**Research Laboratory Exposure Control Plan Checklist (ECP)**

The purpose of ECP is to eliminate or minimize occupational exposure to bloodborne pathogens in accordance with OSHA standard [29 CFR 1910.1030](https://osha.gov/laws-regs/regulations/standardnumber/1910/1910.1030). This exposure control plan has to be reviewed and updated **annually** and when changes in materials or procedures occur.

**Section 1: General Laboratory Information**

|  |  |
| --- | --- |
| Current Registration number: | COUHES Approval Number if applicable: |
|  |  |
| Principal Investigator/Supervisor: | Department/Lab/Center/Institute: |
|  |  |
| PI email address: | PI office phone: |
|  |  |
| Emergency contact for exposures (PI/Supervisor/EHS Rep/Lab Manager)  Name and title:  Phone Number:  Email: | |
| Laboratory Room Numbers where human materials are used / stored:  ☐ Check this box if the lab is storing human material but is not currently using it. | |

**Section 2: Human material used/stored (Check all that apply):**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Established human cell lines |  | Human blood (including serum, plasma, blood products, components) or human bodily fluids (including feces, urine, & saliva) |
|  | Primary human cell lines, unfixed human tissues or organs, or human organoids |  | Fetal tissue or materials (such as organoids) developed from fetal tissue |
|  | Human embryonic stem cells (hES) or materials (such as organoids) derived from hES or Human Induced Pluripotent Cells (iPS) |  | Human cells, tissues, or organs containing HIV, HBV, HCV or other bloodborne pathogens (i.e. malaria parasite containing human blood) |

**Section 3: Job Classifications with Occupational Exposure (You can modify job classifications based on your laboratory):**

|  |  |  |
| --- | --- | --- |
| **Job Classification** | **All Employees Have Exposure**  (Check if everyone in this position works with human material) | **Some Employees Have Exposure**  (Check if only some workers in this position work with human material) |
| a. Professor |  |  |
| b. Postdoctoral Researcher |  |  |
| c. MIT/ Laboratory Staff (Laboratory Assistants, Technicians, etc.) |  |  |
| d. Graduate Student |  |  |
| e. Undergraduate Student |  |  |
| f. Research Scientist |  |  |
| g. Other Title *(please specify*): |  |  |

**Section 4: Procedures and Tasks Involving Human Blood or Other Potentially Infectious Materials (OPIMs) (Check all that apply)**  Not Applicable- Materials are only being stored. (If you select this option, skip to Section 10.)

As a reminder human material includes blood, body fluids (such as semen, fecal samples, cerebrospinal fluid) tissues, organs, organoids and cell lines.

|  |  |
| --- | --- |
|  | a. Injections of human material into animals |
|  | b. Other use of needles or sharps with human material |
|  | c. Dissecting, cutting, pipetting or otherwise handling human material |
|  | d. Creating aerosols (mixing, centrifuging, vortexing, or sonicating) of human material |
|  | Other: *(please specify)* |

**Section 5: Sharps Management**

[**OSHA 1910.1030**](https://www.osha.gov/SLTC/bloodbornepathogens/index.html) **requires the PI and/or Supervisor and laboratory/work area personnel who are at risk of potential exposures or injuries from contaminated needles or sharps during their work to identify, evaluate, and select effective engineering controls and work practices and document that solicitation in the Exposure Control Plan Checklist.**

1. List procedures involving the use of sharps. Not Applicable

|  |  |  |  |
| --- | --- | --- | --- |
| Sharps can include different kinds of needles, scalpels, glass ampoules, glass pipettes, etc. Safer sharp designs include self-sheathing or retractable needles, scalpels with safety guards, blunt needles, and ampoule breakers. These should be used whenever possible.  Please see links below for more information on safer sharp options:   * [CDC](https://www.cdc.gov/infection-control/media/pdfs/Sharps-Safety-Poster3-P.pdf) * [ISIPS](https://isips.org/safety-products/)   For individuals handling needles, manually recapping needles is prohibited. If no alternatives exist, recapping or needle removal must be performed using a mechanical device or a one-handed technique. Researchers must justify the need for recapping. | | | |
| **Sharp type** | **Procedure** | **Safety feature of sharp or mitigation strategy if applicable** | **Recapping (Yes/No)? If yes, give the reason.** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

1. I and my lab/work area personnel have reviewed safer medical devices and (select one option):

There are no other safer devices or safer available methods for the current procedures used in our research.

There are safer sharp options available, which we will use. These are described in the table above.

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**Section 6: Equipment Decontamination**

1. List instructions and schedule for decontaminating and maintaining equipment.

|  |  |  |  |
| --- | --- | --- | --- |
| **Equipment/Surface (i.e. centrifuge/ Bench top)** | **Decontamination Instructions** | **Frequency (check what applies)** | **Disinfectants Used** |
|  |  | Choose an item.  Other: |  |
|  |  | Choose an item.  Other: |  |
|  |  | Choose an item.  Other: |  |
|  |  | Choose an item.  Other: |  |

1. Specify any special waste handling procedures for equipment decontamination, if applicable (e.g., radioactive, chemical contamination). Not Applicable

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| --- |
|  |

1. Do you have a piece of equipment (i.e. microscope, centrifuge, etc.) that you cannot disinfect and clean? Please identify the equipment below and provide the reason(s) why it cannot be disinfected. Not Applicable

|  |  |
| --- | --- |
| **Equipment** | **Reason** |
|  |  |
|  |  |
|  |  |

**Section 7: Engineering Controls**

1. In the table below, please indicate the engineering controls in use, their location, the frequency of maintenance, and the party responsible for their specified maintenance.

|  |  |  |  |
| --- | --- | --- | --- |
| **Engineering Control** | **Location** | **Maintenance Frequency** | **Responsible Party** |
| Biosafety cabinet |  | Choose an item.  Other: | Choose an item.  Other: |
| Sharps Container |  | Choose an item.  Other: | Choose an item.  Other: |
| Other *(please specify):* |  | Choose an item.  Other: | Choose an item.  Other: |

1. PI/Supervisor certifies that the engineering controls have been evaluated annually and deemed appropriate for the work being conducted.

**Section 8: Personal Protective Equipment (PPE)**

1. Please indicate the (PPE) used, as well as the decontamination and disposal instructions

|  |  |
| --- | --- |
| **Personal Protective Equipment** | **Decontamination and Disposal Instructions** |
| Disposable Gloves | Dispose directly into biowaste box |
| Laboratory Coats | Contaminated lab coats are deconned with an appropriate disinfectant then bagged and sent out for laundering with a commercial vendor |
| Uncontaminated lab coats are placed in a bag and sent off for cleaning with a commercial vendor |
| Dispose directly into biowaste box |
| Safety Glasses | Disinfect with an appropriate disinfectant before reusing |
| Dispose directly into biowaste box |
| Face Shields and Masks | Disinfect with an appropriate disinfectant before reusing |
| Dispose directly into biowaste box |
| Cut resistance gloves / Utility gloves | Disinfect with an appropriate disinfectant before reusing |
| Dispose directly into biowaste box |
| Aprons | Disinfect with an appropriate disinfectant before reusing |
| Dispose directly into biowaste box |
| Other *(please specify*): | Disinfect with an appropriate disinfectant before reusing |
| Dispose directly into biowaste box |

1. PI/Supervisor certifies that the PPE indicated above is available and effective for the work being conducted.

**Section 9: Waste Disposal Procedures:**

**For more information regarding waste please visit** [**EHS website**](https://ehs.mit.edu/regulated-waste/)

|  |  |  |  |
| --- | --- | --- | --- |
| **Check all that apply** | **Waste Type** | **Handling Instructions** | **Disinfectant(s) used** |
|  | Solid Waste | Dispose into a bench top container, which is emptied into the biowaste box when full, or will be disposed directly into the biowaste box. | **N/A** |
|  | Liquids Waste | Use an appropriate EPA-approved disinfectant before disposal in sink drain. |  |
|  | Lab-ware or Surfaces (i.e., benchtops) | Use an appropriate EPA-approved disinfectant. |  |
|  | Sharps | Collect in disposable biohazard sharps containers, which will be placed in biowaste box when full |  |
|  | Autoclave (list location): | Ensure you run all **autoclaved waste** with a  [**sterigage**](https://multimedia.3m.com/mws/media/356429O/technical-info-3m-comply-sterigage-steam-chemical-integrator.pdf)  and a [**biological indicator**](https://biologicalindicators.mesalabs.com/eztest/)  (BI), and log the run on a waste log to be kept for three years. For more information, please refer to MIT [EHS website.](https://ehs.mit.edu/biological-program/autoclave-validation-and-calibration-program-avcp/) | **N/A** |
|  | Other *(please specify*): |  |  |

**Section 10: Spill Decontamination Procedures**

1. Cleaning up a spill:
2. Evacuate nonessential personnel
3. Remove contaminated PPE or clothing
4. Wash any exposed skin with soap and water
5. Assess the situation and put on PPE (lab coat, double gloves, and safety glasses/goggles).
6. Gather spill kit and disinfectant.
7. Cover the entire spill with paper towels/ absorbent material
8. Saturate absorbent material with disinfectants; wait for appropriate time (i.e., 10% bleach, 10 min)
9. Pick up absorbent material with tongs and dispose them as biowaste (or biosharps for broken glass).
10. Repeat surface disinfection; wait 5-10 minutes or until air dry.
11. Wipe up disinfectant. For sensitive surfaces, rinse with 70% Ethanol.
12. Dispose of waste in the Biowaste bin, remove gloves, and wash hands.
13. List location(s) and type(s) of spill clean-up materials:

|  |
| --- |
|  |

*Note: Even if materials are only being stored and not used, plans to handle spills/leaks of stored materials must be in place.*

**Section 11: Handling Exposures or Potential Exposures**

1. Quickly secure sensitive materials or hazardous processes (i.e. animals, open flame)
2. Immediately take care of yourself:
   1. Cut/needlestick/splash to skin: wash the area with soap and water and rinse for 5-10 minutes
   2. Splash to eyes, nose, or mouth, use eyewash or flush with room temperature water for 15 minutes
3. Tell your PI, supervisor, EHS representative or Lab Manager
4. For minor injuries/ exposures (where you can wait 2-3h) go to MIT Health:

Building E23 at 25 Carleton St.

Urgent Care hours: Monday-Friday 8 am - 8 pm, Saturday and Sunday 10 am – 4 pm

After hours: call 617-253-1311

1. For more major injuries, call MIT Police (617) 253-1212 or dial 100 from any MIT phone
2. Supervisor or representative must submit an [incident report](https://atlas.mit.edu/atlas/Main.action?tab=home&sub=group_ehsinjury&sapSystemId=PS1) through [ATLAS](https://adminappsts.mit.edu/injury/Entry.action?sapSystemId=PS1)
3. EHS will follow-up

**Section 12 : Signatures**

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Principal Investigator Date

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MIT Biosafety Officer Date