistry; Plant Expert
2.	Alan Goodman	School of Molecular Biosciences; Scientist

IBC Members Absent:

	Member	Affiliation/Role
1.	Levi O'Loughlin	Biosafety Officer; Research Assurances
2.	Hanu Pappu	Plant Pathology
3.	Bin Shan	Elson S. Floyd College of Medicine
4.	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 (6 of 11 members) present. In the absence of Hanu P and Levi O, Alan G and Andrei S assumed voting membership.

II. Announcements:

Sonja H announced that she and Levi O were completing deferred protocols, with 13 old protocols finished this month, and plans to complete the deferred list as soon as possible.

III. Minutes – May 21, 2019

A request was made that resolved BAFs be listed in the minutes and a mistake was noted as to adjournment time, to be amended from 13:13 to 14:13. These changes were enacted in the May 2019 minutes by Sonja H.

Approve. The motion was proposed by Rob O and Seconded by Andrei S. Motion carried (6-6).

Mike K and Mike H entered at 13:13, and Linda T entered at 13:15 (Quorum now 9 of 11 members present.)

IV. **BSL-3 BAFs – no protocols**

V. **BSL-2 BAFs**

A. New Protocols

1. *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

- 3B.3 Gloves required for all work
- 3B.4 Beakers and trays for transport must be sealed to meet containment requirements
- 3B.5 Clarification of amounts and percentages of bleach and ethanol to be utilized

IBC Decision:

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

Motion carried (9-9)

2. *BAF Number: 1313-001* *Principal Investigator: Cunha, Cristina*

Title: Immunological intervention of malignant catarrhal fever virus-induced disease

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

IBC Decision:

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

The motion was proposed by Alan G and seconded by Rob O.

Motion Carried (9-9)

VI. BSL-1 BAFs

New Protocols:

1. *BAF Number: 1310-001* *Principal Investigator: Jiang, Zhihua*

Title: Functional Genomics Using Gene/Transcript Knock-out and Knock-down Approaches

Facilities: Current

BSM: Current

Primary Reviewer: Nina W

Secondary Reviewer Mark H

Required Changes :

- 4C.1 List Bovine and name cells used
- 4C.2 Remove “embryo and or commercial cell lines”
- 2B List source and designation of Bovine cells used

IBC Decision:

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

The motion was proposed by Nina W and seconded by Mike H

Motion Carried (9-9)

2. *BAF Number:1311-001* *Principal Investigator: Shu, Zhiqu*

Title: Development of a Novel Acoustic Technology for the Cryopreservation of Live Cells and Tissues

Facilities: Current

BSM: Current

Primary Reviewer: Rob O

Secondary Reviewer: Mike K

Required Changes:

- None

IBC Decision:

Approve

The motion was proposed by Rob O and seconded by Mike K.

Motion carried (9-9).

Mike K left the meeting at 13:57. Quorum now 8 of 11.

3. *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: Linda T

Secondary Reviewer: Andrei 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.

The motion was proposed by Linda T and seconded by Andrei S.

Motion carried (8-8).

B. Renewals:

1. *BAF Number: 1246-002* *Principal Investigator: Gleason, Cynthia*
Title: Plant parasitic nematode-plant Interactions
Facilities: Current *BSM: Current*
Primary Reviewer: Andrei S *Secondary Reviewer: Linda T*

Required Change:

- 4C.1 Specific strain of *E. coli* added to the host

IBC Decision:

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

The motion was proposed by Andrei S and seconded by Linda T.

Motion carried (8-8).

2. *BAF Number: 1107-004* *Principal Investigator: Cooper, Cynthia*
Title: Melanophore Function and Development in Danio rerio zebrafish
Facilities: Current *BSM: Current*
Primary Reviewer: Eric S *Secondary Reviewer: Nina W*

Required Changes:

- 2B Capillary glass to be disposed of in a safe container.
- 2B All animals incinerated and bleach to kill larvae (how embryos to be de-activated)
- 4C.1 Name strain of *E. coli*

IBC Decision:

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

The motion was proposed by Eric S and seconded by Rob O.

Motion carried. (8-8).

VII. BAFs Resolved in the Interim

Administrative Approvals:

- | | |
|---------------------------------------|--|
| 1. <i>BAF Number:</i> 1272-001 | <i>Principal Investigator:</i> Highland, Maggie |
| 2. <i>BAF Number:</i> 1124-003 | <i>Principal Investigator:</i> Cousins, Asaph |

Other Approvals:

- | | |
|--|--|
| 1. <i>BAF Number:</i> 1243-002 | <i>Principal Investigator:</i> Goodman, Alan |
| 2. <i>BAF Number:</i> 730-009 | <i>Principal Investigator:</i> Brayton, Kelly |
| 3. <i>BAF Number:</i> 953-006 | <i>Principal Investigator:</i> Dong, Wenji |
| 4. <i>BAF Number:</i> 1237-003 | <i>Principal Investigator:</i> Rossi, David |
| 5. <i>BAF Number:</i> 1222-002 | <i>Principal Investigator:</i> Kunz, Hans |
| 6. <i>BAF Number:</i> 1309-001 | <i>Principal Investigator:</i> Kopper, Jamie |
| 7. <i>BAF Number:</i> 1294-001 | <i>Principal Investigator:</i> Sankaran, Sindhuja |
| 8. <i>BAF Number:</i> 1212-002 | <i>Principal Investigator:</i> Sanguinet, KareN |
| 9. <i>BAF Number:</i> 1194-003 | <i>Principal Investigator:</i> Wang, Zhenjia |
| 10. <i>BAF Number:</i> 1152-005 | <i>Principal Investigator:</i> Tang, Juming |
| 11. <i>BAF Number:</i> 1158-004 | <i>Principal Investigator:</i> Vadyvaloo, Viveka |
| 12. <i>BAF Number:</i> 1230-002 | <i>Principal Investigator:</i> Sun, Jingru |
| 13. <i>BAF Number:</i> 808-008 | <i>Principal Investigator:</i> Pappu, Hanu |

Deactivations:

*BAF Number:***1154-002** *Principal Investigator:* **Walker Brendan**
Title: **Viral Vector-Mediated Conditional Gene Excision and Overexpression**

VIII. Deferred BAFs

Deferred BAFs – June 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. <i>BAF Number:</i> 1232-002 | <i>Principal Investigator:</i> Brozik, James |
| <i>Title:</i> 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:* **1160-006**

Principal Investigator: **Zhu, Meijun**

Title: **Pathogen Prevalence, Host Immune Responses and Their Interaction As Well As Safety of Foods**

Facilities: **update needed** *BSM:* **current**

Primary Reviewer: **Levi O**

Secondary Reviewer: **Rob O**

- 10/30/18: deferred by IBC, pending BAF revision and facility approval.
- 11/19/18: revisions received and forwarded to Rob and Levi. Rob's approval received.
- 11/20/18: Approval Received from Levi O. Updated facility approvals requested.

•

4. *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.

•

5. *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.

6. *BAF Number: 620-013* *Principal Investigator: Black, Margaret*
Title: Improving Suicide Genes for Cancer Gene Therapy Engineering Enzymes for Anti-tumor Suicide Gene Therapy

Facilities: Under Review *BSM: Under Review*

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

- 12/4/18: Deferred by IBC, pending BAF revision and facility and BSM approval.
- 12/11/18: BSM requested.
- 12/18/18: Updated BAF received.
- 12/20/18: Revised BAF sent to reviewers. Approval Received from Nina W.

7. *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.

8. *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.

9. *BAF Number: 1146-003* *Principal Investigator: Shah, Devendra*

Title: Patho-genomics and proteomics of enteric bacteria

Facilities: Current *BSM: Under review*

Primary Reviewer: Nina W *Secondary Reviewer: Mark H*

- 2/26/19: deferred by IBC, pending BAF revision.
- Questions to Reviewer 6-14-2019

10. *BAF Number:* **1302-001** *Principal Investigator:* **Gardner, Courtney**
Title: **Influence of Heat Stress of Microbial Nutrient Cycling**
Facilities: **Current** *BSM:* **Current**
Primary Reviewer: **Eric S** *Secondary Reviewer:* **Linda T**

- 3-26-2019 Deferred, pending completion of the required changes to the BAF to the satisfaction of the Chair and BSO
- 4-2-2019 sent request for BAF changes (SH)
- 5-15-19 BSM Approved

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

- 3-26-2019 Deferred pending completion of changes to BAF with BSO approval
- 4-9-2019 Updated BAF received
- Revised BAF requested per e-mail. (SH)

12. *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
- Revised BAF requested per e-mail (SH)

13. *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

14. *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*

IX. Biosafety Program Update: none

X. Adjournment

Meeting Adjourned at 2:35. Proposed by Alan G seconded by Rob O.

WSU IBC Minutes

July 30, 2019

IBC Members Present:

	Member	Affiliation/Role
1.	Eric Shelden	IBC Chair; School of Molecular Biosciences
2.	Mike Kluzik	ORA Director; Research Assurances
3.	Rob O'Connor	Veterinary Microbiology and Pathology
4.	Levi O'Loughlin	Biosafety Officer; Research Assurances
5.	Nathan Weller	Community Member; Pullman City Council

Alternate IBC Members Present:

	Member	Affiliation/Role
1.	Andrei Smertenko	Institute of Biological Chemistry; Plant Expert
2.	Alan Goodman	School of Molecular Biosciences; Scientist

IBC Members Absent:

	Member	Affiliation/Role
1.	Mike Heston	Community Member; Pullman Fire Department
2.	Mark Hubbard	WSU ARC; Research Development Specialist
3.	Hanu Pappu	Plant Pathology
4.	Bin Shan	Elson S. Floyd College of Medicine
5.	Nina Woodford	Director, Office of the Campus Veterinarian

IBC Invited Guests:

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

I. Call to Order:

The meeting came to order at 13:20, with a quorum (7 of 11 members) present. In the absence of Hanu P and Mark H, Alan G and Andrei S assumed voting membership.

II. Announcements:

There were two announcements made by Levi O.

1. The BSL3 / FSAP shutdown of the Global Allen Health building for maintenance and program review was at the midpoint and all was going well.

2. The 2019-2020 committee member roster is being updated and letters will be sent.

III. Minutes – June 25, 2019

Approve with verification of date. The motion was proposed by Alan G and seconded by Rob O. Motion Carried (7-7)

IV. BSL-3 BAFs

A. New Protocols None

B. Renewals:

1. 1. *BAF Number:***824-007** *Principal Investigator:* **Baszler, Tim**
Title: **National Animal Disease Diagnostic Network:WA**
Facilities: **Requested** *BSM:* **Current (Sensitive material)**

Primary Reviewer: **Levi O**

Secondary Reviewer: **Eric S**

Required Changes

- 3A Check for harmful to humans (i.e., Avian Flu, Foot and mouth)
- 3B.4 Specify double containment more clearly

IBC Decision

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

Proposed by Eric S, Seconded by Levi O.

Motion carried (7-7)

V. BSL-2 BAFs

A. New Protocols:

1. *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 Mark “yes” for non-vertebrates involved
- 2G.2 Define “other” for containment using the NIH language
- 4.A Mark DD4, check both questions “No”
- 4C.1 Indicate BSL-2

IBC Decision

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

Proposed by Rob O and seconded by Eric S

Motion carried (7-7)

B. Renewals:

1. 1. *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

Proposed by Rob O, seconded by Levi O

Motion carried (7-7)

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

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

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

Primary Reviewer: **Alan G**

Secondary Reviewer **Rob O**

Required Changes

- 3B.4 Specify type of containment
- 3B.3 Biosafety Cabinet usage should be discussed
- 4C.4 Clarify getting DNA from other places? BSL2 should be marked.
- 5A.6 Change answer to question (likely “yes”)

IBC Decision

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

Proposed by Alan G seconded by Rob O.

Motion carried (7-7)

C. Amendments

1. 1. *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 Additional details are needed, specifically, explanation of how to analyze microbial genes
- 4C.1 Indicate that new lines of transgenic wheat is produced
- 6B.6 Indicate how material will be decontaminated chemically

IBC Decision

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

Proposed by Andrei S, seconded by Rob O

Motion carried (7-7)

VI. BSL-1 BAFs

A. New Protocols: none

C. Renewals:

1. *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 Indicate source of Erwinia
- 2A Revise in lay language
- 3B.5 Indicate if chemicals will be used and specify which ones
- 4C List hosts to include all plants (i.e., stone fruits)
- 4C.4 List species as source of DNA

IBC Decision

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

Proposed by Andrei S, seconded by Rob O

Motion carried (8-8)

2. *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 Provide vector examples
- 4C3 Provide gene examples
- 4c.4 Provide species examples

IBC Decision

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

Proposed by Andrei S, seconded by Eric S

Motion carried (7-7)

VII. BAFs Resolved in the Interim

Administrative Approvals:

<i>BAF Number : 1124-003</i>	<i>Principal Investigator: Cousins, A</i>
<i>BAF Number : 1272-002</i>	<i>Principal Investigator: Highland, M</i>
<i>BAF Number: 1265-005</i>	<i>Principal Investigator: Sheldon, E</i>

Other Approvals:

<i>BAF Number:</i> 1311-001	<i>Principal Investigator:</i> Shu, Zhiquan
<i>BAF Number:</i> 1302-001	<i>Principal Investigator :</i> Gardner, Courtney
<i>BAF Number:</i> 1160-006	<i>Principal Investigator:</i> Zhu, Meijun
<i>BAF Number:</i> 1246-002	<i>Principal Investigator:</i> Gleason, Cynthia
<i>BAF Number :</i> 1310-001	<i>Principal Investigator:</i> Jiang, Zhihua
<i>BAF Number:</i> 1107-004	<i>Principal Investigator:</i> Cooper, Cynthia

Deactivations:

<i>BAF Number :</i> 1152-002	<i>Principal Investigator:</i> Walker, Brendan
<i>BAF Number:</i> 1039-006	<i>Principal Investigator:</i> Wang, Susan

VIII. Deferred BAFs

Deferred BAFs – June 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: 620-013 *Principal Investigator:* **Black, Margaret**

Title: **Improving Suicide Genes for Cancer Gene Therapy Engineering Enzymes for Anti-tumor Suicide Gene Therapy**

Facilities: **Under Review**

BSM: **Under Review**

Primary Reviewer: **Eric S**

Secondary Reviewer: **Nina W**

- 12/4/18: Deferred by IBC, pending BAF revision and facility and BSM approval.
- 12/11/18: BSM requested.
- 12/18/18: Updated BAF received.
- 12/20/18: Revised BAF sent to reviewers. Approval Received from Nina W.

6. 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.

7. *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.

8. *BAF Number: 1146-003* *Principal Investigator: Shah, Devendra*
Title: Patho-genomics and proteomics of enteric bacteria
Facilities: Current *BSM: Under review*
Primary Reviewer: Nina W *Secondary Reviewer: Mark H*

- 2/26/19: deferred by IBC, pending BAF revision.
- Waiting to hear from Nina if the new version BAF is ok (6-14-2019)

9. *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
- Revised BAF requested per e-mail. (SH)

10. *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
- Revised BAF requested per e-mail (SH)

11. *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**

12. 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*

13. 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

14. 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: Linda T

Secondary Reviewer: Andrei 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.

IX. Biosafety Program Update

Levi O updated the IBC that a suspected brucellosis case was found by WADDL and all proper notifications were made.

X. Old Business none.

XI. Adjournment

Meeting adjourned at 14:43 Proposed by Eric S and seconded by Mike K.

Motion carried (7-7).

XII.

XIII. Adjournment