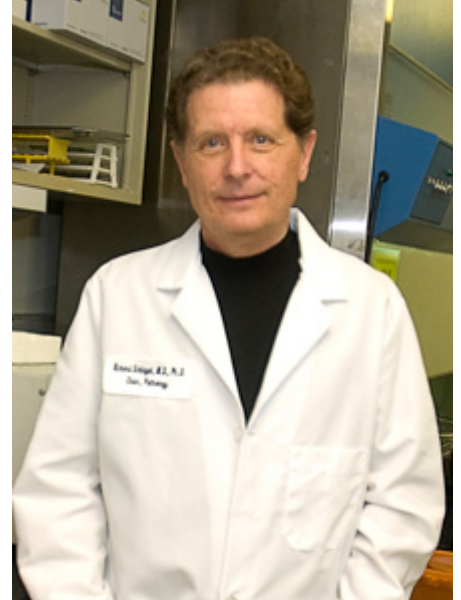


Dr. Richard Schlegel's laboratory co-developed the technology for the human papillomavirus (HPV) vaccine, which was approved by the U.S. Food and Drug Administration for clinical use in June 2006. HPV is the etiologic cause of cervical cancer, which is the second-leading cause of cancer deaths in women worldwide. Dr. Schlegel's laboratory is currently developing, with grants from the Bill and Melinda Gates Foundation and the National Institutes of Health (NIH), second- and third-generation vaccines that could be used to prevent and treat HPV infections in the developing world, where almost all deaths from cervical cancer occur.



Dr. Schlegel's laboratory also utilizes a wide range of experimental approaches to investigate HPV/host interactions at the immunological, cellular, and molecular levels. In particular, his lab looks at three oncogenes in the papillomavirus genome with in vitro transforming activity: E5, E6, and E7, in order to understand the mechanism of papillomavirus-mediated cell transformation. Such approaches will aid in the design of viral-specific therapeutics. These approaches have led to the discovery that the antimalarial drug, dihydroartemisinin, is a potent therapeutic for cervical cancer cells.

Lastly, the Schlegel laboratory is exploring the mechanism by which the HPV viruses induce cell immortalization. The property is unique to the "high-risk" HPVs present in human cancers and the laboratory has defined the Myc protein as being a critical target of the HPV E6 oncoprotein, thereby facilitating the transactivation of the hTERT gene and the consequent induction of telomerase activity.

Collaborations: Dr. Schlegel and Dr. Byers have research projects in an NIH-funded PPG that was recently awarded to Dr. Mishra Lopa. Dr. Michael Johnson served as an advisor for a graduate student (Clare Thibodeau) in Dr. Schlegel's laboratory who worked on the role of Myc in breast cell immortalization. The Schlegel laboratory also collaborated and published with Dr. Uren's laboratory on the role of wnt pathway signaling in cervical cancer. Finally, Dr. Schlegel's laboratory is initiating studies of prostate vaccines in collaboration with Dr. Chris Albanese and a grant is currently being submitted on this topic.

Beginning in 1980, Dr. Schlegel was an investigator, then a senior investigator at the National Cancer Institute (NCI), and later served as Chief of the Cell Regulation and Transformation Section in the Laboratory of Tumor Virus Biology at NCI. In 1990, he joined Georgetown University Medical College as an Associate Professor in the Department of Pathology, and became Chair of that department in 2003. He serves on the editorial board of the journal *Virology* and serves as a permanent member of the NIH Virology study section.

Dr. Schlegel received his MD and PhD degrees from Northwestern University Medical School, and was a resident and post-doctoral fellow at Harvard Medical School (Brigham Hospital) in the fields of Pathology and Virology.

