

Joint Event

# Hematology, Immunology & Traditional Medicine

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## Expression of TIM-3 on plasmacytoid dendritic cells as a predictive biomarker of decline in HIV-1 RNA level during ART

HIV-1 infection is associated with functional impairment and depletion of plasmacytoid dendritic cells (pDCs). The mechanisms of dysfunction of pDCs are still unknown. Here, we investigated the development of phenotype of pDCs in a cohort of 21 HIV-1 infected individuals before treatment and during 9 months since the start of antiretroviral therapy (ART). With the aid of polychromatic flow cytometry we detected a higher expression of HIV-1 receptor CD4, as well as of the regulatory receptor BDCA-2, the marker of killer pDC TRAIL, the Fcγ receptor CD32, and the surface protein TIM-3 in treatment-naïve individuals compared to healthy controls. After 9 months of treatment the level of expression of these markers approached but not reached the expression levels observed in healthy donors. We found a negative correlation between the expression of TIM-3 and the rate of decline of HIV-1 RNA level over the first 3 months of ART. We concluded that pDC immunogenic phenotype is not completely restored after 9 months of sustained suppression of HIV-1 RNA levels in ART-treated individuals and that the level of TIM-3 surface expression on pDCs in treatment-naïve patients could be a predictive marker of the rate of decline in HIV-1 RNA level during ART.

### Biography

Albert Font Haro is a PhD student at the age of 32 years Charles University in Prague, Czech Republic. He has published 3 papers in reputed journals.

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