Developer of HIV Med Tenofovir Focuses on Fighting Zika

Koen Van Rompay hopes to stop mother-to-child transmission of Zika virus, just like he did with HIV.

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We can all thank veterinarian-turned-virologist Koen Van Rompay for helping develop tenofovir (known under the brand name Viread). Since its FDA approval in 2001, tenofovir has remained one of the most widely prescribed meds for people living with HIV. It's also one of two components in Truvada, the daily prevention pill taken by HIV-negative people.

Van Rompay's work in the 1990s showed that tenofovir could lower the chances of a fetus contracting the virus from an HIV-positive mother. Today, as Capital Public Radio reports, Van Rompay is directing his knowledge at stopping another kind of mother-to-child viral transmission: that of the Zika virus.

Specifically, he and his researchers are working with rhesus monkeys at the National Primate Research Center at the University of California, Davis.

"When I saw those stories online [about birth defects caused by Zika], my first question was, I wonder what has been done in monkeys. So, I did a quick search. I only found some…papers from the '50s," he told Capital Public Radio. "One of the reasons I'm so eager to do Zika virus research is because I've seen with HIV how strategies that we develop in monkeys can really make a big difference."

As The Daily Beast noted in an article about Van Rompay, it's estimated that Zika has infected about 1.5 million people in Brazil. When a pregnancy is involved, the virus can cause microcephaly—a condition characterized by an abnormally small head and brain—in newborns. Because developing a vaccine could take 20 years and $1.5 billion, it's important to find a way to stop mother-to-child transmission.

Van Rompay is working with other specialists across medical and research fields to build a shared database of Zika knowledge, an effort that reminds him of the early 1990s when researchers were tackling HIV.

"Even though there are many epidemiological and biological differences, both epidemics are

fueled by socio-economic conditions of poverty in all its aspects, including poor access to health care and proper information," Van Rompay told The Daily Beast. "That requires global long-term efforts.

"The race is very similar, but I have hopes that it will be easier to develop a vaccine against Zika virus than it is against HIV," he continued. "Compared to 25 years ago, there is now a very large arsenal of antiviral compounds available that researchers are already starting to screen in vitro for activity against Zika virus, and if necessary, make further chemical modifications."

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