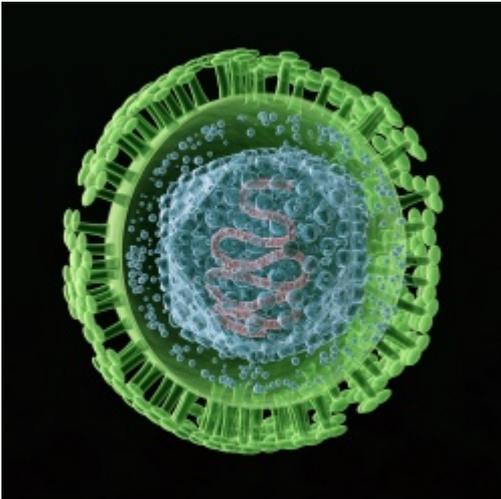


# Herpes Vaccine Update: Don't Throw Away Condoms Just Yet



By Josh Bloom — September 26, 2016



Electron micrograph of a herpes virus.  
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Earlier this year, [I wrote about GEN-003](#) <sup>[1]</sup>, the world's first effective genital herpes vaccine **(1)**. Since that time, our readers have expressed considerable interest in the clinical progression of this vaccine. So, as your "*one-stop herpes resource supercenter*" (probably not something you'd want inscribed on your gravestone), we have been following this vaccine and other developments in the field.

This week, there are some preliminary, but nonetheless very interesting developments; this time with a different vaccine (two, actually). Rational Vaccines (RVx), a biotechnology startup founded in 2015, focuses on vaccines for both genital and oral herpes simplex virus (HSV), and claims to be up to 100 times more effective than GEN-003, but won't show data to back that up.

The vaccines are based on research performed by Chief Science Officer William Halford, Ph.D., Associate Professor at the Southern Illinois University School of Medicine. Halford, a virology and immunology expert, has taken an alternative approach by developing a new class of live HSV-1 and HSV-2 mutant vaccines called *Theravax and Profavax*. The key difference between Rational Vaccines' technology and previous herpes vaccines is referred to as antigenic breadth - the degree to which the vaccines resemble the outer coating of the virus found in naturally occurring HSV. The closer the match, the better the chances of eliciting a robust immune response.

Despite the absence published data, Halford claims Rational may have a game changer on its hands **(2)** - if their claims are real.

That's the rub. I spoke with Agustin Fernandez III, co-founder and CEO of the company, and he

wouldn't reveal details of the vaccine, saying he instead preferred to issue a press release in mid-October. If that happens, I will interview Dr. Halford and provide more details.

Although there is no data, we can talk about their claims. The animal model of viral or bacterial infections in immune compromised (SCID) mice is generally quite predictive of efficacy in humans **(3)**. And they say its vaccines work in this model. Normally, when immune compromised mice are infected with herpes, they die. However, when the mice were first inoculated with the vaccine, 114 out of 115 survived after being infected with HSV-2.

It's still just a marketing claim so patients shouldn't penalize GEN-003 for playing by FDA rules and publishing their data. We will know much more in a couple of weeks. Stay tuned.

To read about other herpes vaccine candidates, [please click here](#) [2].

Notes:

- (1) GEN-003 has been shown to be moderately effective in phase II trials in treating people who are already infected with HSV-2.
- (2) This is despite long odds. Only about 10 percent of drug candidates that enter human clinical trials end up being approved by the FDA.
- (3) Animal models of human disease vary greatly in predicting the success of a potential drug in humans. Some models, for example, cancer and Alzheimer's, are terrible. Models for infectious disease are usually quite good.

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**Links**

[1] <http://acsh.org/news/2016/03/10/vaccine-herpes-erupts-news-9932>

[2] [http://acsh.org/search?search\\_api\\_views\\_fulltext=herpes+vaccine](http://acsh.org/search?search_api_views_fulltext=herpes+vaccine)