Meet A Very, Very Long-Term Survivor

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Today's HIV epidemic emerged in the 1980s and has origins in Africa, but how did the virus itself evolve? New evidence traces it back as far as 60 million years.

HIV is a type of lentivirus—a virus that has a long incubation period and causes chronic illness in mammals by injecting its genetic code into the DNA of the host's cells. Searching for the origins of lentiviruses, a research team led by Daniel Elleder of the Czech Academy of Sciences looked at ancient genetic samples of Malayan flying lemurs. Elleder and his team found lentivirus remnants and reconstructed ancient viral genomes, dating the oldest lentiviruses to as long ago as 60 million years. Previous estimates—based on samples from lemurs, ferrets and rabbits—dated back between 3 million and 12 million years.

Why does this matter in 2016? As Elleder has explained: "We hope that our findings will allow virologists to better understand how lentiviruses evolved and how their hosts developed defenses against them." The more we know about HIV, the sooner we can cure it and make it part of ancient history.

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