

BU Agent Incident Reporting Summary January to March 2021

**CAMPUS	Date of Incident	Incident Type/Agent Involved	BSL	Transmissible Person to Person	Description	Reportable Incident	Report of Clinical Illness	Agency Reported To	Comments/Corrective Action
BU Medical Campus (BUMC)									
BUMC	1/14/21	Contusion and abrasion related to an incubator door	BSL-2	No	A research assistant professor called ROHP today to report a physical injury in the lab which did not involve a biological exposure. While routinely opening a door to an incubator in the lab, a hinge broke and the door abruptly fell against his chest. He sustained a painful contusion to his left collarbone, with a small abrasion of the skin over the collarbone.	No	No	N/A	Research Assistant Professor applied first aid to the wound. There was no concern for biological exposure. Root cause was attributed to broken equipment. Laboratory workers should be mindful of equipment and report malfunctions as soon as they become apparent so repairs can be done to resolve any issues.
BUMC	1/20/21	Splash of 4% paraformaldehyde to left eye	ABSL-1	No	A undergraduate student research assistant called ROHP at 12:05 pm to report she sustained a splash of 4% paraformaldehyde to her left eye today at about 11:00 am.	No	No	N/A	EHS followed up with the undergraduate student and corroborates with the initial ROHP report. The student reported she was using the fume hood with the sash at the appropriate height while doing the mouse perfusion but was not wearing any safety eye protection when accidentally there was a small splash of 4% paraformaldehyde to her left eye. Same day, her PI reported that the work being conducted was at ABSL-1 and verified that there were no viruses involved with this animal work. Root cause was attributed to lack of PPE. EHS reminded the lab to wear safety eye protection when conducting project specific tasks involving chemicals. Several options were recommended that meet the ANSI criteria and the PI has restocked and retrained lab staff.
BUMC	1/26/21	Mouse bite to left index finger	ABSL-1	No	A call today from animal science staff who reported that yesterday while in the training room, he picked up nonexperimental (non-transgenic, non-infectious) mouse holding his tail and as he was sliding his fingers up the body of the mouse it turned and bit his left second digit of his hand just below the knuckle.	Yes	No	BPHC	EHS conducted a phone interview with the staff and corroborates with the ROHP report. There were no infectious agents, chemicals or toxins administered to the BSL1 mouse and it was not transgenic. Accordingly the affected area was washed and ROHP was notified. No root cause was identified. The mouse had been properly acclimated prior to handling. All of the online training requirements are up to date and the staff is highly skilled and experienced with animal handling techniques.
BUMC	1/28/21	Needle puncture to right 3rd digit	BSL-2	No	Researcher described the following incident: Her research involves processing intestinal luminal fluid taken from patients (having inflammatory bowel disease) to isolate extracellular vesicles. The vesicles are isolated after ultracentrifugation in the form of a pellet. This pellet is resuspended using an insulin syringe. She had finished resuspending the pellet, when she punctured her right 3rd digit on the volar aspect just above the DIP joint on the finger pad. The syringe was empty. Consulted with both Dr. Winters and Dr. Ross. I will follow-up on Monday with this researcher.	Yes	No	BPHC	Upon follow up with EHS, researcher agreed with initial ROHP report. Root cause was attributed to not being conscientious. Researcher was reminded to work carefully and steady pace especially when working late in the day. Per LSC policy, researcher will take sharps safety training to refresh knowledge of sharps and prevent future incidents.

BUMC	2/3/21	Superficial laceration to right middle finger pad	ABSL-2	No	ROHP received an email on 2/4/21 from a Third-year PhD student accidentally sustained a 1 mm laceration of her right 3rd digit while cutting mouse lungs in Sigma Nuclei EZ Lysis Buffer. She was holding the razor with her left hand and holding the petri dish with her right hand. When she moved the dish to get a better angle cut the tip of her right finger with the razor.	Yes	No	BPHC	EHS met with the researcher and corroborates the initial ROHP report. It was reported that the tissue was from a mouse that was commercially procured and was not injected with any pathological agents or rDNA. The amount of tamoxifen was expected to be already excreted out at time of injury and didn't pose concern. The root cause was attributed to not being conscientious. EHS reminded researcher to irrigate the affected area after an injury for 15 minutes with soap and water and recommended that the chopping take place in the center of the dish to mitigate sharps incidents in the future.
BUMC	2/23/21	Laceration to left index finger from microtome blade after use on paraffin embedded tumor tissue	BSL-2	No	A medical student research assistant reported he sustained a laceration to his finger from a microtome blade. He was wearing one pair of gloves, personal eye glasses and lab coat when he tried to use a chemical wipe to wipe paraffin off a microtome blade when he cut his left index finger.	Yes	No	BPHC	EHS met with the student and corroborates with the initial ROHP report. The tissue was from a mouse which was injected with 1205Lu human melanoma cells for tumor generation and was treated with DMSO. The lab manager followed up to confirm that no rDNA was transfected into the cell line and no rDNA was injected into the mouse. The root cause was attributed to individual not trained and lack of PPE. EHS advised the student to use cut resistant gloves while using microtome and to use a brush to remove paraffin wax from the microtome blade, never hands.
BUMC	2/18/21	Mouse bite to left distal thumb	ABS-1	No	PhD Researcher called ROHP at 2:00 m today and reported a mouse bite to left thumb. Researcher says mouse may have been a mouse that was injected previously with an opioid at some point from another experiment, but she is not sure.	Yes	No	BPHC	EHS met with the student for follow up investigation. PPE was appropriate. It was verified that the mouse was ABSL-1, non-transgenic and no biologics/infectious agents were administered. The PI later reported that the mouse involved in the incident was a control mouse that did not receive prior administration of morphine. This same mouse was selected as part of training to demonstrate to the new PhD student how to attach the electrodes. The student mentioned it was her first time in performing this technique and was being supervised by a more senior lab member at the time of the animal bite. Root cause was attribute to insufficient skills or expertise, individual not trained. Student was advised to work with the animal trainer to reaffirm techniques for scruffing, etc. and is shadowing a more senior lab member until fully proficient.

BUMC	2/25/21	Splash of Hematoxylin to right wrist	BSL-2	No	Student was washing out a flask that had contained hemapoxylin, a chemical dye he had used to stain mouse muscular skeletal tissue. It had already been emptied but has some residual dye in it. He noticed while washing the flask that he had an area of approximately 1/2 inch on the dorsal surface of his right wrist that had the purple dye on it. This was just at or above the top of his nitrile glove. He initially washed it off with soap and water for two minutes and dye had been all removed and the PhD researcher working with him, called ROHP.	No	No	N/A	EHS followed up with the student and PI. Student confirmed he was wearing a lab coat and gloves at the time of the incident and that the hemapoxylin had accidentally dropped in between where the lab coat and gloves. EHS reviewed with the new student and PI what do when there is an accidental exposure or chemical spill. Reminded them to contact ROHP immediately and irrigate the affected area for 15 minutes with soap and water. Root cause was lack of awareness and understanding the procedure and lack of PPE. The lab will purchase sleeve covers that can extend over the arm and cover the area between the lab coat and gloves. The student was advised to better understand chemical procedures before doing work.
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Charles River Campus (CRC)									
CRC	1/11/21	Chemical splash to intact skin	N/A		A safety officer called ROHP 1/11/21 at 6:35 pm to report a researcher sustained a splash to her face but was okay. I spoke to the PhD student who reports she was wearing safety glasses, a mask, lab coat and gloves yesterday when approximately 100 micro liters or a few drops of 60% Reb-al (Sodium bis(2-methoxyethoxy)aluminum hydride) and Toluene got on her hair/forehead and maybe her left wrist at around 6:30 pm 1/11/21.	No	No	N/A	EHS reviewed SDS with lab safety coordinator and student involved with the incident. The waste generated in the incident was appropriately contained and managed by lab staff on-site knowledgeable with spill clean up. Root cause was attributed to engineering controls not being used as intended. Lab staff need to be trained to properly use the horizontally sliding hood and to keep the barrier in place between face and hazardous chemicals. PPE should include a flame retardant/chemical protection lab coat and safety goggles. Also, eyewash and safety shower were reviewed as part of incident response. Lab will purchase luer-lock syringes for use with hazardous chemicals.
CRC	1/11/21	Report of thermometer mercury spill	N/A	No	A 4th year PhD student called the ROHP answering service 1/11/21 at 5:24 pm to report she dropped a mercury thermometer. She reported it was a small amount and there was good airflow in the room.	No	No	N/A	EHS followed up with the researcher who reported she was clearing off a desk in the laboratory in order to make room for a piece of equipment. While she was moving items she picked up a mercury thermometer in its case. The case was not closed when it was picked up and the mercury thermometer slipped out and broke on the floor. The root cause was attributed to not being conscientious and a housekeeping issue. EHS waste management responded to the spill with a Jerome mercury vapor analyzer and did not have any readings. Clean up was completed and all other mercury thermometers were provided to EHS waste for disposal.
CRC	2/2/21	Needlestick to left thumb	N/A	No	A 3rd year PhD student called ROHP at 4:20 pm to report she sustained a needle stick that had contained Hexafluoro-2,3-bis(trifluoromethyl)butane-2,3-diol to her left thumb through one pair of gloves while working at a fume hood.	No	No	N/A	EHS reviewed incident with student and PI and corroborates initial ROHP report. Root cause was attributed to not being conscientious and missing equipment. EHS suggested using a reaction flask at as low as possible level and instructed the researcher to work within reachable angles. It was recommended she complete the Sharps Safety Training in BioRAFT.
CRC	2/24/21	Sterile needle puncture to right index finger	N/A	No	ROHP received a call from Lab Supervisor notifying us the student sustained a needle puncture.	No	No	N/A	Student described to EHS that she was planning on using a nitrogen balloon reaction for the first time to create an N2 atmosphere in a reaction vessel for her polymerization reaction. However the nitrogen balloon deflated prior to the needle being unsheathed and placed in the septa. Root cause was attributed to insufficient skills or expertise. EHS reviewed the procedure to reaffirm good techniques and advised the student to complete the Sharps Safety Training in BioRAFT.

CRC	3/1/21	Drop of sodium hydroxide onto right ankle	BSL-2	No	Student was pouring a 0.1 M solution of NaOH into a burette for titration, when a drop of fell onto her ankle. She noted an "itchy" feeling with contact, but that resolved when she wiped the drop away with a tissue.	No	No	N/A	Upon EHS follow up, student reports that she was wearing jeans that went down to the ankle bone and ankle socks at the time of incident. She says that her pants rode up when she was splashed. The root cause was not being conscientious. EHS counseled student on incident response and discussed techniques for safely adding sodium hydroxide to buret. EHS recommended wearing longer pants that cover ankles when working in lab.
CRC	3/3/21	6% M spill of Hydrochloric (HCL) Acid on right and left fingertip	N/A	No	Student reported to his Teaching Fellow in the Chemistry Department, on 3/17/21 that he had accidently spilled 6% Hydrochloric Acid on his right and left fingertips two weeks ago on 3/3/21 in their Chemistry Lab class.	No	No	N/A	EHS spoke with the student who reported that the acid had gotten on both gloved hands during his lab session two weeks prior. Root cause was lack of awareness and understanding the procedure. EHS recommended that he use a pipette to transfer small amounts of liquid in the future for better control of the volume in the funnel rather than directly pouring from stock. EHS also emphasized immediate incident response and reporting to ROHP.
CRC	3/19/21	Rat bite to left thumb pad	BSL-2	No	3rd year medical student called ROHP at 10:15 am to report he was holding rat by neck attempting to inject it with anesthesia when it turned and bit him on the left thumb pad. It also scratched him, but he does not have any scratch marks on his hand or fingers.	Yes	No	BPHC	EHS discussed the incident with the student and corroborates with the ROHP report. There were no infectious agents, toxins or chemicals administered to the rat that was involved with the animal bite. Reporting measures and washing the affected area was appropriate. Student told safety that the thumb wound was showing signs of healing. For the past 5 years he had been working with research mice but this was the first study where he needed to handle rats. Prior to experimentation he had completed a training with the animal trainer specific for rats. Root cause was attributed to insufficient skills and expertise. Student will repeat a session with the animal trainer to reaffirm good techniques should he continue working with rats. Currently the rat study has ended.
CRC	3/24/21	Drop of Sulfuric Acid on left 3rd digit knuckle	N/A	No	Student reports to ROHP that they were taking sulfuric acid out of a bottle with a dropper to put in a microwave tube under a hood and they didn't realize they had gotten sulfuric acid on their left 3rd digit knuckle until they experienced pain.	No	No	N/A	EHS followed up with student who reports she did not check her gloves for damage either prior to working with the sulfuric acid or upon removing them to wash her hands. Root cause was attributed to not being conscientious. EHS recommended checking gloves for defects prior to working with chemicals and advised holding microwave tube and acid dispensing bottle in one hand so the other hand can be used to transfer the reagent.

CRC	3/25/21	Dust from chemical waste barrels got into both eyes	N/A	No	An employee called ROHP at approximately 12:00 noon to report she had some dust from a chemical waste barrel get into both of her eyes. She reached into a chemical waste barrel to grab a new plastic bag at the bottom and when she went to fix the bag around the barrel it snapped back and "kicked up some dust".	No	No	N/A	EHS discussed the incident with the employee who was sitting at her desk in the combined office/lab prep area when one of her work study students was struggling with a new 16 gallon waste drum for solid waste. Employee got up to assist, crossing the 4' separating the lab space and neglected to put on eye protection. When manipulating the container, silica dust accidentally got into her eyes. Root cause was attributed to lack of PPE. EHS recommended using tape as a visual marker on the floor to indicate the transition between office and lab to remind lab staff to DON PPE including safety eye protection.
CRC	3/25/21	Superficial laceration to right 5th finger pad	BSL1	No	Undergraduate Student reported to ROHP that he was wiping dry a Cryotome blade used to slice fixed, clean mouse brain with a single layer chem pad. When he proceeded to wipe it horizontally with his hand instead of lightly touching it, he cut the tip of his 5th digit finger pad horizontally and approximately 1/2 an inch.	Yes	No	BPHC	EHS followed up with the undergrad who admitted that he had dismissed mentor's warnings about how sharp the blade was and had started to rush. Root cause was attributed to lack of PPE and insufficient skills or expertise. The lab will need to acquire and use cut resistant gloves over disposable gloves when working with the cryostat and other sharps. EHS advised using tools to handle the blade and refrain from using hands. The lab will need to retrain staff with a revised SOP that expands on blade cleaning procedures.
CRC	3/26/21	Scratch to right large thumb knuckle	BSL1	No	ROHP received an incident report from a supervisor on 4/6/21. The employee had reported to the supervisor on 4/5/21 that on 3/26/21 that she was wiping down the lab benches in a classroom and her right thumb knuckle (carpometacarpal CMC joint) got scratched when it went over one of the valves on the bench.	Yes	No	OSHA	EHS followed up with the student who reported she scratched her right thumb knuckle on 3/26/21 wiping down a bench with 70% ethanol in SCI415. She was wearing gloves and thinks she scraped her thumb on the metal nozzle that's on the bench. It was very minor scratch. On 4/6/21 she noticed it wasn't healing properly and it looked like it might have gotten a tiny bit infected. She went to Occupational Health for them to check it out. They were concerned there might be a foreign body in the scratch. They sent her to get an X-ray of her thumb at an Urgent Care, and there was no foreign body. Then they debriefed the wound and prescribed topical and oral antibiotics. They gave her a letter saying it was fine to return to work. It fully healed a few days after that. Root cause was attributed to not being conscientious. EHS advised her to take precautions when wiping down bench tops that have gas and vacuum valve protrusions.

National Emerging Infectious Disease Laboratory (NEIDL)									
NEIDL	2/23/21	Breach of BSL4 Suit	BSL 4	No	A BSL4 researcher discovered a tear in his supplied air suit while in the shower exiting the BSL4 lab. The researcher noticed a hissing sound while in the shower, inflated the suit and discovered a tear by the head of his suit between a zipper and plastic section measuring about 3mm.	Yes	No	BPHC	EHS did a follow up with the user. Risk assessment: the location of the breach was far away from the working area. User was always on air while working under the BSC with Select agent. The incident posed a very low risk of potential exposure to SA and recommendation was to follow up with ROHP. Root cause was attributed to broken/defective equipment. EHS retrained personnel on pre-entry suit integrity test procedure. EHS retrained user on notification; EHS must be notified immediately for the suit or glove tear incidents.
NEIDL	3/1/21	Breach of BSL4 suit glove	BSL 4	No	A BSL4 researcher performing necropsy on a non-human primate infected with Ebola sustained a breach of his suit glove on the left index finger measuring a pin hole but two gloves under the suit glove that were not compromised. After reviewing with the biosafety officer and infection control, this case was deemed to be a non-exposure.	Yes	No	BPHC	EHS tested the suit glove and found a pinpoint hole 1mm in size at the base of the left index finger compatible with damage that occurs while connecting to breathing air (user is left handed). The user was wearing two inner gloves, and both were tested and were found intact. There were no accidents or spills during the procedure or problems with room air pressures. The necropsy was conducted utilizing 9-inch-long instruments and tissues are never manipulated by hand. Root cause was attributed to inadequate procedure. The researcher was retrained on the appropriate way of connecting and disconnecting from air using online training module in BioRaft.
Other - Collaborating Laboratory		No incidents							

* Indicates if incident is reportable to local, state or federal agency (e.g. Centers for Disease Control, National Institutes of Health, Boston Public Health Commission, etc.)

**** Campus Location**

BUMC - Boston University Medical Center

CRC - Charles River Campus

NEIDL - National Emerging Infectious Disease Laboratories

Other - work done at collaborating laboratories