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The origin of HIV-1

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The origin of the human immunodeficiency virus HIV-1 is [controversial](#). In his 1999 book *The River: A Journey Back to the Source of HIV and AIDS*, journalist Edward Hooper claimed that the chimpanzee simian immunodeficiency virus, the closest relative of HIV-1, was transferred to humans in the Congo between 1957 and 1960 via an oral vaccine against the polio virus. Hooper believes that chimpanzee kidney cultures were used in the preparation of the vaccine. In the 26 April *Nature*, three independent studies provide evidence that effectively dismiss this claim.

[Berry et al.](#) subjected two frozen stocks of the suspect vaccine to PCR analysis. They detected neither human nor simian immunodeficiency virus sequences (*Nature* 2001, **410**:1046-1047). Instead, they found evidence of macaque mitochondrial sequences, suggesting that the vaccine was prepared from macaque, not chimpanzee cells.

In the second study, [Blancouet al.](#) performed a similar analysis on five frozen stocks of the vaccine, one of which was used to vaccinate 75,000 people in Léopoldville in the former Belgian Congo. No sample proved positive for HIV-1 or simian immunodeficiency virus. Again, only macaque mitochondrial DNA sequences were detected (*Nature* 2001, **410**:1045-1046).

[Rambaut et al.](#) undertook a phylogenetic study of 197 HIV-1 sequences sampled from the Congo and 223 sequences representing the global diversity of HIV-1 (including all known subtypes). Their study identified the last common ancestor of the main group of HIV-1 viruses (group 'M', the viruses responsible for the majority of AIDS cases) as a virus present in a human host, rather than being transferred from another primate (*Nature* 2001, **410**:1047-1048).

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