



Initial Training Network - Developing innovative (bio)artificial devices for kidney & liver disease treatment

Interview with **Katarzyna MAKSYMOW**

*Post-doc researcher at EXcorLab
Germany*



“ I come from Poland.

I have graduated in Materials Science from Jagiellonian University in Cracow. It is a very interesting field of study. I have chosen a specialization in nanotechnology and photonics. After graduation I decided to stay in Cracow and do a PhD about human heart. Well, not exactly... I did research on cardiovascular prosthesis that may be used in artificial hearts. In science, what I like most is when I am not far from real life, when I can see that my work can be a small step towards a better tomorrow. ”

Welcome in the BIOART project Katarzyna. What is your post-doc project about? What objectives do you have to reach?

My objective in the BIOART project is to develop biocompatibility protocols. In this statement is hidden an experiment that leads to the relevant evaluation of innovative material interaction with blood. In my work I simulate real conditions of blood flow through membranes. I analyze what is changing in blood during experiments. Every artificial material interacts with the human body to some extent. All that we, scientists, can do is to invent more effective and less harmful materials. My task is to find a method to distinguish which material is more haemocompatible. I am working with standard materials and also new ones. I measure blood components and compare the results between different types of membranes. This is what allows me to develop the biocompatibility protocols.

Denys Pavlenko, a BIOART PhD student hosted at Utwente, came to EXcorLab for a 2-day visit in December 2013. Can you explain what was done during these 2 days?

Denys' s stay at EXcorLab was very valuable. We had the possibility to exchange on our experience and get a fresh view on the project on biocompatibility and the fabrication of material. We both participated in biocompatibility experiments with standard modules and step by step measures and discussed the results. It was a really inspirational experience for us. You cannot develop new mate-



rials when you do not know what properties it should have. And you cannot analyze the properties of these materials when you know nothing about its fabrication.

You participated in BIOART's meeting and training sessions in January 2014. What did you learn there?

There are two lectures I remember most from the training sessions in January. One was presented by prof. Raymond Vanholder. He spoke about the most recent research about protein bound uremic toxins. What really impressed me was his perfect knowledge of the current debate in the subject and the simple and interesting way he had of speaking about difficult issues.

The second lecture was given by a patient, who had had hemodialysis treatment in the past. He spoke about his experience, his feelings about the influence of this disease on his life. He was calm and professional even when he had to say something that was very difficult for him. Then I realized that we are all working on something really significant.

What is the best thing about doing a post-doc? How challenging is it?

Doing a postdoc is a very good way to learn something new and get fresh inspiration after finishing a PhD. When you choose your way as a scientist you know that you will learn something new every day. You need to be creative and open-minded. Nowadays, science is so wide that it is impossible to be an expert in everything. However, from every place that you have seen you may extract the best practices.

Anything that makes you be a better researcher is worth doing. A post-doc is one of these

things and I feel very lucky that I had this opportunity. Not just because I learn a lot and enlarge my view on my field but also because I have met wonderful people, who show me a huge passion for their everyday job.

What is appealing to you in being a researcher?

Being a researcher is like being a traveler. You can go wherever you want, and be in a place that nobody had seen before.

Do you have any plans after completing the PhD?

Yes, I have many, too many maybe. But there's only one requirement I expect from my future work, and it's to work in my field. I am really excited about the new challenges that are waiting for me!

Thanks for answering my questions Katarzyna, and all the best for your post-doc!

BIOART in brief

BIOART is a Marie Curie Initial Training Network funded by the European Commission.

Starting date:

1st December 2012

End date:

30th November 2016

Coordinator:

Dr. Dimitrios STAMATIALIS,
University of Twente, MIRA Institute,
The Netherlands

Programme:

FP7-PEOPLE-2012-ITN

Project Reference: 316690

EXcorLab GmbH

EXcorLab's core competence is to perform in vitro and clinical studies and contract research in the field of membrane applications in medicine (dialysis, apheresis, oxygenation).

www.excorlab.de

