



Video Microscopy Reveals HIV Infection Mechanisms

Researchers led by ICFO and IrsiCaixa visualize for the first time the dynamic details of the capture of HIV virus by dendritic cells.

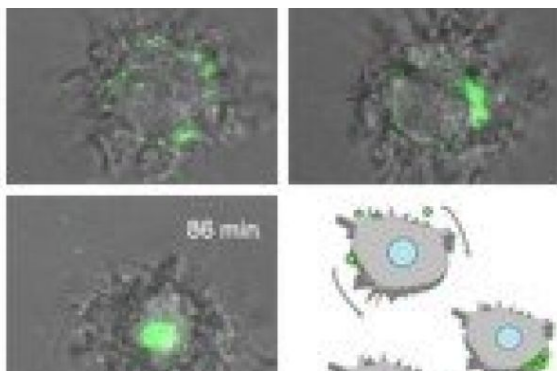
January 30, 2012

The study has been recently published in *Traffic* by a team of researchers led by ICREA Prof. Maria Garcia-Parajo, leader at ICFO of the Single molecule biophotonics Group and ICREA Prof. Javier Martinez-Picado, of the AIDS Research Institute IrsiCaixa. The study hints at the perfect scenario to promote HIV pathogenesis, thus helping in the development of new therapies.

The authors use three-dimensional video microscopy and single-particle tracking to show for the first time dynamic and kinetic insight on the process of capture of HIV by dendritic cells. They visualize three sequential phases: virus binding; polarized or directional movements toward concrete regions of the cell membrane; and virus accumulation followed by diffusive

behavior that facilitates the progression of the disease.

The authors of the study are Nuria Izquierdo-Useros, Maria Rodriguez-Plata, Itziar Erkizia, Julia Prado, and Julia Blanco, led by Prof. Martinez Picado from IrsiCaixa; and Olga Esteban, from CIBER (Zaragoza) and IBEC (Barcelona) led by Prof. Garcia-Parajo.



Virus is actively recruited to one side of the cell membrane.