New research center launched to study Ebola and Lassa survivors

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Robert Garry, PhD, is co-director of the new Center for Viral Systems Biology, a research collaboration led by The Scripps Research Institute to study survivors of Ebola and Lassa fever.

Tulane University virologists are part of a team of researchers working on a new $15 million federally funded project to help eradicate Ebola and Lassa fever by studying in detail how survivors were able to fight off the deadly viruses.

The Scripps Research Institute will lead the effort via the newly created [Center for Viral Systems Biology](#) (CViSB), which includes researchers from Tulane University School of Medicine, Kenema Government Hospital in Sierra Leone, the University of California, Los Angeles, the Ragon Institute and the Massachusetts Institute of Technology.

The new project builds on more than a decade of highly collaborative work in Sierra Leone, West Africa, where scientists and local partners have built research facilities and worked with patients.

"Coupling the powerful tools of systems biology research with the resources built up over the past fifteen years in West Africa will allow important advances in our understanding of Ebola and Lassa fever, two of the deadliest diseases known," said [Robert Garry](#), PhD, co-director of the new center and professor of microbiology at Tulane.

While Ebola virus outbreaks are rare, the 2013–2016 epidemic in West Africa infected more than 15,000 people, killing more than 10,000. Lassa virus causes recurring outbreaks in West Africa, killing thousands of people a year.

"These are very severe diseases, but some people survive. So the simple question is 'Why?' How are some people able to fight off the disease, while others are not?" said CViSB co-director [Kristian Andersen](#), PhD, director of Infectious Disease Genomics at the Scripps Translational Science Institute.

 Researchers will use genomic analysis and other advanced tools, including physiological measurements, to study individual disease survivors. They will also develop predictive statistical models for identifying critical disease correlates and analyze large-scale data sets to pinpoint causal host-pathogen interactions. By shedding light on the molecular networks that play critical roles in patient outcomes, the research will allow scientists to identify new targets for medicines and vaccines and inform personalized treatment strategies.

"This is different from a lot of research where we are looking at the outbreaks as a whole," Andersen said. "In this research, instead we're zooming in on the individual patient to learn how we can best treat and prevent these diseases in the future."