**Biological Use Authorization Application**

**Required for Biological Use Authorization from the Institutional Biosafety Committee**

|  |
| --- |
| This application is for new research projects and renewals of research projects that involve biohazards and therefore require Biological Use Authorization (BUA) from the Institutional Biosafety Committee (IBC). More information about this application and the review process is available on the [EH&S website](https://www.ehs.washington.edu/biological/biological-research-approval).1. Complete all questions of this BUA Application as they apply to your research project. Fields will expand as needed. Links to [Frequently Asked Questions (FAQs)](http://www.ehs.washington.edu/biological-use-authorization-bua-application-faqs), as well as links to reference and supplemental documents, are provided throughout the application. The online [EH&S Biosafety Training](https://www.ehs.washington.edu/training/biosafety-training-online) and the [UW Biosafety Manual](https://www.ehs.washington.edu/resource/biosafety-manual-4) will assist you in completing this application.
2. Submit your completed application and supplemental documents to EH&S Research and Occupational Safety. Incomplete applications may be returned to you. Electronic submissions are preferred.

**EH&S Research and Occupational Safety****ehsbio@uw.edu** **· box 357165 · phone 206.221.7770 · fax 206.221.3068** |

**General Project Information**

[See FAQ](http://www.ehs.washington.edu/biological-use-authorization-bua-application-faqs)

|  |  |  |
| --- | --- | --- |
| **Date Submitted**       |  |  |
| **Type** | [ ]  New | **Project Title**       | *Check here if the title has changed* [ ]  |
| **[ ]** Renewal: BUA#     -   -    |
|  | **Name** | **Daytime Phone** | **Email** | **UW NetID** | **Advanced Degree(s)** | **Box** |
| **Principal Investigator** |       |    .   .     |       |       |       |       |
| **Lab Contact** if different than PI |       |    .   .     |       |       |       |       |
| **PI’s Emergency Contact Number:**       | Please provide a pager, cell phone, or home phone number. Do not list your daytime office line. Will only be used by EH&S, UWPD, or Comp. Med. in case of emergencies. |
| **Department**       | **Division** if applicable       |
| [**IACUC Protocol Number**](http://www.ehs.washington.edu/biological-use-authorization-bua-application-faqs#GP3)  |     -    | [**Human Subjects Division Number(s)**](http://www.ehs.washington.edu/biological-use-authorization-bua-application-faqs#GP4)      |
| **Anticipated Start Date:**       | **Funding Source(s)**       | **eGC-1 Number(s)**       |
| **[ ]** Yes**[ ]** No  | Does the funding sponsor require UW EH&S review prior to submission to the sponsor? If yes, provide deadline:       |
| **[ ]** Yes**[ ]** No  | Do you have or need permits for this project (e.g., [USDA-APHIS](https://www.aphis.usda.gov/aphis/resources/permits), [CDC](https://www.cdc.gov/cpr/ipp/))? If yes, specify and submit permit with this application:       |

**Research Description**

1. Provide a short description of the overall goals of the research using laymen’s terms.

[See FAQ.](http://www.ehs.washington.edu/biological-use-authorization-bua-application-faqs#RD1)

1. Provide a description of the various laboratory procedures involving biohazardous agents, including all work with recombinant or synthetic DNA/RNA. [See FAQ.](http://www.ehs.washington.edu/biological-use-authorization-bua-application-faqs#RD2)
2. Provide a declaration of what you consider to be the element(s) of your research that constitutes the greatest **biohazardous** risk to laboratory personnel. [See FAQ.](http://www.ehs.washington.edu/biological-use-authorization-bua-application-faqs#RD5)

**Hazard Identification**

|  |
| --- |
| **Transgenic Plants**Does this project involve the following?  |
|  | Yes | No |  |
|  | [ ]  | [ ]  | Transgenic plants. If yes, describe (provide genus, species):       |
|  |  |  | Yes | No |  |
|  |  | a. | [ ]  | [ ]  | [Invasive species or noxious weeds](http://www.nwcb.wa.gov/). If yes, describe:       |
|  |  | b. | [ ]  | [ ]  | Can the transgenic plants survive in the immediate geographic area? If yes, describe:       |
|  |  | c. | [ ]  | [ ]  | Can the transgenic plants interbreed with regional native species or noxious weeds? If yes, describe:       |
|  |  | d. | [ ]  | [ ]  | Will any of your work involve plant pathogens? If yes, describe:       |
|  | [ ]  | [ ]  | Harvest of or work with seeds and/or spores from transgenic plants. If yes, provide genus and species:       |
|  | [ ]  | [ ]  | Use of transgenic plants in the UW Botany Greenhouse. If yes, describe:       |
|  | [ ]  | [ ]  | Use of transgenic plants in the field. If yes describe:       |
|  |
| **Contact with Animals**If yes, list species. |
|  | Yes | No |  |
|  | [ ]  | [ ]  | Vertebrate animals:       |
|  | [ ]  | [ ]  | Invertebrate animals:       |
| **Tissue, Blood, and Body Fluids**If yes, list type and source. |
|  | Yes | No |  |
|  | [ ]  | [ ]  | Human:       |
|  | [ ]  | [ ]  | Non-human primate:       |
|  | [ ]  | [ ]  | Other animals:       |
|  | [ ]  | [ ]  | Are tissues or cells transplanted between species? If yes, describe:       |
| **Culture of Primary Cells or Cell Lines**If yes, list type and source. [See FAQs.](http://www.ehs.washington.edu/biological-use-authorization-bua-application-faqs#CC1) |
|  | Yes | No |  |
|  | [ ]  | [ ]  | Human:       |
|  |  | Yes | No |  |
|  |  | [ ]  | [ ]  | Human embryonic stem cells (hESCs) |
|  |  | [ ]  | [ ]  | Use of human induced pluripotent stem cells (iPSCs). |
|  |  | [ ]  | [ ]  | Generation of human induced pluripotent stem cells (iPSCs). If yes, describe the method used:      If yes to b or c, complete the Recombinant and Synthetic DNA and RNA section. |
|  | [ ]  | [ ]  | Non-human primate:       |
|  | [ ]  | [ ]  | Other animals (mice, canines, etc.):       |

|  |
| --- |
| **Bloodborne Pathogens** [See FAQs.](http://www.ehs.washington.edu/biological-use-authorization-bua-application-faqs#bbp1) |
|  | Yes | No |  |
|  | [ ]  | [ ]  | This project involves working with bloodborne pathogens or drawing, processing, working with, or storing human blood, tissue, cells, cell lines, or body fluids visibly contaminated with blood or other potentially infectious materials (OPIM). See [list of OPIM](http://www.ehs.washington.edu/biological/bloodborne-pathogens-bbp-program). If yes, the [Washington State Bloodborne Pathogens (BBP) Rule](http://app.leg.wa.gov/wac/default.aspx?Cite=296-823) applies. [BBP program](http://www.ehs.washington.edu/biological/bloodborne-pathogens-bbp-program) requirements include completion of the following. 1. Annual [Bloodborne Pathogens for Researchers Training](https://www.ehs.washington.edu/training/bloodborne-pathogens-researchers-online)
2. [Site-specific BBP Exposure Control Plan](http://www.ehs.washington.edu/system/files/resources/bbpecp.docx): **Submit with this application.**
 |

|  |
| --- |
| **Bacteria, Viruses, Yeasts, Fungi, Parasites, and Prions**This section does not need to be completed for viral vectors, which should be described in question 36 (Gene Delivery Methods Table). |
|  | Yes | No |  |
|  | [ ]  | [ ]  | This project involves research with bacteria, viruses, yeasts, fungi, parasites, and/or prions. If yes, fill out the table below. If no, move to the next question. |

|  |
| --- |
| 1. **Microorganism Table** [See FAQs.](https://www.ehs.washington.edu/biological-use-authorization-bua-application-faqs#MG1)
 |
| **a.** **Genus & Species** | **b.**[**Risk Group**](https://my.absa.org/tiki-index.php?page=Riskgroups) | **c.****Recombinant?** | **d.** **Administered to cells?** **(specify species)** | **e.****Administered to animals or plants?** **(specify species)** |
| *Pseudomonas aeruginosa***EXAMPLE**  | *[ ]  Risk Group 1**[x]  Risk Group 2**[ ]  Risk Group 3* | *[x]  yes [ ]  no* | *[x]  yes: human cells**[ ]  no* | *[x]  yes, wild type: mice* *[ ]  yes, transgenic:* *[ ]  no* |
|       | [ ]  Risk Group 1[ ]  Risk Group 2[ ]  Risk Group 3 | [ ]  yes [ ]  no | [ ]  yes:      [ ]  no | [ ]  yes, wild type:      [ ]  yes, transgenic:      [ ]  no |
|       | [ ]  Risk Group 1[ ]  Risk Group 2[ ]  Risk Group 3 | [ ]  yes [ ]  no | [ ]  yes:      [ ]  no | [ ]  yes, wild type:      [ ]  yes, transgenic:      [ ]  no |
|       | [ ]  Risk Group 1[ ]  Risk Group 2[ ]  Risk Group 3 | [ ]  yes [ ]  no | [ ]  yes:      [ ]  no | [ ]  yes, wild type:      [ ]  yes, transgenic:      [ ]  no |
|       | [ ]  Risk Group 1[ ]  Risk Group 2[ ]  Risk Group 3 | [ ]  yes [ ]  no | [ ]  yes:      [ ]  no | [ ]  yes, wild type:      [ ]  yes, transgenic:      [ ]  no |
|       | [ ]  Risk Group 1[ ]  Risk Group 2[ ]  Risk Group 3 | [ ]  yes [ ]  no | [ ]  yes:      [ ]  no | [ ]  yes, wild type:      [ ]  yes, transgenic:      [ ]  no |
|       | [ ]  Risk Group 1[ ]  Risk Group 2[ ]  Risk Group 3 | [ ]  yes [ ]  no | [ ]  yes:      [ ]  no | [ ]  yes, wild type:      [ ]  yes, transgenic:      [ ]  no |
|       | [ ]  Risk Group 1[ ]  Risk Group 2[ ]  Risk Group 3 | [ ]  yes [ ]  no | [ ]  yes:      [ ]  no | [ ]  yes, wild type:      [ ]  yes, transgenic:      [ ]  no |
|       | [ ]  Risk Group 1[ ]  Risk Group 2[ ]  Risk Group 3 | [ ]  yes [ ]  no | [ ]  yes:      [ ]  no | [ ]  yes, wild type:      [ ]  yes, transgenic:      [ ]  no |
|       | [ ]  Risk Group 1[ ]  Risk Group 2[ ]  Risk Group 3 | [ ]  yes [ ]  no | [ ]  yes:      [ ]  no | [ ]  yes, wild type:      [ ]  yes, transgenic:      [ ]  no |
|       | [ ]  Risk Group 1[ ]  Risk Group 2[ ]  Risk Group 3 | [ ]  yes [ ]  no | [ ]  yes:      [ ]  no | [ ]  yes, wild type:      [ ]  yes, transgenic:      [ ]  no |
| If you need additional spaces, fill out the [Microorganism Table Supplemental](http://www.ehs.washington.edu/resource/microorganism-table-supplemental-biological-use-authorization-bua-application-706). |

|  |
| --- |
| **Select Agents**The Federal Select Agent Program oversees the possession, use and transfer of biological select agents and toxins, which have the potential to pose a severe threat to public health or to animal or plant products. |
|  | Yes | No |  |
|  | [ ]  | [ ]  | Will this project involve any Select Agents, **including exempt or attenuated strains**?If yes, complete questions 21 and 22.For a complete list of Select Agents, please see the [Select Agents and Toxins webpage](https://www.selectagents.gov/SelectAgentsandToxinsList.html). A subset of select agents are subject to the [Dual Use Research of Concern](https://www.ehs.washington.edu/system/files/resources/DURC.pdf) policy. |
|  | * 1. **Agent Name**

Choose from dropdown list | * 1. **Strain Information**

Describe the strain information and/or any genetic modifications made to this agent. |
|  |        |       |
|  |        |       |
|  |        |       |
|  |        |       |
|  |        |       |
|  | Will you be conducting any of the following types of experiments? |
|  |  | Yes | No |  |
|  | a. | [ ]  | [ ]  | Experiments in which a strain of bacteria will be transformed with a genomic library from a closely related bacteria? Describe.       |
|  | b. | [ ]  | [ ]  | Experiments in which a strain of bacteria will be transformed with any gene fragment that could possibly complement an attenuating mutation? Describe.       |
|  | c. | [ ]  | [ ]  | Competitive infection experiments in animals or in vitro with both wild type and attenuated strains of bacteria? Describe.       |

|  |
| --- |
| **Recombinant and Synthetic DNA and RNA** [See FAQs.](http://www.ehs.washington.edu/biological-use-authorization-bua-application-faqs#DNA1) |
|  | Yes | No |  |
|  | [ ]  | [ ]  | This project includes the use of any form of recombinant or synthetic DNA or RNA. If yes, complete the questions below. If no, proceed to question 48. |
| Does this project involve the following? |
|  | [ ]  | [ ]  | Construction and/or use of synthetic DNA/RNA (e.g., probes, DNA or RNA oligonucleotides, base-pair analogs).  |
|  | [ ]  | [ ]  | Creation of c-DNA/genomic libraries.  |
|  | [ ]  | [ ]  | DNA/RNA sequencing.  |
|  | [ ]  | [ ]  | Use of gene editing technologies (e.g., CRISPR/Cas9). If yes, describe.       |
|  | [ ]  | [ ]  | Use of recombinant or synthetic DNA/RNA in microorganisms. If yes, describe the nature of each microorganism. [See FAQ.](http://www.ehs.washington.edu/biological-use-authorization-bua-application-faqs#DNA2)       |
|  | [ ]  | [ ]  | Use of recombinant or synthetic DNA/RNA in animals (somatic cells or germ-line transgenics) including insects, nematodes, and mammals. If yes, describe what type of recombinant or synthetic DNA/RNA and in which species of animal. [See FAQ.](http://www.ehs.washington.edu/biological-use-authorization-bua-application-faqs#DNA3)       |
|  | [ ]  | [ ]  | Use of recombinant or synthetic DNA/RNA in plants (somatic cells or germ-line transgenics). If yes, describe.       |
|  | [ ]  | [ ]  | Use of recombinant or synthetic DNA/RNA in cell culture. If yes, describe and list species.       |
|  | [ ]  | [ ]  | Potential for toxic products to be produced/released from recombinant cells, animals, or plants. The definition of toxic is an agent with an LD50 of less than 100 nanograms per kilogram (ng/kg) body weight. If yes, list the toxic product(s) and how it functions.       |
|  | [ ]  | [ ]  | Potential for infectious agents to be produced/released from recombinant cells, animals, or plants. If yes, explain. [See FAQ.](http://www.ehs.washington.edu/biological-use-authorization-bua-application-faqs#DNA4)       |
|  | [ ]  | [ ]  | Environmental release or field testing of genetically engineered organisms. If yes, explain.       |
|  | This project includes research with recombinant or synthetic DNA/RNA using the following enhanced gene delivery techniques (covered under section III-E of the NIH Guidelines): |
|  | [ ]  Liposome complex | [ ]  Nanomaterial (<100 nm in length) |

If you have marked 'yes' to questions 28, 29, 30, and/or 31, complete the Gene Delivery Methods table (next page).

|  |
| --- |
| **Gene Delivery Methods Table** [See FAQs.](http://www.ehs.washington.edu/biological-use-authorization-bua-application-faqs#GD1) |
|  | List all gene delivery methods in the table below as they apply to gene transfer experiments and as they apply to the use of recombinant cells and microorganisms (engineered in your laboratory or obtained from another source). If additional spaces are needed, complete and submit the [Gene Delivery Methods Supplemental](http://www.ehs.washington.edu/resource/gene-delivery-methods-supplemental-biological-use-authorization-bua-application-705). For large numbers of genes, attach a complete list of genes. For large numbers of genes not yet identified, see question 38. If not introducing recombinant and synthetic DNA/RNA into cell culture, microorganisms, or animals, proceed to the next section. |
|  |
| 1. **Gene Delivery Method**

Choose from dropdown list | 1. [**Gene Inserts**](http://www.ehs.washington.edu/biological-use-authorization-bua-application-faqs#GD1)

**Must use common** [**RefSeq**](http://www.ncbi.nlm.nih.gov/refseq/rsg/) **gene names** | 1. [**In vitro**](http://www.ehs.washington.edu/biological-use-authorization-bua-application-faqs#GD2)

Specify cell type and activities | 1. [**In vivo**](http://www.ehs.washington.edu/biological-use-authorization-bua-application-faqs#GD3)

Specify species and activities | 1. **Source**

Choose from dropdown list |
| **EXAMPLE** | *GFP, RFP* | *[ ]* No *[ ]* Yes:*grown in human cells, PCR analysis* | *[ ]* No [ ]  Yes*:**IV injection into mice* |  |
|        |       | [ ]  No [ ]  Yes:      | [ ]  No [ ]  Yes:      |        |
|        |       | [ ]  No [ ]  Yes:      | [ ]  No [ ]  Yes:      |        |
|        |       | [ ]  No [ ]  Yes:      | [ ]  No [ ]  Yes:      |        |
|        |       | [ ]  No [ ]  Yes:      | [ ]  No [ ]  Yes:      |        |
|        |       | [ ]  No [ ]  Yes:      | [ ]  No [ ]  Yes:      |        |
|        |       | [ ]  No [ ]  Yes:      | [ ]  No [ ]  Yes:      |        |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Yes | No | N/A |  |
|  | [ ]  | [ ]  | [ ]  | Negative replication competent virus testing has been performed on the above viral vectors. See [EH&S webpage](http://www.ehs.washington.edu/resource/viral-vectors-gene-transfer-524) for viral vector testing information. If yes, submit results.       |

|  |
| --- |
| **Gene Inserts** |
| 1.
 | For research involving a large number of genes not yet identified, list the categories or general functions of the genes. [See FAQ.](http://www.ehs.washington.edu/biological-use-authorization-bua-application-faqs#GD1)       |
| Do any of the genes involved in this research influence the following (references to the *NIH Guidelines* are given)? If yes, list the agent and explain. |
|  | Yes | No |  |
|  | [ ]  | [ ]  | Release of biological toxins ([*NIH Guidelines*, Section III-B-1](https://osp.od.nih.gov/wp-content/uploads/NIH_Guidelines.html) and [Appendix F](https://osp.od.nih.gov/wp-content/uploads/NIH_Guidelines.html)):       |
|  | [ ]  | [ ]  | Deliberate transfer of a drug resistance trait to a microorganism when such resistance could compromise the ability to control the disease agent in humans, veterinary medicine, or agriculture ([*NIH Guidelines*, Section III-A](https://osp.od.nih.gov/wp-content/uploads/NIH_Guidelines.html)):        |
|  | [ ]  | [ ]  | Increase of tropism ([*NIH Guidelines*, Appendix B-V](https://osp.od.nih.gov/wp-content/uploads/NIH_Guidelines.html)):       |
|  | [ ]  | [ ]  | Increase of virulence ([*NIH Guidelines*, Section II-A-3](https://osp.od.nih.gov/wp-content/uploads/NIH_Guidelines.html)):       |

|  |
| --- |
| **Oncogenes and Tumor Suppressor Genes**This section applies to work with oncogenes and tumor suppressor genes. [See FAQs for instruction on completing this section.](http://www.ehs.washington.edu/biological-use-authorization-bua-application-faqs#OG1)  |
|  | Yes | No |  |
|  | [ ]  | [ ]  | Do any of your proposed genes appear in the following database (**must use common** [**RefSeq**](http://www.ncbi.nlm.nih.gov/refseq/rsg/) **gene names**)?1. [*Cancer Gene Census*](http://cancer.sanger.ac.uk/cosmic/census/tables?name=symbol)

If yes, they are known oncogenes. List.       |
|  | [ ]  | [ ]  | Are any of your proposed genes well described in the scientific literatures as oncogenes? If yes, list genes and describe.       |
|  | [ ]  | [ ]  | Do you have other reasons to believe that your proposed genes are oncogenes? If yes, list genes and describe reasons.       |
|  | [ ]  | [ ]  | Do you have reasons to believe that you are silencing or knocking out tumor suppressor genes? If yes, list and describe.       |
|  | [ ]  | [ ]  | If yes to any of the four preceding questions, are there any extenuating circumstances you would like the IBC to consider when setting biocontainment levels for this work? If yes, describe. [See FAQ](http://www.ehs.washington.edu/biological-use-authorization-bua-application-faqs#OG2).        |

|  |
| --- |
| **Transgenic Animals**If this project involves the use of genetically modified animals, complete the table below. If no, proceed to question 49. [See FAQs.](http://www.ehs.washington.edu/biological-use-authorization-bua-application-faqs#TA1) **Note: Transgenic animals include vertebrates and invertebrates (e.g., *drosophila*, zebrafish, *Caenorhabditis elegans*, oysters, frogs, mice, rats, pigs).** |
|  | Yes | No |  |
|  | [ ]  | [ ]  | Are you working with transgenic animals? If yes, complete the table below. If no, proceed to question 49. |
| 1. **List species**
 | **Species:**       | **Species:**       | **Species:**       |
| 1. **List all strains**
 |       |       |       |
| 1. **I am creating transgenic animals**
 | [ ]  No [ ]  Yes Specify method:       | [ ]  No [ ]  Yes Specify method:       | [ ]  No [ ]  Yes Specify method:       |
| 1. **Transgenic animals are generated in a Comparative Medicine core facility**
 | [ ]  No [ ]  Yes Specify space:       | [ ]  No [ ]  Yes Specify space:       | [ ]  No [ ]  Yes Specify space:       |
| 1. **I am breeding transgenic animals**

Select all that apply | [ ]  No [ ]  Yes:[ ]  Breeding of rodents that have a gene encoding more than fifty percent of an exogenous eukaryotic virus[ ]  Breeding of rodents in which the transgene is under the control of a gammaretroviral long terminal repeat (LTR) | [ ]  No [ ]  Yes:[ ]  Breeding of rodents that have a gene encoding more than fifty percent of an exogenous eukaryotic virus[ ]  Breeding of rodents in which the transgene is under the control of a gammaretroviral long terminal repeat (LTR) | [ ]  No [ ]  Yes:[ ]  Breeding of rodents that have a gene encoding more than fifty percent of an exogenous eukaryotic virus[ ]  Breeding of rodents in which the transgene is under the control of a gammaretroviral long terminal repeat (LTR) |
| 1. **Transgenes include the following**

Select all that apply | [ ]  Potential for toxic products to be produced/released from the animal. Explain:      [ ]  Knock out of tumor suppressor. Explain:      [ ]  Antibiotic resistance. Explain:       | [ ]  Potential for toxic products to be produced/released from the animal. Explain:      [ ]  Knock out of tumor suppressor. Explain:      [ ]  Antibiotic resistance. Explain:       | [ ]  Potential for toxic products to be produced/released from the animal. Explain:      [ ]  Knock out of tumor suppressor. Explain:      [ ]  Antibiotic resistance. Explain:       |

|  |
| --- |
| ***NIH Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules***Select all sections of the *NIH Guidelines* that apply to this project. [See FAQs.](http://www.ehs.washington.edu/biological-use-authorization-bua-application-faqs#NIH1) |
|  | [ ]  | [Section III-A](http://www.ehs.washington.edu/system/files/resources/experiments-NIH-guidelines.pdf) | Experiments that require IBC approval, RAC review and NIH Director approval before initiation (e.g., deliberate transfer of drug resistance to a microorganism that is not known to acquire it naturally, if such acquisition could compromise the ability to control disease agents in humans, animals or agriculture) |
|  | [ ]  | [Section III-B](http://www.ehs.washington.edu/system/files/resources/experiments-NIH-guidelines.pdf) | Experiments that require NIH/OBA and IBC Approval Before Initiation (e.g., cloning of toxin molecules with a LD50 less than 100 ng/kg) |
|  | [ ]  | [Section III-C](http://www.ehs.washington.edu/system/files/resources/experiments-NIH-guidelines.pdf) | Experiments that require IBC and Institutional Review Board (IRB) approvals before research participant enrollment (e.g., human gene transfer) |
|  | [ ]  | [Section III-D](http://www.ehs.washington.edu/system/files/resources/experiments-NIH-guidelines.pdf) | Experiments that require IBC approval before initiation (e.g., recombinant and synthetic nucleic acids in pathogenic microorganisms, viral vectors for gene transfer, gene transfer in Risk Group 2 microorganisms) |
|  | [ ]  | [Section III-E](http://www.ehs.washington.edu/system/files/resources/experiments-NIH-guidelines.pdf) | Experiments that require IBC registration before initiation (e.g., recombinant and synthetic nucleic acids in Risk Group 1 microorganisms or formulated into synthetic or natural vehicles, experiments involving whole plants at BSL-1P) |
|  | [ ]  | [Section III-F](http://www.ehs.washington.edu/system/files/resources/experiments-NIH-guidelines.pdf) | [Exempt experiments](https://www.ehs.washington.edu/system/files/resources/exempt-experiments.pdf) (e.g., recombinant and synthetic DNA that is not in organisms or viruses, DNA/RNA in microorganisms that are exempt under III-F) |

**Hazard Control**

|  |
| --- |
| **Containment Requirements** [See FAQs.](http://www.ehs.washington.edu/biological-use-authorization-bua-application-faqs#CR1) |
|  | What biosafety level(s) are recommended for your work according to the *NIH Guidelines* and the CDC’s *Biosafety in Microbiological and Biomedical Laboratories* (*BMBL*)? |
|  |  | [Laboratory](http://www.ehs.washington.edu/biological-use-authorization-bua-application-faqs#CR1): | [ ]  BSL-1 | [ ]  BSL-2 | [ ]  [BSL-2 w/3 practices](http://www.ehs.washington.edu/biological-use-authorization-bua-application-faqs#CR3) | [ ]  BSL-3 |
|  |  | [Animal Facility](http://www.ehs.washington.edu/biological-use-authorization-bua-application-faqs#CR2): | [ ]  ABSL-1 | [ ]  ABSL-2 | [ ]  [ABSL-2 w/3 practices](http://www.ehs.washington.edu/biological-use-authorization-bua-application-faqs#CR3) | [ ]  ABSL-3 |
|  |  | Plant Facility: | [ ]  BSL-1P | [ ]  BSL-2P | [ ]  Field Work |  |
| **Facilities**List each UW research space where you will perform work with biohazardous agents. Identify specific buildings, rooms, and activities. |
|  |
|  | ***In vitro* Use** |
| **Building/Room** | **Activities** | **Biohazardous Agents** | **Comments** |
| *Health Sciences Building, T287***EXAMPLE** | *Cell culture of human cells, growth of lentiviral vectors, creation of transgenic plants* | *AAV, plasmids, human cells, transgenic plant seeds, Pseudomonas aeruginosa* | *BSL-2 tissue culture room. Certified biosafety cabinet in room.* |
|       |       |       |       |
|       |       |       |       |
|       |       |       |       |
|       |       |       |       |
|       |       |       |       |
|       |       |       |       |
|       |       |       |       |

|  |  |
| --- | --- |
|  | **Animal Use**  |
| **Building/Room** | **Activities** | **Biohazardous Agents** | **Comments** |
| *Health Sciences Building, T287***EXAMPLE** | *(e.g., implanting human cells in mice, perfusions of mice exposed to reovirus, housing of exposed animals)* | *(e.g., human cell lines, murine cells transduced with gammaretroviral vectors)* | *BSL-2 tissue culture room. Certified biosafety cabinet in room.* |
|       |       |       |       |
|       |       |       |       |
|       |       |       |       |
|       |       |       |       |
|       |       |       |       |
|       |       |       |       |
|       |       |       |       |

|  |  |
| --- | --- |
|  | **Shared Core Facilities** (e.g., MRI, FACS, hESC, UW Botany Greenhouse) |
| **Facility/Building/Room** | **Activities** | **Biohazardous Agents** | **Comments** |
| *MRI / Brotman B67***EXAMPLE** | *(e.g., cell sorting, imaging of animals, flow cytometry)* | *(e.g., cell lines, animal cells from exposed animals, cells with recombinant DNA)* |  |
|       |       |       |       |
|       |       |       |       |
|       |       |       |       |
|       |       |       |       |
| If additional spaces are needed, complete and submit the [Additional Facilities Table](http://www.ehs.washington.edu/system/files/resources/addroom.docx). |

|  |  |
| --- | --- |
|  | Briefly describe any work environment that does not fit the above descriptions (e.g., field work).       |

|  |
| --- |
| **Equipment** |
|  | This project includes use of the following equipment with aerosol-generating potential: |
|  | [ ]  Centrifuge  | [ ]  Syringes/needles | [ ]  French press | [ ]  Homogenizer |
|  | [ ]  Cell sorter | [ ]  Sonicator  | [ ]  Automation/robotics |
|  | This project includes use of the following equipment with engineered safety features. |
|  | [ ]  Biological safety cabinet | [ ]  Safety cups or sealed rotors for centrifuges |
|  | [ ]  Aerosol management system for cell sorting  | [ ]  Engineered safe sharps |
|  | [ ]  Splash shields | [ ]  Other (specify):       |
|  | Yes | No |  |
|  | [ ]  | [ ]  | This project involves specific procedures that pose an increased risk for exposure (e.g., aerosol generating procedures performed openly on the lab bench). If yes, list.        |
|  | [ ]  | [ ]  | I have laboratory processing equipment (e.g., shaker, centrifuge, incubator) located in a corridor outside of my laboratory suite. If no, proceed to the next section. If yes, complete the following. |
|  |  |  | Yes | No |  |
|  |  |  | [ ]  | [ ]  | Storage/use of this equipment complies with the [UW Corridor Use Policy](https://www.ehs.washington.edu/system/files/resources/Corridor_Policy_Focus_Sheet.pdf). |

|  |
| --- |
| **General Biosafety Laboratory Practices**Reference the [UW Biosafety Manual (BSM)](https://www.ehs.washington.edu/resource/biosafety-manual-4). |
|  | Yes | No |  |
|  | [ ]  | [ ]  | I have a current [BSM](https://www.ehs.washington.edu/resource/biosafety-manual-4) that is available to staff. |
|  | [ ]  | [ ]  | I have written decontamination procedures for equipment and surfaces. See [BSM Section 4](https://www.ehs.washington.edu/resource/biosafety-manual-4). |
|  | [ ]  | [ ]  | I use appropriate decontaminants with the appropriate contact time for the agents I work with. List disinfectants used:       |
|  | [ ]  | [ ]  | All biological waste is decontaminated prior to disposal. Methods used include the following: |
|  |  |  | [ ]  Autoclave (list location):       |
|  |  |  | [ ]  Waste is shipped offsite |
|  | [ ]  | [ ]  | Biohazardous materials are transported between UW buildings. If yes, state the transportation method.        |
|  | [ ]  | [ ]  | Biological agents are transported within building in leak-proof, secondary containers. |
|  | [ ]  | [ ]  | I have procedures in place for the safe use and handling of [sharps](https://www.ehs.washington.edu/biological/sharps-and-laboratory-glass) that I work with. |
|  | [ ]  | [ ]  | [First aid and medical follow-up procedures](https://www.ehs.washington.edu/system/files/resources/exposure-response-poster.pdf) are in place in the event of an exposure incident.  |
|  | [ ]  | [ ]  | A biohazard label is affixed to equipment used for biological agents when appropriate. |
|  | [ ]  | [ ]  | A [biohazard door sign](https://www.ehs.washington.edu/system/files/resources/biohazard-sign.pdf) is posted as required. |
|  | [ ]  | [ ]  | This project involves shipping of biological materials. |
|  | [ ]  | [ ]  | I have other written biosafety standard operating procedures (SOPs). If yes, list.       |
| **Personal Protective Equipment**See [WAC 296-800-160](http://apps.leg.wa.gov/wac/default.aspx?cite=296-800-160) and [UW APS 10.4](http://www.washington.edu/admin/rules/policies/APS/10.04.html) for applicable regulations. |
|  | Yes | No |  |
|  | [ ]  | [ ]  | I have identified the PPE requirements for each proposed activity associated with this project and will enforce the use of required PPE. |
|  | [ ]  | [ ]  | Protective lab coats designed for lab use are worn while working with hazardous materials. |
|  | [ ]  | [ ]  | This project involves tasks with the potential for splash/splatter to mucous membranes. These tasks require the following PPE: |
|  |  |  | [ ]  Safety glasses | [ ]  Goggles | [ ]  Face shield |
|  |  |  | [ ]  Surgical mask | [ ]  Other (specify):       |
|  | [ ]  | [ ]  | This project involves tasks with an inhalation risk from infectious aerosols outside of containment. |
|  | [ ]  | [ ]  | Gloves are inspected before use and are changed when contaminated, when integrity has been compromised, and when otherwise necessary. |
|  | [ ]  | [ ]  | PPE is removed before entering non-contaminated areas (e.g., public hallways, lunch rooms). |
|  | [ ]  | [ ]  | PPE is removed in an order that minimizes cross-contamination. |

**Other Hazards**

|  |
| --- |
| **Chemicals**Does this project involve the following? If yes, list. Follow the [UW Laboratory Safety Manual (LSM)](https://www.ehs.washington.edu/resource/laboratory-safety-manual-510) and the Chemical Use Guidelines, a quick reference for safe work with hazardous chemicals. |
|  | Yes | No |  |
|  | [ ]  | [ ]  | [Particularly Hazardous Substances](http://www.ehs.washington.edu/system/files/resources/lsm.pdf#page=251) as defined by the [LSM](https://www.ehs.washington.edu/resource/laboratory-safety-manual-510).       |
|  | [ ]  | [ ]  | [Toxins of biological origin](https://www.ehs.washington.edu/resource/biological-toxin-safe-work-practices-65) (e.g., TTX, Botox, Pertussis, Diphtheria).       |
|  | [ ]  | [ ]  | [Nanoparticles (˂100 nm in length)](https://www.ehs.washington.edu/resource/guidelines-safety-during-nanoparticle-research-534). If yes, list and specify use and/or production.       |
|  | [ ]  | [ ]  | Fixing agents.       |
|  | [ ]  | [ ]  | I have a current LSM with [lab-specific chemical SOPs](https://www.ehs.washington.edu/chemical/chemical-sop-templates-and-guidelines) that is available to staff. |
|  |
| **Radiation**Does this project involve the following? Reference the [UW Radiation Safety Manual](https://www.ehs.washington.edu/system/files/resources/RSManualBinder.pdf). **Note: Use of radioactive materials requires prior authorization by EH&S Radiation Safety. Contact them at 206.543.0463 or** **radsaf@uw.edu****.**  |
|  | Yes | No |  |
|  | [ ]  | [ ]  | Radioactive materials. If yes, describe and list any radionuclides used on the project:       |
|  | [ ]  | [ ]  | X-ray or non-ionizing radiation, including lasers, ultra-violet (UV), magnets, and radio frequency (RF) devices. If yes, list and specify the type:       |
| **Other Hazards** |
|  | Yes | No |  |
|  | [ ]  | [ ]  | This project involves other significant hazards (e.g., climbing hazards, etc.). If yes, explain:       |

|  |
| --- |
| **Training** [See FAQs.](http://www.ehs.washington.edu/biological-use-authorization-bua-application-faqs#T1) |
|  | Yes | No |  |
|  | [ ]  | [ ]  | [EH&S Biosafety Training](http://www.ehs.washington.edu/training/biosafety-training-online) is completed. [See FAQ.](http://www.ehs.washington.edu/biological-use-authorization-bua-application-faqs#T1) Required for PIs and lab staff every three years |
|  | [ ]  | [ ]  | PI/supervisor has provided lab-specific biosafety training to laboratory personnel. |
|  |  |  | N/A |  |
|  | [ ]  | [ ]  | [ ]  | [EH&S Shipping Hazardous Materials Training](http://www.ehs.washington.edu/training/shipping-hazardous-materials) is completed. Required for shippers and/or transporters of infectious substances or hazardous materials |
|  | [ ]  | [ ]  | [ ]  | [EH&S Bloodborne Pathogens for Researchers Training](http://www.ehs.washington.edu/training/bloodborne-pathogens-researchers-online) is completed. Required annually |
|  | [ ]  | [ ]  | [ ]  | PI/supervisor has provided training on the lab’s site-specific BBP exposure control plan. |
| See the EH&S [Laboratory Training Matrix](http://www.ehs.washington.edu/system/files/resources/ehslabsafetytrainmatrix.pdf) for more information about suggested training classes. |

|  |
| --- |
| 1. **Personnel Registration**

Instructions:* Include the principal investigator, laboratory managers, research staff, students, fellows, and all other staff who have the potential for exposure to biohazardous agents.
* Training records can be checked online using [My EH&S Training](https://training.ehs.washington.edu/mytraining/index.php).
* [EH&S Biosafety Training](http://www.ehs.washington.edu/training/biosafety-training-online) is required every three years for those who have the potential for exposure to biohazardous agents.
* [EH&S Bloodborne Pathogens Training](http://www.ehs.washington.edu/training/bloodborne-pathogens-researchers-online) is required annually for those who have the potential for exposure to human blood or other potentially infectious material ([OPIM](https://www.ehs.washington.edu/biological/bloodborne-pathogens-bbp-program)).
 |
| **Name** | **Position** | **UW Net ID** | [**Training Dates**](https://training.ehs.washington.edu/mytraining/index.php) **(most recent)** |
| **Biosafety** | **Bloodborne Pathogens** |
| **Date:** | **Date:** | **N/A** |
| Andrea Badger**EXAMPLE** | Research Scientist | abadger | 05-29-2015**EXAMPLE** |  | [x]  |
|       |       |       |       |       | [ ]  |
|       |       |       |       |       | [ ]  |
|       |       |       |       |       | [ ]  |
|       |       |       |       |       | [ ]  |
|       |       |       |       |       | [ ]  |
|       |       |       |       |       | [ ]  |
|       |       |       |       |       | [ ]  |
|       |       |       |       |       | [ ]  |
|       |       |       |       |       | [ ]  |
|       |       |       |       |       | [ ]  |
|       |       |       |       |       | [ ]  |
|       |       |       |       |       | [ ]  |
|       |       |       |       |       | [ ]  |
|       |       |       |       |       | [ ]  |
|       |       |       |       |       | [ ]  |

|  |
| --- |
| **Supplemental Forms**Are the following supplemental forms required for your research? If yes, submit with this application. |
|  | Yes | No |  |
|  | [ ]  | [ ]  | [**Site-specific Bloodborne Pathogen Exposure Control Plan**](https://www.ehs.washington.edu/system/files/resources/bbpecp.docx). Required for projects involving working with bloodborne pathogens or drawing, processing, working with, or storing human blood, tissue, cells, cell lines, or body fluids visibly contaminated with blood or other potentially infectious materials (OPIM).  |
|  | [ ]  | [ ]  | [**Dual Use Research of Concern (DURC) Form**](https://www.ehs.washington.edu/system/files/resources/DURC-application.docx). Required for projects involving non-attenuated strains of the following agents & toxins:

|  |  |  |
| --- | --- | --- |
| * Avian influenza virus (highly pathogenic)
* *Bacillus anthracis*
* Botulinum neurotoxin
* *Burkholderia pseudomallei*
* *Burkholderia mallei*
 | * Ebola virus
* Foot-and-mouth disease virus
* *Francisella tularensis*
* Marburg virus
* Reconstructed 1918 influenza virus
* Rinderpest virus
 | * Toxin-producing strains of *Clostridium botulinum*
* Variola major virus
* Variola minor virus
* *Yersinia pestis*
 |

 |

|  |
| --- |
| Statement of Responsibility * As Principal Investigator for this project, I have the responsibility to ensure that my laboratory operates in a safe manner and that all staff and students are informed of risk, appropriately wear protective equipment, and are adequately trained.
* I understand that I am responsible for assuring that my laboratory complies with all federal, state, and local environmental laws and regulations. I will comply with shipping requirements for hazardous materials.
* If my work involves **recombinant or synthetic DNA/RNA molecules**, I acknowledge that I am responsible for **full compliance** with the *NIH Guidelines* in the conduct of recombinant and synthetic DNA/RNA research.
* **I will neither initiate nor modify** any recombinant or synthetic DNA/RNA research that requires IBC approval prior to initiation until IBC approval is given.
* I will report the following to an EH&S biosafety officer at 206-221-7770 or ehsbio@uw.edu as soon as possible:
	+ (1) Violations of the *NIH Guidelines*;
	+ (2) Biohazardous spills;
	+ (3) Loss of biohazard containment;
	+ (4) Research-related accidents or illnesses;
	+ (5) Exposures or potential exposures to biohazards, including recombinant or synthetic DNA/RNA;
	+ (6) Exposures or potential exposures involving animals previously exposed to biohazards, including recombinant or synthetic DNA/RNA.
* I will adhere to the IBC-approved emergency plans for [handling accidental spills](http://www.ehs.washington.edu/system/files/resources/biohazardous-spills.pdf) and [personnel exposures](https://www.ehs.washington.edu/system/files/resources/exposure-response-poster.pdf).
* In case of incidents or near misses, I will instruct my staff to complete the [Online Accident Reporting System (OARS)](https://www.ehs.washington.edu/workplace/accident-and-injury-reporting) form within 24 hours. If any of my staff are employed by the University of Washington Medical Center or Harborview Medical Center, then I will direct them to complete an accident report on the Patient Safety Network (PSN).
* I will ensure that all students and staff working in my laboratory are familiar with our departmental Health & Safety Plan and departmental Emergency Plan.

**To the best of my knowledge, the information reported on this form is correct and accurately reflects my proposed research.** **I further understand that I must contact EH&S Research and Occupational Safety prior to initiating any changes in my research involving biological materials (including recombinant or synthetic DNA/RNA).**     Principal Investigator Name (printed or typed)           Principal Investigator Signature/Electronic Signature Date |
|  | Submit your completed application and supplemental documents to **EH&S Research and Occupational Safety****ehsbio@uw.edu** **· box 357165 · phone 206.221.7770 · fax 206.221.3068**Electronic submissions are preferred. |  |