

Institution	Oklahoma State University - Center for Health Sciences
Meeting Date	Thursday, February 19 2026
Meeting Time	10:00am
Meeting Type	Hybrid Meeting

IBC Members Present	Name	Role	Attendance
	Dr. Gerwald Koehler	Committee Chair	Present
	Dr. I-Hsiu (George) Huang	Scientific Member	Present
	Dr. Sue Katz Amburn	Scientific Member	Present
	Dr. Crystal (Niki) Johnson	Scientific Member	Present
	William (BJ) Reddig	Lab representative	Present
	Dr. David Wallace	Animal Expert	Present
	Dr. Fang (Fiona) Liu	Non-affiliated member	Absent
	Jennifer Nangle	Non-affiliated Member	Absent
	Dr. Vikram Gujar	Alternate Member - Affiliated Scientist	Present, voted in place of Sue Katz Amburn for IBC-00001242.
Quorum	Quorum is met. The IBC has six (6) voting members present, and four (4) voting members are required to conduct business.		

Others in Attendance	Name	Affiliation	Title
	Kadin Falkensten	Oklahoma State University - Center for Health Sciences	Research Compliance Coordinator, Biosafety Officer

Call to Order	The IBC Chair called this meeting to order at 10:02am.
Conflicts of Interest	The IBC Chair asked all members present to identify any conflicts of interest with the materials that are to be reviewed. Dr. Koehler and Dr. Katz Amburn identified a conflict with IBC-00001242, and will recuse themselves for the discussion of this protocol.

Discussion of previous minutes	No discussion was held regarding the January 2026 IBC meeting minutes. Dr. Johnson made the motion to approve, and BJ seconded. Dr. Koehler abstained from voting as he was not present at the January meeting. All other members voted in favor of approving, with none opposed.		
Review and Approval of previous meeting minutes	Date of previous meeting Thursday, January 15 2026	Motion Approve as Written	Votes; for/against/abstain 5/0/1

Review of Prior Business	Business	Review and Discussion
	Report of pending/outstanding protocol(s)	At this meeting, there are no protocols pending review. There are two protocols with an upcoming De Novo review within the next 3 months (IBC-00001196 and IBC-00001184). Since the previous meeting, there was one yearly continuing review that was approved (IBC-00001230).

New IBC Registrations and Amendments for Review		
Review of IBC-00001251		
PI Name(s)	Dr. Jacob Manjarrez	
Registration Title/Number	Caenorhabditis elegans Molecular Mechanisms of Stress, Aging, and Resilience	IBC-00001251

Project Overview

The nematode *Caenorhabditis elegans* (*C. elegans*) is an ideal system for linking molecular biology, neural circuitry, host-microbe interactions, and health. With only 302 neurons, *C. elegans* display a wide repertoire of intelligent-seeming behaviors: searching for food, following gradients, avoiding toxins, responding to touch, and locating mates. These activities rely on conserved neural and molecular pathways, making the worm a powerful entry point for studying decision-making, stress resilience, and disease mechanisms. For this study, several agents will be used alongside the *C. elegans* nematode including *Lactococcus lactis* (bacteria), *Leuconostoc massenteroides* (bacteria), *Pseudomonas aeruginosa* (bacteria), and *Candida albicans* (fungus). These bacterial and fungus species will be grown and used to feed the *C. elegans* nematode and have a wild-type pathogenicity. No toxin genes are known to be present in any of the coding sequences of these agents. *Pseudomonas aeruginosa* has known mutations to delete the *edd* and *glpK* genes, which negatively affects the biofilm formation and metabolic versatility of the agent. In addition to these agents, *In vivo-jetPEI* will be used to assist in the transfection of plasmids into the *C. elegans* nematode. *In vivo-jetPEI* is a polyvalent polymer-based reagent that condenses nucleic acids into stable nanoparticles of approximately 20-80nm in diameter. Alongside these agents, over 280 plasmids will be used in this study to assist in the study of neural circuits within the *C. elegans* nematode. The vast majority of these plasmids will come from the Fire Lab *C. elegans* Vector Kit that is available through Addgene (<https://www.addgene.org/kits/firelab/>). These plasmids are intended to be used in conjunction with *In vivo-jetPEI* to transfect nucleic acids into *C. elegans*, allowing for their neural circuits to be visualized using high-resolution fluorescence microscopy. The plasmids used in this study include: pCFJ909; pCFJ910; pCFJ1201; pCFJ1202; pCFJ1200; pCFJ1272; pCFJ1273; pCFJ496; pCFJ914; pCFJ1208; pCFJ1209; pCFJ1324; pCFJ420; Peft-3::GFP::H2B; pCFJ421 - Pmyo-2::GFP::H2B; pCFJ601 - Peft-3 Moc1 transposase; pMA122 - peel-1 negative selection; pGH8 - pRAB-3::mCherry::unc-54utr; pCFJ90 - Pmyo-2::mCherry::unc-54utr; pCFJ104 - Pmyo-3::mCherry::unc-54; pJL44 - Phsp16.48::MosTase::glh-2utr; pCFJ906; pCFJ907; pCFJ908; pCFJ1000; pCFJ1001; pCFJ1002; pCFJ1258; pCFJ1259; GCaMP variants; RCaMP variants; GFP variants; RFP variants; YFP variants; BFP variants; DsRED variants; mKate variants; APP variants; Htt variants; alpha synuclein

	<p>variants; LRRK2 variants; TDP43 variants; Chr2 variants; NHpR variants; Arch variants; Mac variants; Queen-2m variants; Slo-3 variants; pBL6/mCherry; and pRS426 TEF/mCherry. A full list of all plasmids used in this study, along with their vector maps, can be found on the Addgene site for the Fire Lab C. elegans Vector kit, or by following this link (https://media.addgene.org/cms/filer_public/78/57/78573fd2-a987-42d3-9cda-ba073439cdd8/fire-lab-c-elegans-vector-kit-datasheets-and-maps-addgene.pdf).</p> <p>No intentional modifications will be made to any of the nucleic acid sequences used in this study. It is possible that unintended modifications are made within the C. elegans nematode as they are living organisms, however all agents and nucleic acid materials used in this study will be destroyed at the end of each experiment to prevent any unintended modifications from spreading or recurring. No host/vector systems will be employed in this study. The experimental manipulations in this study include working with animals (nematodes), culturing of bacterial species, culturing of fungal species, working with nanoparticles, administration of agents to animals (nematodes), and use of recombinant or synthetic nucleic acids. The proposed biosafety level of this experiment is Biosafety Level 2.</p>
NIH Guidelines Section	III-D-4-a, III-D-4-b, III-D2, III-D4, III-F2, III-F3, III-F6
Risk Assessment and Discussion	<p>Risk Assessment: Animals with biohazards (non-vertebrate species), generation of splashes possible, sprays or aerosols from centrifugation possible, use of nanoparticles</p> <p>Discussion: No additional discussion was held regarding the hazardous procedures.</p>
Training	All personnel listed on this application have completed the minimum required lab safety training courses, including Lab Chemical safety, Bloodborne Pathogens training, and Laboratory Biosafety training. Additionally, all personnel have documented in-lab training for specific procedures that are carried out in each individual lab.
Additional Training	No additional training was outlined for this protocol.

Project Overview	<p>The study investigates the role of the cell surface of <i>Serratia</i> species in biofilm formation and susceptibility to hydrophobic antibiotics and biocides. Cell surface hydrophobicity and outer membrane exclusion are likely crucial factors in both processes. The gram-negative bacteria studied will be members of the genus <i>Serratia</i> (<i>S. entomophila</i>, <i>S. ficaria</i>, <i>S. grimesii</i>, <i>S. liquefaciens</i>, <i>S. marcescens</i>, <i>S. odorifera</i>, <i>S. plymuthica</i>, <i>S. proteamaculans</i>, <i>S. quinivorans</i>, <i>S. rubidaea</i>), part of the order Enterobacterales, all of which are human or environmental isolates from ATCC or laboratory collections. Other microorganisms, including strains of <i>Escherichia coli</i>, <i>Pseudomonas aeruginosa</i>, and <i>Pasteurella multocida</i> will serve as controls for the experiments. Some of the control microorganisms were acquired because they were modified from wild-type strains in order to act as models for antibiotic resistance. Each of these organisms, except for the <i>E. coli</i> strains used, are opportunistic pathogens and both <i>Serratia</i> spp. and <i>P. aeruginosa</i> are constitutively resistant to many antibiotics but are susceptible to inactivation in the lab. Experimental work will take place in a BSL2 laboratory, following OSU-CHS safety protocols. Experimental protocols will not involve genetic modifications but will involve extraction of RNA from treated cells and testing gene expression with RT-qPCR, while others will involve analysis of growth and biofilm production. This research project will help to elucidate crucial mechanisms of biofilm formation and antimicrobial resistance in the genus <i>Serratia</i>.</p>
NIH Guidelines Section	No NIH Guidelines Sections apply to this study at this time.
Risk Assessment and Discussion	<p>Risk Assessment: Generation of Splashes, Sprays of Aerosols from Centrifugation</p> <p>Discussion: No additional discussion was held regarding the hazardous procedures for this application.</p>
Training	All personnel listed on this application have completed the minimum required lab safety training courses, including Lab Chemical safety, Bloodborne Pathogens training, and Laboratory Biosafety training. Additionally, all personnel have documented in-lab training for specific procedures that are carried out in each individual lab.
Additional Training	No additional training was noted by the Biosafety Committee for this application.

IBC Training	At this meeting, Kadin Falkensten gave a brief review and reminder of what types of activities are covered by the IBC, and which activities are not.
Public Comments	No public comments were recorded at this meeting.
Adjournment	The IBC Chair moved to adjourn the meeting at 10:49am. The next IBC meeting is scheduled for Thursday, March 19 2026.