

**M1-Molecular and Cellular Biology (MCB)  
Internship Proposal Form  
Chemistry-Biology Department**

**(Deadline Friday 15<sup>th</sup> December 2023)**

**Laboratory Address and Affiliation:**

Institute of Structural Biology

**Laboratory/Team Research area (Keyword)**

Entry et budding of enveloped viruses (EBEV)  
ESCRT complex, Exosome, HIV envelope glycoprotein

**Summary of the Proposed Internship Project (10 lines)**

Title: Refining Vps4 Functionality in VLP Budding

**DESCRIPTION:**

In cells, membranes undergo continuous deformation, such as during processes like endocytosis, virus egress, or cell division. This deformation of the membrane is orchestrated by protein complexes referred to as ESCRTs. These complexes assemble into filamentous structures, which in turn induce membrane deformation and fission. Subsequently, these filaments are depolymerized by VPS4, an ATPase enzyme.

The objective of this project is to clarify the mechanism responsible for ATP production, which is essential for VPS4 function, and to identify the interactors and regulators of ATPase in a model of viral particle budding.

**Methodologies and/or Techniques to be used**

Cells culture, western blot, immunoprecipitation, immunofluorescence

**Person to contact:**

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**Additional information**

Proposal Form send as a PDF file to: [sabrina.boulet@univ-grenoble-alpes.fr](mailto:sabrina.boulet@univ-grenoble-alpes.fr)

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