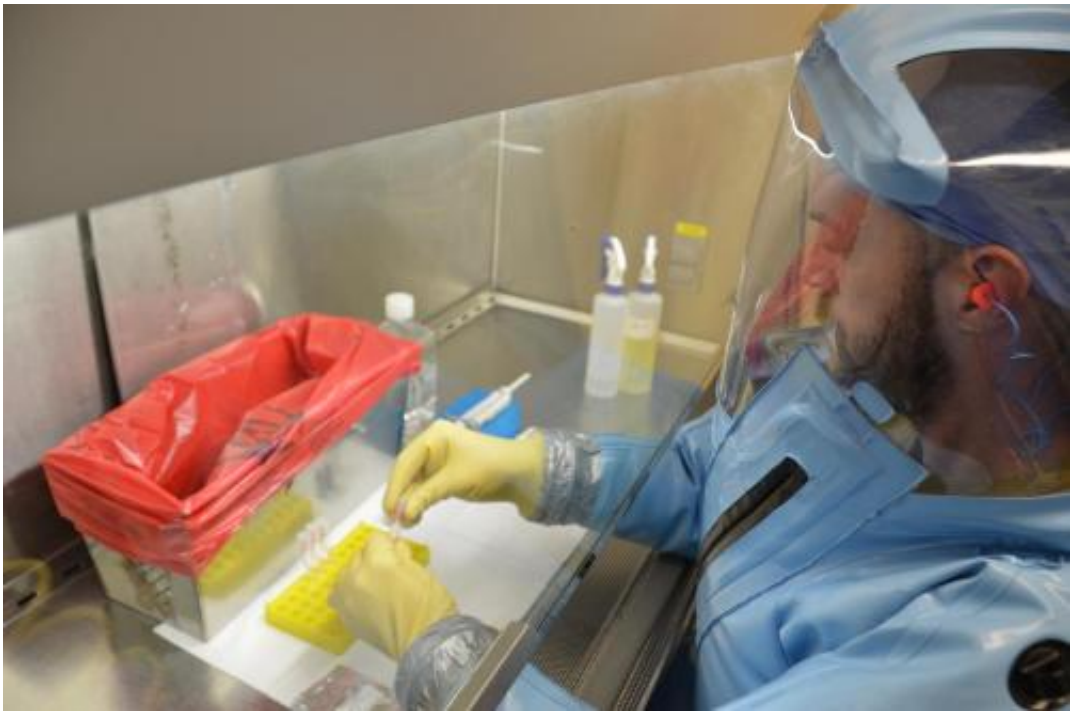
UTMB collaboration results in rapid Ebola test

March 4 2015



Robert Cross, UTMB researcher, is shown handling the simple diagnostic test recently authorized for emergency use by the FDA. The small size and rapid result are expected to speed up the diagnosis of Ebola and aid in patient management and the safety of healthcare workers. Credit: University of Texas Medical Branch

University of Texas Medical Branch researchers who helped assess the effectiveness of a new rapid test kit to diagnose Ebola learned this week it has received emergency use authorization from the Food and Drug

Administration.

"The kit was tested using the live Ebola virus under high containment conditions at the Galveston National Laboratory to determine its effectiveness prior to field trials," said Robert Cross, the UTMB researcher who was part of a small team who traveled to Sierra Leone at the height of the Ebola outbreak last year to also validate the test in the field. The entire development process was completed in just over six months.

The test is significant because Ebola can take hold within five to seven days, and in some extreme cases it can take almost that long for a traditional test to provide a diagnosis.

At the start of the Ebola epidemic, Corgenix Medical Corporation and collaborators from Tulane University, UTMB and other partners with the Viral Hemorrhagic Fever Consortium quickly shifted focus from other areas to develop a diagnostic kit that could rapidly diagnose Ebola. The approved kit is a result of that collaboration.

According to Cross, UTMB has been working with Tulane for many years under the direction of Dr. Robert Garry, a longtime collaborator with Thomas Geisbert, UTMB's internationally-recognized Ebola researcher. Garry heads the Fever Consortium, which was founded by Tulane and operates a field site for medical research on Lassa fever in Sierra Leone.

"The central mission of the GNL is to provide support to research entities, including private partners and other universities, on extremely dangerous pathogens," said Cross. "This was an exciting project because we were involved from the start with the goal of developing a test that could provide a quick answer to clinicians about someone's condition. Instead of taking several days to find out if someone has Ebola, this new

test provides an answer within about 15 minutes. Follow-up testing with conventional testing will be necessary to confirm the illness, but the rapid tests allows medical providers to get a jump start on treating suspected patients."

"This has the potential to be a game-changer in stopping the spread of the epidemic," said Garry, professor of microbiology and immunology at Tulane. The new rapid test is very similar to a pregnancy test. Potentially infected bodily fluids are exposed to a test strip that can determine infection status after just a few minutes.

The rapid test kit is manufactured by Corgenix, based in Broomfield, Colorado. Corgenix has a long history of research and development of products for diagnosing diseases, including Lassa fever, a similar hemorrhagic fever found in West Africa. The Corgenix rapid test is the first rapid diagnostic test for emergency use approved by the FDA.

"Completing this product development in less than a year demonstrates how governmental agencies, regulatory bodies, industry, non-profits and others can work together to find solutions to catastrophic events such as the Ebola virus outbreak," said Douglass Simpson, Corgenix President and CEO. "The collaboration has enabled us to quickly deliver this critically important point-of-care test and potential breakthrough in the fight against Ebola in the current outbreak in West Africa."

Provided by University of Texas Medical Branch at Galveston

provided for information purposes only.