

FROM WET TO DRY LAB, THERE AND BACK AGAIN

A talk with PhD students about multidisciplinary research

Wondering what to do after getting your master's degree?

2 years ago, we were wondering ourselves. Then we decided to apply for a PhD position in an EU-funded project which integrates *wet lab (biology / chemistry)* with *dry lab (mathematics / physics / statistics / bioinformatics)*. Come listen to our experiences and become inspired to think about a similar career path!



Who are we?



We are nine Marie Skłodowska-Curie's fellows who work in different European countries on the same project.

To work on this project, we were required to all move abroad. This resulted in an **international** working environment where nine of us are coming from eight different countries from all around the globe.

Scientifically, we have very different backgrounds such as mathematics, statistics, biology or biochemistry. This diversity is what our project is about: **integration** of different disciplines in intersectoral research.

What do we do?

We are part of an EU-funded project called **I**nnovative Training in **M**ethods **for** **FUTURE** Data (abbreviated **IMforFUTURE**).

Our main focus is on ageing and ageing-related diseases. However, understanding complex biological mechanisms involved in ageing is extremely challenging. Many different **omics** disciplines are involved in the process of ageing, such as **genetics**, **epigenetics**, **proteomics**, **glycomics** or **metabolomics**. This means that the scientific community needs a team of experts who come from different scientific fields. And besides their expertise, these scientists need to be able to successfully communicate among each other. Communication between **wet lab** (data production in laboratories) and **dry lab** (statistical data analysis) is crucial. Biologists must understand possibilities and limitations of statistical analysis and statisticians have to understand where their numbers are coming from. In **IMforFUTURE** we are aware of this and we are working on integration of knowledge.

If you are interested to learn more about IMforFUTURE, visit: <https://imforfuture.eu/>

What are we going to talk about?



Don't be scared, we won't talk about details of our research with you (unless you ask)! First, we will introduce you to **Marie Skłodowska-Curie fellowships** because it is an amazing opportunity that maybe you can seize one day.

Secondly, we will present the main goals of **IMforFUTURE**. We will explain how a **multidisciplinary project** works and why collaboration among different disciplines is crucial.

After that, each one of us will present his/her **background** and tell you a bit about his/her **experience**. How did we find out about this opportunity? Was it hard to move to another country? What are challenges and benefits of working in a multidisciplinary international environment? What is it like to do a PhD?

We will also reserve time for all **questions** you may want to ask us. To help you think about questions and to prepare yourself for the talk, you can read a bit about each one of us on the next two pages. If you don't exactly understand the topics of our PhDs, don't worry. It took us some time as well to be able to understand them, and we are still learning a lot every day.

Let us introduce ourselves...



Tamás Pongrácz

I am a PhD candidate in Leiden University Medical Center at the Center for Proteomics and Metabolomics, and my research focuses on **glyco(proteo)mics**. I obtained both my bachelor's (**Medical Analytics**) and master's degree (**Medical Biotechnology**) at the University of Pécs, Hungary.



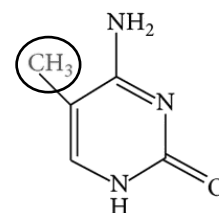
Frانيا Zúñiga

I studied **Biochemical engineering** in a city near the Pacific coast in Mexico. Then, I moved to the centre of Mexico to do my master's degree where I worked with **biopharmaceuticals**. For my PhD, I moved to Germany and I am now developing a method for observing **the less abundant glycoproteins** in human blood plasma.



Samira Smajlović

I am a former **Genetics** and **Bioengineering** student from BiH currently employed in the field of **Epigenetics** at Faculty of Sciences in Zagreb. My research involves studying epigenetic regulation of genes related to autoimmune and inflammatory diseases with focus on identifying possible novel therapeutic intervention points.



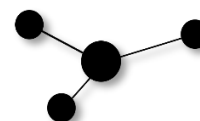
Azra Frkatović

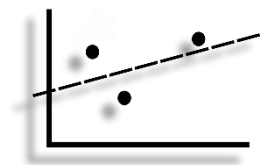
I obtained my bachelor's degree in **Genetics** and decided to stay in the same field for my master's, mostly focusing on wet lab work. Now I apply statistical methods to discover **novel genetic variants** involved in glycosylation process.



Iva Budimir

After getting a degree in **Mathematics** at the University of Split, I decided to switch from theory to applications. Now I work on the integration of different omics datasets using **networks** as a PhD student at the University of Bologna.





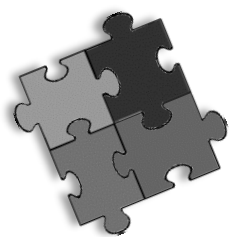
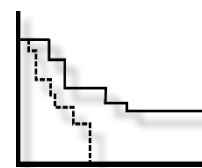
Maarten van Schaik

*After my bachelor's in Criminology, I decided to do a master in **Statistics** at my university in the Netherlands. In my PhD, I am developing statistical models for the counts of **microbiota** in such a way to include information about bacterial species or family relationships of the subjects.*



Annah Muli

*I did my BSc. in Statistics and MSc. in **Mathematical Statistics** at the University of Nairobi, Kenya. I am currently doing a PhD in the same field at the University of Leeds. My research entails developing **flexible statistical methods** for analysis of correlated survival data with application to omics data.*



Anna Carbó Meix

*I studied **Biomedical Sciences and Neurosciences** at the University of Barcelona. For my Bachelor's and Master's theses, I worked with preclinical genetics models of disease. As a PhD student at the University of Bologna, I **analyse and integrate different omics data** to find biomarkers of diseases.*



Arianna Landini

*I started with a bachelor's degree in **Food Science** and then moved to biology and human genetics. I am currently doing a PhD at the University of Edinburgh, focusing on **rare genetic variants** related to glycomics.*



Come to meet us and prepare questions!