

This is the story of Leeuwenhoek, the first of the microbe hunters. It is the tale of the bold and persistent and curious explorers and fighters of death who came after him.....Some of them who were too bold have died – done to death by the immensely small assassins they were studying – and these have passed to an obscure small glory.

Paul De Kruif, Microbe Hunters (1926), Harcourt, Brace and Co., pub, pg. 3

In 1993 CAL/OSHA published the Bloodborne Pathogens Rule (Title 8 CCR GISO 5193); the fundamental premise of this rule is an approach to infection control termed *Universal Precautions*. *Universal Precautions* assumes that all human blood, blood products, and certain body fluids are contaminated with HIV, HBV, HCV, or other bloodborne pathogens and that these materials be handled accordingly.

The Bloodborne Pathogens Standard (29 CFR, Bloodborne Pathogens. - 1910.1030) applies to all occupational exposure to blood or other potentially infectious materials. **Blood** means human blood, human blood components, and products made from human blood. **Bloodborne Pathogens** means 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), hepatitis C virus (HCV) and human immunodeficiency virus (HIV). Additionally, “**Other Potentially Infectious Materials**” (OPIM) are included under this standard. OPIM means (1) The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, 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 or HBV.

The following are specific actions Stanford University has taken to minimize exposures to bloodborne pathogens:

Bloodborne Pathogens Exposure Control Plan – describes how to eliminate or minimize exposure of all Stanford University personnel to human/primate blood or blood products that might contain bloodborne pathogens. All work at Stanford University that has the potential to contain bloodborne pathogens will be carried out using Universal Precautions. Universal precautions is an approach to infection control whereby all human/primate blood and other human/primate body fluids, tissues and cells are treated

as if known to be infectious for HIV, HBV, HCV, and other bloodborne pathogens (BBP's).

Each principle investigator (PI)/supervisor will complete an Exposure Plan based on the nature of the work being carried out in their facilities. The PI/supervisor will indicate procedures and materials in the laboratory that have the possibility of exposing personnel to BBP's. Once completed, the plan will remain on file in a central location within the laboratory/work place.

A copy of the Stanford University Bloodborne Pathogens Exposure Control Plan is in Appendix G. It can also be accessed on the web at:

http://www.stanford.edu/dept/EHS/prod/researchlab/bio/docs/bloodborn_pat_exp_control.pdf

Hepatitis B vaccine program - the vaccine is offered free of charge to all Stanford University personnel considered 'at risk' due to occupational exposure. While Stanford University encourages employees to be vaccinated, accepting vaccination is not a condition of employment. Employees that are offered the vaccine are required to either accept the vaccine or sign a declination form. Stanford University students (including post doctoral fellows, graduate students, and medical students) are to go to Vaden for vaccination, while faculty and staff use Employee Health. For additional information of the vaccine program and a copy of the Hepatitis B Vaccination Declaration, see Appendix H or access the web at:

http://www.stanford.edu/dept/EHS/prod/researchlab/bio/docs/Hepat_BVacc_Decl.pdf

Bloodborne Pathogen Training program - All Stanford University faculty, staff, and students who have potential exposure to blood or blood products will be trained annually (see Chap. 5).

Vaccinations

Vaccinations are available for many etiologic agents used in the laboratory. The Biosafety Officer in conjunction with the Administrative Panel on Biosafety (APB) will make the recommendation for the use of vaccinations on a case- by- case basis.

Medical surveillance

Medical surveillance may be required for both those workers who use biohazardous agents as well as any animal handler who must tend to animals inoculated with etiologic agents. Some animals may be infected with agents not related to the research, such as sheep whose body fluid may contain *Coxiella burnetii*, the causative agent for Q-fever. The Department of Comparative Medicine will work with the Biosafety Officer and EH&S to identify animal handlers who may be at risk for occupational exposure to infectious microorganisms in the course of their duties.

Procedures for receiving a medical examination:

- A. Each University School/Department shall administer the Medical Surveillance program for its employees. The supervisor shall identify employees who may be at risk for occupational exposure to biological agents. The Biosafety Officer can assist the supervisor if a medical examination is appropriate.
- B. The Department/School will schedule a medical appointment with:
Stanford University Occupational Health Clinic
Environmental Safety Facility (ESF)
480 Oak Road, Room B15
Stanford, CA 94305-8007
Phone: (650) 725-5308
www.stanford.edu/dept/EHS/prod/researchlab/IH/SUOHC/index.html
- C. Upon completion of the medical examination, the participant will be notified by the examining physician to review the results. Appropriate referrals will be made at this time in the event of abnormal findings. EH&S will receive one copy of the medical clearance form from the Occupational Health Clinic. This form will describe the participant's ability to work with biological agents, work in the particular environment or other condition that initiated the examination. The Occupational Health Clinic will also send a copy of the clearance form to the requesting department.
- D. If there is a restriction indicated on the clearance form that inhibits an individual's ability to complete a job, then the supervisor shall notify the Biosafety Officer to discuss a remedial course of action.
- E. Medical records will be kept at the Occupational Health Clinic for the duration of the individual's participation in the Medical Surveillance Program at Stanford University. A copy of the medical surveillance clearance form will be kept by the department and at EH&S.