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
08-May-2026 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:	
Richard Goering, PhD Vice Chair, Scientist (Medical Microbiology & Immunology)	**Rima El-Herte, PhD** Member, Scientist (Infectious Disease)
John Baxter Member, Scientist (Biosafety Officer)	**Marisa Zallocchi, PhD** Member, Scientist (Biomedical Sciences)
Nicholas Streck, PhD Member, Scientist (Biomedical Sciences, Virology, & Immunology)	**Christopher Austin, MS** Member, Scientist, Community Representative
STAFF MEMBERS PRESENT:	
Teri Prentis, BA *IRB Administrator*	
Stuart Martens, JD *Legal*	

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. Goering called the meeting to order at 02:13 PM

The Chair of this meeting 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 of this meeting 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.

REVIEW AND APPROVAL OF PREVIOUS MINUTES

The Committee reviewed and approved the **10-Apr-2026 IBC Minutes** as written.

Total Vote Count	For	Against	Abstained	Absent	Recused
6	6	0	0	0	0

REVIEW OF PRIOR BUSINESS

None.

POLICY APPROVALS, ANNOUNCEMENTS, EDUCATION

None.

COMMITTEE REVIEW

Submission Number: EHS-25-0530-02

Title: recombinant DNA technology based expression of staphylococcal regulatory systems

Principal Investigator: Aurijit Sarkar

Submission Type: Modifications

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

Determination: Approved

Determination Date: 08-May-2026

Expiration Date: 21-Apr-2028

Total Vote Count	For	Against	Abstained	Absent	Recused
6	6	0	0	0	0

Agents:	Escherichia coli strains for cloning and expression; Staphylococcus aureus strain RN4220 for gene expression studies
Agent Risk Group:	RG-2
NIH Guidelines category of r/s NA research, if applicable:	Section III-D

Summary: We are attempting to understand the function of protein kinases, response regulators and downstream signaling proteins in cellular physiology or drug resistance.

Bacteria will be maintained as glycerol stocks at -80 °C. Normal microbiology procedures, such as agar plating, liquid cultures and glycerol stock preparation will be followed to maintain strains. These will be grown in liquid cultures or on agar plates to perform experiments described below. No more than 1 L volumes of culture will be grown. All excess cultures (not committed to long-term storage or planned experimental procedures) and used plates will be destroyed by bleaching or autoclaving, as appropriate. All precautions mentioned in the Lab Safety Protocol will be followed.

Our goal is to understand cellular signaling occurs and how it can be disrupted during drug design. The following is a summary of planned procedures either to generate transfected cells or using the same:

1. *Antimicrobial susceptibility determination:* Minimum Inhibitory Concentration (MIC) and checkerboard assays will be run. Cultured bacteria will be incubated with varied concentrations of antimicrobials and/or chemicals of interest to note the concentrations that block growth.
2. *Growth/kill curves:* Cultured bacteria will be incubated with chemicals and/or antibiotics and viable bacteria will be monitored, either by serial dilution-plating procedures or monitoring OD600.
3. *Biofilm formation:* cultures will be incubated under various conditions to study the formation of biofilm. Isolated biofilm will be quantified using colorimetric analysis or commercially available toolkits.
4. *Persister formation in biofilm:* Biofilms formed above will be evaluated for the presence of bacteria that survive high-concentration antimicrobial conditions by disruption of biofilm in broth, serial dilution and plating.
5. *Expression of bacterial factors*
    a. *Factors of interest:* for example, penicillinase, various PBPs, PBP2a, various two-component systems or enzymes.
    b. *Methods used:* molecular biology techniques such as Western blots, and standard assays (e.g., incubating bacteria or extracts with nitrocefin to monitor beta-lactamase).
6. *RNA extraction and RT-qPCR*
    a. *Methods used:* Trizol, RNA extraction kits and detergent solutions, in conjunction with or without lysostaphin digestion and homogenization by bead-beating.
7. *Cell wall quantification*
    a. *Methods used:* Chemical and/or enzymatic digestion of live bacterial cells, followed by chromatography and/or other molecular biology techniques, such as gel electrophoresis.
8. *Protein expression and purification:* we will either clone genes or purchase plasmids with the same genes encoded from standard sources such as Genscript.
    a. The genes will be introduced into E. coli strains to propagate the plasmid.

   b. Restriction endonucleases will be used to excise genes from either a vector or genomic DNA.
   c. The genes will then be introduced into an appropriate E. coli host for protein expression under induction where appropriate.
   d. The E. coli host or lysate may be used for experiments where appropriate, particularly for high-throughput assay design.
   e. Transformed E. coli will be lysed using standard reagents, like B-PER or M-PER. Purification of proteins will be done using standard tools and kits.
9. *Assays with purified protein:* We will either express proteins in-house or purchase the required enzymes from a Contract Research Organization for binding and/or activity assays.
10. *Reporter-based assays to monitor transcription:* We will introduce plasmids containing recombinant DNA where gene-reporter fusion constructs into either E. coli or S. aureus (non-pathogenic) lab strains such as K12 or RN4220. These transfected strains can be used to monitor the transcription under varied conditions.

Discussion: No concerns were raised by the Committee. The Committee voted to approve the submission as written.

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 02:16 PM

END OF COMMITTEE REVIEW

Next meeting is tentatively scheduled for 12-Jun-2026 at 2 PM.

END REPORT