Microverse Scientist Exchange grantee Mart Sillen is a Ph.D. student at KU Leuven in Belgium

"It helps you grow as a scientists to see different spaces"

Mart Sillen spent seven weeks in the Adaptive Pathogenicity Strategies group at HKI to bring an immunology perspective to her Candidiasis research project

Interview by Anna Komor

What brings you to Jena?

Mark [Gresnigt] and I met in Nice during the FEBS human fungal pathogens meeting. We started talking and he pointed out to me the immunology of vulvovaginal candidiasis and suggested all these cool experiments (1). And now I am here.

What is your impression of the city?

Jena is way hillier than I expected. But it's nice, the nature is very nice. Everywhere you look you see the hills and I like that. And I like the atmosphere here. One has a lot of opportunities. On the campus, a lot of people collaborate and they use each other's machinery. Within the Microverse you have an overarching structure and each week there is a lecture so you know what other people are doing, which machines they have and what could be of use for your own research. This gives you the motivation for collaboration.

Have you noticed any cultural or procedural differences between your home lab and this lab?

I think here there is way more legislation than in Belgium. Way more paperwork. In Belgium, I never hear people say paperwork is a big hurdle. Also, the people are a bit more direct. For example, us Flemish or Belgian people, we will not say what's on our minds. We will say it's ok, while maybe here they will say, oh no that's a problem, which is actually also good. We Belgians don't want to step on anyone's toes.

How will this stay impact your project?

The work I did here complements and makes the storyline more complete. I now have the immunology side which is very important in the case of vulvovaginal candidiasis (2), as it is an immune pathology. Since I am only at the beginning of my PhD, I have some interesting findings and I can still take a different route or consider looking more deeply into certain findings. I think it helps you grow as a scientist to see different spaces. I like that I came early because the project is sort of defined but it doesn't need to be that way. If you find something interesting at the beginning, you can still jump on that.

Do you have plans to come back?

I hope so. We were able to investigate quite some interesting stuff, but for some experiments we could only touch the surface. I want to look a bit deeper into some aspects of mode of action.

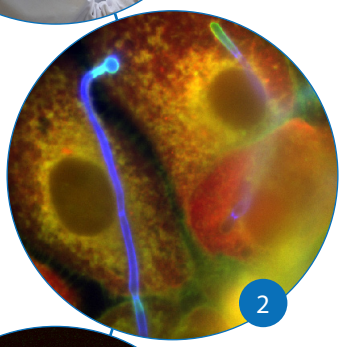
What are the strengths here in Jena that are not present in your home lab?

Of course, the immunology and all of the microscopy power (3). The knowledge of immunology is not that big in my lab. Specifically, with the microscopes, it's a lot of cool machinery and it's available for everyone to use.

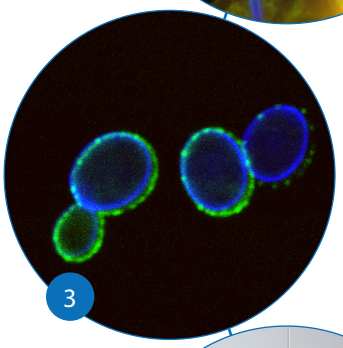
What are the strengths of your home lab?

The strength of my home lab is its knowledge of genetically modifying fungi, investigating nutrient sensing and metabolic analysis, antifungal drug discovery and resistance and dissecting fungal pathogenicity on the gene level.

Source 1: Balance of the microverse / Alena Gold



Source 2: Leibniz Institute for Natural Product Research and Infection Biology



Source 3: Leibniz Institute for Natural Product Research and Infection Biology

Source 4: Balance of the microverse / Alena Gold

Source 5: Ontheworldmaps.com

Mark, can you say a bit about what the visit has brought for your lab?

Mark speaking: Mart also took some samples from Microverse associated group leader Gerald Lackner in her experiments (4). These were experiments that we were planning to do anyways and they fit in perfectly with what Mart was doing. We had a meeting yesterday with Gerald and he seems really happy with this data. For me it's additional manpower, we are a small group. This is not my project, it is Mart's project, but it's really nice to help out on a project of a collaborator and to support them.

Mart, you are working on an infection that impacts exclusively women/people with a vulva and vagina. What is your experience in the scientific community working on this "gendered" problem? Do you think it is harder to get funded?

Back to Mart: There is still more attention given to invasive candidiasis and I can get where people are coming from because it has the worst possible outcome, death. However, when we look at the prevalence of different forms of candidiasis, vulvovaginal candidiasis sits right at the top. So whilst it does not cause mortality, quality of life is severely impacted. This together with the high prevalence means that it deserves some more attention.

More and more labs are making great efforts in creating awareness about female-specific diseases. For example, the lab of my second advisor Prof. Sarah Lebeer set up the Isala website in which they communicate their research findings on a scientific comprehensible level so that non-scientists can understand. I believe that these efforts highlight the importance of investigating female specific diseases and hopefully results in more funding.

Can you tell us about where you come from?

I'm from a province in Flanders, Belgium. I studied at the KU Leuven (5) near Brussels, where I got my bachelor's and master's degree. I did my master's thesis in the lab where I am currently doing my PhD, in the lab of Prof Patrick Van Dijck at the KU Leuven.

And how do you find German?

We do one year of German in school, because Belgium has three official languages. We have Flanders, we have Wallonia, where you speak French, and then we have a small part where they speak German. I have one year of German, but that's really not sufficient to speak German here in Jena. I can understand if I can read something very slowly.

What can you recommend to visitors to Leuven?

Visit the Stella Artois factory, go for a walk through the Arenberg Park in which a lot of historical university buildings are located, and visit the "Oude Markt", it houses a lot of student bars with all the best Belgian beers.

For more information about the Microverse Scientist Exchange Program, visit our website: