



Dynamic Interactive Nanosystems

Marie Curie Initial Training Network

Interview with Ioanna Kalograiaki ESR - Instituto de Química Física Rocasolano (IQFR)-CSIC- Madrid, Spain



Ioanna Kalograiaki

I come from Serres, a small city in northern Greece. I studied my degree in Pharmacy at the Aristotle University of Thessaloniki (AuTh), close to my hometown. During the last semester of my pharmaceutical studies, a first opportunity arose to join the Pharmaceutical Technology Laboratory at the Complutense University of Madrid with an Erasmus Grant and I gladly accepted it. This was clearly one of my best choices ever, mostly because it was a great introduction to the world of research! Indeed, I continued with a M.Sc. Degree in Pharmaceutical Technology in the same laboratory. Yet, when I finished it, being convinced that intersectoral approaches usually result in better solutions in complex problems, I tried to make a shift later on, challenge my adaptability and follow a training program in a different sector: this is how I ended up in Biochemistry and more specifically in the field of Glycobiology!

What is your PhD project about? What objectives do you have to reach?

My PhD project focuses on the exploration of the glycosylation patterns of different probes, including pathogenic microorganisms and extracellular vesicles and the characterization of their interactions with lectins, an ubiquitous family of carbohydrate-binding proteins. To this end, we develop innovative, versatile microarray systems that permit high-throughput screening of targets. My main objective is to discover glycosylation patterns' alterations involved in disease or pathogenesis processes, to be used as potential biomarkers.



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What is the best thing about taking a PhD in the framework of an ITN European Project? What is challenging?

Most importantly: the interdisciplinary approach. Having the opportunity to interact with top scientists of different fields, adopt new approaches, learn numerous techniques, enjoy secondments in other laboratories and get trained by experts in innovative methods. It is also trivial that we are provided with the space needed to start building up our own network.

“Obstacles are there to make the accomplishment of goals to look like a victory!”

Without any doubt, my training in the framework of DYNANO is a **gratifying experience** and has already helped me to “grow up” from both scientific and personal points of view. Indeed, a PhD can also be a challenge itself; there might be experiments that don’t work at the first try, many projects and collaborations to be concluded in short time or discouraging events. But obstacles are there to make the accomplishment of goals to look like a glorious victory! The best thing is that you are not alone; I can only be grateful to my colleagues and supervisor, Dr. Solís for making my life... “sweeter” and supporting me in every step.



Could you tell us something about your secondments and what you learnt there?

My first secondment was during the month of March 2013, that I was hosted by the group of Prof. Edit Buzás in Semmelweis University, Hungary. Visiting another laboratory is always **an enriching experience, a great opportunity to acquire new scientific skills, exchange ideas** with communicative people and work on building a long-term collaboration.

During this monthly stay, I was trained on extracellular vesicles’ isolation and characterization techniques. Certainly, it has given a huge impulse to my research along with high-motivation to keep working hard.

“Secondment has given a huge impulse to my research along with high-motivation”

Now (September 2014) I am in Stockholm, Sweden, hosted in Prof. Olof Ramström’s group in the Royal Institute of Technology (KTH), practicing my organic synthesis skills in a try to synthesize and characterize sugar-decorated nanoparticles. Later this month, I will be also seconded in Attana AB, under the supervision of Dr. Teodor Aastrup, applying the Quartz Crystal Microgravimetry (QCM) technique in my field of research, at the same time as becoming familiar with **basic entrepreneurship concepts and R&D processes** in the industrial sector.



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What did you learn from your participation to national/international events during your PhD?

I believe that each and every one of us should find his own equilibrium between research and results dissemination. It is important completing a huge amount of work but even more significant being able to expound your results to the scientific community and beyond, so that good ideas reach and benefit the society. National and international events are **a great opportunity to present our work, contribute with innovative ideas**, receive constructive comments and exchange opinions with scientists of coherent fields while networking.

Do you have some advice to master/engineer students considering taking a PhD?

Always being open to new ideas and ready to accept that things might turn out different than you hypothesized in first place. And more than anything, capture the opportunity to learn because your moment is now. **A PhD will open many doors and will be a deep fulfilling experience upon accomplishment.**

Do you have any plans after completing the PhD?

I hope that after these 36 months I will be able to expand my research work and get involved in other projects as a postdoctoral researcher. I would be delighted to continue towards innovative applications, as a consequence of obtaining a solid background in basic biochemical research, being trained in different techniques and adopting different approaches in problem solving. I cannot imagine a better opportunity to start up a scientific career than a **Marie Curie ITN** as it is a complete platform, **providing you with all the tools needed to learn, dream and innovate.** Thank you DYNANO!

Thank you Ioanna and all the best for DYNANO.

Interviewed by Laurence Bosch



DYNANO in brief

Starting date: 1st November 2011

Project duration: 48 months

Number of partners: 15

Project Coordinator: Dr. Mihai BARBOIU,

European Membrane Institute -IEM, Montpellier, France.

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