

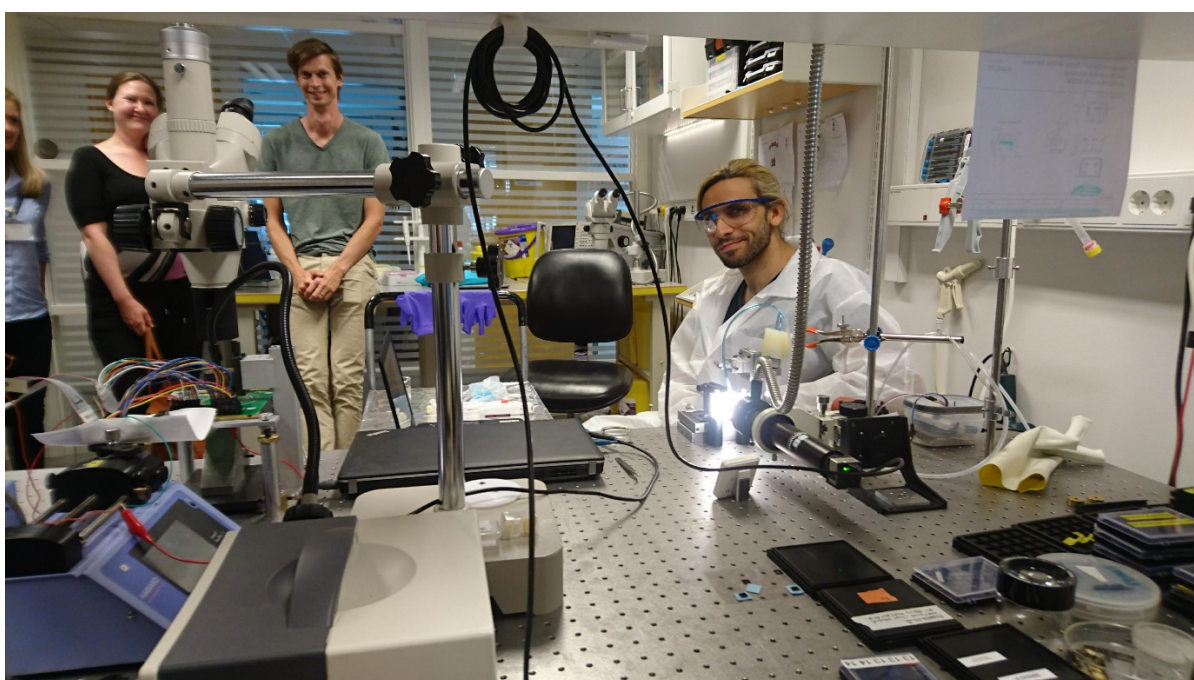
Forum Scientium

INFORum Scientium

*Study visit to Södertälje,
Stockholm and Uppsala 2018*

This newsletter is available for download at: www.liu.se/scientium/inforum
Further information regarding the doctoral programme Forum Scientium can be found at www.liu.se/scientium

Editor: Stefan Klintström



The research school Forum Scientium at Linköping University, Sweden, has as one part of its responsibilities to stimulate the PhD students and postdocs career planning as early as possible. One way that this is done is through study visits to research-intensive companies and to research departments at various universities. During the visits, we try to meet senior persons within research and development, as well as persons who recently made a transition eg from being a PhD student to becoming a professional. The network of earlier Forum members, the so-called Former Scientium, and the PhD student's supervisors are invaluable when arranging the study visits and contributes to the high quality of the visits. 28-29 May 2018 Forum Scientium had an intensive study visit programme in Södertälje, Stockholm and Uppsala, Sweden. At this study visit we did not visit any academic departments.

"The Forum Scientium pyramid symbolizes the need for a good foundation, the need to receive inputs and have collaborations from more than one side, and the creation of a peak of excellence."



Forum Scientium

AstraZeneca, Södertälje



Our hosts met up with us at the main entrance of AstraZeneca AB in Södertälje. We were first given a general introduction to the company, what they do and the scale in which it is done, concluded with AstraZeneca's YouTube video "How medicines are made". This presentation was done by our three hosts, all former Forum Scientium members, now working at AstraZeneca, Björn Kronander, Leif Johansson and Angelika Holm. Björn who is currently working as a process engineer told us about his working days being very different from day to day. In general, his role is to solve problems that may arise in production, serve as an expert during inspections, and to improve the production process, when and where this is possible. Leif is working with quality assurance of materials and supplies. His role is to assure the quality of all products being delivered to the site and all products leaving the site. It is also his role to find suppliers when new material needs to be purchased. Angelika is also working with quality assurance but as a production hygienist. Her role involves monitoring, reduction and handling of product contamination of microorganisms.

Our hosts described interesting differences and changes to get used to when transitioning from academia to industry. Were in the beginning they experienced major differences in their day-to-day work as well as how important planning, follow-up and trust in co-workers is to get the general agenda of the company forward. It

is no longer primarily your project it is the company's. They also explained how AstraZeneca wants you as an employee to develop, by giving you the opportunity (when possible) to take courses, learn from other departments and from transition through work-tasks within the site as well as between sites both nationally and internationally.

Apart from a description of AstraZeneca and the different professional roles we also got a description of the type of qualities that are valued in the industry and how these may differ from the academia. This was also followed by a description of the type of knowledge, transferable soft skills, that most PhD-students acquire during their studies, but may neglect to highlight. The discussions were very interesting and kept going also during lunch. Fortunately, our hosts were able to join us for a nice lunch at the local restaurant to round up the visit.

/Anna Södergren & Niclas Björn

RISE Electrum Laboratory, Kista

We arrived at the **RISE (Research Institutes of Sweden) Electrum Laboratory in Kista** as our second stop on the study visit. There we were greeted by former Forum Scientium member [Per Björk \(Researcher\)](#) who gave us a brief guided tour à la pre-presentation.



At the presentation the organisation of RISE and its structural network were introduced, encompassing a large number of different fields in collaboration within academy, business and the community. Here, leading projects regarding research and innovation are conducted by six major divisions of the institute: Bioeconomy, ICT, Bioscience and Materials, Safety and Transportation, Built Environment and Certification. Per Björk, is part of the Electrum Laboratory, a fully equipped laboratory for processing of semiconductor for electronics, optoelectronics and MEMS (Micro Electro-Mechanical Systems). It is run by a collaboration between RISE (formerly Acreo) and the Royal Institute of Technology (KTH). It focuses on the field of Micro and Nano Technologies. The development of technologies conducted in this area is categorized by the European Union as Key Enabling Technologies aiming to improve the world's standard of living and economic growth. Per Björk presented devices utilizing photonics for imaging applications, sensors for minimal invasive glucose measurement based on MEMS technology, etc.

After the presentation we were guided through the facility and paid a visit to the part of the laboratory focused on optical measurements, where an impressive FT-IR setup was displayed for performing measurements close to zero Kelvin. Overall was the study visit at RISE, Kista well received by the Forum Scientium group and sparked the interest in some members of the research institutes working platform, as a sort of an interface between academia and industry.

More info at

<https://www.acreo.se/groups/electrum-laboratory>

/Tobias Abrahamsson & Jun Zhang

Svensk Medicin AB



[Niclas Lindqvist](#), is a recruiter within the life science sector and the owner of Svensk Medicin AB. He has worked at and with AstraZeneca, Pfizer and other giants of medical products. Niclas was able to help us navigate through the, at times confusing, structure of the Life Science businesses. He informed us about the different existing positions and their tasks, what is needed to apply, salaries and the potential of the position, among other things. In an easy-going presentation he spoke about the do's and don'ts when applying for a job, how to perfect an application and a CV, and how to set up an attractive LinkedIn. He also discussed how to perform at a job interview. We talked a lot about how to answer the questions from the interviewers. Finally, we invited him for dinner with us so that we could continue the discussions.

/Olof Eskilsson and Yusheng Yuan

GE Healthcare and the Testa Center, Uppsala

[Jesper Hedberg](#) greeted us at GE Healthcare Bio-Sciences in Uppsala. He gave us an introduction about GE in general and the life science unit in particular.

After that [Kia Pedersen](#) introduced us to her journey to her current position as a leader in the upstream bioprocess R&D unit. She also shed some light on her group in terms of what they work on and how they work.

[Anna Grönberg](#), a specialist on antibody purification introduced us to the latest developments at GE in terms of affinity purification. For instance, a new affinity

matrix with just peptides of the antibody binding domain of Protein A affinity proteins improved robustness and capacities, while an affinity molecule modified membrane could improve throughput. We also talked about the skills and competences she would consider as interesting for working there.

We continued right away with the discussion with Jesper about job opportunities and requirements at GE as well as what work is like at GE. He highlighted that apart from the technical skills most of all the soft skills and attitude of the applicant are important. For instance, in terms of problem solving and information gathering. He also stressed, that the biopharmaceutical market is growing fast and people with bioreactor expertise are kind of rare and sought for.

More info about GE Healthcare at <https://www.gelifesciences.com/en/se/solutions/bioprocessing/services/testa-innovation-center>

Jesper Hedberg also introduced us to the possibilities at the soon to be opened Testa center in Uppsala.

In brief, the Testa Center provides:
(from the home page)

- High-quality technology offering: four industrial research laboratories (non-GMP) in test-scale mainly based on single-use technologies
- Access to bioprocess expertise: dedicated GE Healthcare personnel available for support
- Cost effective research: Develop, test, verify, and create the production parameters before investing in your own equipment
- Facility for advanced education within production of biological products: open for all universities and institutions
- Authentic environment for process and digitalization technology
- Alignment with the Swedish innovation system: simple way to commercialization

- Complete control over your intellectual property (IP) and data

More info about the Testa Center at <https://www.gelifesciences.com/en/se/solutions/bioprocessing/services/testa-innovation-center>

/Johannes Gladisch

Swedish Medical Products Agency (MPA or Läkemedelsverket), Uppsala



After lunch, the former Forum Scientium member Rikard Owenius (PhD defense 2001) welcomed us at the Swedish Medical Products Agency (MPA). First, the lawyer Christer Backman updated us on current legislation concerning drugs and medical devices in Sweden. We also learnt how Brexit is affecting EU medical agencies, particularly the consequences and new roles for MPA, as it is one of the most important agencies within Europe. Later, we enjoyed a coffee in the nice sunshine and then Rikard Owenius talked about his work at MPA. Rikard let us know how important Forum Scientium was for making strong relationships and networking opportunities. He shared with us his experience as a postdoc and from research in academia, and how he moved into industry while looking for a more durable career. We finally learnt that new job opportunities may arise in MPA as brand-new devices and also mobile phone applications within the Health area need to be regulated.

/Anna Svärd & Celia Escudero Hernández

General

Our hotel Zinkensdamm was situated in a surprisingly quiet and calm area, despite its very central location. Especially as we to come there had to deal with the very dense traffic in Stockholm. (Linköping is really nice if you compare.)

During Monday evening, the whole group, together with our two hosts Per Björk and Niclas Lindqvist, went to have a common dinner at restaurant Tehran, where we enjoyed some delicious food.

After dinner, we walked some 50 meters to the north to enjoy the fantastic view of Stockholm's city center including the town hall and the Lake Mälaren, all under a wonderful red sunset.

/Andrea Molinas

