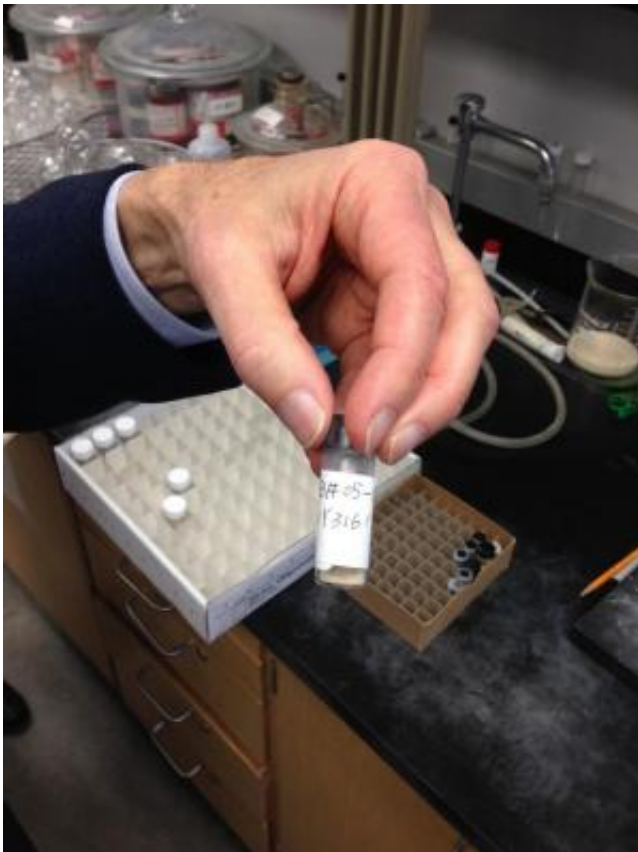


Scientists design leading therapeutic drug in fight against Ebola virus

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Auburn scientists design promising drug candidate to fight the deadly Ebola virus

An Auburn University research team has produced a new drug candidate that could one day slow or even stop the deadly Ebola virus. The discovery will be published in an upcoming issue of the journal

Bioorganic and Medicinal Chemistry.

The group, led by professor of chemistry and biochemistry Stewart Schneller, has designed a compound aimed at reversing the immune-blocking abilities of certain viruses, including Ebola.

"In simple terms, the Ebola virus has the ability to turn off the body's natural [immune response](#)," Schneller said. "We have made a small tweak in compound structure that will turn that response back on."

Currently there are no drugs to combat Ebola, and the death toll from recent outbreaks in West Africa is approaching 1,000, according to the World Health Organization. Immunizations might one day lessen the virus' impact, but vaccines have limitations that other drugs do not.

"Vaccines offer a promising therapeutic approach, but they can't be given to everyone in a population, including the young, the elderly and those with compromised immune systems," said Schneller. "This and other factors support the need for drug therapy as we fight this disease."

Ebola is a severe, often fatal illness in humans. Outbreaks have occurred primarily in remote villages in Central and West Africa near tropical rainforests. It is transmitted to people from wild animals and spreads in the human population through human-to-human transmission.

Schneller has studied Ebola for the past decade. The drug design research taking place in his laboratory has focused on combatting a variety of virus-caused infections, including Smallpox, Yellow Fever, Hepatitis C and others.

More extensive studies with Schneller's new discovery are already underway through a partnership with the National Institutes of Health.

"It's a long process that has taken 10 years to get to this point," said Schneller. "You think you can outsmart the [virus](#) or outsmart nature, but that does not happen. So we have to redesign. We made this one small change and it has made a dramatic difference."

Provided by Auburn University

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