INSTITUTIONAL BIOSAFETY COMMITTEE
12:01 p.m.
President's Conference Room
Meeting Minutes
March 11, 2026

Members Present:	Jovanka Voyich-Kane, Microbiology & Cell Biology, chair Amy Robison, Biosafety Officer Alyssa Evans, Microbiology & Cell Biology Jerod Skyberg, Microbiology & Cell Biology Kristen Connolly, Center for Biofilm Engineering Matt Taylor, Microbiology & Cell Biology, IACUC Chair Kim Hilmer, Chemistry/Biochemistry Mike Giroux, Plant Sciences & Plant Pathology Dale Huls, Office of Sponsored Programs Katie Rowse, Community Member
Members Absent:	Josh Charles, Bozeman Fire Department, Community Member Blake Wiedenheft, Microbiology & Cell Biology Jennifer DuBois, Chemistry/Biochemistry
Ex-Officio Members Present:	Tammy Lynn, Safety & Risk Management Kirk Lubick, Research Integrity & Compliance Nicole Soll, Research Integrity & Compliance
Ex-Officio Members Absent:	Jaspur Kolar, Bridger Occupational Health & Urgent Care
Guests:	Mark DeWald, Research Integrity & Compliance Ryan Brickman, Safety & Risk Management

I. Review and approval of IBC Meeting Minutes from February 11, 2026.

The minutes were approved as written. Approved 10, Nays 0, Abstained 0

II. Announcements from the Chair:

III. Originals/Amendments/Renewals/Interim Reviews Approved since September Meeting:

1. Originals
    - 2026-593 Walk: Collection and processing of urine and stool samples from bison without animal handling
2. Amendments
    - 2023-466 Deluca: updated personnel
    - 2024-350 Lauchnor: updated personnel and protocol objectives
    - 2024-540 Secor: updated personnel, added human cell lines: Caco-2 and THP-1, and protocol objectives
    - 2025-125 Wiedenheft: updated personnel, added micro-organisms and plasmids
      Biohazardous Agents: Alistipes putredinis
      Strains: DSM 17216 **Biosafety Level:** 2
      Biohazardous Agents: Bacteroides gallinarum
      Strains: DSM 18171 **Biosafety Level:** 1
      Biohazardous Agents: Muribaculum intestinale
      Strains: DSM 100746 **Biosafety Level:** 1
      Biohazardous Agents: Bacteroides graminisolvens
      Strains: DSM 19988 **Biosafety Level:** 1

Recombinant/Synthetic Nucleic Acid Molecules:
Host: E. coli **Vector/Plasmid:** pAD
Inserted Nucleic Acids/Genes of Interest: Gam **Biosafety Level:** 1
Host: E. coli **Vector/Plasmid:** pBAD
Inserted Nucleic Acids/Genes of Interest: small phage endoced ORFs **Biosafety Level:** 1

- 2025-384 Walk: updated personnel
- 2026-444 Evans: updated personnel

3. Interim Reviews
    - 2024-32 Lachowiec: no changes
    - 2024-487 Loveday: updated person, protocol information, funding indexes, plasmid list, lab inspection date, medical clearance and PAPR clearance dates
      Recombinant/Synthetic Nucleic Acid Molecules:
      Host: E. coli **Vector/Plasmid:** pHW2000
      Inserted Nucleic Acids/Genes of Interest: Influenza A Virus Genes **Biosafety Level:** 1

    - 2024-50 Flenniken: updated personnel, lab self-inspection date and cabinet inspection date
    - 2024-510 Fields: no changes
    - 2025-377 Loveday: updated protocol language
    - 2025-37 Schaff: updated personnel
    - 2025-569 Skyberg: no changes
4. Renewals
    - 2026-445 Pratte: The probiotic potential of symbiotic partnerships: Can contact between aquatic animals enhance the anti-pathogen potential of protective microbiomes?
    - 2026-11 Rynda-Apple: Influenza viruses for use in research projects in the Apple lab
    - 2026-10 Kunze: Neuronal cell cultures for Brain-on-chip models to study communication and neurodegeneration.

New Business

A. Review of Protocols

Originals

596 Linck "To use genomic data to understand connectivity and future vulnerability of American Pikas at their southern range limit"

Overview: This project will assess historical connectivity and future adaptive potential in American pika in the Southern Rockies. Results from this work will be used to inform conservation and management decisions. We will collect a small disk of tissue (1 mm in diameter) from the ear of each captured pika for genetic analysis. Exposure to plague or other wildlife diseases is a potential hazard to humans that will be handling these animals.

Risk mitigation includes: Using insect repellant (DEET) and wear long pants and long sleeves at all times in the field and personnel inspect their clothing regularly for fleas and ticks; using gloves when handling pikas, soiled traps, or samples derived from pikas; and using a respirator if handling dead or moribund animals suspected of disease; clothing worn while handling pikas will be removed at the end of the day, bagged prior to transport in vehicles, left outside of field housing, and laundered at least once per week and before being worn for other uses; traps and tarps are cleaned between pikas by wiping with a 10% bleach solution, and are cleaned between study sites with soap and water followed by immersion in a 10% bleach solution; after removing disposable gloves, hands are cleaned using bottled water, hand soap and bleach wipes available in the field kit; personnel will seek immediate medical attention at a nearby medical facility (Colorado facilities provided) and consult with MSU's occupational health provider; DNA will be extracted in the MSU lab wearing BSL-1 PPE and waste will be autoclaved.

Biohazardous Agents: none
Recombinant/Synthetic Nucleic Acid Molecules: none

Motion to return for modification and DMR upon submission.

Approved 10, Nays 0, Abstained 0

Approved items to be addressed include:

Protocol Objectives:

- Indicate that the animals are sedated prior to handling.
- Is there a justification for needing to handle dead or moribund animals suspected of disease? If so, provide that. If not, seems like it would be best to just not handle dead or moribund animals.
- Remove and/or update the reference to the CDC page about plague, as it is no longer available.
- Remove specific respirator type (i.e. P100-class particulate-filtering) keep "repirator"
- Clarify if the respirator will be worn in any other handling conditions or just with dead animals. This becomes even more unclear in the 5th paragraph if the respiratory will be worn regardless.
- In last paragraph, change "should wear" to "will wear".
- Specify what equipment will be disinfected with.

Related Protocols:

- Linked IACUC protocol will require anamendment to align with this protocol.

Biosafety Operating Procedures

- Occupational health review: please uncheck Other and instead check N95, as this is the appropriate respirator for protection against potential zoonotic pathogens indicated in this protocol, and enter each personnel's name who will be wearing a respirator, medical clearance date, training date, and fit testing date. These items require annual updating.

Renewals

22 James "Evaluation of Treatment on Medical Biofilms"

Overview: This protocol includes testing projects that evaluate treatment solutions and test materials related to medical devices and medical device use. Biofilms grown may be single species, dual species or multi-species biofilms, or from human saliva. Viability is assessed using viable plate counts, microscopy, sequencing, or plaque assay.

Risk mitigation includes: Reactors are sealed shut and are inoculated through an input port in the incubator. Medical devices and the drip flow reactor are inoculated in the BSC. Prior to opening a reactor, the reactor system will be placed in the BSC for disassembly and removal of test materials. Microscopy samples are either fixed prior to imaging, or for live imaging will follow the Microscope Imaging of Biological Agents policy. All waste is autoclaved.

Biohazardous Agents: Pseudomonas aeruginosa
Strains: ATCC 15442, ATCC 9027, SWR 215, PAO1 delta fap, mPAO1, LMG 27622, ATCC BAA-2108, ATCC 27853, ATCC 15442, PaO1 UW Strain PW 2960, PaO1 UW Strain PW 8623, PAO1ΔPA2231, PaO1 UW Strain PW 6997, PaO1 UW Strain PW 6141, PaO1 UW Strain PW 9338, PaO1 UW Strain PW 9337, PA14,ATCC 25619, NCTC 13646 (CIP A22, DSM 25123), ATCC 25355, ATCC BAA-2108
Biosafety Level: 2
Biohazardous Agents: Staphylococcus aureus
Strains: ATCC 6538, ATCC 700789, BAA-1556, SH1000, SH1000 delta psm, ATCC 6538P, AH2547, SWR 10943, ATCC 29213, MRSA USA300 Lac, MRSA USA100, MRSA 252, ATCC 33592, ATCC 25923
Biosafety Level: 2
Biohazardous Agents: Stapylococcus epidermidis
Strains: clinical strain, ATCC35984, ATCC 12228 **Biosafety Level:** 2
Biohazardous Agents: Enterotoxigenic Esherichia coli
Strains: UTI89, CGSC 8997, CGSC 8996, CGSC 7739, ATCC 25922 **Biosafety Level:** 2
Biohazardous Agents: Serratia marcescens
Strains: ATCC 27137, ATCC 13880 **Biosafety Level:** 1
Biohazardous Agents: Cutibacterium acnes

Strains: ATCC 6919 **Biosafety Level:** 1
Biohazardous Agents: Enterobactor cloacae
Strains: ATCC 13047 **Biosafety Level:** 1
Biohazardous Agents: Escherichia coli
Strains: ATCC BAA-196, ATCC 8739, ATCC 70092 **Biosafety Level:** 2
Biohazardous Agents: Proteus mirabilis
Strains: ATCC 35509 **Biosafety Level:** 2
Biohazardous Agents: Acinetobacter baumannii
Strains: ATCC 19606, ATCC BAA-1797, ATCC BAA-1605, SWRWC 257, AB 5075 **Biosafety Level:** 2
Biohazardous Agents: Candida albicans
Strains: ATCC 10231, ATCC 90027, ATCC 18804 **Biosafety Level:** 2
Biohazardous Agents: Enterococcus faecalis
Strains: ATCC 29212, ATCC 700802, ATCC 5129 **Biosafety Level:** 2
Biohazardous Agents: Salmonella enterica typhimurium
Strains: ATCC 19430 **Biosafety Level:** 2
Biohazardous Agents: Streptococcus mutans
Strains: ATCC 25715 **Biosafety Level:** 2
Biohazardous Agents: Streptococcus sobrinus
Strains: OMZ 176 **Biosafety Level:** 2
Biohazardous Agents: Streptococcus sanguinis
Strains: DSM 20068 **Biosafety Level:** 2
Biohazardous Agents: Mycobacterium ulcerans
Strains: ATCC 19423 **Biosafety Level:** 2
Biohazardous Agents: Micrococcus luteus
Strains: ATCC 49732 **Biosafety Level:** 1
Biohazardous Agents: Veillonella parvula
Strains: ATCC 10790 **Biosafety Level:** 2
Biohazardous Agents: Streptococcus pyogenes
Strains: ATCC BAA-946 **Biosafety Level:** 2
Biohazardous Agents: Mycobacterium terrae
Strains: ATCC 15755 **Biosafety Level:** 1
Biohazardous Agents: Human coronavirus
Strains: BEI NR-53725(OC43); ATCC VR-1558 (OC43) ATCC VR-740 (229E); BEI NR-52726 (229E); BEI NR-470 (NL63) **Biosafety Level:** 2
Biohazardous Agents: Finegoldia magna
Strains: ATCC 29328 **Biosafety Level:** 2
Biohazardous Agents: Corynebacterium striatum
Strains: ATCC BAA-1293 **Biosafety Level:** 2
Biohazardous Agents: Porphyromonas gingivalis
Strains: ATCC 33277 **Biosafety Level:** 2
Biohazardous Agents: Streptococcus oralis
Strains: ATCC 6249 **Biosafety Level:** 2
Biohazardous Agents: Klebsiella pneumoniae
Strains: ATCC 14877, ATCC 4352, ATCC BAA-1705, ATCC 29011 **Biosafety Level:** 2
Biohazardous Agents: Ralstonia pickettii
Strains: ATCC 27511 **Biosafety Level:** 1
Biohazardous Agents: Actinomyces naeslundii
Strains: ATCC 12104 **Biosafety Level:** 2
Biohazardous Agents: Clostridium perfringens
Strains: SWR 816 **Biosafety Level:** 2
Biohazardous Agents: Actinomyces viscosus
Strains: ATCC 15987 **Biosafety Level:** 2
Biohazardous Agents: Prevotella nigrescens
Strains: ATCC 33563 **Biosafety Level:** 2
Biohazardous Agents: Anaerococcus vaginalis

Strains: ATCC 51170 **Biosafety Level:** 2
Biohazardous Agents: Bacillus cereus
Strains: ATCC 11778 **Biosafety Level:** 1
Biohazardous Agents: Fusobacterium nucleatum
Strains: UTI89, CGSC 8997, CGSC 8996, CGSC 7739, ATCC 25922 **Biosafety Level:** 2
Biohazardous Agents: Canine coronavirus
Strains: ATCC VR-2068 **Biosafety Level:** 2
Biohazardous Agents: Candida parapsilosis
Strains: ATCC 90018 **Biosafety Level:** 1
Biohazardous Agents: Staphylococcus pseudintermedius
Strains: ATCC 49444 **Biosafety Level:** 2
Biohazardous Agents: Pseudomonas fluorescens
Strains: ATCC 13525 **Biosafety Level:** 1
Biohazardous Agents: Enterobacter cloacae complex isolate
Strains: It was isolated by Baxter Healthcare Coorperation. It was isolated from a peritoneal dialysis solution mix tank at one of their manufacturing facilities. We have a Accugenix AccuPRO-ID report from Charles river with identification. **Biosafety Level:** 2
Biohazardous Agents: Streptococcus gordonii
Strains: ATCC 10558 **Biosafety Level:** 2
Biohazardous Agents: Mycobacterium abscessus
Strains: ATCC 19977 **Biosafety Level:** 2
Biohazardous Agents: Burkholderia cepacian
Strains: ATCC 10856 **Biosafety Level:** 2
Biohazardous Agents: Candida auris
Strains: CDC B11903 **Biosafety Level:** 2

Motion to return for modification and DMR upon submission; If protocol gets split up per inquiry from committee then it will go to FCR in April 2026 meeting
Approved 10, Nays 0, Abstained 0
Approved items to be addressed include:

Protocols Objectives:

- Overall, the IBC committee would like the PI to consider breaking this protocol up, or provide justification for not breaking it up.
- Specific changes to the protocol are:
    - Add fixation time and temperature to CSLM section. Also amend the fixation time to 1 hour per mm of tissue/biofilm, as that is industry standard.
    - Sequence analysis-
        - remove in house sequencing as this is no longer available
        - MSU IRB is included, however, there is not a linked MSU IRB protocol for debridement sample collection.
    - SARS-CoV-2 related virus objectives:
        - amend "SARS-CoV-2 related viruses" in both places to "coronavirus
        - remove all strain names and cell line names as these are specified in sections 5 and 8. Include that human and animal cells lines are utilized and if they are primary or continuous cell lines.
    - Sharklet standard test method- remove "provided by Sharklet Technologies" if this is an open source standard method. In this same paragraph, remove the last two sentences about calculation and replication.
    - In the final paragraph if ALL coronavirus work is done in the BSC- please state that All work will be done in the BSC rather than list all the steps. If only select steps are done in the BSC, please state that only the following procedures will be done in the BSC and then list them.

Related Protocols:

- Please link the IRB protocol mentioned for collection of human debridement samples

Volume of Biohazardous Agent(s)
- Is this answer accurate for the CDC reactor?

Laboratory Biosafety Manual
- Per instructions in section 2.9 update lab manual and attach

Sharps Usage
- Is it necessary to recap the needle during disassembly if that part could be removed first? If not, include the SOP for recapping needles in the lab specific biosafety manual, including documenting training on the SOP.

Amendments
None

Interim Reviews
None

B. Biosafety Officer Updates
   1. Microscope Imaging of Biological Agents (3-year review)
      a. Minor changes
         i. Approved 10, Nays 0, Abstained 0

   2. MSU Biosafety Manual updates:
      a. Amendment to Chapter 12 Decontamination and Sterilization
         i. Discussion of change about disposal of solid waste for BSL-1 labs
         - Approved 0, Nays 10, Abstained 0
         ii. No changes but wording amended to clarify that BSL-1 labs follow same rules
      b. Update on PFA and formalin fixation: BSO will include common fixation methods and how to validate non-common methods into the MSU Biosafety Manual by it's annual review in September 2026.

The meeting was adjourned at 1:08 p.m.