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HIV Infection of human regulatory T cells (Treg) downregulates Foxp3 expression and produces a loss of the suppressive capacity of these cells

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Regulatory T cells (Treg) play an important role in infections modulating host immune responses and avoiding over-reactive immunity. Immune hyperactivation associated with HIV infection lead to a marked erosion and deregulation of immune system, and by that, the role of Treg in HIV-infected patients is critical because their implication preventing this hyperactivation. The findings about the role of Treg in HIV infection are controversial, and considering that Treg are susceptible of being infected by HIV, there are not data about the effect of HIV infection on Treg phenotype and function. It was demonstrated for first timethat HIV infection of Treg markedly disturbs the phenotype of these cells downregulating the expression of Foxp3 and CD25, which is followed by a loss of their suppressive capacity. We also demonstrated that the balance between Treg and effector cells is broken in HIV patients by a direct effect of the virus on Treg, and finally we have also described that HIV-infected patients have a marked deficit and impaired function of Treg that would be related with the incidence of Immune hyperactivation in these patients.

Biography

Rafael Correa Rocha has completed his first PhD in Biology at the Universidad Complutense of Madrid (Spain) in 2004. His thesis was awarded with the National Prize of Doctorate 2005. He joined the ISREC (Epalinges, Switzerand) as a Post-doctoral researcher and afterwards, he obtained a position as Assistant Professor at the Hopitaux Universitaires de Genève (Switzerland). He joined the IISGM of Madridas a Senior Scientist in February 2008. He completed a second PhD in Medicine at the Universidad Autónoma of Madrid in 2014. At present, he is the Head of the Laboratory of Immune-regulationat IISGM. He has published more than 40 papers in reputed journals.

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