

BU Agent Incident Reporting Summary April to June 2019

**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 Actions
BU Medical Campus (BUMC)									
BUMC	4/12/19	Splash to face	BSL2	No	On Friday, 4/12/19, a graduate student presented at ROHP following a splash to her face which had occurred a few minutes earlier. She was not wearing eye protection or a face shield, but fortunately no liquid got into her eyes, mouth or nose. The liquid landed on unbroken skin and she felt a burning pain.	Yes		BPHC	The incident was attributed to lack of personal protective equipment. Using the syringe and plunger is a necessary step in the RNA extraction protocol. It can not be eliminated or substituted out. EHS recommends while performing this task a full face shield must be worn and the samples must be handled inside a fume hood with the sash lowered. In the event of any personnel exposure, the affected area should be irrigated for 15 minutes using the laboratory eyewash station, followed by a phone call to ROHP notifying them that someone is on route. ROHP is instituting a more formal triage procedure.
BUMC	5/2/19	Neck pain related to extensive pipetting	BSL2	No	A right handed post-doctoral associate developed right sided upper back and neck pain on 4/26/19, following a 7-hour day of pipetting which involved about 800 pipetting motions.	No			EHS followed up with the individual reporting neck pain related to extensive pipetting. It was highly encouraged that an ergonomic assessment be completed to evaluate her workstation and tasks. However, due to this project being short term and having another lab technician added to assist with the high volume of pipetting, the researcher denied further investigation. EHS emphasized that if symptoms persisted please seek consultation.
BUMC	5/12/19	Rat bite to right ring finger	BSL1	No	A 3rd year PhD student emailed ROHP this morning to report she was bitten by a rat yesterday (5/12/19) at about 4pm. The student reports she was bitten on the right 4th ring finger with the rat's bottom tooth on the pad of her finger and top tooth biting her nailbed. The rat was not transgenic, was from a ABSL1 lab and did not contain any bacteria, virus, toxin or chemical.	Yes		BPHC	The incident was attributed to lack of awareness/understanding of procedure. In summary, the rat was clean and did not harbor any pathogens or hazardous agents. To prevent recurrence in the future and avoid animal bites, the student will follow procedures to ensure the rodents are well acclimated and handled prior to surgery.
BUMC	5/23/19	Percutaneous exposure to left middle finger	BSL2	No	A research study assistant called ROHP at 1:30 pm to report a needle-stick injury which had occurred a few minutes earlier. While working with an LYS-M mouse (which was genetically modified), and after injecting PBS (Phosphate buffer saline) into a mouse cavity with a 26 gauge needle, she accidentally stuck her left middle finger with the used needle. .	Yes		BPHC	The incident was attributed to no procedure/inadequate procedure. There was a discrepancy with the initial ROHP report. While the project that she was working on did involve a LYS-M transgenic mouse line acquired from Jackson labs, she was accidentally stuck by a needle that had come into contact with a wild type mouse not the LYS-M mouse. The wild type mouse was used as part of a control in the study. She confirmed that she used a new needle to introduce the PBS into the cavity for each mouse. EHS recommended that procedures involving work with the LYS-M transgenic mouse line acquired from Jackson labs be updated/added to both the representative IACUC and IBC protocols. EHS recommended that she complete the sharps safety training.
BUMC	5/29/19	Percutaneous injury to left thumb		No	On Wednesday, 5/29/19, a senior research assistant (an employee) sustained an abrasion to his left thumb from the tip of a contaminated blunt forceps. While undergoing training for use of the cryostat, using mouse and human tissue samples, he used the same blunt tip forceps to grasp the samples.	Yes		BPHC	The incident was attributed to insufficient skills or expertise. The employee was being trained on the use of the cryostat and embedding procedure when the incident happened. The sample had thawed more than the protocol dictated making the tissue block slippery and with the loss of grip this resulted in the jamming of the forceps into the thumb under the force applied. This is deemed not reportable to NIH. To prevent recurrence in the future, the employee will continue their supervised training and follow the protocol exactly including maintaining the proper temperature of the tissue blocks.
BUMC	6/11/19	Laceration to left palm	BSL2	No	A lab manager came to ROHP today to report a laceration while working in the lab. She had been working with pluripotent cell lines (which she reports are "not considered pathogenic") in glass flasks. While holding the flasks over the sink, she accidentally knocked the flasks together and one broke, tearing the glove of her left hand and causing a shallow laceration to her left palm.	No			The incident was attributed to not being conscientious. The employee had been washing down the sink and brushed against the two flasks which were connected by tubing and they began to topple. While grasping for the flasks to stabilize them, they knocked together which caused one to shatter in her left hand causing the laceration in her left palm. Individual washing of flasks has been the standard clean up procedure. To prevent recurrence in the future, staff will not deviate from this procedure and will only wash flasks that are no longer attached to one another.

BUMC	6/13/19	Sentinel rat tested positive for Encephalitozoon cuniculi	BSL1	No	On 6/12/19, a clinical veterinarian from the BUASC reported that routine screening of a rat colony indicated that one sentinel rat (of three tested) was positive for an infection with ECUN (Encephalitozoon cuniculi). ROHP is in the process of reviewing and documenting the following issues: <ul style="list-style-type: none"> • The names of researchers and support staff from the research lab and from the BUASC who may have entered the room and/or handled the rats on that rack or in that room over the past 3 months. • The PPE protocol prior to discovery of this lab result, and establishment of a new, more stringent PPE protocol today. • The university's policy related to pet ownership (rabbits, guinea pigs, mice or rats) at home, and precautionary measures to be taken before entering the BUASC or working with research animals at B.U. • Since cages from this rack may be transported to the research lab for work that area, decontamination of the lab is being carried out. • Whether any known human exposure to ECUN has taken place in this work area (as indicated by an exposure such as an animal bite or by a report of illness). 	?		BPHC	The incident was unfounded. With further testing, the initial reported result for ECUN was determined to be a false positive. The cage mate was not found to be infected with ECUN. Serology samples from the cage mate were negative by both MFIA and IFA. No amplification was detected in the urine/kidney samples by ECUN PCR. Furthermore, each research animal on that rack as well as the telemetry rack was tested and found to be negative for ECUN. On 7/2/2019, the incident was closed out and requirements for room entry have been returned to routine PPE.
BUMC	6/17/19	Non transgenic mouse bite to right index finger	ABSL1	No	A right hand dominant undergraduate student was bitten on his right index finger (between the PIP and DIP joints) by a ABSL1 C57 non transgenic mouse that did not contain any biologics or hazardous agents.	Yes		BPHC	The incident was attributed to insufficient skills or expertise and lack of personal protective equipment. EHS corroborates with the ROHP report. The mouse was non transgenic and did not contain any biologics or hazardous agents. EHS consulted with the new student and together agreed that additional training for handling animals must be carried out prior to conducting animal work and PPE shall also include protective safety eyewear.
BUMC	6/26/19	Strain to lower back	ABSL2	No	An animal care technician was seen in ROHP on 6/26/19 reporting that he noticed right lower back pain as he went to straighten up from lifting an approximately 20 pound bag of wooden bedding chips in the clean cage room he planned to put into a dispenser. He was evaluated and treated in ROHP and will follow up.	No			General observations and visual inspection of the location of the injury were done by EHS. The injured employee was also interviewed briefly for a description of the event. Based on the observations done, the Lifting Index was calculated to determine if any modifications could be made to reduce the risk of low back injury for the task. The types of tasks performed by the animal care technicians often involve lifting heavy loads and repetitive motions. Ergonomic assessments can benefit these workers by giving safe lifting techniques that preserve their long-term health and improve their overall productivity by making the tasks easier on their body. Keeping tasks to a lift index lower than 1.0, or as close to 1.0 as possible, will minimize risk of low back injury while performing tasks. For this task, having a spring-loaded cart hold all the woodchip bags could achieve a much better lift index compared to the system that is currently in place.
Charles River Campus (CRC)									
CRC	4/1/19	Cut to left 5th finger		No	ROHP received an incident report 4/2/19 that a Visiting Fellow cut her left 5th (pinky) finger while cutting into plastic 4/1/19 at 12 noon. The Visiting Fellow first went to BU Student Health where she was referred to Urgent Care. She reported the bleeding had stopped so she left without being seen. She spoke with a Charles River Campus BU Occupational Health clinician 4/2/19 and reported no involvement with biologics and is scheduled for a follow up in the BU Occupational Health office this morning for wound check.	No		N/A	The incident was attributed to insufficient skills/expertise. The visiting fellow was attempting to cut a cylindrical piece of plastic with a loose razor blade. While cutting, she lost her grip and cut her left pinky finger. The razor blade was brand new and she was working in a space where there is no biological work. She was using an incorrect tool for cutting and will select appropriate equipment for cutting plastic in the future.
CRC	4/3/19	Powdered chemical exposure to left arm	N/A	No	At 6:20pm on 4/3/19, an undergraduate student in an organic chemistry teaching lab dropped a flask and some of the chemical product in the flask (which was in a powdered form) touched his exposed skin between his glove and his lab coat on his left arm. He immediately washed the exposed area with soap and water. He reports that there were no adverse effects, either immediate or delayed. This skin was not broken.	No		N/A	The incident was attributed to a lack of oversight/supervision. Teaching fellows should be focusing the attention of the students on the task at hand.
CRC	4/9/19	Chemical spill to lab coat with no skin exposure	N/A	No	On 4/9/19, a third year graduate student in the chemistry department spilled some n-butyllithium on the sleeve of her lab coat. She was wearing gloves, eye protection, and closed toe foot ware at the time. She immediately removed her lab coat and gloves and activated the emergency shower for her arm. She called EHS but not ROHP. She reports no injuries or symptoms at the time or afterwards.	No			The incident was attributed to a lack of awareness/understanding of the procedure. The graduate student reported that she normally only works with 100mL vials of n-butyllithium, but ran out and borrowed her lab mates larger 750mL bottle. When she attempted to draw 5mL of n-butyllithium using a 6mL syringe, the end of the plunger came loose, causing n-butyllithium to spill onto her lab coat. To prevent recurrence in the future she will follow procedures and use 100mL bottles and a 12mL syringe.

CRC	4/17/19	Chemical spill on gloved hand	N/A	No	The ROHP after hours answering service received a call on Wednesday evening from a teaching assistant in an organic chemistry teaching lab. An undergraduate student had spilled a few liquid cc of "Glyoxylic acid and P-toluene sulfonic acid monohydrate that contained acid" on her single-gloved left hand. The chemical fell on the back of her left hand, in the web between the index finger and the thumb. She noticed heat where the chemical touched her glove but there was no glove compromise. She immediately removed her glove and washed hands with soap and water.	No		N/A	The incident was attributed to not being conscientious. The undergraduate student spilled a few liquid cc of glyoxylic acid and p-toluene sulfonic acid monohydrate that contained acid on her single-gloved left hand. She noticed heat where the chemical touched her glove but there was no glove compromise. She immediately removed her glove and washed hands with soap and water. To prevent recurrence in the future she will be more conscientious and focus on the task at hand.
CRC	4/30/19	Puncture wound to right ring finger	N/A	No	ROHP received an incident report from a TF on 5/2/19 related to an injury on 4/30/19 in the Chemistry 110 (introduction to Chemistry) teaching lab, on the last day that the lab portion of that course took place. ROHP called the TF, who reported that an undergraduate student was inserting a clean pipette into a pipette rod when the glass pipette broke and a portion of the glass was embedded into the ring finger of her right hand. At the time, the undergraduate student was wearing all required PPE (lab coat, gloves, and safety glasses).	No		N/A	This incident was attributed to lack of lack of awareness/understanding the procedure. The undergraduate student reported that she was attempting to insert a clean glass pipette into a pump when the pipette broke and a portion of the glass was embedded in her right ring finger. EHS has asked the student to complete sharps training. To prevent recurrence in the future, she will use less force when inserting the pipette.
CRC	4/30/19	Needle stick to left index finger	BSL2	No	A Senior Research Technician called ROHP today at about 10am to report he sustained a needle stick injury to his left index finger while working with lentivirus yesterday afternoon 4/30/19 at 4:30pm. This researcher was evaluated in ROHP. Provided post exposure counseling.	Yes		BPHC	The incident was attributed to not being conscientious. The employee accidentally stuck his left index finger with the 30 gauge hollow bore needle that had already contacted the dura surface and may have potentially picked up contaminants (lentivirus). EHS emphasized to use caution when handling sharps contaminated with biological hazards and reviewed safe sharps techniques. To prevent recurrence in the future, hands will be positioned away from the sharps. This incident was reported to the NIH. The employee confirmed that the lentiviral vector is from the 3rd generation and is replication incompetent. It is a pseudotyped lentivirus VSV-G (vesicular stomatitis virus). There is no oncogene present. There is no tumor suppressive gene present. The vector uses 5 plasmids. The transgene being expressed is GCamp7 (a fluorescent calcium indicator). Typical volume of injection applied is ~700nL/ bird. The concentration of the virus is 10 ⁹ virions/mL.
CRC	5/14/19	Right thumb scratch to right thumb	BSL2	No	A Research Assistant and 1st year PhD student called the on call service 5/14/19 at 6pm to report she sustained a scratch on her right thumb at about 5:30pm. The Research Assistant followed up in the office with ROHP today. PPE at time of incident: her own eye glasses and glove on left hand only. She reports she accidentally scratched her ungloved right thumb on a 1.5mm steel cannula of a myograft machine.	Yes		BPHC	The incident was attributed to not being conscientious. The employee accidentally stuck his left index finger with the 30 gauge hollow bore needle that had already contacted the dura surface and may have potentially picked up contaminants (lentivirus). EHS emphasized to use caution when handling sharps contaminated with biological hazards and reviewed safe sharps techniques. To prevent recurrence in the future, hands will be positioned away from the sharps. This incident was reported to the NIH. The employee confirmed that the lentiviral vector is from the 3rd generation and is replication incompetent. It is a pseudotyped lentivirus VSV-G (vesicular stomatitis virus). There is no oncogene present. There is no tumor suppressive gene present. The vector uses 5 plasmids. The transgene being expressed is GCamp7 (a fluorescent calcium indicator). Typical volume of injection applied is ~700nL/ bird. The concentration of the virus is 10 ⁹ virions/mL.
CRC	5/31/19	Cut to right 4th finger		No	A PhD student called ROHP Friday May 31st at 6:14pm to report he sustained a cut. He was doing some bacteria work and he put Ethanol on his glove. He grabbed a beaker of sterile tubes. It fell out of his hands because his hands were slippery. Tubes fell and cut him. He spoke with the on call physician. The student was counseled.	No			This incident was attributed to lack of awareness/understanding of procedure. EHS spoke with the student and reviewed the incident. To prevent recurrence in the future, the gloves will be sprayed with ethanol for aseptic technique but he will wait until they are dried prior to starting the experiment to ensure his grip is effective for handling materials.
CRC	6/10/19	Splash to right arm	BSL2	No	A PhD graduate student called ROHP this morning at 10 am to report he spilled a solution containing bovine serum albumin at 9:50am. He reports he was wearing one pair of gloves and goggles for PPE working at the bench. The graduate student washed immediately with soap and water. He denies any skin changes or exposure to his face or to any open skin. This incident was reviewed with the Medical Director and is not considered an exposure to biologics or any hazardous agent.	No			The incident was attributed to insufficient skills or expertise. EHS counseled the student on appropriate PPE. To prevent recurrence in the future, the student will focus on the task at hand and use less pressure when capping the BSA bottle.

CRC	6/11/19	Cut to right 4th ring finger	BSL1	No	A lab manager called ROHP at about 12pm today to report one of the undergraduate students accidentally cut her finger at 9:40am when trying to cut electrical tape with a razor. The lab manager reports he sent the student to BU student health center for further evaluation. where she was treated.	No			The incident was attributed to inadequate procedure. The student reported that she cut her finger accidentally when trying to cut electrical tape with a razor blade. The razor blade was clean and did not harbor any pathogens or contaminants. To prevent recurrence in the future, another tool will be used for cutting the electrical tape.
CRC	6/17/19	Cut to right thumb	BSL1	No	A right hand dominant PhD student called ROHP this morning to report she accidentally cut her right thumb on a broken glass petri dish at 10:10am this morning. She reports she was wearing one pair of gloves and a lab coat. She sustained a 1mm superficial cut. She sprayed ethanol on the site immediately and washed for 10-15 minutes.	Yes		BPHC	This incident was attributed to not being conscientious. EHS met with the researcher to discuss the incident. She was working with petri dishes that have a small glass pane on the bottom for imaging. The dish contained fixed human monocytic leukemia cells in 4% formaldehyde. She was wearing PPE and using proper engineering controls at the time. While attempting to seal the petri dish with parafilm she sustained a superficial cut to her right thumb. She immediately removed her gloves, and irrigated the wound for 15 minutes. To prevent recurrence in the future, the student will use less pressure while handling these petri dishes. As the exposure was from fixed tissue, this incident was deemed non-reportable to NIH.
CRC	6/19/19	Eye irritation while responding to a leaky refrigerator	N/A	No	Two Environmental Health and Safety (EHS) staff called our office today at 3pm to report they both sustained eye irritation when responding to a leak from a refrigerator in a chemistry lab that happened one week ago 6/19/19. The EHS staff who responded first tell me they were wearing a ½ face mask and goggles at the time of the response. They noticed irritation right away and left the area. One staff reported her symptoms resolved within 3 minutes and the other staff reports she washed her face with symptoms resolving within a day. ROHP will follow up with the graduate student who found the leak.	No			The incident was attributed to inadequate personal protective equipment. The refrigerator associated with the chemical leak was located inside a laboratory storage room. When personnel experienced symptoms of eye irritation, the storage room was immediately vacated by all occupants and only re-opened after the chemical leak was properly managed, cleaned up and chemical waste was disposed of by another EHS staff who was trained to wear a full air purifying face mask with appropriate filters.
National Emerging Infectious Disease Laboratory (NEIDL)									
NEIDL	4/23/19	Percutaneous injury to right index finger		No	A research scientist sustained a probable needle-stick injury in her finger today while working with three mice that had been exposed to M. avium. She saw no blood and was not positive that the skin had been broken. She washed with soap and water and then checked the glove and found that both outer and inner glove had been compromised. She then called her PI and ROHP, and came to ROHP for evaluation.	Yes		BPHC	The incident was attributed to an inadequate procedure. The employee sustained a needle-stick injury in her finger while pinning an anesthetized mouse to a foam board with a hollow bore needle. The same needle was used to pin two mice to a foam board prior to this incident. As a result, there may have been some mouse fluid inside the bore of the needle at the time of the incident. The three mice had been inoculated intranasally with the BSL2 agent mycobacterium avium three months prior. No recombinant material, GMMO's or GMO's were involved in this incident. To prevent recurrence in the future the lab has updated their procedure to utilize forceps to stabilize the mouse rather than a double-gloved hand. This will remove the researcher's hand from being at risk of exposure from a needle-stick.
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