

**Master 2 internship project  
Year 2021-2022**

**Laboratory/Institute:** TIMC/IMAG  
**Team:** GREPI

**Director:** A. Moreau-Gaudry  
**Head of the team:** A. Baillet/B. Huard

**Name and status of the scientist in charge of the project:** B. Huard **HDR:** yes x

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**Program of the Master's degree in Biology:**

- Immunology, Microbiology, Infectious Diseases     Structural Biology of Pathogens  
 Physiology, Epigenetics, Differentiation, Cancer     Neurosciences and Neurobiology

**Title of the project:**

**Targeting of plasmocytes in autoimmune diseases**

Objectives (up to 3 lines):

This project aims at identifying tissue-specific targets at the surface of plasmocytes infiltrating selected autoimmune tissues.

Abstract (up to 10 lines):

Treatments of autoimmune diseases are rapidly evolving, and new compounds targeting humoral immunity have recently successfully entered the field. However, there is still a complete lack of compounds targeting one of the main effector cells in autoimmunity, the antibody-producing plasmocytes. The present project will aim at identifying targets generated by post-translational modifications at the surface of plasmocytes infiltrating autoimmune tissues including joints (rheumatoid arthritis), thyroids (Hashimoto), livers (autoimmune hepatitis), salivary glands (Sjögren), and bowel (Crohn). Biopsy samples from autoimmune patients will be studied by immunohistochemistry and flow cytometry. It is expected to find environment/tissue specific post-translational modifications, which may conduct to disease specific depletion of autoimmune plasmocytes.

Methods (up to 3 lines):

Immunohistochemistry  
Flow cytometry  
Hyperion imaging mass cytometry

Up to 3 relevant publications of the team:

1-L. Baert, et al., The role of APRIL - A proliferation inducing ligand - In autoimmune diseases and expectations from its targeting, *J. Autoimmun.* 2018.

2-L.Baert, et al., A proliferation-inducing ligand-mediated anti-inflammatory response of astrocytes in multiple sclerosis, *Ann. Neurol.* 2019

3-L. Baert e al., the number 13 of the family : a proliferation inducing ligand. *Current Opinion in Immunology.* 2021, in the press.

Requested domains of expertise (up to 5 keywords):

Autoimmunity, antibodies, plasmocytes, inflammation