Abstract

To avoid long-term toxicity and drug resistance of HIV, new treatment involving the use of novel antiviral medicines is recommended. We have studied the anti-HIV activity of a crude extract and several purified compounds from an African plant. The crude extract inhibited HIV-1 replication on several cell lines and also on human PBMCs at non-toxic concentrations. It strongly inhibited HIV infection but not VSV infection of U373-CD4-CXCR4/CCR5 cells independently of co-receptor usage (IC_{50} between 3 and 12 µg/ml, respectively). The extract inhibited HIV-1 when added at the time of infection but not after infection. The antiviral activity of the extract was maintained when it was pre-incubated with the virus but not with the cells. These data suggest that the extract might act on the early process of HIV infection. In addition, the extract displayed a synergistic effect with fusion inhibitor as well as with co-receptor inhibitors suggesting that the extract may have other activity such as protease or integrase inhibitors. Purified compounds have been tested on U373-CD4-CXCR4/CCR5 cells against pseudotype viruses. Four compounds showed anti-HIV activity. More in-depth studies are in progress.