

Horizon 2020
Marie Skłodowska Curie Actions
PROFILE FORM – Expression of Interest

Organization Name / Department	Laboratorio de Virología, CONICET-Universidad de Belgrano/Molecular Biology Department	Organization Short Name	Laboratorio de Virología, CONICET-UB
Organization Type	<input checked="" type="checkbox"/> University <input checked="" type="checkbox"/> Public Research Centre <input type="checkbox"/> Large Scale Enterprise <input type="checkbox"/> Small and Medium Scale Enterprise	<input type="checkbox"/> Public Body <input type="checkbox"/> International NGO <input type="checkbox"/> National NGO	
Research Fields	<input type="checkbox"/> Chemistry CHE <input type="checkbox"/> Social and Human Sciences SOC <input type="checkbox"/> Economic Sciences ECO <input type="checkbox"/> Information Science and Engineering ENG <input type="checkbox"/> Environment and Geosciences ENV <input checked="" type="checkbox"/> Life Sciences LIF <input type="checkbox"/> Mathematics MAT <input type="checkbox"/> Physics PHY	<u>Sub-Fields / Keywords:</u> Retrovirology Molecular Biology of retroviruses Lentiviral entry, replication, assembly and budding Viral envelope glycoproteins Viral receptors	
Short Description of the Organization / Department	The Virology Laboratory members are investigators and fellows of the National Scientific and Technical Research Council of Argentina (CONICET; www.conicet.gov.ar). The laboratory is located in the Universidad de Belgrano (UB; www.ub.edu.ar), Buenos Aires, Argentina.		
Previous Related Projects / Research Experience	<p>Retroviruses are unique among virus families in that they copy their RNA genome into a double-stranded DNA molecule which is then integrated into the chromosomes of the virus-infected cells. The study of retrovirus replication and pathogenesis is of great importance to both human and veterinary medicine. The studies of our group are focused on retrovirus entry, assembly, budding and maturation using the simian and feline immunodeficiency viruses (SIV and FIV, respectively) as models. In the late stages of the viral life cycle, the retroviral Gag polyprotein assembles into particles which then bud from the plasma membrane of the infected cells. By means of genetic and biochemical analyses, we investigate the processes of Gag transport to the cell surface, Gag interaction with the plasma membrane, particle assembly and genomic RNA packaging into virions. We are also interested in elucidating the molecular mechanism that underlies the incorporation of the viral envelope (Env) glycoprotein into virions. Moreover, we are characterizing the process of Env interaction with cellular receptors as well as the ability of this protein to mediate the fusion of the viral and cell membranes. These events are crucial for virus entry. Our goal is to gain a better understanding of retroviral morphogenesis at the molecular level. The information stemming from our work may prove useful for the rational design of therapeutic strategies aimed at blocking retrovirus replication.</p>		

Short Description of the Project idea (if foreseeable)	<p>The following projects are underway:</p> <ul style="list-style-type: none"> - Identification of the FIV envelope glycoprotein domains involved in the interaction with the cellular receptor CXCR4. - Characterization of the FIV capsid regions that are essential for Gag particle assembly and maturation. - Analysis of the functional domains of the SIV nucleocapsid protein.
Related Call	MSCA-IF-2017 and MSCA-IF-GF Global Fellowships Net4Mobility
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