

**Master 2 internship project  
Year 2023-2024**

**Laboratory/Institute:** TIMC/IMAG  
**Team:** T-RAIG

**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 antibody-producing plasmacytes in autoimmune diseases**

**Objectives (up to 3 lines):**

This project aims at identifying tissue-specific targets at the surface of plasmacytes 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 plasmacytes. The present project will aim at identifying targets at the surface of plasmacytes 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. It is expected to find environment/tissue specific post-translational modifications, which may conduct to disease specific depletion of autoimmune plasmacytes.

**Methods (up to 3 lines):**

Immunohistochemistry  
Flow cytometry  
Cell culture/transfection

**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 et al., the number 13 of the family : a proliferation inducing ligand. *Current Opinion in Immunology.* 2021.

**Requested domains of expertise (up to 5 keywords):**

Autoimmunity, antibodies, plasmacytes, inflammation