



www.ipbs.fr

205 route de Narbonne
31077 Toulouse Cedex04

T. 33-5 61 17 59 00
F. 33-5 61 17 59 94

UMR 5089

The Institute of Pharmacology and Structural Biology (www.ipbs.fr), CNRS UMR5089 has an open doctoral fellowship. The project involves three groups located in Toulouse with multi-disciplinary expertise (Magali Suzanne (CNRS UMR5088), Isabelle Maridonneau-Parini (CNRS UMR5089) and Thomas Mangeat (CNRS UMR5088)).

Tumor development and aggressiveness is characterized by : i) enhanced tissue stiffness, ii) increase in apoptotic cells, a basic cellular process involved in tumor stiffening (1), and iii) infiltration of macrophages which favor tumor growth and formation of metastases. Using cutting edge approaches in 3D microscopy (isotropic and highly resolved SIM microscopy) to monitor macrophage migration in 3D matrices and in tumor explants, we will analyze whether different proportions of apoptotic cells impacts the stiffness, the infiltration of macrophages, their conversion to an immunosuppressive phenotype and formation/architecture of macrophage podosomes required for tissue infiltration (1-10).

Applicants should be trained in cell biology. Salary (17000€/year, social security included, to start on October 1st). To apply, please send a motivation letter, a curriculum vitae and two contacts for references to imp.job@ipbs.fr

1. Monier, B. et al., 2015 *Nature* 518, 245-248.
2. Cougoule, C. et al. 2010 *Blood* 115, 1444-1452.
3. Guiet, R et al. 2011 *J. Biol. Chem.* 287, 13051-13062.
4. Maridonneau-Parini, I. 2014 *Immunol. Rev.* 262, 216-231.
5. Van Goethem, E. et al., 2011 *Eur J Cell Biol* 90, 224-236.
6. Van Goethem, E. et al. 2010 *J. Immunol* 184, 1049-1061.
7. Gui, B et al. *In revision*.
8. Labernadie A et al. 2014 *Nat. Commun.* 5,5343
9. Proag A et al. 2015 *ACS nano*
10. Bouissou A et al. 2017 *ACS nano* 11(4), 4028-40.

Team: Migration and differentiation of phagocytes
leader: I. Maridonneau-Parini
Institute of Pharmacology and Structural Biology
CNRS UMR 5089, Toulouse, France
<https://phagocytes.weebly.com/>

