

## UMKC IBC Human Cell Line Policy

### **PURPOSE:**

The purpose of this policy is to give the UMKC research community guidance and information on the regulatory background when working with cell lines, human derived cell lines, tissues and other potentially infectious materials (OPIM).

Protocol submissions to the UMKC Institutional Biosafety Committee must acknowledge the potential risk associated with use of cell lines, human derived cell lines, humanized animal cells, tissues, and other potential infectious materials to be considered for protocol approval. This potential and known risk of infection should be addressed in any IBC protocol submission.

### **POLICY:**

The US Occupational Health and Safety Administration's blood borne pathogens is established to provide protection to workers who have occupational exposure to human blood or other potentially infectious materials (OPIM). Human cell lines are part of the category of OPIM. As such, human cell lines and tissues are covered under the bloodborne pathogen standard and are to be handled as biohazardous.

Cell lines that are well characterized by testing for the presence of any of the blood borne pathogens can be assessed as not covered by the OSHA Blood Borne Pathogen Standard. The testing required is by an independent third party and the results would need to be submitted, reviewed and approved by the UMKC IBC.

Also, Appendix H of the Biosafety in Microbiological and Biomedical Laboratories 5th edition, Working with Human, NHP and other mammalian cells and tissues, also recognizes that there are additional potential hazards associated with the manipulation of human cells and tissues and those hazards include Blood Borne Pathogens. (Hepatitis B, hepatitis C, HIV HTLV, EBV, HPV and CMV and others) Also, appendix H recognizes that immortalized cells that may carry viral genetic material that may also pose potential hazards to those who handle these materials. Link:

[https://www.cdc.gov/biosafety/publications/bmbl5/BMBL5\\_appendixH.pdf#x2013;%20Working%20with%20Human,%20NHP%20and%20Other%20Mammalian%20Cells%20and%20Tissues%20%5BPDF%20-%2020236%20KB%5D%3C/a%3E%20](https://www.cdc.gov/biosafety/publications/bmbl5/BMBL5_appendixH.pdf#x2013;%20Working%20with%20Human,%20NHP%20and%20Other%20Mammalian%20Cells%20and%20Tissues%20%5BPDF%20-%2020236%20KB%5D%3C/a%3E%20)

Based on the above cited section of the OSHA Blood Borne Pathogen Standard and the Appendix H of the BMBL, the UMKC IBC has agreed that there needs to be an acknowledgement of the potential risk of infection by working with human cell lines as OPIM for a protocol to be approved.

### **Resources:**

- ***Biosafety in Microbiological and Biomedical Laboratories***, 5<sup>th</sup> edition, U.S. Health and Human Services, <https://www.cdc.gov/biosafety/publications/bmbl5/index.htm>, Assessed May 30, 2018
- ***NIH Guidelines for research Involving Recombinant or Synthetic Nucleic Acid Molecules***, April 2016, National Institutes of Health, Office of Science Policy, <https://osp.od.nih.gov/biotechnology/nih-guidelines/> Accessed May 30, 2018
- ***29 CFR 1910.1030 Bloodborne Pathogens***, U.S. Department of Labor, Occupational Safety and Health Administration, [https://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=STANDARDS&p\\_id=10051](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10051) Accessed May 30, 2018