

GRÉGOIRE MARTIN DE FRÉMONT

From France to Sweden



Project: **Study of congenital atrioventricular blocks in newborns from mothers with anti-SSA antibodies**

Research topic: **Biology**

Swedish Institution: **Karolinska Institutet**

French Institution: **Université Paris Saclay**

Dates of mobility: **07/11/2023 to 07/11/2024**

Program: **SFVE-A**



PRESENTATION

On top of his Immunology-centered MD training in Paris, [Grégoire Martin de Fremont](#) completed the [Pasteur Institute](#)'s Advanced Immunology MSc in 2021 to get a more fundamental understanding of immune mediated inflammatory diseases (IMiDs). He has two main fields of interest which are IMiDs, especially in the setting of pregnancy as illustrated by his research on pregnancies in women with Sjögren's disease (*Lancet Rheumatology* 2023) and his PhD project, and immuno-hematology, as shown by his training and previous work.

ACTIVITIES IN SWEDEN

De Fremont's PhD focuses on the study of congenital atrioventricular block (cAVB) in newborns from mothers with anti-SSA antibodies (Abs). This project is a collaboration between Prof. [Marie Wahren-Herlenius](#)' lab at the [Karolinska Institutet](#) in Stockholm and Prof. [Gaetane Nocturne](#)'s lab (Prof [Xavier Mariette](#)'s group), Immuno-Rheumatology, [Université Paris-Saclay](#). The two European laboratories have complementary skills: Prof Marie Wahren-Herlenius' lab has developed a particular expertise in the study of cAVB with a world unique biobank and access to population-based national health registers. Prof. Nocturne, who is part of a National and European reference center for Sjögren's disease, has an expertise in the immunopathology of Sjögren's disease and B cell.

Thanks to this collaboration, De Fremont had the opportunity to travel to Sweden within the framework of the SFVE-A mobility program to study how the exposure of cardiac cells to inflammatory molecules (interferons) influences gene expression and anti-SSA Abs binding to cardiac cells and explore the targets of anti-SSA Abs. He also analysed epidemiological data on cAVB individuals from Swedish population-based health registers.

After this first year, the collaboration will carry on with the ultimate aim of improving pre-conception counseling, the management of the pregnancy of anti-SSA Abs positive women and the follow-up of anti-SSA exposed individuals.