Creighton UNIVERSITY

Office of the Provost
Research Compliance

CREIGHTON UNIVERSITY
INSTITUTIONAL BIOSAFETY COMMITTEE

IBC MEETING MINUTES

MEETING LOCATION
Zoom (via Invitation)

MEETING DATE and TIME
12-Sep-2025 at 02:00 PM

Institutional Biosafety Committee
2500 California Plaza
Omaha, NE 68178-0125
T: 402.280.2126 | **E:** IBC@creighton.edu
creighton.edu | **creighton.edu/researchservices**

ATTENDANCE

VOTING MEMBERS PRESENT:	
Michael Belshan, PhD Chair, Scientist (Medical Microbiology & Immunology)	**Charles Brockhouse, PhD** Member, Scientist (Biology)
Richard Goering, PhD Vice Chair, Scientist (Medical Microbiology & Immunology)	**Marisa Zallocchi, PhD** Member, Scientist (Biomedical Sciences)
John Baxter Member, Scientist (Biosafety Officer)	**Graham Cox, PhD** Member, Scientist, Community Representative (Animal Containment Expert)
Nicholas Streck, PhD Member, Scientist (Biomedical Sciences, Virology, & Immunology)	**Christopher Austin, MS** Member, Scientist, Community Representative
Rima El-Herte, PhD Member, Scientist (Infectious Disease)	
STAFF MEMBERS PRESENT:	
Stuart Martens, JD *Legal*	
Shannon Walsh, MS *Research Compliance Auditor*	
DESIGNATED GUESTS:	
Joshua Kochanowsky, PhD (Medical Microbiology & Immunology) Principal Investigator, EHS-25-0557 *Present 2:05 PM-[end]*	

Attended in Person: None – virtual meeting.
Attended via Zoom: All attendees were present via Zoom.

The IBC has 10 voting members. Six members, including at least one community representative, are required to conduct business.

A quorum was met and Dr. Belshan called the meeting to order at 2:03 PM

The Chair asked whether any members of the Committee had a conflict of interest for any item on the meeting agenda. No members reported a conflict of interest.

The Chair asked whether members of the Committee had received all necessary materials to complete their reviews for this meeting. All members confirmed they received all necessary materials to complete their reviews for this meeting.

The IBC Administrator reviewed the CITI training, documentation, and disclosure requirements for members of the IBC. No members present at this meeting had training, documentation, and/or disclosure deficiencies. All present members were therefore eligible to vote.

The Chair will vote only as necessary to maintain quorum or to break a tie in voting.

REVIEW AND APPROVAL OF PREVIOUS MINUTES

The Committee reviewed and approved the **08-Aug-25 IBC Minutes** as written.

Total Vote Count	For	Against	Abstained	Absent	Recused
9	8	0	1	0	0

The Chair, Michael Belshan, abstained.

REVIEW OF PRIOR BUSINESS

None.

POLICY APPROVALS, ANNOUNCEMENTS, EDUCATION

a. Departure of IBC Member

i. The Chair reported to the Committee that Stacey Morrow has left her position on the Committee. The Chair asked that the Committee members contact him if they hear of anyone at the University having interest in filling the position. Shannon McIntyre reported that there would be a discussion with the Director of Research Compliance, Dr. Knezetic, about the replacement as well.

COMMITTEE REVIEW

Submission Number: EHS-25-0558-01

Title: Aindow IBC Initial

Principal Investigator: Ann Aindow

Submission Type: New

Type of Registration: Non-Exempt Recombinant/Synthetic Nucleic Acid Registration

Determination: Approved

Determination Date: 12-Sep-2025

Expiration Date: 11-Sep-2028

Total Vote Count	For	Against	Abstained	Absent	Recused
9	8	0	1	0	0

The Chair, Michael Belshan, abstained.

Agents:	N/A
Agent Risk Group:	N/A
NIH Guidelines category of r/s NA research, if applicable:	Section III-D

Summary: Bacteriophage are viruses that infect and kill bacteria. These “phages” are useful tools to investigate fundamental biological processes and have potential as alternatives to antibiotic therapy for treatment of bacterial infections. In my group, we will isolate environmental bacteriophages for mechanistic study and engineer phage in order to target antimicrobial resistant (AMR) bacteria.

Discussion: No concerns were raised by the Committee. The initial application was approved as written.

All required training per institutional policy is complete for all individuals listed on this registration.

Submission Number: EHS-25-0557-01
Title: SOP for Trichomonas vaginalis
Principal Investigator: Joshua Andrew Kochanowsky
Submission Type: New
Type of Registration: Non-Exempt Recombinant/Synthetic Nucleic Acid Registration
Determination: Approved
Determination Date: 12-Sep-2025
Expiration Date: 11-Sep-2028

Total Vote Count	For	Against	Abstained	Absent	Recused
9	8	0	1	0	0

The Chair, Michael Belshan, abstained.

Agents:	Trichomonas vaginalis
Agent Risk Group:	RG-2
NIH Guidelines category of r/s NA research, if applicable:	N/A

Summary: The central hypothesis of this proposal is that TvEVs play a major role in suppressing host cell immune responses that would otherwise impede parasite-mediated host cell lysis, a process critical for the acquisition of nutrients by this obligate extracellular parasite. To test this, I will leverage preliminary transcriptomic data showing that TvEVs down-regulate expression of a non-canonical, type I interferon, IFNε and *in vitro* assays showing that pretreatment of prostate and vaginal epithelial cells with IFNε is protective against Tv-mediated killing. The following Biosafety Guidelines and Procedures document will outline the safe growth, cultivation, standard equipment used, procedures for decontamination and emergency response in case of spill or accidental exposure to personnel.

Discussion: Dr. Kochanowsky entered the room to present a short summary of his protocol and address any questions or concerns from the Committee. No concerns were raised by the Committee. The initial application was approved as written.

All required training per institutional policy is complete for all individuals listed on this registration.

Submission Number: EHS-22-0529-03
Title: 227 Klotho interacting proteins and brain function
Principal Investigator: Gwendalyn King
Submission Type: Continuation
Type of Registration: Non-Exempt Recombinant/Synthetic Nucleic Acid Registration
Determination: Approved with Conditions
Determination Date: 12-Sep-2025
Expiration Date: N/A

Total Vote Count	For	Against	Abstained	Absent	Recused
9	8	0	1	0	0

The Chair, Michael Belshan, abstained.

Agents:	Replication-deficient adenovirus type 5
Agent Risk Group:	RG-1
NIH Guidelines category of r/s NA research, if applicable:	Section III-D

Summary: My lab is working to understand the function of the klotho protein within the brain. Klotho is a transmembrane protein that is found on the cell surface of neurons

and choroid plexus epithelial cells. It is shed into the cerebrospinal fluid. Shed and transmembrane klotho have distinct functions within the body but very little is known about molecular mechanism of action for klotho expression within the brain.

We previously cloned and developed replication-deficient adenovirus type 5 (E1 and E3 deleted) to express mouse klotho or control beta-galactosidase protein. We also have a adenoviral type 5 virus expressing cre that was obtained from the University of Iowa. In addition to the above risk group 2 viruses, we have an adeno-associated viral vector grown at the University of Alabama at Birmingham (previous institution) that expresses klotho protein. This AAV is listed as a risk group 1 virus.

We would like to overexpress klotho (or control protein) using either our adenoviral vectors or our adeno-associated viral vectors that contain the mouse klotho cDNA sequence. Our lab and other labs have noticed enhanced memory function with klotho overexpression but we do not understand the mechanism behind enhanced memory. We will overexpress eventually in animals but initially we will overexpress by infecting immortalized celts or primary neuronal cultures.

We have also generated a conditional klotho knockout mouse, Ad-cre delivery via stereotaxic surgery will allow focal klotho excision within the brain. As well we can Ad-KL to overexpress klotho in mice where klotho has been genetically eliminated.

While viral vector work in animals is exciting and anticipated in the future, at present the main purpose of our viral vectors is for expression of klotho in primary neuronal cultures. Viral vector infection allows us to increase klotho in neurons that are difficult to transfect. Alternatively, we will use viral vectors to infect immortalized cell lines. We have data that suggest that klotho may be a structural protein, important for synaptic function. We will use viral vectors expressing klotho, plasmids expressing klotho, and plasmids expressing synaptic proteins to determine the protein:protein interactions occur with klotho at the synapse.

Besides the viral vectors mentioned above, we have DH5alpha competent cells (risk group 1 derivative of K12 E. coli) and an array of plasmids used routinely in tissue culture work to better understand klotho function. The plasmids currently in the lab are listed in the attached table.

Viral vector work (both with AAV and adenovirus to ensure best practices in viral vector handling) will be conducted under BSL-2 conditions in a biosafety cabinet. Virkon S (1-2% with a contact time of at least 5 minutes) solution will be freshly made prior to any work with virus. All plastic ware, tips, plates etc., will be Virkon S decontaminated before standard biohazardous waste disposal. Hood surfaces and equipment will be decontaminated with Virkon before and after handling virus. Staff will wear appropriate

PPE (gloves, lab coat continually, and protective eyewear (as needed)) throughout experiments where viral vectors are utilized.

Discussion: The Committee voted to give a determination of Approved with Conditions. The condition to be addressed is as follows: Agent Risk Group should be changed on the application from RG-2 to RG-1. The Committee agreed that this change does not need to be re-reviewed by the Chair for full approval to be issued.

All required training per institutional policy is complete for all individuals listed on this registration.

Submission Number: EHS-22-0540-04
Title: 244 Transcription regulation in the inner ear
Principal Investigator: Litao Tao
Submission Type: Modification
Type of Registration: Exempt Recombinant/Synthetic Nucleic Acid Registration
Determination: Approved with Conditions
Determination Date: 12-Sep-2025
Expiration Date: N/A

Total Vote Count	For	Against	Abstained	Absent	Recused
9	8	0	1	0	0

The Chair, Michael Belshan, abstained.

Agents:	AAV
Agent Risk Group:	RG-2
NIH Guidelines category of r/s NA research, if applicable:	Section III-D

Summary: Investigation of the transcription regulation in the inner ear will provide valuable information for us to understand the molecular mechanisms specifying cell fates during development and determining the death or survival of cochlear cells upon traumatic challenges. Such understanding will help us find new treatment to prevent sensory hair cell loss or to regenerate sensory hair cells after damage to cure deafness which otherwise is permanent for the rest of life in human and other mammalian animals. Using in vitro assays and in vivo experiments, we are planning to investigate the regulatory roles of enhancers of essential cochlear genes, since enhancers dictate the cell type-specific and developmental stage-specific expression of target genes. Given the technical difficulty to transduce cochlear cells by other viral vectors, we

choose the Adeno-Associated Virus serotypes (Anc80L65, AAV-ie, and AAV-ie-K558R), which has been shown to be highly efficient in transducing sensory hair cells and other cochlear cells in vitro and in vivo (Landegger et al., Nat Biotechnol. 2017; Tan et al., 2019; Tao et al., 2022), to infect cultured cochlear cells in vitro or to transduce inner ear cells in vivo through lateral ventricles of the brain.

Two sets of AAV vectors will be used:

1. AAV vector carrying candidate enhancer and reporter genes for enhancer activity assay.
2. AAV vector with dCAS9-VP64 expression construct and AAV vector with enhancer specific sg-RNA expression construct for epigenetic manipulation of candidate enhancers to stimulate/repress the expression of target genes.

Discussion: Marisa Zallocchi stated that the PI chose Section III-F on the application for the NA category and it should be changed to Section III-D. The Chair agreed with this necessary revision. No other discussion was had.

The Committee voted to give a determination of Approved with Conditions. The condition to be addressed is as follows: Change the category of r/s NA research from Section III-F to Section III-D. The Committee agreed that this change does not need to be re-reviewed by the Chair for full approval to be issued.

All required training per institutional policy is complete for all individuals listed on this registration.

PUBLIC COMMENTS

There were no public comments.

THIS MEETING ADJOURNED AT 2:29 PM

END OF COMMITTEE REVIEW

Next meeting is tentatively scheduled for 10-Oct-2025 at 2 PM.

END REPORT