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Tekst 9

Search for long-term reservoir of Ebola begins

Scientists are flying out to equatorial Africa to sample birds in an attempt to identify the mysterious reservoir of the Ebola virus, which has caused repeated fatal outbreaks in the region.

The most recent, in the Republic of Congo, was first detected on 4 January. On Friday, health minister official Joseph Mboussa, said the death toll had risen to 106, out of a total of 120 cases.

The haemorrhagic fever can kill up to 90 per cent of its victims. In Congo, people are thought to have contracted the virus through contact with infected gorilla meat.

But scientists do not know the identity of the long-term reservoir of the disease, from which the gorillas caught the disease. "And as long as we haven't established the reservoir of the Ebola virus, it's an illusion to think of an appropriate cure," warned William Karesh, of the US Wildlife Conservation Society recently.

Structural similarities

Birds were implicated as a possible host to the deadly virus by David Sanders and Scott Jeffers at Purdue University, Indiana and Anthony Sanchez, at the US Centers of Disease Control in Atlanta, Georgia, who showed in December that there are strong structural similarities between Ebola and some bird retroviruses.

"The biochemistry of entry of Ebola [into a cell] is really similar to bird retroviruses. It is clear that they have a common ancestor," Sanders told **New Scientist**. "We suggest the possibility that the current natural reservoir is

a bird host – it's consistent with Ebola's epidemiology."

The central African rift valley separates the ranges of bird species into distinct western and eastern groupings. Ebola outbreaks occur in central and western Africa but not in the east – consistent with being confined to the bird populations on one side of the rift valley. Sanders says gorillas or other primates cannot be the long-term reservoir of Ebola because they die too quickly, meaning the virus would die out too.

Gloves and masks

Now Townsend Peterson, an ornithologist at the University of Kansas, Nate Rice at Purdue, and colleagues are flying out to Equatorial Guinea, with all arriving by the end of March.

In addition to ecological research projects, they will be collecting samples of liver and spleen tissue from about 100 bird species. The researchers will be protected by gloves and masks.

Peterson says his previous work tracking the ecology of outbreaks of filoviruses – the group to which Ebola belongs – suggested that bats were a more likely reservoir. But Sander's study means that "birds certainly merit examination", he says.

The samples will be sent to Sanchez, a molecular virologist at the CDC, who will test for the viral proteins that identify Ebola.

"There is this link with avian retroviruses," he told **New Scientist**: "It's a long shot – but we'll see what happens."

Shaoni Bhattacharya in the *New Scientist*

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- 2p 45 □ Welke twee mogelijkheden worden in tekst 9 genoemd als mogelijke “long-term reservoir of Ebola” (kop)?