

TRAINING BURSARY PROGRAMME REPORT (2021)

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Training bursary program destination: Karolinska Institute, Stockholm, Sweden

1) What was the motivation to apply for training in this Centre?

Until today, my primary focus has been clinical research in the field of Systemic Lupus Erythematosus (SLE). I have dealt with projects aimed at characterizing clinical phenotypes, outcome measures, the definition of clinical remission and evaluation of organ damage in SLE. Being these the focus of the projects I participated in, I had little opportunity to perform laboratory research so far. Considering this as a pitfall in my education, especially because I would like to enroll in a PhD course at the end of my residency program, I participated in the “SLEuro training bursary program” with the purpose to acquire knowledge and practical skills in the field of flow cytometry.

My primary goal was to improve my research skills, particularly, I wanted to acquire a deeper understanding of B-cells biology.

The SLE training fellowship was the perfect opportunity to learn a complicated subject like flow cytometry from one of the best European centers on SLE: the Karolinska Institute, in Stockholm. My second goal was to expand my network of professional contacts in the SLE field, for future collaborations at international level.

2) How the objectives were fulfilled by the training?

My research experience was performed in the Center for Molecular Medicine at Karolinska Institutet. Under the supervision of Prof Vivianne Malmstrom, I learned the basic techniques of flow cytometry. As I had no laboratory skills, the first weeks were spent in acquiring basic manual skills and over the next few weeks, I acquired the theoretical and practical knowledge to perform a flow cytometry experiment that I was able to conduct on my own at the end of my experience.

I participated in the various scientific meetings organized by the department which included biweekly discussion of immunological aspects and autoimmune diseases. Through these activities, I acquired a better insight on how critically read a scientific paper and how to integrate immunology knowledge to best perform a scientific experiment of translational medicine.

3) What are the main opportunities / strengths this centre offers for future applicants?

The Unit of Rheumatology at Karolinska Institute and Karolinska University Hospital in Stockholm is one of the leading academic rheumatology units in Europe. It has several research groups involved in both basic and clinical research in all the field of musculoskeletal diseases, including SLE. The Karolinska lupus cohort is one of the biggest in Europe and contains information on more than 700 SLE patients.

Karolinska Institute includes the Center for Molecular Medicine: this is a true flagship for the University that, by combining experimental and clinical research, aims at promoting molecular investigation and clinical application on common autoimmune diseases.

Here I found a welcoming, international atmosphere with people ready to teach you and involve you in their projects.

Regarding the cytofluorimetry part, in the lab there are four different cytofluorimeters of the latest generation that allow you to perform experiments with 24 different colors at the same time. Strengths of my experience were:

- The mix of learning opportunities combining laboratory techniques practice and participation in the group's research activities.
- The presence of Prof. Malmstrom as a leader of a multi-disciplinary team which allows you to feel as an equal member of their team
- The lab is large and well organized, and it is possible to perform most of the laboratory techniques

All these reasons make the Karolinska Institutet as a perfect center to carry out research projects focusing on patients with autoimmune disease and with SLE.

4) Practical advice for future applicants to the SLEuro training bursary

My advice for future applicants would be to check on each center's website before applying, as it is usually informative regarding the department's daily activities and the orientation of the research which is carried out in their laboratory. Afterward, it is important to contact the department/clinic before applying, to get a better understanding of whether this specific center is suitable for fulfilling the applicant's goals and to make a preliminary schedule on what their activities will involve.

I am very grateful for this opportunity. It was certainly a very rewarding experience to have come to Karolinska Institutet. SLEuro's bursary was invaluable not only financially but because it established a framework of connections and support that made it easier to achieve my objectives.

A special thank you to Dr. Francesca Faustini, for helping me realize this experience and for always being available to help me.

I surely recommend this experience, so intense and full.