Cal Poly Humboldt.

EH&S
Ext. 3302
SBS 311

EH&S Use Only	
BUA#	BSL
☐ Approval date: ☐ Approval Pending ☐ Not Approved	
Expiration date:	
Biosafety Officer:	Date:

Biological Use Authorization Application

Section 1 – Application Type

☐ New application
☐ Renewal BUA#

Section 2 – Contact Information

Principal Investigator		Department	
Email		Phone ext.	
Co-PI		Department	
Email		Phone ext.	
Alternate Contact		Department	
Email		Phone ext.	

Section 3 – Personnel

Name	Job title	Campus Ext.	Date of most recent training on Biosafety and/or Bloodborne Pathogens

Section 4 – Work and Storage Locations

Building	Room #	Work	Storage	Shared

Section 5 – Project Description

Part 5A – Project Objectives

Provide a brief summary of the goals of the proposed research.

Part 5B – Experimental Procedures

Describe the experimental procedures used in the project.

Section 6 – Experiments Covered by the NIH Guidelines

Check all that apply.

For further information, see the NIH Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules at http://osp.od.nih.gov/sites/default/files/NIH_Guidelines.pdf

IBC approval, RAC review, NIH Director approval:

☐ A 1 Deliberate transfer of drug resistance into microorganisms

NIH/OBA and IBC approval:

☐ B 1 Cloning of toxic molecules, LD_{50} < 100 ng/kg

IBC, IRB approvals and RAC Review:

☐ C 1 Work with human research participants

IBC approval prior to initiation:

☐ D 1 Experiments with pathogenic agents as host-vector systems

☐ D 2 Cloning DNA from pathogenic agents into nonpathogenic or lower eukaryotic host-vector systems

☐ D 3 Use of infectious virus, or defective viruses in the presence of helper virus, in tissue culture systems

☐ D 4 Experiments involving recombinant DNA in whole animals

☐ D 5 Experiments involving recombinant DNA in whole plants

☐ D 6 Large scale (>10 liters) cell culture

☐ D 7 Experiments with influenza viruses

IBC notice simultaneous with initiation:

☐ E 1 Work with < 2/3 of eukaryotic viral genome

☐ E 2 Transgenic plants containable at biosafety level 1

☐ E 3 Transgenic rodents containable at animal biosafety level 1

Experiments Also Reviewed by the IBC:

☐ Use of human and/or primate cell lines and tissues
☐ Use of human pathogens
☐ Use of toxins with an LD_{50} ≤ 100 µg/kg body weight

Section 7 – Recombinant DNA and Biological Materials

Part 7A – Gene, Vector and Host Information

☐ This project does not involve work with recombinant DNA. Go to Part 7B.

Gene List

Add rows as necessary.

Gene name	Gene function	Source organism	Vendor/source of material
If the gene products pose a known or likely hazard to lab personnel, then provide additional information below.			

Vector List

List the vectors used for the genes given above.

For viral vectors, provide information on their replication competency and tropism, including whether the vector is capable of infecting human cells.

Host List

State the name or genus species for the host cell type(s).

Part 7B – Animal Experimentation

☐ The project does not involve whole animal experimentation as covered by the NIH Guidelines or the introduction of biological agents into animals. Go to Part 7C.

☐ The project is associated with an Institutional Animal Care and Use Committee protocol application.
IACUC Protocol number:

☐ The project involves the use of transgenic animals which were created at another institution. (Attach MTA)
Rodent ☐ If yes, can they be housed as BSL1? Yes ☐ No ☐
Other ☐ Please specify:

☐ The project involves the creation of transgenic animals.
Rodent ☐ Other ☐

☐ The project involves breeding of transgenic animals.
Rodent ☐ Other ☐ Please specify

☐ The project involves the modification of somatic cells of non-transgenic animals
Specify:

Part 7C – Infectious Agents: Bacteria, Rickettsia, Fungi, Parasites, Prions and Viruses

☐ This project does not involve work with infectious agents. Go to Part 7D.

Agent name	Type of infectious agent	Normal route of transmission	BSL	Introduced into animals

How did you verify BSL? Provide documentation or rationale:

Provide information on the pathogen's resistance patterns, if known.

Part 7D – Human/Primate Cell Lines and Tissues

☐ The project does not involve work with human/primate cell cultures or tissues. Go to Part 7E.
☐ Human Subjects Committee IRB approval
☐ Embryonic Stem Cell Research Oversight IRB approval

Material name	Description	Vendor	Introduced into animals
Are the cell types listed above screened for any bloodborne pathogens? Summarize below.			

Part 7E – Toxins

☐ The project does not involve work with toxins having an LD_{50} ≤ 100 µg/kg body weight. Go to Part 7F.

Toxin name:
Source of toxin:
Maximum amount of toxin to be stored:
LD_{50} value:
Additional information:

Part 7F – Work Involving > 10 Liters of Cell Culture

☐ The project does not involve volumes greater than 10 liters. Go to Part 8.

Rationale for large scale cell culture:

Section 8 – Risk Containment

Section 8A - Engineering Controls

Check all engineered safety equipment used for this project.

☐ Biological safety cabinet(s)

	Building	Room	Class	Type	Certification date	Vacuum line protection
1						☐ HEPA filter ☐ Secondary flask
2						☐ HEPA filter ☐ Secondary flask
3						☐ HEPA filter ☐ Secondary flask

☐ Biohazardous sharps waste containers
☐ Other:

Section 8B – Safe Work Practices

Safety procedures used for this project:

- Wash hands after work, after removing gloves and before leaving the laboratory
- Perform all procedures in a manner that minimizes splashes and aerosols
- Perform procedures that may generate an infectious aerosol in a biosafety cabinet
- Use a mechanical pipetting devices at all times
- Disinfect work area and lab equipment daily and after use (as detailed in Section 9 below)
- Transport biological agents between buildings inside rigid, leak-proof, double container systems
- Employ universal precautions when handling human and nonhuman primate tissues
- Restrict access to shared spaces during experimental procedures involving potentially infectious materials
- Post appropriate warning signs to entryways of shared spaces immediately prior to and for the duration of all such experiments
- Do not bend, break, shear or remove needles from disposable syringes
- Place the sharps waste container as near the point of use as appropriate for immediate disposal
- Other:

Section 8C – Personal Protective Equipment

Check all personal protective equipment to be used.

- ☐ Latex/nitrile gloves
- ☐ Lab coat
- ☐ Other:
- ☐ Goggles/face shield for biohazardous liquid handling outside of a biosafety cabinet

Section 9 – Disinfection and Sterilization

Part 9A – Spill Response

Disinfectant:

For spills contained inside of a biosafety cabinet, keep the cabinet blower on.
Replace any contaminated personal protective equipment.
Obtain or prepare a fresh solution of disinfectant.
Cover the spill with paper towels to prevent aerosols and splashing, and apply disinfectant to the area.
Wait out 10 minutes.
Use paper towels to absorb the spill, working from the outside in.
Use tongs to collect the paper towels if sharps are involved.
Bag the clean-up materials as solid waste, discard the gloves and wash your hands thoroughly.

For larger spills outside of a biosafety cabinet, notify colleagues and vacate the premises for 30 minutes to allow aerosols to settle.
Post a sign at the door warning of the spill and advising of the proper re-entry time.
Before or upon re-entry, don clean personal protective equipment and proceed as described above.

Part 9B – Liquid Waste Disinfection and Disposal

Provide a brief description of the type of liquid waste generated, the type and dilution or concentration of disinfectant, contact time and procedure.

Part 9C – Surface and Equipment Decontamination

Specify the type and dilution or concentration of disinfectant(s), contact time(s) and procedure(s) used and provide a list of the equipment included in routine decontamination and disinfection.

Part 9D – Solid Waste Disinfection and Disposal

Indicate the methods(s) used to disinfect and dispose of solid waste.

- ☐ Biohazard bag and autoclave, minimum 121˚C and 15 psi for 30 minutes
- ☐ Biohazard bag taken away by a commercial service, e.g. eco medical
- ☐ Biohazardous sharps disposal per University guidelines
- ☐ Other:

Part 9E – Pathological Waste Storage and Disposal

Indicate the methods(s) used to store and dispose of pathological waste or animal carcasses).

- ☐ Biohazard bag and autoclave prior to disposal, minimum 121˚C and 15 psi for 30 minutes
- ☐ Animal carcasses to be stored in approved freezers until pick up by licensed commercial medical waste hauler (i.e., eco medical Inc.)
- ☐ Other:

Section 10 – Medical Surveillance and Incident Protocol

- ☐ Information is on file in the lab to provide to healthcare providers in the event of an exposure
- ☐ Other:

Summary of the main accidents that are reportable to EH&S:

Symptoms of exposure from the agents used:

Describe post exposure procedure:

Section 11 – Additional information may be provided to the IBC in the space below.

Section 12 – Application Certification

Part 12A – Principal Investigator's Certification

By signing below, I certify that I have read the following statements and that I am responsible for their enforcement. As the Principal Investigator, I will

(1) Ensure that all personnel on the proposed project will have received relevant training and are aware of the potential biohazards, appropriate precautions, health surveillance practices and emergency procedures.

(2) Report to EH&S any research-related illness or accident within 24 hours after the occurrence.

(3) Submit in writing any significant modifications made to the construction of recombinant DNA, protocols, personnel or facility.

(4) Read and understand the responsibilities of the Principal Investigator as outlined in the current *NIH Guidelines for Research Involving Recombinant DNA*. I agree to comply with these and all Institutional policies and procedures, including those relating to the handling, transferring, and shipping of infectious agents and recombinant DNA.

Principal Investigator signature _____ Date _____

Co-Investigator signature _____ Date _____

Department chair signature _____ Date _____

Part 12B – Researcher Training on BUA Application

Personnel listed in Section 3 shall print, date and sign their name below after the application has been approved by the HSU Biosafety Committee and after they have been trained on the protocols and safety procedures outlined in this application. A copy of the signed page shall be mailed to the campus biosafety officer, SBS 316.

Printed name	Signature	Date