

Using a sophisticated mathematical model developed at Los Alamos, researchers discovered that HIV reproduces much faster than previously known. An international research team used the modeling approach to obtain, for the first time, a precise estimate of the number of offspring produced by a single Simian Immunodeficiency Virus, first-cousin to the virus that causes AIDS in humans. Results were surprising, showing that immunodeficiency viruses can produce 10 to 100 times more progeny than previously postulated. In another research effort, the world's first portable acoustic cytometer is undergoing development by a research team at the Laboratory's National Flow Cytometry Resource. Flow cytometry is the diagnostic tool of choice for HIV, but costs and technological limitations have held it back in developing countries. The portable acoustic cytometer is designed to change this: compact, low-cost, with high throughput and high sensitivity. The device is the recipient of an R&D 100 award.

HIV modeling efforts, flow cytometry tool to help detect AIDS