

SIU Med School Researcher Proposes Vaccine Against Herpes

A research scientist at Southern Illinois University School of Medicine in Springfield reports the development of a new type of vaccine for herpes simplex virus (HSV-2) that holds hope for the prevention of genital herpes. His findings were published this week by the Public Library of Science (PLoS) in their journal *PLoS ONE*.

William P. Halford, Ph.D., associate professor of medical microbiology, immunology and cell biology at SIU, is the author of the report and principal investigator of the study. The research was funded by a grant from the National Institutes of Health.

The report documents the construction of a genetically-engineered HSV-2 virus that undergoes limited growth when tested in an animal model, but establishes only insignificant infections. Like the chickenpox and shingles vaccine, SIU's HSV-2 vaccine consists of a live virus that is weakened.

Herpes simplex virus infects about 1 billion people worldwide and causes genital herpes. Once a person is infected, they carry HSV-2 for life. The infections may reactivate months to years later causing recurrences of genital herpes or transmission to other people.

Currently, one in ten young adults acquires HSV-2 before they are married. An effective vaccine would be useful in breaking the cycle and stopping the spread of genital herpes.

Halford believes that the SIU vaccine merits further study. The next step is to publish studies demonstrating that SIU's live HSV-2 vaccine is better than more established HSV-2 vaccine approaches, such as the Herpevac vaccine. Human clinical trials in the early 2000s revealed that the Herpevac vaccine had a limited effect in women but did not protect men against HSV-2 infection.

Halford presented his newest data at the International Herpesvirus Workshop in July 2010, including results showing that SIU's live HSV-2 vaccine is 10 to 100 times more effective in protecting mice against genital herpes than a Herpevac-like vaccine. Halford's first report on this new class of HSV-2 vaccine is available at the *PLoS ONE* web site -- <http://dx.plos.org/10.1371/journal.pone.0012251>.

Halford joined the SIU faculty in 2007. He completed a postdoctoral fellowship at the University of Pennsylvania (2000) and earned his doctorate in virology and immunology at the Louisiana State University Health Sciences Center (1996).