Three years post-doctoral position on the contribution of Autophagy proteins in HIV replication

A postdoctoral position is available in the laboratory of Dr. Clarisse Berlioz-Torrent at the Institut Cochin in Paris. This opening is funded by the ANRS (Agence Nationale de Recherche sur le SIDA et les Hépatites Virales).

Overview:
Autophagy is a highly conserved degradative pathway that maintains cellular homeostasis, responds to pathological processes and combats infections. Growing evidences demonstrate that ATG proteins, which control autophagy, also regulate non-autophagy-related cell functions, such as phagocytosis of pathogens, membrane remodeling, antiviral activity or specialized secretion. These recent advances led us to explore the non-canonical function of ATG proteins in HIV-1 replication cycle. In this context, we showed that HIV-1 engages a non-canonical autophagic pathway, reminiscent of LC3-associated phagocytosis (LAP), to counteract BST2 restriction on HIV-1 release. BST2 is a restriction factor that reduces HIV-1 dissemination by tethering HIV-1 virions at the cell surface.

Project:
With more than 700000 deaths due to this infection in 2019, HIV-1 is still a major global public health issue. It is therefore crucial to better characterize the interactions with cellular proteins that govern the replication cycle of HIV-1 in order to propose new therapeutic targets. In line with our ongoing work, the candidate will identify cellular cofactors required for HIV dissemination, related to non-canonical function of ATG proteins.
Applicants for this position should have strong knowledge and expertise in virology, protein biochemistry, cellular biology, molecular biology and/or the field of autophagy. While previous experience in these fields is a plus, we also welcome candidates from other fields, motivated to make the transition to HIV research. Main activities will be: cell tissue culture and viral infection in BSL2 and BSL3 environment, Imaging (confocal microscopy, live imaging, electronic microscopy), cellular fractionation and compartment isolation, protein complex purification, mass spectrometry analysis.

Environment:
Team Host-Virus Interactions is part of the department Infection, Immunity, Inflammation of the Institut Cochin located in the center of Paris, 22 rue Méchain – 75014 Paris, France.
Visit our Web: https://www.institutcochin.fr/la-recherche/3i/equipe-berlioz_torrent-emiliani

Institut Cochin is one of the biggest biomedical French Research Center located in the center of Paris that provides a multidisciplinary scientific environment and very efficient core-facilities.

Qualifications:
Candidate should be strongly motivate, have excellent technical skills, good communication skills and fluent English. Candidates should also possess a PhD or MD/PhD.

Please send a cover letter describing past research accomplishments and future research interests, CV, and a list of 3 references by email to: clarisse.berlioz@inserm.fr.