

ESO Department to Department Visit Programme Report

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Receiving Department: Laboratory for Thrombosis Research, KU Leuven, Belgium

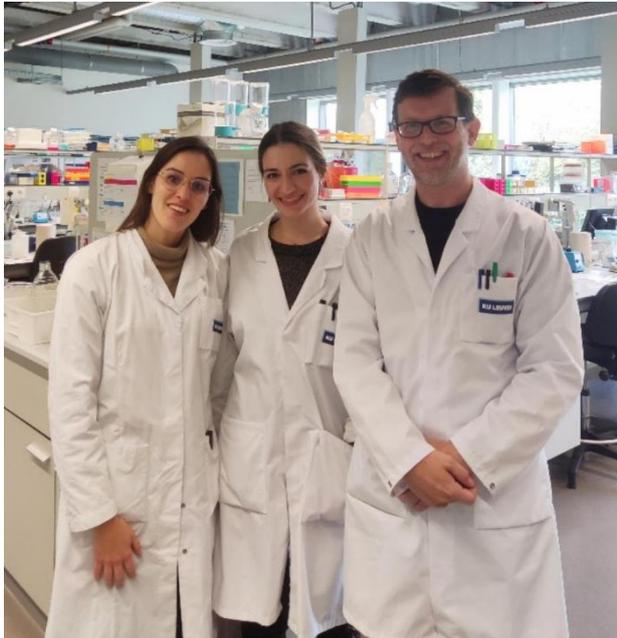
I am now going into my 4th year of residency at the Neurology Dpt. of St. Josef Hospital Bochum, a university clinic with hundreds of strokes admissions per year, and a three-digit count of mechanical thrombectomies as well. I was always partial to stroke medicine and vascular neurology, and wishing to understand the mechanisms of some poorly understood aspects of my daily work, such as the reasons behind thrombolysis resistance and the pathophysiology of cancer-related stroke, I got the opportunity to visit the Laboratory for Thrombosis Research in Kortrijk, Belgium through the ESO Department to Department Visit Program. I first got to know the laboratory through their interesting publications on thrombus analysis, and contacted Professor Simon de Meyer, who was kind enough to accept me in his laboratory.



During the week I spent there, Professor de Meyer and soon-to-be Dr. Sarah Vandelanotte, a PhD candidate of the department, showed me all the techniques applied in thrombus analysis, and as beginner's luck would have it, we even got a call from the hospital that a new clot could be picked up on my first day there, giving me the chance to see the steps from the very beginning. Mrs. Vandelanotte explained and demonstrated the steps in great detail, and gave me plenty of time and opportunities to test and hone my skills in preparing the samples, from putting them in formaldehyde, embedding them in paraffin and preparing the glass slides, to going through the numerous steps of staining, either for simple hematoxylin/eosin, or immunohistochemistry and immunofluorescence, and preparing the images for analysis. We also got to discuss how the results of these techniques can be interpreted to exact quantifiable measurements and reach conclusions, and what information the thrombus can give us in general. Professor de Meyer and Mrs. Vandelanotte conduct very important work in the field of thrombosis research, and hearing their opinions and learning about their achievements and projects opened my eyes to the new possibilities ahead. I also got the opportunity to see the ongoing research regarding thrombolysis resistance using freshly acquired thrombectomy clots or



even *in vitro* created clots, and by attending the laboratory meetings, I also took a small dive into the projects of the whole laboratory, which include von Willebrand disease and ADAMTS13-related research as well. The laboratory uses some cutting-edge techniques and devices, and is now also equipped with a lightsheet microscope, a technology which I hope will considerably facilitate thrombus and tissue engineering research in the future, and which I was lucky enough to see firsthand in this visit.



All in all, it was my privilege to visit this Laboratory and learn the techniques of thrombus analysis. As a clinician, it is always humbling to see the amazing and hard work of scientists in laboratory research, because it is there that we can find the answers to the questions arising in our clinical practice, and develop new or improved treatments for our patients. It was once again very clear to me, that interdisciplinary approaches are fundamental in stroke research, and I was happy to learn that staff from this laboratory regularly attend the ESOC, as it is a conference of wide interest, not only confined to medical doctors and clinicians,

but also to all sorts of scientists involved in stroke. I will be very happy to meet Prof. de Meyer and Mrs. Vandelanotte in Helsinki in 2025 again, and with this, I would like to thank them for their amazing hospitality and also thank the ESO for aiding this scientific exchange.