

POSTER 29

ANTI-HIV ACTIVITY AND EVOLUTIONARY CONSERVATION OF TRIM 37

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We have found that human Trim 37 inhibits HIV-1 replication. Co-immunoprecipitation, RNAi knockdown, quantitative RT-PCR studies, and yeast-2-hybrid data analyses showed that Trim 37 mediates its inhibitory effects by interacting with HIV-1 reverse transcriptase (RT). This interaction was found to abrogate RT-mediated viral DNA synthesis. In the current study, we sought to investigate whether Trim 37's ability to inhibit retroviral replication is functionally conserved and under positive selection. An initial phylogenetic analysis of selected Trim37 sequences has revealed that Trim 37 is highly conserved from insects to humans. Our ongoing studies are focused on generating a more detailed phylogenetic analysis of Trim 37 as well as a functional analysis of antiretroviral activity.