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

(Deadline Wednesday 20th October 2016)

Laboratory Address and Affiliation

Institut de biologie structurale, UMR UGA-CNRS-CEA 5075 Campus EPN 71 AVENUE DES MARTYRS CS 10090 38044 GRENOBLE CEDEX 9

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

Groupe IRPAS_immune response to pathogens and altered self From molecules to cell

Summary of the Proposed Internship Project (10 lines)

Title: Visualization of molecular interactions at the "effero-synapse", by confocal and super resolution microscopy

DESCRIPTION: **Efferocytosis** is the process of removal or clearance of apoptotic cells by professional and non-professional phagocytes. The process is continuously going on in human body, in all animals and multicellular organisms, and is crucial for development, tissue homeostasis and resolution of inflammation. We propose to visualize **at nano scale** and to quantity molecule(s) taking place at the Efferosynapse which is the interface between the apoptotic cell and the phagocyte. Study will focus on some phagocyte receptors known to bind C1q, a serum protein previously characterized as a bridging molecule between the phagocyte and its prey and involved in the maintenance of **immune tolerance**.

Methodologies and/or Techniques to be used

Cell culture, transfection, protein labeling, immunodetection, confocal and super resolution microscopy (STORM) imaging.

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Additional information

http://www.ibs.fr/groupes/groupe-reponse-immunitaire-aux/