



ADA Forsyth Institutional Biosafety Committee

Meeting Minutes July 13, 2026

LOCATION: Hybrid Meeting; Microsoft Teams & Momentum Conference Room
ADA Forsyth Institute
100 Chestnut Street
Somerville, MA 02143

Call to order @ 1:03PM

Present: Song He, PhD (Chair), Kathy Eklund, MHP, Jessica Mark Welch, PhD, Jing Zhou, PhD, Batbileg Bor, PhD, Candace Dunlap, MS (Community Member), Slawek Antoszczyk, PhD (Community Member), Susan Yost, MS (Scientist, not affiliated), Debra November-Rider, MS (Administrator)

Quorum present: 8

A. Approval of Meeting Minutes

Vote to accept the Minutes, June 24, 2024

Total: 8

In Favor: 8

Opposed: 0

Abstained: 0

B. Announcements

1. New members
2. Facility
3. Permits/Registrations
4. Federal Funding
 - a. <https://forsyth.org/nidcr-2025-rankings-ada-forsyth/>
5. Massachusetts Economic Impact Award
 - a. <https://forsyth.org/gold-award-massecon-gillette-stadium-celebration/>
6. Student Scholars Summer Program
 - a. <https://forsyth.org/forsyth-student-scholars-summer-program/>
7. Updated IBC Manual of Procedures – April 2026

8. ADA IBC website <https://forsyth.org/institutional-biosafety-committee/>

C. Protocol Review 1 of 2

Protocol Title: Lentiviral ESR1 Overexpression in Human Gingival Fibroblasts to Study Estrogen-Responsive Inflammatory Signaling

PI: Nil Yakar Yilmaz, PhD

Protocol Summary: This protocol will use commercially prepared, self-inactivating lentiviral particles to introduce either the human estrogen receptor-alpha gene (ESR1) or a fluorescent control marker into human gingival fibroblasts grown in culture. These cells will be used to study how estrogen signaling changes inflammatory responses in gingival connective-tissue cells. The work is limited to cell culture.

RISK ASSESSMENT

	Description	Not Applicable
Agent Characteristics	Commercially produced recombinant lentiviral particles for in vitro mammalian gene expression. The particles are self-inactivating and replication-incompetent; replication genes are deleted from the viral genome.	
Type of manipulations planned	Receipt and -80C storage; thawing on ice; dilution in culture medium; transduction of HGF-1 and/or commercially sourced primary human gingival fibroblasts; removal/inactivation of	

	virus-containing medium; culture, puromycin selection as needed, and expansion of transduced cells; fluorescence monitoring in closed plates; TNF-α/estrogen/fulvestrant stimulation; collection of cell lysates for RT-qPCR and related molecular assays; decontamination and waste disposal. No viral packaging, concentration, ultracentrifugation, animal injection, or human-subject use will be performed.	
Source of the inserted DNA Sequences	Human ESR1 cDNA, NM_001291230.2, in VectorBuilder vector pLV[Exp]-EGFP/Puro-EF1A>hESR1. Control vector: pLV[Exp]EGFP/Puro-EF1A>mCherry.	
Nature of the inserted DNA sequences	hESR1 encodes human estrogen receptor-α, a ligand-activated nuclear receptor/transcription factor. EGFP:T2A:Puro permits fluorescence tracking and puromycin selection in the ESR1 vector. mCherry is a fluorescent reporter control. The inserted sequences do not encode select agents, biological toxins, antibiotic resistance intended for clinical use, or infectious viral proteins.	
Host(s) and Vector(s) to be used	Host cells: HGF-1 and/or primary human gingival fibroblasts. Vectors: VectorBuilder	

	pLV[Exp]-EGFP/Puro EF1A>hESR1[NM_001291230.2] and pLV[Exp]-EGFP/Puro-EF1A>mCherry control lentivirus.	
Will an attempt be made to obtain expression of a foreign gene and protein produced?	Yes. hESR1/ERα will be expressed in transduced fibroblasts. EGFP/Puro marker will be expressed from the hESR1 vector; mCherry will be expressed from the control vector.	
Containment conditions to be implemented	BSL-2 containment. All open lentivirus work will be performed in a certified Class II BSC in Room 4123 by trained personnel. PPE will include lab coat/gown, gloves, double gloves for open lentiviral work, safety glasses/eye protection, and surgical mask when splash risk exists. Viral stocks and live-virus plates/tubes will be transported in labeled, sealed, leakproof secondary containers. Centrifugation will use sealed tubes/appropriate containment, with tubes opened in the BSC. Closed plates may be imaged without opening at the	

	microscope, with Parafilm sealing/secondary containment as appropriate. Liquid waste will be treated with at least final 10% bleach for the required institutional contact time before disposal; solid waste will enter the approved biohazardous waste stream. Sharps will be avoided.	
Selection of the NIH Guidelines applicable to the proposed work	NIH Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules apply because the work involves recombinant lentiviral vectors and human cells containing recombinant nucleic acid sequences. The work is consistent with institutional IBC review for defective/self-inactivating lentiviral vectors used without helper virus and recombinant host-vector systems.	

BIOSAFETY LEVEL: BSL 2

Vote to approve Biosafety Level (BSL2):

Total: 8

In Favor: 8

Opposed: 0

Abstained: 0

QUESTIONS/COMMENTS:

1. Section I, #4: Abstract – update surface disinfection with “Work surfaces will be disinfected after procedures using 10% bleach or (not and) 70% ethanol”.
2. Section IV, #4: should be number 3; update numbering.
3. Section IV, #7: Decontamination and Waste: need to edit the following:
 - a. First, must clean surfaces and then disinfect. Work surfaces will be disinfected after procedures using 10% bleach or 70% ethanol (not both).
4. Section V: Decontamination, Waste and Disposal Procedures
 - a. Autoclavation of materials (pg. 9): uncheck box. Biohazard materials no longer are autoclaved first. Follow the AFI protocol for the disposal of non-sharp biohazardous waste. Use the designated biowaste plastic bags to contain the waste. Place the bagged biohazard waste into the designated biohazard waste boxes. The filled biohazard waste boxes will be transported by the AFI licensed waste hauler and will be incinerated for final disposal
5. Section VII, #23: Personnel and Training
 - a. Please confirm and send Philip Trackman, PhD, CITI Biosafety Training Completion Report/Certificate if he is in the lab. If he isn't, please state it on the protocol form.
6. Section VIII, #24: Occupational Health
 - a. Please confirm and send Philip Trackman, PhD, CITI Biosafety Training Completion Report/Certificate if he is in the lab. If he isn't, please state it on the protocol form.
7. Section IX: Principal Investigator Assurances
 - a. Please submit proof of Biosafety Training for Philip Trackman, PhD if he is doing laboratory work. If he isn't, state it on the protocol form.

Vote to accept protocol with revisions*

Total: 8

In Favor: 8

Opposed: 0

Abstained: 0

**Resubmission will be made offline; review by the Chair and/or other IBC members.*

D. Protocol Review 2 of 2

Protocol title: Local AAV-Mediated Esr1 Silencing in Mouse Periodontal Tissues

PI: Nil Yakar Yilmaz, PhD

Summary: The purpose is to test whether local reduction of ER α signaling in gingival/periodontal tissues changes inflammatory responses and alveolar bone loss in a mouse periodontitis model. The work involves recombinant viral vector material and AAV-treated mice.

RISK ASSESSMENT

	Description	Not Applicable
Agent Characteristics	Commercially produced, ultra-purified recombinant adeno-associated virus serotype 2 (AAV2) particles for mammalian shRNA knockdown. The package includes three AAV2 vectors carrying U6-driven mouse Esr1-targeting shRNAs and one matched scramble shRNA control. All vectors carry CAG-driven mCherry reporter. Each AAV2 virus at $>10^{13}$ GC/mL, 4 x 25 μ L, recommended for cell culture and in vivo applications. The vector maps list vector size 6488 bp and packaged viral genome size 3349 bp.	
Type of manipulations planned	Receipt of commercially prepared AAV2 stocks on dry ice; storage at -80°C in labeled secondary containment; thawing on ice; dilution/aliquoting; loading microliter syringes in a certified Class II BSC; transport in sealed secondary containment to animal procedure area; gingival injection into anesthetized mice; post-injection animal housing; ligature-induced periodontitis procedures; euthanasia and harvest of maxillae. Fixation, decalcification and histological assessment, RT-qPCR assays, micro-CT, and flow cytometry; decontamination and waste disposal.	

Source of the inserted DNA Sequences	Mouse Esr1-targeting shRNA sequences designed and provided by VectorBuilder: mEsr1 shRNA#1 target sequence: CCCATGATCTATTCTGAATAT mEsr1 shRNA#2 target sequence: CCGCCTTCTACAGGTCTAATT mEsr1 shRNA#3 target sequence: CGTGTCATGTATGCAGTTATT Scramble control shRNA target sequence: CCTAAGGTTAAGTCGCCCTCG Other vector components include AAV2 ITRs, human U6 promoter, Pol III terminator, CAG promoter, mCherry reporter sequence, and SV40 late polyadenylation signal. Bacterial plasmid backbone elements include ampicillin resistance and pUC origin, but these are not part of the packaged 3349-bp AAV genome.	
Nature of the inserted DNA sequences	The Esr1 shRNA sequences are designed to reduce endogenous mouse Esr1 mRNA expression. The scramble shRNA is a non-targeting control with no intended target in human or mouse. mCherry encodes a red fluorescent reporter protein used to track vector localization.	
Host(s) and Vector(s) to be used	Host animals: C57BL/6J mice, or other IACUC-approved mouse strain if later specified by the animal protocol. Vectors: 1. pAAV[shRNA]-CAG>mCherry-U6>mEsr1[shRNA#1], Vector ID VB260624-1648vgu 2. pAAV[shRNA]-CAG>mCherry-U6>mEsr1[shRNA#2], Vector ID VB260624-1649ufa 3. pAAV[shRNA]-CAG>mCherry-U6>mEsr1[shRNA#3], Vector ID VB260624-1650egt 4. pAAV[shRNA]-CAG>mCherry-U6>Scramble shRNA, Vector ID VB010000-9496yha	
Will an attempt be made to obtain expression of a foreign gene and	Yes. The AAV vectors will express mCherry, a red fluorescent reporter protein, from the CAG promoter. The vectors will also express U6-driven	

protein produced?	shRNA sequences targeting mouse Esr1 or a non-targeting scramble sequence.	
Containment conditions to be implemented	BSL-2 laboratory practices will be used for receipt, storage, thawing, dilution, aliquoting, syringe loading, and open handling of recombinant AAV2 material. Open AAV handling will be performed in a certified Class II biosafety cabinet by trained personnel. PPE will include lab coat/gown, gloves, double gloves for open AAV work and syringe preparation, safety glasses/eye protection, and surgical mask when splash risk exists. Viral stocks and loaded syringes will be transported in labeled, sealed, leak-proof secondary containers. AAV-treated animals will be housed and handled under ABSL-2 or other IBC/vivarium-assigned animal biosafety procedures. Fresh tissues/cells from AAV-treated animals will be considered potentially biohazardous until fixed, chemically lysed, or otherwise inactivated. Liquid waste will be treated with freshly prepared bleach to at least 10% final concentration for the required institutional contact time before disposal. Solid waste will enter the approved biohazardous waste stream. Animal carcasses, tissues, and surgical specimens will be returned to the animal facility for disposal. Sharps will be discarded immediately in puncture-resistant, leak-proof, labeled red sharps containers.	
Selection of the NIH Guidelines applicable to the proposed work	NIH Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules apply because the work uses recombinant AAV vectors carrying recombinant/synthetic shRNA and reporter sequences and involves administration of recombinant viral vectors to whole animals. The work is non-exempt and requires IBC review. The work is consistent with NIH Guidelines provisions for recombinant/synthetic nucleic acid molecules and whole-animal experiments involving recombinant viral vectors.	

Biosafety Level: BSL2

Vote to approve Biosafety Level (BSL2):

Total: 8

In Favor: 8

Opposed: 0

Abstained: 0

Questions/Comments:

1. Section III, 11: Please provide explanation why the Risk Group is 1 and not RG 2?
2. Section IV, 17: First, must clean surfaces and then disinfect. Work surfaces will be disinfected after procedures using 10% bleach **or** 70% ethanol.
3. Section VII: Personnel and Training - Please confirm and send Philip Trackman's CITI Biosafety Training Completion Report/Certificate if he is in the lab. If he isn't, please state it on the protocol form.
4. Section VIII: Occupational Health - Please confirm and send Philip Trackman's CITI Biosafety Training Completion Report/Certificate if he is in the lab. If he isn't, please state it on the protocol form.
5. Section IX: Principal Investigator Assurances - Please submit proof of Biosafety Training for Philip Trackman's if he is doing laboratory work. If he isn't, state it on the protocol form.

Vote to accept protocol with revisions*

Total: 8

In Favor: 8

Opposed: 0

Abstained: 0

**Resubmission will be made offline by the Chair and/or other IBC members.*

5. General Lab Biosafety Topics (policies, incidents or near misses)

General Lab Biosafety Topics	Summary & Date
Policies	No new policies
Policy Amendments	No new policy amendments
Incidents	No incidents
Near Misses	No near misses
Other: Updated IBC Manual of Procedures	Version 2.0; April 2, 2026

Vote to accept General Lab Biosafety Topics

Total: 8

In Favor: 8

Opposed: 0

Abstained: 0

6. Safety Committee Summary Report – No safety issues were reported

7. New Business or other IBC Member Comments - None

The meeting adjourned at 1:55 PM.