ASU Bloodborne Pathogens Exposure Control Plan

January 2022

Contents

I. Purpose

Arizona State University is committed to reducing the risks to individuals who may be exposed to Bloodborne Pathogens. ASU developed the Bloodborne Pathogens Exposure Control Plan to meet the requirements of the Occupational Safety and Health Administration Bloodborne Pathogens Standard (codified in 29 CFR § 1910.1030) and to address ASU's concern for personal safety.

The OSHA Bloodborne Pathogens Standard requires that specific safety issues be addressed in the ASU Bloodborne Pathogens Exposure Control Plan, including the following topics:

- Communication of hazards to employees and students.
- Employee and student exposure situations.
- Methods of compliance (e.g., engineering controls, work practices and personal protective equipment used to minimize exposures).
- Procedures for hepatitis B vaccinations, post-exposure vaccinations, and follow- up.
- Recordkeeping practices.

The specific methods instituted to implement each of these topics are described in the designated section of this document. The ASU Bloodborne Pathogens Exposure Control Plan is reviewed at least annually by Environmental Health and Safety and Employee Health and was last approved on January 4, 2021.

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II. Bloodborne Pathogens

This Exposure Control Plan was developed to protect against potential exposures to bloodborne pathogens. According to OSHA, **bloodborne pathogens are microorganisms that are present in human blood and can cause disease in humans**. These pathogens include, but are not limited to, Hepatitis B Virus, or HBV, Hepatitis C Virus, or HCV, and Human Immunodeficiency Virus, or HIV. Provided below is a brief overview of each of these viruses:

- **Hepatitis B** viral infection is caused by HBV, and was formerly known as "serum hepatitis." Of all bloodborne diseases, HBV poses the greatest risk for infection among health care providers and laboratory researchers because it can be easily transmitted through needlesticks and other types of percutaneous exposures. The virus causes inflammation of the liver and can lead to serious and occasionally fatal disease. Following an exposure an unvaccinated person should be offered treatment with HB immune globulin and HBV vaccination. An effective vaccine is available and should be offered to personnel who may be exposed.

- **Hepatitis C** viral infection is caused by Hepatitis C Virus, or HCV. HCV poses a risk for infection among health care providers and laboratory researchers because it is transmitted through needlesticks and other types of percutaneous exposures. Similar to HBV, the virus causes inflammation of the liver and can lead to serious and occasionally fatal disease. Post exposure diagnostic testing should be completed, but at the present time there is no recommended post exposure prophylaxis

- **Acquired Immunodeficiency Syndrome, or AIDS**, is a disease caused by HIV. HIV is a retrovirus which suppresses the immune system leaving the infected individual vulnerable to opportunistic infections and cancers. These infections become increasingly severe and eventually lead to death. No cure for HIV has been found. Protease inhibitors are available, although its efficacy is debated within the medical community. Protease inhibiting drugs are now part of the treatment process and seem to hold some promise according to some medical experts.

In addition to HIV, HBV, and HCV, there are other viruses, bacteria, and parasites that may be present in blood, human body fluids, or tissues. A few of these agents include:

Disease	Causative agent
Babesiosis	*Babesia microti*
Brucellosis	*Brucella* species
Creutzfeldt-Jakob Disease (CJD)	Prion
Leptospirosis	*Leptospira interrogans*
Malaria	*Plasmodium* species
Relapsing Fever	*Borrelia duttoni, Borrelia hermsii, Borrelia parkerii, Borrelia recurrentis*
SIV Infection	Simian Immunodeficiency Virus
Syphilis	*Treponema pallidum*
T-cell Leukemia	Human T-lymphotropic virus Type 1
Viral Encephalitis	Arboviruses
Viral Hemorrhagic Fevers	Ebola, Marburg, Lassa fever viruses
Viral Meningitis	Arenaviruses (e.g., Lymphocytic Choriomeningitis Virus)

Note: The bacterial and parasitic diseases listed above are treatable with antibiotics or other therapy. There are no specific, effective treatments for the viral diseases.

Bloodborne pathogens may also include the following sources of potentially infectious materials of human origin:

- Amniotic fluid.
- Body fluids visibly contaminated with blood or unknown body fluids.
- Cerebrospinal fluid, or CSF.
- Pericardial fluids.
- Peritoneal fluids.
- Pleural fluid.
- Saliva contaminated with blood.
- Semen.
- Synovial fluid.
- Vaginal secretions.

Certain infectious materials handled by university personnel are also regulated under the OSHA Bloodborne Pathogens Standard. These materials should be handled in the same manner as human blood or body fluids:

- Animals that have been experimentally infected with HIV, HBV or HCV.
- Blood and tissues from experimental animals infected with HIV, HBV or HCV.
- Cell lines or tissue cultures containing HIV, HBV or HCV.
- Culture media or other solutions which contain HIV, HBV or HCV.
- Human T-lymphocyte cultures.
- Primary human cell and tissue cultures.

Bloodborne pathogens may be transmitted if human blood or Other Potentially Infectious Material, or OPIM, comes in contact with your blood or body fluids. Exposures often occur through needlesticks, direct contact of materials on non-intact skin, or splashes to the eyes, mouth, and nose.

Individuals that may have a **reasonable chance** of encountering human blood, body fluids, or OPIM while performing their normal job duties **are covered** by the OSHA Bloodborne Pathogens Standard.

III. Overview

The ASU Bloodborne Pathogens Exposure Control Plan is designed to allow for timely and accurate identification, evaluation (including exposure), control and monitoring of bloodborne hazards in the laboratory environment. This document forms the basis for effective management of biological hazards in general, and more specifically, pathogens known to be carried in blood or OPIM as defined by the OSHA Bloodborne Pathogens Standard.

The ASU President is the chief administrative officer for the campus and holds ultimate responsibility for implementation of the ASU Bloodborne Pathogens Exposure Control Plan at all facilities under campus control. Environmental Health and Safety is responsible for monitoring compliance with the ASU Bloodborne Pathogens Exposure Control Plan.

The Biological Safety Officer, or BSO, works closely with campus administrators to develop any additional policies and practices needed to support the effective implementation of the ASU Bloodborne Pathogens Exposure Control Plan, as well as review, revise, or update the ASU Bloodborne Pathogens Exposure Control Plan as needed. In a coordinated effort with campus administration (e.g., Deans, Directors, Chairs, Supervisors), hazards will be identified, individuals will be trained and vaccinated when needed, and records will be kept to qualify the individuals for periodic retraining.

Individual departments and units are responsible for ensuring that the provisions of the ASU Bloodborne Pathogens Exposure Control Plan and the mandates of the OSHA Bloodborne Pathogens Standard are carried out. Departments and units which have been identified as potentially having personnel with potential exposure to blood or OPIM include, but are not necessarily limited to:

- Biodesign Institute.
- Biocollections and Biodiversity Knowledge Integration Center.
- Chemistry and Biochemistry.
- College of Health Solutions.
- College of Integrative Sciences and Arts.
- College of Nursing and Health Innovation.
- College of Technology and Innovation.
- Department of Animal Care and Technology, or DACT.
- Department of Anthropology.
- Engineering.
- Environmental Health and Safety, or EHS.
- Employee Health.
- Emergency Medical Services, or EMS.
- Facilities Management.
- Family and Human Development.
- Family Resources.
- Health Services.
- Intercollegiate Athletics.
- LightWorks.
- Mail services.
- Mary Lou Fulton Teachers College.
- Math and Natural Sciences.

- New College of Interdisciplinary Arts and Sciences.
- Police Department.
- Residence Life.
- School of Dance.
- School Of Earth and Space Exploration.
- School of Letters and Science.
- School of Nutrition and Health Promotion.
- Speech and Hearing.
- Student Recreation Complex.
- The College of Liberal Arts and Sciences.

Some of the job tasks or procedures performed by individuals that present potential exposures to bloodborne pathogens include, but are not necessarily limited to the following:

- Handling human blood, components, or products.
- Handling human-derived materials that may be contaminated with blood.
- Handling unfixed human organs or tissues.
- Culturing primary human cells or cultures known to contain HIV, HBV or HCV.
- Handling OPIM (e.g., semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva contaminated with blood, unfixed human tissue or organs, animals and tissues of animals known to be infected with HIV, HBV, or HCV, and all other body fluids in situations where it is difficult or impossible to differentiate between body fluids).
- Cleaning up spills of human blood or human-derived materials that may be contaminated with blood.
- Performing first aid or emergency response.
- Working with or handling sharps contaminated with human blood, components or products.

IV. Universal Precautions

Universal precautions assumes that **all** blood, body fluids (e.g., semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, and saliva in dental procedures), tissues, and OPIM are infectious for HIV, HBV, HCV and other bloodborne diseases. Because no test method can offer complete assurance for the absence of all bloodborne pathogens, Universal Precautions must always be observed when handling blood and other potentially infectious materials collected from any source.

Universal precautions must be observed by all university personnel to prevent contact with blood and OPIM. Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids will be considered potentially infectious.

The only exception to the use of universal precautions is in rare instances, such as unexpected medical emergencies, where employees may not be able to put on appropriate personal protective equipment, or PPE, (see Section XI). In those situations where the provider of health care or public safety services must afford judgment, the employees must not ignore the underlying concept of universal precautions nor should he or she decline to use PPE simply because it is not practical to use. Only under unexpected, extraordinary circumstances will employees have the option to not use PPE. An example would be if they feel such equipment would prevent the proper delivery of health care or public safety services or would create a greater hazard to their personal safety if they used such equipment. The exemption provided in the standard applies does not apply to the general concept of universal precautions, but only to the use of PPE under rare and relatively limited circumstances.

V. Responsibilities

A. ASU Environmental Health and Safety

The responsibilities of the EHS department include, but may not be limited to, the following:

- Designate the Biological Safety Officer as the individual to oversee the ASU Bloodborne Pathogens Exposure Control Plan.
- Develop, implement, and evaluate the ASU Bloodborne Pathogens Exposure Control Plan for the university.
- Assist departments with hazard assessments to determine jobs or tasks where exposure to blood or OPIM is possible.
- Promote practices, procedures, and methods that conform to the concept of universal precautions.
- Ensure that employees and students with potential exposure to bloodborne pathogens observe universal precautions.
- Determine, in conjunction with the affected department, applicable engineering controls, safe work practices, housekeeping methods, and personal protective equipment, or PPE, to prevent blood and OPIM exposure to campus community members.
- Provide guidance and technical assistance to laboratories engaged in HIV, HBV, and HCV research.
- Assist departments in the identification of employees and students that have potential exposures to bloodborne pathogens.
- Provide direction on approved medical facilities capable of providing the confidential post exposure evaluation and follow-up.
- Create training opportunities as deemed necessary and appropriate for each affected department.
- Ensure that individual departments are compiling and maintaining (for a minimum of three years) all training records relative to the ASU Bloodborne Pathogens Exposure Control Plan.
- Provide biohazard labels to requesting department.
- Coordinate the proper management and disposal of regulated waste; disposal bags and containers must be procured by each department.
- Assist departments in communicating the ASU Bloodborne Pathogens Exposure Control Plan to third- party vendors who perform tasks on campus that potentially implicate exposure control issues.
- Assist departments with Bloodborne Pathogens and exposure control issues upon request.
- Conduct periodic inspections of ASU facilities to ensure compliance with the ASU Bloodborne Pathogens Exposure Control Plan.
- Serve as university liaison to regulatory authorities.
- Provide a means for suggestions, complaints, and concerns regarding the ASU Bloodborne Pathogens Exposure Control Plan.
- Review and update the ASU Bloodborne Pathogens Exposure Control Plan at least annually or as changes occur.

B. ASU Employee Health

The responsibilities of ASU Employee Health include, but may not be limited to, the following:

- Assist in the development and implementation of the ASU Bloodborne Pathogens Exposure Control Plan.
- Assist in identifying and documenting personnel with possible exposure to bloodborne pathogens and the associated tasks and responsibilities of those positions and provide this information to EHS.
- Make available the hepatitis B vaccination to personnel identified through the process of exposure determination to have a potential exposure to bloodborne pathogens.
- Make available a hepatitis B antibody titer analysis to employees and students identified through the process of exposure determination that believe they have been vaccinated but do not have records documenting the vaccination series.
- Perform confidential medical evaluation and follow-up immediately available to an exposed individual, following an exposure incident.
- Coordinate with EHS in the development of bloodborne pathogens training materials.
- Maintain confidential medical records in accordance with OSHA mandates for exposure incidents.
- Maintain all medical records for the duration of employment plus thirty years.
- Maintain declination statements (including vaccination declinations).
- Comply with all applicable requirements established in the OSHA Bloodborne Pathogens Standard and the ASU Bloodborne Pathogens Exposure Control Plan.

C. Human Resources

The responsibilities of Human Resources include, but may not be limited to, the following:

- Assist in the development and implementation of the ASU Bloodborne Pathogens Exposure Control Plan.
- Assist in identifying and documenting personnel with possible exposure to bloodborne pathogens and the associated tasks and responsibilities of those positions and provide this information to ASU Employee Health.
- Ensure job descriptions include bloodborne pathogens requirements if the position involves activities covered by the OSHA Bloodborne Pathogens Standard.
- Comply with all applicable requirements established in the OSHA Bloodborne Pathogens Standard and the ASU Bloodborne Pathogens Exposure Control Plan.

D. Supervisors

Supervisors, including Principal Investigators, have a key role in the successful development, implementation and monitoring of the ASU Bloodborne Pathogens Exposure Control Plan. Supervisors support and respect each employee's right to a safe working environment. The responsibilities of each supervisor include, but may not be limited to, the following:

- Provide all affected personnel with access to the ASU Bloodborne Pathogens Exposure Control Plan.
- Identify and document personnel with potential exposure to bloodborne pathogens and the associated tasks and responsibilities of those positions and provide this information to EHS.
- Ensure that universal precautions are understood and executed by employees and students with possible exposure to bloodborne pathogens.
- Promote practices, procedures, and methods that conform to the concept of universal precautions.
- Design and implement engineering controls and institute work-practice control procedures to eliminate or minimize potential exposure to blood and OPIM.
- Provide appropriate PPE to employees and students that have potential exposure to bloodborne pathogens.
- Maintain a clean and sanitary workplace environment.
- Develop and implement cleaning schedules as deemed appropriate for the types of activities and facilities involved.
- Comply with additional criteria established for HIV, HBV, and HCV laboratories.
- Maintain hepatitis B virus declination statements and provide copies to ASU Employee Health.
- Make confidential medical evaluation and follow-up immediately available to an exposed individual, following an exposure incident.
- Report exposure incidents to the Biological Safety Officer.
- Report needlestick incidents immediately to EHS. ASU Employee Health maintains the needlestick log for ASU.
- Coordinate and ensure all employees successfully complete the annual training required by the ASU Bloodborne Pathogens Exposure Control Plan.
- Contact EHS for instructions for how to access the online Biosafety and Bloodborne Pathogens training modules.
- Compile and retain employee and student training records for a minimum of three years. Submit copies to EHS.
- Affix appropriate labels to containers of regulated waste, refrigerators, freezers, and other equipment containing blood or OPIM, and other containers of blood or potentially infectious materials.
- Post the universal biohazard symbol and appropriate Biological Safety Level at the entrance of HIV, HBV, and HCV research laboratories. Contact the Biological Safety Officer or refer to the ASU Biosafety Manual to determine the appropriate Biological Safety Level.
- Ensure waste is labeled and disposed properly.
- Clearly identify the use of blood, products made from human blood, plasma, products made from plasma, or OPIM when applying for a new protocol through the Institutional Biosafety Committee, or IBC.
- Provide, at no cost to the employee, all supplies, PPE, and vaccinations that are necessary for compliance with the ASU Bloodborne Pathogens Exposure Control

Plan.

- Conduct periodic surveillance of activities within their respective areas to ensure compliance with the ASU Bloodborne Pathogens Exposure Control Plan.
- Comply with all applicable requirements established in the OSHA Bloodborne Pathogens Standard and the ASU Bloodborne Pathogens Exposure Control Plan.

E. Employees and Students

All employees and students have a basic right to a workplace that is free of recognized hazards that may cause injury or illness. With respect to bloodborne pathogens, individuals have the right to information and training for controlling exposures to bloodborne pathogens, the availability of vaccination for hepatitis B, and post-exposure medical care and post-exposure consultation.

Responsibilities of employees and students include, but may not be limited to, the following:

- Read, understand, and comply with the requirements of the ASU Bloodborne Pathogens Exposure Control Plan.
- Notify supervisor and EHS if job tasks, and responsibilities present occupational exposure concerns that have not been previously identified.
- Alert others in the work area, before work begins, of activities that may expose themselves or others to bloodborne pathogens or OPIM.
- Follow universal precautions when handling blood or OPIM.
- Follow established work practice controls to eliminate or minimize occupational exposure.
- Be aware of engineering controls in the workplace and the proper use of those controls.
- Be aware of the proper use, limitations, and location of PPE.
- Use appropriate PPE to eliminate or minimize exposure.
- Be aware of and observe established housekeeping procedures (e.g., use mechanical devices to clean up broken glass and not bare hands).
- Maintain work area in a clean and sanitary manner.
- Understand the additional requirements and protection for personnel working with HIV, HBV, HCV, or OPIM and follow established procedures.
- Complete and submit the Hepatitis B vaccination consent/ declination form in Appendix A (regardless of whether you are accepting the vaccine) or via your health portal to ASU Employee Health.
- Immediately report all exposure incidents to your supervisor and EHS.
- Report all suspected exposure incidents.
- Attend initial and refresher biosafety and bloodborne pathogens training.
- Make certain that labels are appropriately affixed.
- Notify supervisor to report labeling problems.
- Ensure waste is labeled with the words “Biohazardous Waste” and the universal biohazard symbol; dispose of waste properly.
- Comply with all applicable requirements established in the OSHA Bloodborne Pathogens Standard and the ASU Bloodborne Pathogens Exposure Control Plan.

VI. Employee's Rights

At Arizona State University, **employees have the right to an occupational setting free of recognized hazards that may cause injury or illness**. Employees have additional rights specific to the ASU Bloodborne Pathogens Exposure Control Plan including:

- The right to information and training for controlling exposures to bloodborne pathogens (Section IX).
- Hepatitis B vaccination (Section IX and Appendix A).
- Post-exposure medical care and consultation (Section XVII).

The ASU Bloodborne Pathogens Exposure Control Plan assists in granting these rights to Arizona State University Employees.

VII. Exposure Determination

ASU has performed an exposure determination to identify which employees, students, and visitors may be more likely at risk of exposure to bloodborne pathogens. This determination was made without regard to the use of PPE and regardless of the frequency of exposure.

Job classifications in which **all university employees** in the specific job classification have occupational exposure pursuant to 29 CFR § 1910.1030 include:

Job title	Job code
Advanced Practice Provider	692841
Altitude Chamber Manager	591341
Altitude Chamber Obser Pol PRN	591362
Altitude Chamber Observer, Pol	591359
Animal Biosafety Officer	691461
Asbestos + Env Safety Spec	620715
Asst Dir Animal Care Program	593150
Assc Dir Biosafety/Biosecurity	691482
Assc Biosafety Officer	691459
Asst Chief of Police	190985
Asst Biosafety Officer	691435
Assoc Dir Acad Res Innov Saf	691481
Asst Dir Biosafety	691490
Asst Director Clinical Services	491566
Assoc Dir Employee Health	691481
Assoc Dir Employee Health	691483
Assoc Dir Environ Compliance	691437
Assoc Dir Environ Health + Saf	691434
Assoc Dir Fire Saf and Prev	691446
Asst Dir Fire and Life Safety	691812
Assoc Dir Occ Health + Safety	691475
Asst Dir Occup Health + Safety	693467
Asst Dir Research Safety EH&S	697406
Assoc Dir Safety Supp Svcs	691438
Assoc Dir Susble Res Conserv	691478
Assoc Head Athletic Trainer	498623
Asst Athletic Trainer	490450
Asst Athletic Trainer PRN	490453
Asst University Fire Marshall	691810
Athletic Trainer Intern	493555
Attending Veterinarian	593713
Aviation Med Exam, Polytec PRN	691344
AVP Planning + Programs UTO	196836
BioDesign Researcher	192815
BioDesign Researcher (FSC)	192816
Chemical Safety Specialist	693700
Chief Medical Technologist	620170
Chief of Police	193730
Ch of Stf/Dir Biosaf & Biosec	691492
Clinical Laboratory Nurse, CON	691473
Clinical Laboratory Nurse PRN	691474
Clinical Lab Technician	690111
Clinical Veterinarian	591443
Community Health Nurse	691575
Dir Animal Care Program	593712
Dir Campus Health	693690
Dir Emergency Preparedness	691796
Dir Health Services	693690
Dir NP Healthcare	198316
Dir Professional Field Experie	593845
Dir Wellness Health Promotion	191504

Job title	Job code
Mgr Health Clinics	695381
Mgr NP Health Clinics	695381
Mgr, Safety Support Svcs	691723
NP Section Chief	692894
Nursing Assistant	620240
Nurse Manager	690625
Nurse Prac-Site Coord CONHI	691775
Nurse Practitioner	692847
Nurse Practitioner PRN	692848
Nurse Practitioner Asc Dir NP	696805
Nurse Practitioner, Mgr Stu Hl	690624
Nurse Practitioner Supvr	620230
Nursing Supervisor	620210
Operator, Boat	391401
Operator, Boat PRN	391404
Phlebotomist	620270
Physician, Chief of Medical Sta	690359
Physician	692860
Physician PRN	692861
Physician Intern	691419
Physician Lead	692878
Physician Occup Hlth (CmpHlth)	691786
Physician Section Chief	692893
Physician-Research (CampHlth)	691787
Plumber Lead	351140
Plumbing Asst Supervisor	351150
Plumbing Supervisor	351160
Police Aide	170995
Police Aide	190995
Police Aide Lead	170997
Police Aide Supervisor	170998
Police Commander	191310
Police Corporal	171110
Police Evidence and Property Tech	170990
Police Evidence/Property Tech	190990
Police Lieutenant	171130
Police Officer	171100
Police Officer Events	117943
Police Officer Recruit	171000
Police Sergeant	171120
Police Supvr, Non-Traffic Even	190895
Radiology Technologist Sr	690301
Refuse Management Supvr	350350
Registered Nurse	620190
Registered Nurse PRN	690191
Registered Nurse Sr	620200
Research Nurse PRN	599474
Research Nurse Sr	520320
Research Nurse Sr	590322
Residence Hall Fac/Svc Mgr	440475
Residence Hall Fac/Svr Mgr	490575

Hazardous Materials Handling Officer	195372
Employee Health Aide	693704
EHS Compl Mgr Fac Main Ops	691721
EMS Program Coordinator	691811
Envir Hlth Safety (EHS) Tech	693720
Envirnmtl Compliance Tech Lead	620725
Environmental Compliance Spec	693721
Environmental Compl Spec Ld	693722
Environmental Compliance Techn	620729
Environmental Compliance Techn	690729
Exec Dir University Risk Mgmt	691696
Facilities Safety Supervisor	691491
Hazardous Waste Specialist	620730
Hazardous Waste Supervisor	620733
Head Athletic Trainer	498620
Health & Safety Specialist PRN	690771
Health + Safety Officer	620780
Health + Safety Specialist	620770
Health Sanitarian	620790
Industrial Hygienist	620795
Laboratory Director	590212
Laboratory Safety Inspector	591805
Laboratory Supervisor	591704
Licensed Practical Nurse	620100
Lifeguard	490660
Manager, Safety Support Svcs	691723
Medical Assistant	690110
Medical Assistant Sr.	690210
Medical Dir Clinical Research	692879
Medical Lab Technician	690135
Medical Office Supervisor	690115
Medical Technologist	620150
Medical Technologist Sr	620160
Mgr Environmental Hlth/Safety	691720
Mgr Food Safety/Health Sanita	620792
Mgr Health Clinics	695381
Mgr Environmental Hlth and Safety	691720
Mgr Food Safety and Health Sanita	620792
Mgr Health Services Clinic	693687

Safety Partner	691468
Safety Specialist	693701
Safety Technician	693702
Sanitation Equipment Operator	351415
Security Officer	171160
Security Officer	191160
Security Officer Lead	171170
Security Officer Lead	191170
Sonographer	690387
Sr BioDesign Researcher	892820
Sr BioDesign Researcher (FSC)	892821
Sr. Saf Part Animal Biosafety	691462
Sr Saf Part Biosafety and Bios	691464
Sr Saf Part Chem Hygiene Off	691465
Sr Saf Part Hazardous Waste	691463
Sr Saf Part MTW	691466
Sr Saf Part Radiation & Laser	691467
Supv Safety Support Svcs	691462
Supv Safety Support Svcs	691439
Sustainable Resources Supvr	691493
Swimming Pool Attendant	440640
Swimming Pool Operations Spec	440650
Team Physician	691479
University Veterinarian	593713
University Veterinarian (FSC)	593714
Util Piping + Plub Sys Supvr	391161
Utility Piping Asst Supvr	391155
Utility Piping Specialist	351165
Utility Piping Specialist	391165
Utility Piping Specialist Ld	391165
Utility Piping Specialist Ld	351166
Utility Piping Supvr	391160
Vivarium Maintenance Spec	356841
Vivarium Supervisor	591692
Water Treatment Maint Spec	390120
Water Treatment Maint Spec Ld	390971
Wellness Care Section Chief	695237
Women’s Hlth Nrse Practioner (CH)	691790

Job classifications in which **some university employees** in the specific job classifications have occupational exposure pursuant to 29 CFR § 1910.1030 include:

Job title	Job code
Animal Care Manager	530150
Animal Care Supvr	530140
Animal Caretaker	530099
Animal Technician	590100
Animal Technician Sr	530110
Animal Technologist	530130
Animal Technologist Lead	530135
Asst Dir Research Administrati	591355
Assoc Dir Resrch Administraton	591357
Asst Dir Resrch Integrity/Asrn	597135
Assoc Dir Research Operations	597612
Associate Director, Research	591418
Asc Resrch Professional (FSC)	890350
Asc Rsrch Professional RMY FSC	892113
Asoc Resrch Scientist,MY (FSC)	892870
Assoc Research Professional	890351
Assoc Research Profsl MY (FSC)	890359
Assoc Research Profsnl (FSC)	890352
Assoc Research Scientist	892879
Assoc Research Scientist FSC	892880
Assoc Research Scientist, MY	892871
Assoc Research Scientist, RMY	892886
Asst Dir CEE, CON	491383
Asst Nuclear Mgntc Res Spec	592880
Asst Research Scientist	892881
Asst Research Scientist (FSC)	892882
Asst Research Scientist, RMY	892885
Asst University Fire Marshall	691810
Biomed Computat Data Anlyst Sr	591411
Biomed Computation Data Anlyst	591410
Center Liaison-Ind Assoc Prgm	595150
Cheer Coach	491291
Chemical Applicator	350210
Chemical Safety Specialist	693700
Child Development Intern	491167
Child Development Manager	491158
Child Dvlpmt Asst Professional	491157
Child Dvlpmt Assoc Profssional	491145
Custodial Services Asst Supvr	350250
Custodial Services Supvr	350260
Custodian	350220
Custodian Lead	350230
Dir Research Administration	591260
Dir Research Administration, C	591486
Director, Research	591415
Education Outreach Spec Rsrch	791465
Envirnmtl Compliance Tech Lead	620725
Environmental Compliance Techn	620729
Executive Director	691433
Field Operations Supervisor	170910
Health Educator	620750
Health Educator Assistant	620740
Health Educator Sr	620760
Health Educator Sr PRN	620761
Intern (H.S.) Laborator	590113
Health Physicist	620870
Laboratory Coordinator	530200
Laboratory Coordinator Sr	530210

Job title	Job code
Lab Director	590212
Laboratory Manager	530211
Laboratory Manager, Eng	591703
Laboratory Safety Inspector	591805
Lab Supervisor	591704
Laboratory Operations Cdr	530212
Manager Biomass Operations	596830
Mgr Animal Care	591622
Mgr Laboratory	591582
Mgr Pharmacy	696542
Pharmacist	690260
Pharmacy Assistant	620250
Pharmacy Technician	620255
Pharmacy Technician	691405
PREP Scholar	999500
Radiation Control Specialist	620860
Radiation Control Technician	620830
Radiation Control Technician S	620840
Radiology Technologist	620300
Radiology Technologist Sr	620301
Research Analyst	590360
Research Analyst Assistant	590361
Research Analyst PRN	590362
Research Lab Coordinator	596731
Research Laboratory Manager	591521
Research Scientist	892892
Research Scientist (FSC)	892893
Research Scientist Sr	892878
Research Scientist Sr (FSC)	892875
Research Specialist	530310
Research Specialist Prin	530330
Research Specialist PRN	590305
Research Specialist Sr	530320
Research Specialist Sr PRN	590321
Research Technician	530300
Research Technician	599492
Research and Lab Aide	530280
Research/Lab Aide	590280
Research/Lab Assistant	599483
Research and Lab Assistant	530290
Research and Lab Glassware Attend	530270
Rsrch Infrstr/Facilities Adm	597524
Security Officer	171160
Security Officer Lead	171170
Security Officer Super PRN	171181
Security Officer Supervisor	171180
Senior Research Analyst	591672
Simulation + Lab Nurse Special	691635
Simulation and Lab Spec Lead	691472
Summer Intern (HS) Latorator	590109
Sr Dir Chief Scientific Ops Of	591248
Sr Project Manager Research	590651
Supvr Research Laboratory Svcs	593481
Supvr Veterinary + Tech Svcs	593163
Veterinary Technical Crd	591445
Veterinary Technician	530155
Water Safety Instructor	440665

Unpaid students may have risk of exposure to bloodborne pathogens or OPIM in the course of participating in their academic program or other University- sponsored activity. ASU is not required to cover the cost for unpaid students to have a hepatitis B vaccine. However, the department is encouraged to adopt a policy that compels affected students to obtain the vaccine privately and show evidence of this to the department prior to incurring the risk of exposure.

Employees that have questions regarding their specific job classification in relation to the OSHA BBP Standard 29 CFR § 1910.1030, please contact ASU Employee Health.

VIII. Regulatory Matrix

The bloodborne pathogens compliance program responsibility matrix summarizes key provisions of the plan and correspond those responsibilities with the affected department or unit. The matrix should only be used as a quick reference.

Responsibility	**Supervisors**	**EHS**	Employee **Health**	**Human Resources**	**Employee or Student**
Exposure Control Plan for Bloodborne Pathogens	Provide all affected personnel with access to the Exposure Control Plan.	Designate the Biological Safety Officer as the individual to oversee the Exposure Control Plan. Develop, implement, and evaluate the Exposure Control Plan.	Assist in the development and implementation of the Exposure Control Plan.	Assist in the development and implementation of the Exposure Control Plan.	Read, understand, and comply with the requirements of the Exposure Control Plan.
Exposure determination	Identify and document personnel with potential exposure to Bloodborne pathogens and the associated tasks and responsibilities of those positions and provide this information to Employee Health.	Assist departments with hazard assessments to determine jobs or tasks where exposure to bloodborne pathogens is possible.	Assist in identifying and documenting personnel with possible exposure to Bloodborne pathogens and the associated tasks and responsibilities of those positions and provide this information to Employee Health.	Assist in identifying and documenting personnel with possible exposure to Bloodborne pathogens and the associated tasks and responsibilities of those positions and provide this information to Employee Health.	Notify supervisor and Employee Health if job tasks and responsibilities present occupational exposure concerns that have not been previously identified. Alert others in the work area, before work begins, of activities that may expose themselves or others to bloodborne pathogens or OPIM.
Universal precautions	Ensure that Universal precautions are understood and executed by employees and students with possible exposure to bloodborne pathogens. Promote practices, procedures, and methods that conform to the concept of universal precautions.	Promote practices, procedures, and methods that conform to the concept of universal precautions. Ensure that universal precautions are observed by employees and students with potential exposure to bloodborne pathogens.			Observe universal precautions when handling blood or OPIM.

Responsibility	Supervisors	EHS	Employee Health	Human Resources	Employee or student
Engineering and work practice controls	Design and Implement engineering controls and institute work practice control procedures which will eliminate or minimize potential exposure to blood and OPIM	Provide guidance and technical assistance to departments in the design and selection of appropriate engineering and work practice controls.			Follow established work practice controls to eliminate of minimize occupational exposure. Be aware of engineering controls in the work place and the proper use of those controls.
Personal protective equipment	Provide appropriate personal protective equipment to personnel that have potential exposure to Bloodborne pathogens.	Provide guidance and technical assistance to departments in the selection of the most appropriate types and quantities of personal protective equipment.			Be aware of the proper use, limitations, and location of available personal protective equipment. Use appropriate personal protective equipment to eliminate or minimize occupational exposure.
Housekeeping	Maintain a clean and sanitary workplace environment. Develop and implement cleaning schedules as deemed appropriate for the types of activities and facilities involved.	Provide guidance and technical assistance to departments in the development and implementation of appropriate housekeeping methods.			Be aware of and observe established housekeeping procedures (e.g., use mechanical devices to clean up broken glass not bare hands). Maintain work area in a clean and sanitary manner.
HIV and HBV laboratories	Comply with additional criteria established for HIV and HBV laboratories.	Provide guidance and technical assistance to laboratories engaged in HIV, HBV, or HCV research.			Understand the requirements and protection for personnel working with HIV and HBV and follow established procedures.

Responsibility	**Supervisors**	**EHS**	Employee **Health**	**Human Resources**	**Employee or student**
Hepatitis B vaccination and medical testing	Maintain hepatitis B virus declination statements and provide copies to Employee Health.	Assist departments in the identification of employees and students that have potential exposure to bloodborne pathogens.	Make available the hepatitis B vaccination to employees and students identified through the process of exposure determination to have a potential exposure to bloodborne pathogens. Make available a hepatitis B antibody titer analysis to employees and students identified through the process of exposure determination that believe they have been vaccinated but do not have records documenting the vaccination series.		Complete and submit the Hepatitis B vaccination form (regardless of whether you are accepting the vaccine), and any additional vaccination forms as may be requested by ASU.
Post exposure evaluation and follow-up	Make available the hepatitis B vaccination to personnel identified through the process of exposure determination to have a potential exposure to bloodborne pathogens. Report exposure incidents to the Biological Safety Officer. Report all needlesticks to ASU Employee Health.	Provide direction on approved medical facilities capable of providing the confidential post exposure evaluation and follow-up.	Make available the hepatitis B vaccination to personnel identified through the process of exposure determination to have a potential exposure to bloodborne pathogens. Perform post exposure medical evaluation and treatment. Maintain ASU needlestick log.		Immediately (or as soon as feasible) report all exposure incidents to your supervisors and Employee Health. Report all suspected exposure incidents.
Informing and training	Coordinate annual training required by the Exposure Control Plan. Contact Employee Health for instructions for how to access the online training modules.	Create training opportunities as deemed necessary and appropriate for each affected department.	Coordinate with Employee Health in the development of bloodborne pathogens training materials.		Attend initial and annual refresher biosafety and bloodborne pathogens training.
Training records	Compile and retain employee and student training records for a minimum of three years. Submit copies to Employee Health.	Compile and retain all training records (for a minimum of three years) relative to the Exposure Control Plan.			

Responsibility	Supervisors	EHS	Employee Health	Human Resources	Employee or student
Medical Records			Maintain confidential medical records for exposure incidents. Maintain medical records for the duration of employment plus thirty years. Maintain declination statements.		
Labels and signs	Affix appropriate labels to containers of regulated waste, refrigerators, freezers, and equipment containing blood or OPIM, and other containers of blood or OPIM. Post the universal biohazard symbol and appropriate Biological Safety Level at the entrance of HIV and HBV research laboratories.	Provide labels to requesting department.			Make certain that labels are appropriately affixed. Notify supervisor to report labeling problems.
Waste	Ensure waste is labeled and disposed properly.	Coordinate the proper management and disposal of regulated waste; disposal bags, containers, etc. must be procured by each department.			Ensure waste is labeled and disposed properly.

Responsibility	Supervisors	EHS	Employee Health	Human Resources	Employee or student
Regulatory compliance	Clearly identify the use of blood, products made from human blood, plasma, products made from plasma, or OPIM when applying for a new protocol through the IBC. Provide, at no cost, all supplies, PPE, and vaccinations that are necessary for compliance with the ASU Bloodborne Pathogens Exposure Control Plan. Conduct periodic surveillance of activities within their respective areas to ensure compliance with the ASU Bloodborne Pathogens Exposure Control Plan. Comply with all applicable requirements established in the OSHA Bloodborne Pathogens Standard and the ASU Bloodborne Pathogens Exposure Control Plan.	Assist departments in communicating the ASU Bloodborne Pathogens Exposure Control Plan to third-party vendors who perform tasks on campus that potentially implicate exposure control issues. Assist departments with Bloodborne Pathogens and exposure control issues upon request. Conduct periodic inspections to ensure compliance with the ASU Bloodborne Pathogens Exposure Control Plan. Serve as university liaison to regulatory authorities. Provide a means for suggestions, complaints, and concerns regarding the ASU Bloodborne Pathogens Exposure Control Plan.	Comply with all applicable requirements established in the OSHA Bloodborne Pathogens Standard and the ASU Bloodborne Pathogens Exposure Control Plan.	Ensure job descriptions include bloodborne pathogens requirements if the position involves activities covered by the OSHA Bloodborne Pathogens Standard. Comply with all applicable requirements established in the OSHA Bloodborne Pathogens Standard and the ASU Bloodborne Pathogens Exposure Control Plan.	Comply with all applicable requirements established in the OSHA Bloodborne Pathogens Standard and the ASU Bloodborne Pathogens Exposure Control Plan.

IX. Training

All university employees with a potential exposure to blood or OPIM are required to participate in a bloodborne pathogens information and training program which is provided at no cost to the employee and conducted during their normal working hours. Training will be provided at the time of initial assignment and annual training will be provided within one year of their previous training. Additional training will be provided when changes or modifications of tasks or procedures occur or when new tasks or procedures affect an individual's potential for exposure. The additional training will be limited in scope by only addressing the new exposure created.

A. General Bloodborne Pathogens Training

General Bloodborne Pathogens Training will be provided to all individuals whose job classifications have been identified that may have a reasonably anticipated occupation exposure to Bloodborne pathogens or OPIM and will consist of:

- An overview of ASU Bloodborne Pathogens Exposure Control Plan.
- A general explanation of the epidemiology and symptoms of bloodborne diseases and a review of modes of transmission.
- An accessible copy of the current OSHA Bloodborne Pathogens Standard.
- An accessible copy of ASU Bloodborne Pathogens Exposure Control Plan.
- An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and OPIM.
- Training in methods to prevent or reduce exposure including appropriate engineering controls, work practices, proper use of signs, and proper use and limitations of PPE.
- Annual refresher training within one year of previous training.
- Information on the hepatitis B vaccine, provided at no cost to the employee, including details on its efficacy, safety, method of administration, and the benefits of being vaccinated.
- Information on proper procedures following an exposure incident including methods of reporting the incident, medical follow-up that will be made available, and the post-exposure evaluation and follow-up.
- Information on proper procedures following an environmental exposure or spill including contamination of PPE.

B. Task-Specific Training

Supervisors are required to provide employees with training and information to ensure that employees are apprised of the specific hazards present in their particular area of work. The training requirements include:

- At a minimum, employees shall be informed of the applicable details of the ASU Bloodborne Pathogens Exposure Control Plan and the specific hazards of the tasks and procedures which may expose them to bloodborne pathogens and OPIM in their work setting.
- Employers must provide additional training when changes, such as modification of tasks or procedures or institution of new tasks or procedures,

- affect the employee's occupational exposure. The additional training may be limited to addressing the new exposures created.

C. Training for HIV, HBV and HCV Research Laboratories

Laboratory employees in HIV, HBV, or HCV research laboratories will receive specialized initial training in addition to the established bloodborne pathogens training program. Additional elements of the expanded HIV, HBV, and HCV training program will include:

- Provisions for the supervisor to verify that employees demonstrate proficiency in standard microbiological practices and techniques and in the practices and operations specific to the facility before being allowed to work with HIV, HBV, or HCV.
- Provisions for the supervisor to verify that employees have prior experience in the handling of human pathogens or tissue cultures before working with HIV, HBV, or HCV.
- Provisions for the supervisor to provide a training program to employees who have no prior experience in handling human pathogens. Initial work activities shall not include the handling of infectious agents. A progression of work activities shall be assigned as techniques are learned and proficiency is developed. The supervisor will ensure that employees participate in work activities involving infectious agents only after proficiency has been demonstrated.

D. Training Records

EHS provides bloodborne pathogens training and serves as the custodian of all bloodborne pathogens standard training records taken through ASU Career EDGE. These training records will be maintained for a minimum of three years from the date on which the training occurred. All training records required by this standard will be provided upon request for examination and copying to all employees, employee representatives, the Director of the National Institute for Occupational Safety and Health, or NIOSH, and the Assistant Secretary of the U.S. Department of Labor in accordance with 29 CFR § 1910.20.

Training records will include the following information:

- The dates of the training session.
- The contents or a summary of the training sessions.
- The names and qualifications of persons conducting the training.
- The names and job titles of all persons attending the training sessions.

ASU must comply with the requirements involving transfer of records set forth in 29 CFR § 1910.20(h). Should ASU cease to do business and there is no successor employer to receive or retain the records for the prescribed period, the university will notify the NIOSH Director at least three months prior to their disposal and transmit them to the NIOSH Director, if required by the Director to do so, within the three-month period.

X. Labels and Signs

All required labels and signs shall include the international biohazard symbol and the word “biohazard” or “biological hazard.” The color must be predominantly orange or orange-red with the lettering and universal biohazard symbol in a contrasting color (see image).

Warning labels must be affixed to:

- Centrifuges, biosafety cabinets and equipment used with blood, human cell lines or OPIM.
- Containers of biohazardous wastes.
- Containers used to store, transport, or ship blood or OPIM.
- Incubators used for primary cell cultures.
- Refrigerators and freezers where blood or OPIM are stored.

Warning signs must be placed at the entrance to all spaces that contain bloodborne pathogens or OPIM. The signs must include:

- The biosafety level for the room (e.g., research with human blood must be conducted at BSL-2 or higher).
- The name(s) of the biohazardous material that is present.
- The name and telephone number of the principal investigator, laboratory manager, or other responsible individual.
- The procedures for entering and exiting the room.

In order to maintain consistent labeling throughout the university, EHS will provide all required labels to individual departments upon request. Each department is responsible for purchasing their own biohazard bags and containers.

Contaminated equipment scheduled for maintenance or repair will be labeled in accordance with the provisions in this section and the label must state which portions of the equipment remain contaminated.

XI. Personal Protective Equipment, or PPE

Personal protective equipment is specialized clothing or equipment worn by an employee for protection against a hazard. PPE includes, but is not limited to: gloves, protective laboratory coats or gowns, eye and face protection, and respiratory protection.

Each supervisor must provide the appropriate PPE in the immediate work area for employees to take the necessary precautions to prevent or reduce exposure to bloodborne pathogens or OPIM. PPE should be selected only after a hazard determination has been performed and should not be considered unless other means of controls have been evaluated, including engineering or substitution of less hazardous materials or processes. The supervisor must provide for the cost of obtaining, maintaining, replacing, and disposing of PPE. For assistance with PPE selection, contact EHS.

Always wash hands immediately, or as soon as feasible, after removing gloves or other PPE. Never reuse disposable gloves. Remove PPE after it becomes contaminated and before leaving the work area. Lab coats should not be worn in public areas such as the bathrooms, break rooms or general office areas. All disposable PPE should be discarded in red biohazard trash and all biohazardous waste policies should be followed.

Personal protective equipment	
Type of PPE	**Safety information**
Gloves	Gloves must be worn to protect hands from exposure to bloodborne pathogens or OPIM. Gloves should be changed when contaminated, integrity has been compromised, or when otherwise necessary. Double gloving is recommended when working with high concentrations of pathogenic microorganisms. Heavy rubber gloves may be needed when decontaminating equipment or cleaning spills. Utility gloves may be decontaminated and reused but must be discarded when cracked or torn. Gloves should be removed and hands should be washed when work with bloodborne pathogens or OPIM has been completed and before leaving the laboratory. Do not wash or reuse disposable gloves. Dispose of used gloves with other contaminated laboratory waste.
Eye and face protection	Eye and face protection (goggles, safety glasses with temple and side protection, or face shield) must be used 1) for anticipated splashes or sprays of bloodborne pathogens or OPIM, and 2) when the microorganisms are handled outside the Biological Safety Cabinet (BSC) or physical containment device. Personnel who wear contact lenses should always wear eye protection in laboratories. Eye and face protection should be used in rooms containing infected animals.
Laboratory coats	Protective laboratory coats, gowns, smocks, or uniforms must be worn while working with bloodborne pathogens or OPIM. This protective outerwear protects skin surfaces and street clothing from contamination. Disposable water-resistant gowns should be used when working with materials, which may splash or splatter. Contaminated protective outerwear should be removed and replaced as soon as possible.
Respiratory protection	Any use of respiratory protection (e.g., N95, half-mask, full-face respirators) requires a medical clearance and fit test, which is performed by ASU Employee Health.

XII. Work Practices

Work practices are methods and procedures followed by employees to protect themselves from exposure. The following work practices are derived from the OSHA standard:

Handwashing	The number one defense against infection is clean hands. Hands should be washed with soap and running water after removing the gloves and before leaving the work area. If a sink is not available, hands should be cleaned with disinfectant wipes and washed with soap and water as soon as a sink becomes available. Overly vigorous hand washing is not recommended, as it may cause skin breaks and chapped hands.
Sharps and containers	The use of syringes and needles, glass Pasteur pipettes, and other sharps such as scalpels, razors, and suture needles should be minimized. Used sharps and contaminated broken glassware must be disposed into sharps containers as soon as possible. The sharps containers shall be labeled with the universal biohazard symbol, and shall be puncture-resistant, leak-proof, and closable for transport. Containers must be located where sharps can be disposed of immediately after use. Used needles should not be recapped or removed by hand. If recapping needles is necessary for specific procedures, use forceps, hemostats, or a one-handed technique. Reusable sharps must be handled in a manner that reduces the risk of cuts or punctures during decontamination and cleaning. Wear heavy utility gloves and reach into the decontamination pans with tongs to prevent hand injuries.
Work area restrictions	Eating, drinking, smoking, applying cosmetics and handling contact lenses are prohibited in areas where blood and OPIM are handled or stored. Food and drinks must not be kept in freezers, refrigerators, and other places used to handle or store OPIM. Areas where blood and OPIM are stored or worked with must be posted with hazard identification (such as the universal biohazard symbol) to ensure all personnel entering the area aware of the potential hazards present. Mouth pipetting practices shall not be allowed.
Specimen handling and transport	Specimens and other materials to be transported between work sites should be placed in a secondary container that is leak-proof and labeled with the universal biohazard symbol. Labels are available through EHS. Portable “six-pack” coolers are typical for this use. Containers for shipping specimens must meet the Department of Transportation and United States Postal Service requirements. International shipping may require permits or authorization from the United States Department of Agriculture or Centers for Disease Control. Contact EHS for more information.
Contaminated equipment	Equipment used to store or handle blood and OPIM shall be labeled with the universal biohazard symbol. It must be cleaned and decontaminated before being serviced, repaired, or transported from the work area. Any parts of the equipment that cannot be decontaminated should be labeled with the biohazard symbol and the information communicated to all affected people.

XIII. Housekeeping

Bench tops, counters and all other equipment used to work with blood and OPIM must be disinfected at the end of the work day, when work surfaces are overtly contaminated, or after any spill. Commonly used disinfectants include 10% household bleach or 70-85% ethanol. Other suitable disinfectants are provided in the table below.

Work surfaces and equipment may be covered to prevent contamination with infectious materials. Protective coverings should be removed and replaced at the end of the work, after a spill, or when they are overtly contaminated. Coverings must be discarded as biological waste.

Chemical disinfectants*		
Disinfectant	**Working solution**	**General use**
Bleach (Sodium Hypochlorite)	10%	Disinfects work areas, floors, walls, glassware. Good general all around disinfectant. Disinfects liquid cultures for disposal.
Quaternary Ammonia (Commercial Grade)	10-100 ppm	Disinfects floors, work surfaces, glassware.
Phenolics (Commercial Grade)	2.8-3.0% Active Ingredient	Disinfects instruments, and work surfaces.
Glutaraldehyde	2-3%	Disinfects instruments, including endoscopic tubes.
Isopropyl Alcohol	70-85%	Disinfects work surfaces, equipment; antiseptic and non-corrosive.
Ethyl Alcohol	70-85%	Disinfects work surfaces, equipment; antiseptic, low toxicity, and non-corrosive.
Iodophor	75-150 ppm	Disinfects instruments and surfaces, non-corrosive.

* Contact EHS for more information about chemical disinfectants. Refer to the Environmental Protection Agency, or EPA website for a list of approved chemical disinfectants.

XIV. Biological Spill Kits

Biological spill kits should be available wherever blood or OPIM are used or stored. The contents of the biological spill kit include:

- Biohazard bag.
- Biohazard spill sign.
- Disposable lab coat.
- Disposable shoe covers.
- Hand sanitizing wipes.
- Mini brush and dustpan (or something to scoop spilled materials).
- Nitrile gloves (4 pair).
- Paper towels or other absorbent material.
- Rigid, leak-proof container for sharps.
- Safety goggles.
- Spray bottle (to make a fresh 10% bleach solution).
- Tong or forceps to pick up broken glass.

Note: Bleach or other EPA-registered disinfectant must be available in the lab for spill cleanups.

XV. Spills

Spills of blood or OPIM must be cleaned up immediately by personnel trained in the hazards associated with bloodborne pathogens (and be familiar with this plan) using the following procedures:

1. Wear proper PPE including gloves, eye protection and specialized clothing, such as disposable Tyvek™ suits.
2. If possible, isolate the spill and cover it with towels or absorbent pads.
3. Pour a freshly prepared 1:10 solution of Clorox bleach and water (1 part bleach to 9 parts water) or other EPA-approved disinfectant on the spill, working inward toward the center of the spill and let it stand for 20 minutes. This allows the disinfectant time to kill the organisms present.
4. Remove the towels and rinse with a mild soap solution.
5. Use mechanical means such as tongs or a scoop to pick up broken glassware or sharps, and dispose them in a sharps container. Sharps must never be handled with bare hands.
6. Dispose of waste products in the biohazard waste containers.

XVI. Accidents and Injuries

In the event of a needlestick, sharps injury, or exposure to human blood or other body fluid, immediately follow these steps:

1. Any contaminated clothing should be removed.
2. Vigorously wash exposed area with soap and water.
3. If there is exposure to the nose, mouth, or mucous membranes, flush with water.
4. If there is exposure is to the eyes, irrigate with clean water, saline, or sterile irrigants.
5. Report the incident to your supervisor.
6. Seek medical treatment.
7. Fill out the Report of Injury. The form should be filled out within 24 hours of an accident or injury. Privacy and confidentiality procedures will be followed.

It is highly recommended that post-exposure treatment, if indicated, be started as soon as possible following an exposure incident. If an exposure occurs, the individual should immediately go to ASU Employee Health. If ASU Employee Health is closed, emergency care may be obtained at the nearest emergency room and reported to ASU Employee Health and EHS the next business day. In addition, whenever someone is injured or becomes ill from work-related incidents, the Arizona Department of Administration, or ADOA, requires the following forms to be completed in order to process Worker's Compensation Claims:

- EHS Incident Report.
- Supervisor Incident Report.

Supervisors must report all accidents and injuries to EHS. Federal, state, and local agencies may also need to be notified depending on the nature of the accident or injury. If the project involves recombinant and synthetic nucleic acid molecules, the IBC will be required to report any significant problems with or violations of the NIH Guidelines for Research with Recombinant or Synthetic Nucleic Acid Molecules and any significant research-related accidents or illnesses to the NIH within 30 days. For any incidents involving recombinant and synthetic nucleic acid molecules, contact the biosafety officer immediately at 480-965-1823.

XVII. Post-Exposure Evaluation and Follow-Up

Following a report of an exposure incident, the employee shall be provided a confidential medical evaluation and follow-up. This follow-up must include documentation of the route(s) of exposure and the circumstances under which the exposure incident occurred, identification and testing of the source individual's blood if available, collection and testing of the employee's blood, post-exposure prophylaxis (when medically indicated), evaluation of reported illnesses, and counseling. ASU will provide this evaluation and follow-up through ASU Employee Health or contracted health care providers at no cost to the employee.

A. Documentation of the Source Individual

The source individual will be identified if feasible unless prohibited by state or local law:

- The source individual's blood shall be tested as soon as feasible and after consent is obtained, in order to determine HBC, HCV and HIV infectivity; the results will be documented.
- When the source individual is already known to be infected with HBV, HIV, or HCV, testing for the source individual's known HBV, HIV or HCV status need not be repeated.
- Results of the source individual's testing shall be made available to the exposed employee, and the employee shall be informed of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.

B. Blood Collection and Testing

The exposed employee's blood must be collected no later than 10 calendar days after the exposure incident. Serological testing for HIV, HBV and HCV will be performed after consent is obtained; a healthcare professional's written opinion will be made available within 15 days after completion of the evaluation. Testing must be completed no later than 30 calendar days after the exposure incident. No later than 18 months after the date of the exposure incident, the employee will be retested. If an employee chooses not to complete the testing, that employee may jeopardize the availability of worker's compensation benefits from the Arizona Department of Administration, Risk Management Division.

C. Information Provided to the Health Care Provider

The health care professional responsible for the employee's hepatitis B vaccination will be provided a copy of the OSHA Bloodborne Pathogens Standard. The health care professional evaluating an employee after an exposure incident will be provided the following information:

- A copy of the OSHA Bloodborne Pathogens Standard.
- A description of the exposed employee's duties as they relate to the exposure incident.

- Documentation of the route(s) of exposure and circumstances under which exposure occurred.
- Results of the source individual's blood testing, if available.

D. Health Care Professionals Written Opinion

The supervisor will obtain and provide the employee with a copy of the evaluating health care professional's written opinion within 15 days of the completion of the evaluation. The health care professional's written opinion for hepatitis B vaccination will be limited to whether hepatitis B vaccination is indicated for an employee, and if the employee has received such vaccination.

The health care professional's written opinion for post-exposure evaluation and follow-up will be limited to the following information:

- That the employee has been informed of the results of the evaluation.
- That the employee has been told about any medical conditions resulting from exposure to blood or OPIM which require further evaluation or treatment.
- All other findings or diagnoses will remain confidential and will not be included in the written report.

E. Evaluation of Incident

The supervisor must investigate the circumstances surrounding the exposure incident immediately. Information regarding the exposure incident, source material, and employee vaccination status should be provided to ASU Employee Health and the employee's health care provider. Site-specific procedures should be reevaluated and revised as necessary to prevent recurrences of similar incidents. EHS is available to assist you with evaluating the following:

- Engineering controls and work practices used at the time of the exposure.
- A description of any devices being used (e.g., sharps, centrifuge, blender).
- Materials involved in the incident.
- Protective equipment or clothing worn at the time of the exposure incident.
- A review of the procedures being performed at the time of the incident.
- A review of the employee's training record.

XVIII. Records

A. Medical Recordkeeping

ASU Employee Health will establish and maintain an accurate record for each employee with occupational exposure, in accordance with 29 CFR § 1910.20. The record shall include:

- A copy of all results of examinations, medical testing, and follow-up procedures required.
- A copy of the employee's hepatitis B vaccination status including the dates of all the hepatitis B vaccinations and any medical records relative to the employee's ability to receive vaccination.
- A copy of the information provided to the healthcare professional as required.
- The name and employee identification number of the employee.
- The copy of the healthcare professional's written opinion as required.

ASU Employee Health will ensure that employee medical records required are kept confidential and not disclosed or reported without the employee's express written consent to any person within or outside the workplace except as required by the standard or as may be required by law. ASU Employee Health will maintain the records required for at least the duration of employment plus thirty years in accordance with 29 CFR § 1910.20.

B. Employee Records

ASU is required to establish and maintain an accurate record for each employee with occupational exposure, in accordance with 29 CFR 1910.1020. This record is maintained by ASU Employee Health and includes:

- The name and unique employee number.
- A copy of the employee's hepatitis B vaccination status including the dates of all the hepatitis B vaccinations and any medical records relative to the employer's ability to receive vaccination.
- All medical records pertaining to an exposure incident and follow-up evaluation. All documentation will be held under strict confidentiality guidelines.

C. Sharps Injury Log

ASU is required to establish and maintain a sharps injury log (see Appendix B) for the recording of percutaneous injuries from contaminated sharps. The information in the sharps injury log must be recorded and maintained in such manner as to protect the confidentiality of the injured employee. ASU Employee Health maintains the sharps injury log. The sharps injury log must contain the following information:

- An explanation of how the incident occurred and personnel involved.
- The laboratory in which the exposure occurred.
- The type and brand of device involved in the incident.

D. Documentation of Updated Safe Work Practices

Consideration of changes in technology that reduce or eliminate exposure must be evaluated and documented annually including solicitation of input from non-managerial staff.

XIX. Biological waste disposal

This section describes procedures for the proper handling and disposal of biological waste from research, instructional, and clinical laboratories at ASU. These procedures are based on state and federal law, requirements from the Occupational Safety and Health Administration, or OSHA, Centers for Disease Control, or CDC, and National Institutes of Health, or NIH, and good laboratory practice. Failure to manage biological waste properly could result in personal injury, disruption to research, fines, or criminal prosecution. For purposes of the ASU Bloodborne Pathogens Exposure Control Plan, biological waste is defined in this document as:

- Animal carcasses, body parts, and bedding of animals that have been infected with agents that produce, or may produce, human infection. (A.R.S. § R18-13-1401).
- Discarded cultures and stocks generated in the diagnosis, treatment or immunization of a human being or animal or in any research relating to that diagnosis, treatment or immunization, or in the production or testing of biological materials. (A.R.S. § R18-13-1401).
- Discarded human blood or blood products and materials containing free-flowing blood or free-flowing blood components. (A.R.S. § R18-13-1401).
- Discarded human organs and body parts removed during surgery. (A.R.S. § R18- 13-1401).
- Discarded sharps (e.g., hypodermic needles, syringes, pipettes, scalpel blades, blood vials, needles attached to tubing, broken and unbroken glassware, slides, and coverslips) used in animal or human patient care, medical research, or clinical laboratories. (A.R.S. § R18-13-1401).
- Liquid or semi-liquid blood or OPIM; contaminated items that would release blood or OPIM in a liquid or semi-liquid state if compressed; items that are caked with dried blood or OPIM and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or OPIM. (29 CFR 1910.1030).
- Transgenic plants or animals, genetically modified organisms, or materials containing recombinant or synthetic nucleic acid molecules.

All biological waste must be disposed of in a manner that protects employees, contractors, the community, and the environment from biological hazards.

A. Solid Biological Waste Disposal

Follow these procedures for solid biological waste disposal:

1. Solid biological waste must be placed immediately into an appropriately labeled working container with the universal biohazard symbol or the word “Biohazardous Waste.” The working container should be within arm’s reach of the work. While actively performing work at the bench top, the working container may be a beaker, tin can, plastic box, hanging red bag, or any other leak-proof container.
2. When the working container is two-thirds (2/3) full, the contents should be placed inside a closable, secondary container (e.g., bag) that is appropriately labeled with the universal biohazard symbol or the word “Biohazardous Waste.”

3. The secondary container must be closed when it is two-thirds (2/3) full. Materials to be decontaminated outside the laboratory should be transported in a durable, leak-proof, closed container.

   Note: To protect employees who handle waste and to reduce odors, ASU recommends that all biological waste be thermally (e.g., autoclaved) inactivated. However, this treatment does not satisfy the state biological waste treatment standard for disposal into regular trash or dumpsters.

4 The bag must then be placed into the red biohazardous waste drum. There is a maximum weight limit of 50 pounds in each red drum.
5 When a drum is ready for pick-up, submit a hazardous waste pick-up request online.

B. Liquid Biological Waste Disposal

Follow these procedures for liquid biological waste disposal:

1. Liquid biological waste must be disinfected using thermal (e.g., autoclave) or chemical treatment methods.
2. Materials to be decontaminated outside the laboratory must be transported in a durable, leak-proof, closed container.
3. If EHS has approved the liquid biological waste for drain disposal, ensure all criteria for disposal are met prior to disposal. Contact EHS at asuehs@asu.edu for more information on drain disposal applications.
4. If EHS has not approved the waste for drain disposal, it must be labeled with a hazardous waste tag and treated as a chemical waste for pick up by EHS. Submit a hazardous waste pick-up request online.

C. Sharps Disposal

Used sharps must be discarded immediately or as soon as feasible into sharps containers. These containers must be puncture resistant and the sides and the bottom must be leak proof. They must be appropriately labeled with the word “Sharps” and the universal biohazard symbol or color-coded red to warn everyone that the contents are hazardous. They must be closable (i.e., have a lid, flap, door, or other means of closing the container), and they must be kept upright to keep the sharps and any liquids from spilling out of the container.

During use, containers for used sharps must be easily accessible to personnel and located as close as is feasible to the immediate area where sharps are used or can be reasonably anticipated to be found. Sharps containers must be maintained upright throughout use, replaced routinely, and not be allowed to overfill. When moving sharps containers from the area of use, they must be:

- Closed immediately prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping; and

- Placed in a secondary container if leakage is possible. The second container must be:

    - Appropriately labeled with the universal biohazard symbol or color-coded.
    - Closable.
    - Constructed to contain all contents and prevent leakage during handling, storage, transport, or shipping.
    - Disposed of as regulated waste.

Reusable sharps containers must not be opened, emptied, or cleaned manually or in any other manner that would expose individuals to the risk of accident or injury. When full, sharps containers may be autoclaved provided that no hazardous chemicals are present in the container. The sharps container must then be placed into the red biohazardous waste drum. Sharps and sharps containers should never be discarded directly into regular trash receptacles.

Contaminated sharps must never be sheared or broken.

Recapping, bending, or removing needles is generally prohibited. However, in rare circumstances, recapping is permissible if it can be demonstrated by a research laboratory that no alternative is feasible or that such action is required by a specific procedure. Procedures that describe the recapping process must be written and included in the laboratory-specific safety plan. If recapping is necessary, individuals must use either a mechanical device or a one-handed technique. **The cap must not be held in one hand while guiding the sharp into it or placing it over the sharp.** A one- handed “scoop” technique uses the needle itself to pick up the cap, and then the cap is pushed against a hard surface to ensure a tight fit onto the device. The cap may also be held with tongs or forceps and placed over the needle. Immediately (or as soon as possible) after use, these sharps must be placed into appropriate containers until properly reprocessed or disposed.

XX. Definitions

ASU: Abbreviation for Arizona State University.

Blood: Human blood, human blood components, and products made from human blood.

Bloodborne pathogens: Pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).

Clinical laboratory: A workplace where diagnostic or other screening procedures are performed on blood or OPIM.

Collateral duty exposure: Exposure to blood or OPIM during first aid activities rendered by an individual whose primary job assignment is not the rendering of first aid or other medical assistance. Typically individuals with collateral duty exposure to blood or OPIM respond solely to injuries resulting from workplace incidents, generally at the location where the incident occurred.

Contaminated: The presence or the reasonably anticipated presence of blood or OPIM on an item or surface.

Contaminated laundry: Laundry which has been soiled with blood or OPIM or may contain sharps.

Contaminated sharps: Any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes, and exposed ends of dental wires.

CPR: Abbreviation for cardiopulmonary resuscitation. An emergency medical procedure for a victim of cardiac arrest or, in some circumstances, respiratory arrest.

Decontamination: The use of physical or chemical means to remove, inactivate, or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.

Designated first aid responder: An individual who is trained in first aid and identified by ASU as responsible for rendering medical assistance as part of his or her job duties. An individual who routinely provides first aid with the knowledge of the department or supervisor is also considered a designated first aid responder even if providing first aid is not officially in the employee's job description.

EHS: Abbreviation for the ASU Department of Environmental Health and Safety.

Engineering controls: Controls (e.g., sharps disposal containers, self-sheathing needles, safer medical devices, such as sharps with engineered sharps injury protections and needleless systems) that isolate or remove the bloodborne pathogens hazard from the workplace.

Exposure incident: A specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or OPIM that results from the performance of an employee's duties.

Handwashing facilities: A facility providing an adequate supply of running potable water, soap, and single-use towels or air-drying machines.

Licensed Healthcare Professional: A person whose legally permitted scope of practice allows him or her to independently perform Hepatitis B Vaccination and Post-exposure Evaluation and Follow-up.

HBV: Hepatitis B virus.

HCV: Hepatitis C virus.

HIV: Human immunodeficiency virus.

Needleless systems: A device that does not use needles for: (1) The collection of bodily fluids or withdrawal of body fluids after initial venous or arterial access is established; (2) The administration of medication or fluids; or (3) Any other procedure involving the potential for occupational exposure to bloodborne pathogens due to percutaneous injuries from contaminated sharps.

Occupational exposure: Reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or OPIM that may result from the performance of an employee's duties.

OPIM: Other potentially infectious materials. (1) The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva contaminated with blood, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids; (2) Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and (3) HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV, HBV, or HCV.

Parenteral: Piercing mucous membranes or the skin barrier through such events as needlesticks, human bites, cuts, and abrasions.

Personal protective equipment: Specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g., uniforms, pants, shirts or blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.

PPE: An abbreviation for Personal protective equipment.

Production facility: A facility engaged in industrial-scale, large-volume or high concentration production of HIV, HBV or HCV.

Regulated waste: Liquid or semi-liquid blood or OPIM; contaminated items that would release blood or OPIM in a liquid or semi-liquid state if compressed; items that are caked with dried blood or OPIM and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or OPIM.

Research laboratory: A laboratory producing or using research-laboratory-scale amounts of HIV, HBV, or HCV. Research laboratories may produce high concentrations of HIV, HBV, or HCV but not in the volume found in production facilities.

Sharps: Engineered sharps injury protection means a non-needle sharp or a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, with a built-in safety feature or mechanism that effectively reduces the risk of an exposure incident.

Source individual: Any individual, living or dead, whose blood or OPIM may be a source of occupational exposure to the employee. Examples include, but are not limited to, hospital and clinic patients; clients in institutions for the developmentally disabled; trauma victims; clients of drug and alcohol treatment facilities; residents of hospices and nursing homes; human remains; and individuals who donate or sell blood or blood components.

Sterilize: The use of a physical or chemical procedure to destroy all microbial life including highly resistant bacterial endospores.

Student: A registered ASU student participating in academic programs or University-sponsored activities (e.g., athletics) that have been identified by EHS as subject to exposure risk, and to the extent that their exposure occurs in the course of such participation.

Universal precautions: An approach to infection control. According to the concept of Universal Precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.

Work practice controls: Controls that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., prohibiting recapping of needles by a two-handed technique.

Appendix A: Employee Hepatitis B Virus Consent and Declination Form

I understand that all employees who are reasonably anticipated to come into contact with human blood or other potentially infectious materials during their normal duties must complete this form. I acknowledge that I have been provided with a copy of the CDC Hepatitis B Vaccine Information Statement. I have read and understood the information provided to me. Based upon this information, I acknowledge the following (please check only one of the following boxes):

☐ **I have not received the hepatitis B vaccination series.** However, my employer has provided me with information on how to receive the vaccination free-of-charge through ASU Health Services. I understand this includes three injections at prescribed intervals over a 6-month period. I understand that there is no guarantee that I will become immune to hepatitis B and that I might experience an adverse side effect as the result of the vaccination. I acknowledge that I must provide proof of vaccinations to my employer as they are received.

☐ **I have already received the hepatitis B vaccination series.** Please list the date (or approximate date) of each vaccination and provide proof of vaccinations to your employer:

1st dose: _____ (Month / Year)
2nd dose: _____ (Month / Year)
3rd dose: _____ (Month / Year)
Booster: _____ (Month / Year)

☐ **I have received antibody testing to confirm immunity to hepatitis B.** Please provide proof of immunity to your employer.

☐ **I do not wish to receive the hepatitis B vaccine.** I understand that due to my occupational exposure to blood or OPIM I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to myself. However, I decline hepatitis B vaccination at this time. I understand that by declining this vaccination, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continue to have occupational exposure to blood or OPIM and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

Employee Name (print): _____

Employee's Department (print): _____

Employee Signature: _____

Date: _____

Original: Maintained by Supervisor or Designee
Copy: ASU Employee Health
* Pursuant to 29 CFR § 1910.1030(f)(2)(iv)

Students: Hepatitis B vaccine declination form.

Appendix B: Guidelines for Working in a Biological Safety Cabinet

Biological Safety Cabinets (BSCs) are available for use in many laboratories at ASU. Any work or task with a potential for splash or aerosol generation with infectious materials requires the use of a BSC or other appropriate containment device. Proper use of BSC includes:

- Turn off the ultraviolet lamp if one is in use. Turn on the fluorescent lamp.
- Inspect the air intake grilles for obstructions and foreign material and remove if necessary.
- Adjust sash to appropriate height.
- Turn the cabinet on for at least 10 minutes prior to use, if the cabinet is not already running.
- Prepare a written checklist of materials necessary for the activity (including disinfectant and discard containers).
- Wash hands and arms with mild soap. Put on a rear-fastening, long-sleeved gown with tight-fitting cuffs. Put on safety glasses and a pair (or two pairs) of high-quality nitrile gloves.
- Disinfect work surface with a suitable disinfectant.
- Place items into the cabinet so that they can be worked with efficiently without unnecessary disruption of the airflow, working with materials from the clean to the dirty side.
- Adjust the working height of the stool so that the worker's face is above the front opening.
- Delay manipulation of materials for approximately one minute after placing hands / arms inside the cabinet.
- Minimize the frequency of moving hands in and out of the cabinet.
- Do not disturb the airflow by covering any portion of the grillwork with materials.
- Work at a moderate pace to prevent the airflow disruption that occurs with rapid movements.
- Wipe the bottom and side of the hood surfaces with disinfectant when work is completed.

NOTE: *Be very careful when using small pieces of materials in the BSC as they can be blown into the grilles and disrupt the motor operations.*

Annual certification of the BSC confirms that it will provide the user and experimental material the protection for which it is designed. The airflow, filters, and cabinet integrity are checked to ensure that the cabinet meets minimum performance standards. Certification is arranged through each department and provided by an outside vendor.

BSCs intended for research with biohazardous materials must be certified:

- After they are received and installed (before use with infectious materials).
- After filter changes.
- After being moved (even a few feet).
- Annually.

BSC decontamination (e.g., using a formaldehyde gas production process) must be provided and needs to be done:

- Before any maintenance work requiring disassembly of the air plenum, including filter replacement.
- Prior to cabinet recertification.
- Before moving the cabinet to a new laboratory.
- Before discarding or salvaging.

The production of formaldehyde gas is a health concern. Many BSCs at ASU are not ducted to the outside; therefore, extreme caution should be used when having the procedure performed

Appendix C: Sharps Injury Reporting Log

The sharps injury log must be completed after a needlestick injury. The log is used to record percutaneous injuries from contaminated sharps. The information in the sharps injury reporting log is recorded and maintained in such manner as to protect the confidentiality of the injured employee. The log is kept by ASU Employee Health.