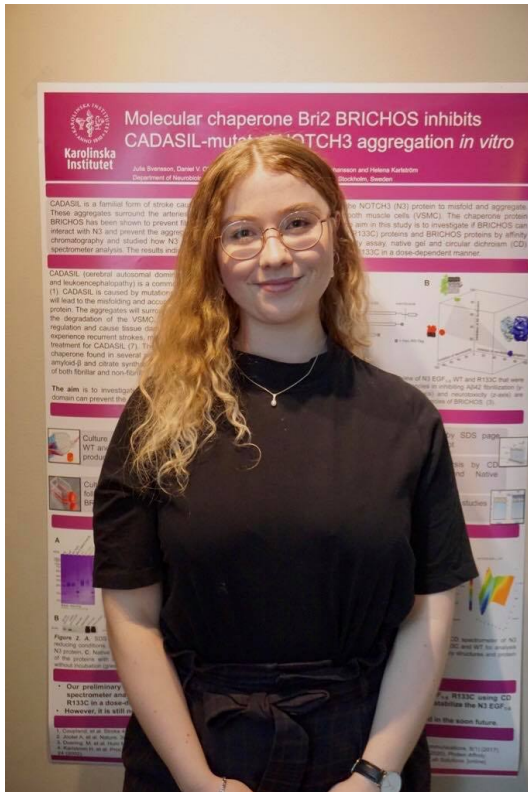


Student experience in Biomedicine at Karolinska Institutet



Julia Svensson

We met with Julia, the first time during a poster exhibition which was part of the Master's Programme in Biomedicine.

We were impressed by the intensity of work and the joy of study radiating from all of Ute Römling's students. Therefore, we asked some of them to tell us about their studies at KI.

This is about Julia Svensson, a 23-year-old student, describing her first years at KI and how she got here in the first place.

Hi Julia, would you like to tell me where you're from?

- I am from a small community in the south of Sweden called Förslöv, in Skåne.

Was your home city/country never an option for your studies?

- There are other universities closer to where I am from, but I felt quite certain that I wanted to study in Stockholm and at the Karolinska Institutet.

How far are you now in your studies?

- I am currently in my second year/last semester in the Master's programme.

Before my Master's studies I also did the Bachelor's programme in Biomedicine at KI.

Why did you choose biomedicine at KI?

- When it was time to decide university for the Bachelor's programme, first of all Stockholm as an option opened up for me because my two older brothers had moved here by then and I was more open to making that move as well.

It would be an adventure, going from a small community to a big city.

Before really deciding, I emailed school counsellors to set up dates for me to visit schools and different programs within biology and biomedicine here in Stockholm. I got to meet students and was a part of round tours and lectures. I had a day at KI and I just felt at home. I knew that this was a school that I would love going to and at that moment I also knew for sure that the research path was my way to go.

The fact that it was a programme in English was first something that made me hesitant, in general asking myself “can I do this?” but after some time of just processing it, I realized the benefits of studying in English. How much it would help me career wise, and how it would develop me as a researcher. I loved that it was an international programme, thinking about the people I would meet, the friends and atmosphere I would get to know.

And of course, the Karolinska Institutet has a reputation which is an advantage, as well as the fact that it is a very focused and dedicated school towards medical biology.

These are basically the reasons for continuing the Masters’ studies. I have a dream to do research and I want to stay within KI because it feels like home.

What did you have to do to become accepted for the two-year Master’s Course?

- The admission for the Master’s course was based on grades, merits (extra curriculum) and a motivational letter. I did my best for 3 years during my Bachelor studies to obtain grades that allowed me to continue with a Master’s programme. I wrote a truthful motivational letter, where I tried to present myself in a way that the admission board got to know me.

How did you select your specific subject?

- I have always been intrigued by every topic within science but until recent years I have found the field that I am passionate about and want to pursue, which is neuroscience. It started in the physiology course in the Bachelor’s programme where we got to see and hold a brain. For me it was just fascinating that this organ is us - personality, feelings, memories, thoughts and so much more. From that day, I just knew that the brain and neuroscience was for me. Therefore, I have made sure that for every project opportunity that the different programmes have given us I made sure to have a project within that field. I find neuroscience interesting, captivating and mysterious in a way that I want to learn and understand more and figure out everything from the way neurons transmit movement of muscles to how the memory works (or does not work) and so much more.

And what was your recent scientific experience?

-I had the fortune to do work together with neurobiologists at the Division for Neurogeriatrics at the Huddinge and Solna Campuses. The group work with protein misfolding which happens in several neurological diseases such as Alzheimer’s disease and other dementias. In my case, I worked with CADASIL, which is the most common familial form of small vessel disease. Contraction of the brain vessels by proteins may lead to stroke and other brain dysfunctions (Figure 1 below). It has been really fascinating to help to purify and to measure the proteins that may inhibit the pathogenic mechanisms that lead to aggregates around the vessels in the brain. My poster with the title “Molecular chaperone Bri2 BRICHOS inhibits CADASIL-mutated NOTCH3 aggregation *in vitro*”, together with Daniel Oliveira, Gefei Chen, Henrik Biverstål, Janne Johansson and Helena Karlström actually got the Prize for best poster presentation, awarded by the tutors at the poster session.

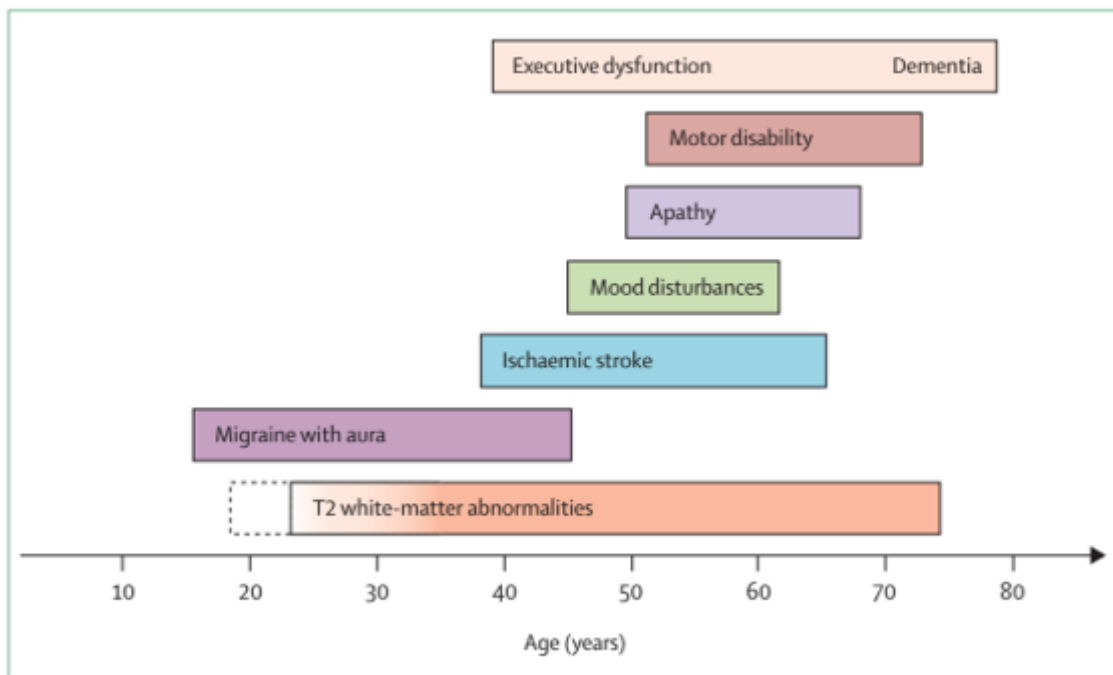


Figure 1: Natural history of the main clinical manifestations of CADASIL

Progress in this area of neuroscience may lead to treatments for unwanted plaque formation in the brain, and I would very much like to continue in the brain research area.

Have you-so far-been able to integrate in the research groups and have your collaborators been helpful to you?

- Every time I have had a project, I have always been lucky in being in helpful, dedicated, fun, very knowledgeable and extremely nice groups. They have always made me feel at home and I am always amazed how much I learn from them.

The projects and groups have been a huge part of my research progress. I learned so much from school and lectures but the experience from going out in real laboratories and participating in research projects have been unreal (in good ways) with incredible opportunities.

When I look back, thinking of what I have learned in regard to theory, practical issues and methodology, I picture a library. For every course, lecture, valuable discussion or project, the library gets filled up with one book after another. My library was quite empty from the start but slowly it is getting fuller and fuller, and I look forward to what more I will learn.

Are you going to continue working in Sweden or do you want to move elsewhere when you are done with your Master's ?

-I would love to continue studying. A PhD exam is the next dream (preferably involving neuroscience) and I am up for anything or anywhere, so we will see where that takes me.

When did you know that you wanted to study biomedicine?

- It all started around the age of 13 I would say, in the 7th grade of school. Science in general has been an interest of mine since one of my most motivated teachers introduced it to me at this age. She taught me math/chemistry and biology and she made everything, from learning basic hydrocarbons by heart to making a herbarium for three years, fun and interesting. Now, more than a decade ago, in my home town, she lit a spark in me. My passion for the subject began, and it has only gotten stronger. Along the years it became more natural and clear to me that it was biology and further biomedicine that was the path I wanted to pursue. These thoughts have guided me through my choices of education, studying the Natural Science programme at school in the gymnasium and my continued studies for both the Bachelor- and Master- programmes in biomedicine at the Karolinska Institutet.

Julia Svensson talked to Julia Borgström and Britta Wahren for the Wikiki.se pages
2020-02-05