Engineer Position in Immunobiological Techniques

Team: Pathophysiology and immunotherapy of inflammatory disorders (Pi2D)
Antibodies, Immunomodulation and Immunotherapy

Dr Mar NARANJO GOMEZ in collaboration with Pr J. COLINGE

Modeling Neutrophils' Role Perpetuating Chronic Inflammation

We are seeking a highly motivated ENGINEER to join our innovative Immun4Cure initiative at the Institute for Regenerative Medicine & Biotherapy (IRMB; Montpellier, France). Our collaborative project is an exciting opportunity to explore the intersection of **immunology and computational sciences**.

Context: **Autoimmune diseases** (AID) involve the immune system mistakenly attacking the body's tissues, causing chronic inflammation and damage, and affecting millions of people globally. **Rheumatoid Arthritis** (RA) is one such disease, marked by persistent joint inflammation driven by immune cells like **neutrophils** (PMNs). While PMNs defend against pathogens, their uncontrolled activation can harm tissues and is linked to RA. Maintaining a tightly regulated balance between protective versus deleterious effect of PMN is crucial. Yet the role of PMNs in RA remains unclear. Differentiating PMN profiles during remission and flare-ups could enhance our understanding, improve patient stratification, and support personalized RA treatments.

The main objective of the project is to investigate **where and when neutrophils appear and interact with other cells in the joint during the development of arthritis using well-established mouse models of the disease.** To do this, we will create computer models that help us understand their movement and behavior as they contribute to harmful immune responses. As a near future perspective, we aim to extend these findings to human samples (Clinical Unit-CHU Montpellier) in collaboration with Pr Jacque Colinge (expert in systems biology, omics data integration, machine learning, and numerical analysis at IRCM, Montpellier). The project represents a genuine interdisciplinary collaboration, uniting partners whose combined expertise covers the crucial aspects of **clinics, immunology and integrating data**.

Environment: The U1183-Inserm Unit at Institute of Regenerative Medicine and Biotherapies is a joint research center focused on stem cells, cellular plasticity, tissue regeneration, and immunotherapies for inflammatory diseases. Antibodies, Immunomodulation and Immunotherapy team is at the forefront of research on antibody-driven immunomodulation in dysimmune diseases. This institute offers a breakthrough program with new cellular and biological therapeutic tools to fully restore immune homeostasis in autoimmune diseases and change the course of care and prognosis. Immun4Cure brings together 11 research institutes, 10 clinical departments, 3 hospital laboratories, 2 research infrastructures and a whole range of technical platforms.

Required skills: Expertise in animal experimentation, molecular and cellular biology (including flow cytometry), and analysis of the immune response. To be a driving force and capable to work independently.

Funding: The engineer position is fully supported during 2 years by the ANR AAPG 2025 NeutroChronic. Beginning of the contract: 1 November 2025

Passionate about advancing healthcare and making a real impact? Come be part of our team!

How to apply: Submit CV/Resume and Cover Letter (+Reference/s) to Dr Mar NARANJO GOMEZ (maria.naranjo@inserm.fr).