Use of human cell lines

The use of human cell lines and tissues in the laboratory presents potential hazards. These potential hazards include bloodborne pathogens such as HBV, HIV, HCV, HTLV, EBV, HPV and CMV, as well as agents such as *Mycobacterium tuberculosis* that may be present in human lung tissue. Other primate cells and tissues also present risks to laboratory personnel. Cells immortalized with viral agents such as SV-40, EBV adenovirus or HPV, as well as cells carrying viral genomic material also present potential hazards to laboratory personnel.

The Office of Biosafety is requiring that human and other primate cells be handled using BSL-2 practices and containment as described in the BMBL 5th Edition. Work should be conducted under the policies and guidelines established by the institution's Exposure Control Plan. All work should be performed in a BSC, and all material decontaminated by autoclaving or chemical disinfection before discarding. BSL-2 recommendations for personnel protective equipment such as laboratory coats, gloves and eye protection should be rigorously followed. All laboratory personnel working with human cells and tissues should be enrolled in the Occupational Health and Safety Program, should provide a baseline serum sample, be offered the Hepatitis B immunization series, and be evaluated by the occupational health physician following any exposure incident. Laboratory personnel should also take Bloodborne Pathogens Training and is accessible on the USAG Board of Regents website (http://www.usg.edu/facilities/training/pathogens/) .This training module is intended for University System of Georgia employees and students who have the potential to be exposed to blood or other potentially infectious material and is designed to provide a basic understanding of bloodborne pathogens, common modes of transmission, and methods of preventing exposure. Similar programs should be considered for work with NHP blood, body fluids, and other tissues.

If the work involves a well characterized human cell line that the user believes is void of any bloodborne pathogen or any adventitious zoonotic agent and thus should not be considered as "other potentially infectious materials" as described in the Bloodborne Pathogens Standard and can produce documentation as such, then the Office of Biosafety will review it for consideration for work at a lower containment level. Considerations to include but not limited to date and inclusiveness of testing documentation as well as laboratory environments where the cell line has been used and/or will be used.

Any work with human cell lines in animals requires ABSL-2 containment and work practices as described in the BMBL 5th edition. If a Risk Group 2 human or zoonotic infectious agent or any recombinant or synthetic nucleic acid molecule is known to be involved in the experiment, a protocol must be submitted for review and approval by the Institutional Biosafety Committee (IBC). A description of this process and the protocol application form can be found on our website The Office of the Vice President for Research: Biosafety.