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Suppression of HIV-1 by DING

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p^{27SJ} is a novel protein derived from a laboratory callus culture of *Hypericum perforatum* (St. John's Wort) that belongs to an emerging family of DING proteins. We have demonstrated that the interaction of p^{27SJ} with HIV-1 Tat and C/EBP β greatly impacts the transcriptional activity of these two proteins that play a key role in replication of HIV-1 in microglia and macrophages. Further, we demonstrate that while the presence of p^{27SJ} in cells interferes with the nuclear localization of C/EBP β , due to its phosphatase activity, expression of p^{27SJ} interferes with phosphorylation of the carboxyl terminus of RNA polymerase II by cyclin T/ cdk9/Tat complex, an event that is critical for activation of the LTR promoter by Tat. Our results provide a new avenue for the development of therapeutic intervention against HIV-1 infection and AIDS.

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