IBRDSC

Policy on the Use of Human and Primate Cell Lines for Laboratory Personnel

Introduction

Human and primate cell lines are commonly used in biomedical research, yet appropriate biosafety requirements for handling these cell lines are often subject to debate within the scientific community. In order to clarify the University's position on this matter, the Institutional Biological and Recombinant DNA Safety Committee has created the following policy.

Background

In 1991, the Occupational Safety and Health Administration (OSHA) issued the Bloodborne Pathogens (BBP) Standard to protect employees who have occupational exposure to human blood or other potentially infectious materials. While human blood, most body fluids, unfixed human tissues and organs were clearly included within the scope and application of the standard, the inclusion of human and primate cell lines was ambiguous.

In 1994, OSHA issued an interpretation of the applicability of the BBP Standard towards human cell lines. According to the interpretation, human cell lines are considered to be potentially infectious and within the scope of the BBP Standard unless the specific cell line has been characterized to be free of hepatitis viruses, HIV, Epstein-Barr virus, papilloma viruses and other recognized bloodborne pathogens. In alignment with this interpretation, the American Type Culture Collection (ATCC) recommends that all human cell lines be accorded the same level of biosafety consideration as a line known to carry HIV. Moreover, the Fourth Edition of the CDC publication, *Biosafety in Microbiological and Biomedical Laboratories* (BMBL), recommends that human and other primate cells should be handled using Biosafety Level 2 (BSL2) practices and containment.

In consideration of the aforementioned regulatory interpretation and consensus guidelines and other factors, the LSU Institutional Biological and Recombinant DNA Safety Committee has adopted the following policy in regards to the use of human and primate cell lines.

Policy

All cell and organ cultures of human origin, including well established cell lines as well as primate cell lines, shall be handled in accordance with the OSHA Bloodborne Pathogens Standard and under Biosafety Level 2 (BSL2) containment. All University personnel working with these cultures shall maintain a written record

of their annual training as required under the OSHA Bloodborne Pathogens Standard.

References

American Type Culture Collection Frequently Asked Questions, URL: http://www.atcc.org/TechnicalInfo/faqCellBiology.cfm#Q53

Biosafety in Microbiological and Biomedical Laboratories, 4th Edition, URL: http://www.bmbl.od.nih.gov/

Health & Safety Office, UNC at Chapel Hill, Biological Safety Manual: Chapter 11; Hazards of Cell and Tissue Culture Systems. August 2000. URL: http://ehs.unc.edu/manuals/bsm/BSM11.pdf

OSHA Letter of Interpretation, URL: http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=21519

Rapport, J. Letter from the Institutional Biosafety Committee on the Subject of the OSHA Bloodborne Pathogen Standard. Temple University. 2001 URL: http://www.research.temple.edu/ehrs/docs/IBCOSHA.pdf

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