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HIV-1 production is dependent on the incorporation of dynamin-2 by Nef

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Nef is a virulence factor for Human Immunodeficiency Virus type 1 (HIV-1) and promotes progression to AIDS. Nef interaction with Dynamin 2 is required for HIV-1 infectivity and Dynamin-2 is incorporated into HIV-1 particles. The objective of this study was to investigate the effects of the interaction between Dynamin-2 and Nef during HIV-1 production. Dynamin-2 incorporation is necessary for both, HIV-1 wild type and Nef-deficient infectivity during depletion of Dynamin-2 by small interfering RNA. The overexpression of Dynamin-2 allows for the enhancement of infectivity of HIV-1 wild type, but is not able to rescue HIV-1 Nef-deficient infectivity. Moreover Dynamin-2's over expression inhibits HIV-1 Nef-deficient production. A Dynamin-2 product is detected less in HIV-1 wild type particles when compared to Nef-deficient HIV-1 particles. This data suggests that Nef and Dynamin-2 interaction is an important factor for virus infectivity and production.

Biography

Thatiane Lima Sampaio worked for a year at University of California in San Francisco as Junior Biologist and completed her PhD from Federal University of Rio de Janeiro, Brazil. She has developed her Postdoctoral studies at University of Brasilia, Brazil and works currently at Federal Institute of Brasilia, Brazil, as a Professor of Biology.

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