



Government of Sierra Leone

Ministry of Health and Sanitation
(MoHS)

Ministry of Agriculture and Forestry
(MAF)

NEW VIRUS IN THE EBOLA-FAMILY FOUND IN BATS IN SIERRA LEONE

FREQUENTLY ASKED QUESTIONS AND ANSWERS (FAQ)



A new virus has been discovered as part of the PREDICT Ebola Host Research Project funded by the United States Agency for International Development (USAID). The new virus belonging to the ebolavirus group was discovered in five insect-eating bats in Sierra Leone. It is known as Bombali virus (BOMV) and is distinct from all previously known ebolaviruses. Based on laboratory experiments, researchers report that the virus has the potential to enter human cells – but it is not known whether it has the potential of infecting anyone or if it is harmful. Studies are ongoing to understand if this virus can cause disease, and the government of Sierra Leone and international partners like UC Davis and Columbia University are engaging local communities to convey what is known about the new virus, and how to live safely with bats. is distinct from all previously known ebolaviruses. Based on laboratory experiments, researchers report that the virus has the potential to enter human cells – but it is not known whether it has the potential of infecting anyone or if it is harmful. Studies are ongoing to understand if this virus can cause disease, and the government of Sierra Leone and international partners like UC Davis and Columbia University are engaging local communities to convey what is known about the new virus, and how to live safely with bats.

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NEW VIRUS IN THE EBOLA-FAMILY FOUND IN BATS IN SIERRA LEONE – FAQ

1. What is this new ebolavirus?

A new virus belonging to the ebolavirus group has been found in five insect-eating bats in Sierra Leone. The new virus, known as Bombali virus (BOMV), is distinct from all previously known ebolaviruses. BOMV was discovered as part of a large USAID-supported survey in West Africa to identify hosts of ebolaviruses, to improve understanding and preparedness for disease risks in the region. BOMV was detected in specimens collected from five bats (out of 241 tested) all of which were sampled in the Bombali district of Sierra Leone.

This new virus is genetically distinct from the virus that caused the outbreak in West Africa (EBOV, belonging to the species *Zaire ebolavirus*), as well as from all other known viruses causing EVD outbreaks to date.

2. Can this new ebolavirus make people or animals sick?

At this time, it is not known if Bombali virus has been transmitted to people or if it causes disease in people; however, results show it has the potential to infect human cells. Because the new virus is genetically similar to other ebolaviruses that do cause disease in humans, further investigation is needed to understand more about the specific risk it poses.

3. What is being done to engage and protect communities?

Public engagement meetings, advocacy, and trainings are a

12. What are filoviruses, and when did Ebola outbreaks start and where do they come from?

This new Bombali virus is part of a larger group of viruses called filoviruses. The filovirus family includes Ebola virus (EBOV), Marburg virus (MARV), and the distantly related Lloviu virus (LLOV).

The first EVD outbreak occurred in 1976 in DRC (Zaire), since that time more than 20 different outbreaks have occurred. There has been no obvious predictable pattern to when or where outbreaks occur and what events result in the spillover of the virus from the main animal carrier to other animals and people. To answer some of these questions, the Ebola Host Project was launched in Sierra Leone, Guinea, and Liberia to sample many animals that may be carriers of the ebolaviruses of several species in different geographic areas and during different wet and dry seasons. In Sierra Leone, this work is being carried out with MOHS, MAF, University of Makeni (UNIMAK), University of California Davis (UCD), and USAID/PREDICT.

13. Where can I get additional information on Ebola?

Background information, technical guidance, and protocols for health care professionals, researchers, journalists, and the public, can be found on the WHO global website: <http://who.int/csr/disease/ebola/en/>, MAF and MOHS <https://www.cdc.gov/vht/ebola>

- 5) If you or someone you know gets sick go to the nearest health facility.
- 6) If your animals become sick contact your local government community liaison or your district medical or agricultural officer to report the sickness.

10. Why can't we just kill all the bats?

Killing or disturbing bats in their natural habitat will not reduce the risk infection by this new virus and, in fact, may result in the opposite effect. Killing bats puts people in direct contact their dead bodies, blood, and feces and urine and likely increases the risk of exposure to Bombali virus and other diseases. Killing all the bats in a community will allow other bats from nearby areas to come in and these new bats may be more likely to spread other diseases.

11. What does it mean to be Ebola-free?

The devastating outbreak of EBOV (species *Zaire ebolavirus*) which led to 11,000 deaths (including close to 4,000 in Sierra Leone) is over and Sierra Leone is free of human cases. However, the virus may be residing in animals, such as primates and bats. Therefore, it is important to be vigilant and continue disease surveillance and to use safe personal practices. The Ministry of Health and Sanitation and the Ministry of Agriculture and Forestry with assistance from USAID are actively monitoring animals for ebolaviruses in order to better understand the risk and prevent human infections.

critical part of the USAID's PREDICT Research Project activities in Sierra Leone, Liberia, and Guinea. Local communities have been consulted at every step from the onset of animal sampling. In Sierra Leone, MOHS and MAF staff, together with PREDICT ecology and virology experts are now in the process of meeting with communities to share plans and answer questions about Bombali virus and how to reduce the risk of exposure to the virus. PREDICT continues to proactively sample wildlife and monitor for known pathogens such as other ebolaviruses as well as for this new virus found in bats.

4. Ebola virus disease (EVD) in Sierra Leone

The West African EVD (2013-2016) crisis was unprecedented. It was the first Ebola epidemic that spread and sustained itself in multiple countries, and it was the first time that EVD occurred in major cities. The new virus, Bombali virus, is not the same virus. There is no evidence yet that it has spilled over into humans or that it can cause disease in humans or animals.

5. What are Ebola viruses?

There are five species of closely related viruses that are collectively referred to as 'ebolaviruses' (genus: *Ebolavirus*). The first virus identified was EBOV (species *Zaire ebolavirus*). This virus was also the cause of the 2013-2016 outbreak in West Africa. Viruses belonging to three other species are also known to cause disease in humans: *Sudan* (species *Sudan ebolavirus*); *Tai Reston ebolavirus*, (species *Tai Forest ebolavirus*); and

Bundibugyo virus (species *Bundibugyo ebolavirus*). The fifth virus, Reston virus (species *Reston ebolavirus*), and can infect humans but does not cause disease, it can however cause severe disease in non-human primates. The discovery of BOMV (species *Bombali ebolavirus*) by the USAID-PREDICT team has increased the number of known species in the Ebolavirus genus to six. At this time, it is not known if Bombali virus has been transmitted to people or if it causes disease in people; however, results show it has the potential to infect human cells.

6. How are ebolaviruses virus spread?

According to WHO, the ebolaviruses can spread to humans through contact with bodily fluids from infected people and animals. Animals that may carry ebolaviruses include non-human primates, bats, and forest antelope. A critical part of preventing large scale outbreaks is early detection and reporting of ebolavirus infections in animals and people so that risks can be identified and appropriate prevention actions taken.

7. How can bats potentially spread ebolaviruses?

A number of different species of bats have been proposed as reservoir hosts for ebolaviruses. In West Africa, the epidemic is thought to have started following contact with an infected bat, but this is not certain. Infected bats are not known to show signs of illness but can shed the virus in their saliva and feces. As a result, other animals and people can become infected if they touch live or dead bats, eat fruit on which bats have already chewed or if they

come into contact with the urine or feces or other fluids of infected bats.

8. How can we safely live with bats?

Bats have been implicated as reservoirs for a number of disease, but they also play important roles in the ecosystem by pollinating native and agricultural crops, reduction of insect pests that also spread disease and damage crops, and consumption of mosquitoes and other pests that feed on people and livestock. A key part of reducing infection risk is to avoid direct contact with bats or their droppings and fluids (eg., feces, urine, blood, saliva), this can be done by covering water and food in the home, practicing good hygiene such as washing hands, cooking pots, and plates with soap and water, and avoiding killing or eating bats. People should not attempt to kill or eradicate bats in response to this discovery.

9. How can the community protect themselves?

The best way to protect yourself from bats and any diseases they may carry (including the new Bombali virus) is to practice good hygiene in and around the home.

- 1) Wash your hands with soap and water before preparing or eating meals.
- 2) Protect your food and water at home by covering them.
- 3) Avoid direct contact with bats (don't kill them or eat them)
- 4) Protect your animals from bat droppings by not keeping them under trees with large numbers of bats