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# Chimp virus could be HIV ancestor

SCIENTISTS believe they have found a "missing link" in the evolution of the virus that causes AIDS. It bridges the gap between the infection that does no harm to most monkeys and the one that kills millions of people. That link is a virus that is killing chimpanzees in the wild at a disturbingly high rate, according to a study in the journal *Nature*.

Chimpanzees are the first primate besides man shown to get sick in the wild in significant numbers from a virus related to HIV. Chimps are also man's closest relative among primates.

And chimps are already endangered. But the discovery of the chimp-killing disease may help doctors come up with better treatments or a workable vaccine for humans, experts said.

The monkey version of the virus that causes AIDS is called simian immunodeficiency virus (SIV), but most infected apes and monkeys show no symptoms or illness.

So "if we could figure out why the monkeys don't get sick, perhaps we could apply that to people", said study lead author Beatrice Hahn, a professor of medicine of the University of Alabama.

The nine-year study of chimps in Gombe National Park in Tanzania found chimps infected with SIV had a death rate 10 to 16 times higher than uninfected chimps. And necropsies of dead infected chimps showed unusually low counts of T-cell white blood proteins — just like the levels found in humans with AIDS, Hahn said.

When scientists looked at the particular strain, they found that it was the closest relative possible to the virus that first infected humans.

"From an evolutionary and epidemiological point of view, these data can be regarded as a 'missing link' in the history of the HIV pandemic," AIDS researcher Dr Daniel Douek of the National Institute of Allergy and Infectious Diseases said. Douek was not involved in the *Nature* study.

Monkeys and apes — except for chimps — seem to survive the virus because of some kind of evolutionary adaptation, probably on the cell receptors. And the infection of chimps is more recent so they haven't adapted,

Douek said.

Hahn said chimps and people probably caught the virus the same way, by eating infected monkeys. And both spread it the same way, through sexual activity.

Many factors are causing Africa's chimp population to dwindle, said study co-author Michael Wilson, a professor of anthropology at the University of Minnesota and former director of field research at the Jane Goodall Institute in Tanzania. Hunting, loss of habitat and disease are decreasing chimp numbers and it's hard to figure out how much

of a factor SIV is, he said.

"The last thing these chimps need is another source of mortality."

Wilson, who spent years observing chimps in Tanzania as part of the study, said when researchers realised the virus was

fatal and they knew which chimps were infected, it became hard to watch some of their activities in the wild.

He recalled wanting to warn one female chimp: "Don't mate with those guys," Wilson said. "But of course I can't do that." — AP



A chimpanzee, called Ch-009, is holding her daughter at Gombe National Park Tanzania in March 2006. Ch-009 was found to be infected with SIV in 2003 and died late in 2006. — AP picture