

When Viruses Cause Cancer



Erle Robertson

Professor (Tenure), Microbiology , University of Pennsylvania Program Leader, Tumor Virology , University of Pennsylvania Professor, Radiation Oncology , University of Pennsylvania

CURRENT RESEARCH

Uncovering the mechanisms of infectious disease to prevent cancer

About 20% of all human cancers are linked to infectious diseases, and this may possibly be an underestimate. So how does a virus cause cancer? A virus uses the body as a host and therefore, in order to survive must go undetected by the immune system. In some cases, the virus is able to mix with the cell's DNA to trigger changes that lead to the proliferation of cancer. Dr. Erle Robertson, of the University of Pennsylvania, is working to understand mechanisms of oncogenesis utilized by viruses in order to impact the risks of human disease with a movement towards curative and preventative therapeutics. By combining different technological approaches, he and his team combine biochemical, genetics, molecular biology, cell biology, microbiology, genomics, bioinformatics, proteomics, and biostatistics to develop innovative research for incredible health applications!

Dr. Robertson's work is becoming increasingly important as we look to the future of healthcare with more diseases being linked to infectious agents and viruses. Understanding the delicate balance between microbiota and the humans they inhabit will be an important key to developing a larger opportunity for treatment and saving lives. Dr. Robertson and his team are constantly engaging new avenues of research that effectively work at the three major levels of basic science, translational research, and therapeutic interventions. His work with primarily, Epstein-Barr Virus (EBV) and Kaposi's Sarcoma herpesvirus (KSHV) in addition to Hepatitis C Virus (HCV) and infectious etiology for gastric cancer and ocular surface squamous cell neoplasia (OSSN) has lead to several advances towards effective treatment and therapeutics.

Current research includes...

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AFFILIATION

 University of Pennsylvania

EDUCATION

- Ph.D., in Microbiology & Molecular Genetics, 1992 , Wayne State University
- Post-Doctoral training , Harvard Medical School , 1992 - 1997
- Bringham and Women's Hospital , Division of Infectious Disease , 1992 -1997

AWARDS

- 1996- Leukemia and Lymphoma Society, Special Fellow Award
- 1999- Leukemia and Lymphoma Society, Scholar Award
- 2009- American Association for Advancement of Science, Fellow
- 2009- American Academy of Microbiology, Fellow
- 2010- University of Pennsylvania, Fellow

RESEARCH AREAS

Life Science, Immunology / Inflammatory, Infectious, Oncology / Cancer

FUNDING REQUEST

Your contributions will support the continued research of Dr. Erle Robertson, of the University of Pennsylvania, as he investigates how cancer is related to infectious diseases and viruses. Donations will fund the necessary \$80-100K required for each member of his team. In choosing to donate, you will play a role in developing novel technologies for the future of cancer treatment and prevention.