



NANODRUG

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newsletter

Issue 9—July 2014



Science and fun
in
Belgium and
Portugal!





We are about to go on holiday and the lab in QMUL is getting empty everyday a bit more. But we are still here, working hard to get some results before leaving. Something to be happy about during the summertime (...do we really need something remarkable from work to enjoy more the sun and the beach??? Mmm..).

However is nearly time to clean glassware and switch off the light in the fume hood, and I'm trying to make a balance of the first half of this 2014, and of course mostly trying to figure out how to deal with the last part of our PhD. Curiously I realize is that, beside travelling in the UK, he had a few trips abroad this year, and on top of the list of the places I visited the most (more than our beloved but nearly forgotten Sicily), Brussels gained the first position... four times in six months. Surprisingly also Giorgio has been twice in Brussels in the last year or so. Maybe it's too late, but what about a Eurostar fidelity card?

Brussels is a wonderful city that seems a smaller version of London if you wish, because it's as international and culturally active as the UK capital, with the advantage to be in the centre of



Europe. It has also got the best chocolate, beers and chips we ever tried... ok, it's not just about food but, you know, we're Italians and we demand for high standards ;)



In march there was another great reunion of all fellows of NANODRUG family for the 2nd NANODRUG Workshop, organized by Prof. Véronique Prétat and Kiran Chereddy and held at the Louvain Drug Research Institute (LDRI), Université catholique de Louvain. It was a short workshop but very intense. We had, in fact, the chance to attend a very interesting workshop focused on 'Skin diseases-drug delivery'. We had both theoretical and practical sessions, particularly interesting to me the talk about enhancement in drug delivery in the skin. Among



was also an opportunity to meet Giorgio again because he had interrupted his studies at Queen Mary University for four months to gain industrial experience working at POLYINTELL, a chemical company based in France and part of IRMED, a European Commission funded project, IAPP, coordinated by Prof. Resmini.



Giorgio's office at Polyntell

the practical session we can mention: techniques on how to work on skin samples, histology and Franz cells. I think everyone gained some more experience, as always happens at NANODRUG meetings.

As we said it wasn't just science... we had time to discover the city, visiting the amazing Grand Place or Grote Markt, have a drink all together in one of the coolest pub and 'scratch' our passage on the table...

...and had the opportunity to enjoy the view from the top of one of the most iconic attraction in Brussels, the Atomium. Not just a stunning view, but also traditional food served in the restaurant where we were invited for the closing gala dinner. Group picture was a must!

As the time goes by we feel that our friendship and connection with all NANODRUG members is growing stronger and getting brilliant. Cause



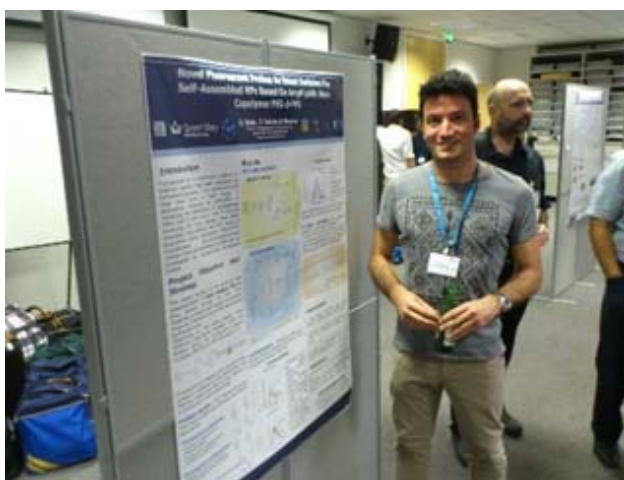
NANODRUG is about science, work, connection, experience but also and about long lasting friendship. The workshop

To conclude I had a birthday present by our two italian/german turning to portuguese girls. A taste of Portugal I shared, just because drinking alone makes me feel older than I am..

After the experience in Coimbra for the 3rd NANODRUG Summer school and International meeting In July, I participated to the Macro Group Young Researchers Meeting in Durham, delivering a poster presentation about my research. It was a really nice and interesting experience, in particular because, shifting my research on polymer chemistry, I met people already experienced in that field.

Have a wonderful holiday NANODRUG family!

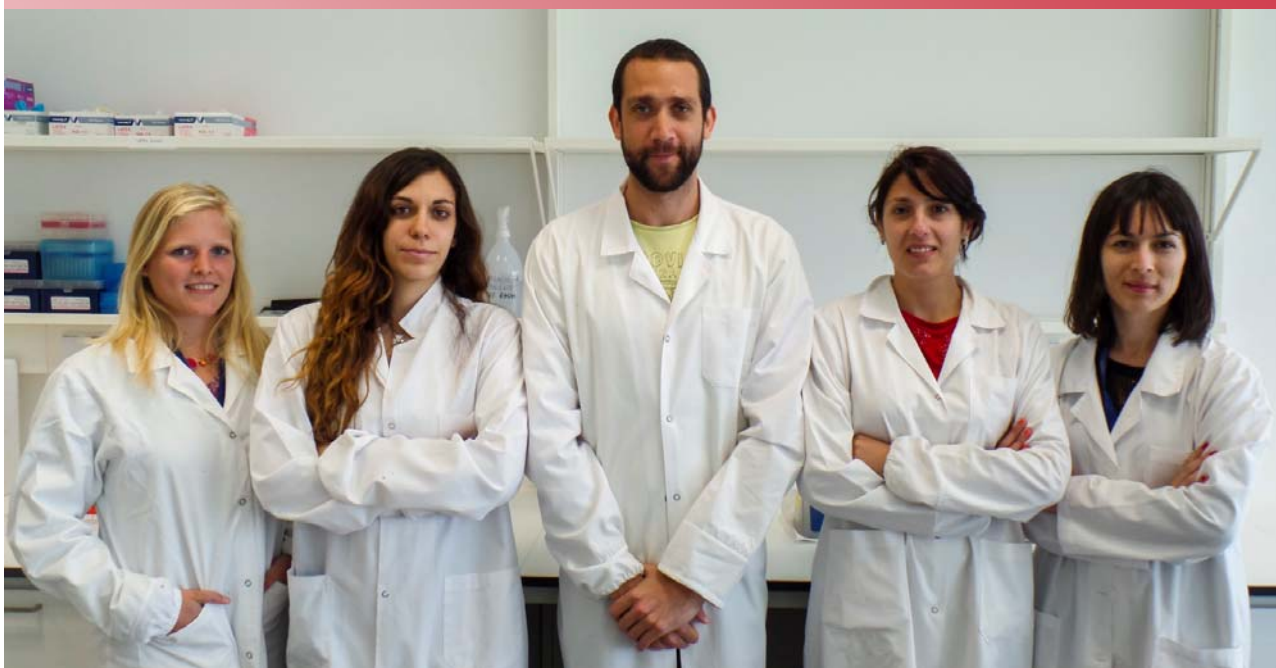
Gabriele and Giorgio



TIME OF CHANGES: Always look on the bright side

By Dr Sara Vicente (SA2)

Once again, Nanodrug meeting was fantastic, both scientifically and personally speaking. It is always a pleasure to spend a few days with you guys sharing our experiences, learning and having some fun, why not? I especially enjoyed the I-teams activity. I loved to work with my team partners and although we did not get the money, I think we have done a wonderful work. I am pretty sure our CardioMiR would hit it!



This time, it was also special for me because it was the first time I had to give a presentation for all of you. I had a long formation on microscopy, cell culture, etc, all of them new techniques for me, to finally arrive there. And of course, also thanks to the work done in collaboration with Jacqueline, Asli and Ben I could show you some results that are just the beginning and encourage the continuation of the research.

Changing topic, as you all may know, I have just moved from Sanofi Toulouse to Chilly-Mazarin, very close to Paris. This is a moment of big changes in Sanofi, and considering how big the company is, you can imagine that any change in here is also huge. Many things are going on and I feel like I am in the middle of the storm and I am just a grain of sand. Everything is moving and I have to go with the wind.

Jorge Rosenfeld, my supervisor in Toulouse,

left the company in May. For me, he has been a very important person. I have learnt a lot from him and he also supported me in my new life in France, especially at the beginning when I could only say “bonjour” in French. At the end of day, you are going to remember those people who sincerely helped you, and I really appreciate his help. He also encouraged me to move to Paris, where I will have more resources and more stable environment to perform my research in this moment of changes.

Now a new period starts: new lab, new colleagues, new supervisor. But all of you have already met Xavier Vigé in Coimbra. I think it is going to be a new and exciting experience for him as well, and I am sure he really enjoyed the meeting. And most importantly, it was very helpful to better understand the project and know the work the partners are doing in their labs. So we can say that it was a really good start.

Yes, I am going to miss Toulouse, the city was just amazing. And of course my friends toulousains, I met wonderful people there. It is always hard to leave when you have just settled down. But on the other hand, I am looking forward to starting my work here. We have brand new confocal microscopes, a little army of fluorescence microscopes, fantastic experts in cell biology, mitochondria functionality and toxicity, and in summary I foresee there are a lot of interesting things to do to evaluate the nanoparticles of the consortium. In addition, I think I am going to have a few guests to do their secondments here, I am really looking forward to welcoming you!

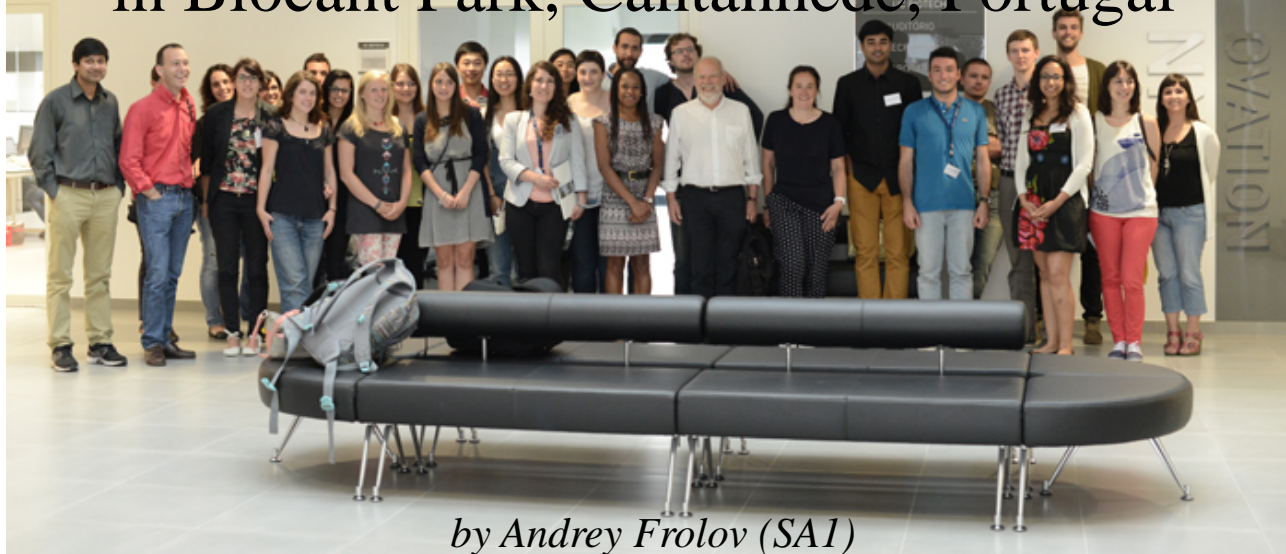
And of course, **“I’ll always have Paris...”**



“Some things in life are bad
They can really make you mad
Other things just make you swear and curse
When you're chewing on life's gristle
Don't grumble, give a whistle
And this'll help things turn out for the best...
And...

**...ALWAYS LOOK ON THE BRIGHT
SIDE OF LIFE...”**

3rd NANODRUG Summer School in Biocant Park, Cantanhede, Portugal



by Andrey Frolov (SAI)

I have just started my postdoc at sanofi-aventis R&D in Vitry (France) within the NANODRUG ITN and already had an opportunity to attend a summer school, scientific conference in Portugal and meet all the NANODRUG members! Here I would like to share my feeling regarding the summer school held in Biocant Park, Cantanhede (Portugal)... As a short summary - it was great!

Cantanhede is a small province city in Portugal and one would not expect there a big research center. However, there is. The Biocant Park is a huge and modern technological park. We had a chance to see well-equipped labs, talk to researchers their and even had some hands-on training on the modern equipment. The place for the summer school was excellent.

During the summer school we had chance to communicate with people from entrepreneurship world. At first hand we listened to success stories of researchers who built up own companies based on their research ideas, learnt what is a start-up promotion company, got advises from a real venture capitalist. For me it was very interesting “to look into the eyes” of these people in order to understand what drives them. I found it very encouraging that entrepreneurs (at least those we had a chance to talk to) really run after their scientific ideas and want to make them working for humanity. We had a story of Dr.

Joao Nuno Moreira who had to overcome many difficulties and disappointments starting from his PhD studies and later on when he built his own company in order to promote the results of his PhD into the market. He said that the most important skills for an entrepreneur in high-tech to be resilient and to believe in your own ideas.

We had exciting training exercises. Before the school we had to prepare a pitch presentation of a project to get funding for a start-up from a venture capitalist. Working in teams, we have presented five projects and had feedback from a real venture capitalist. One of the project presented by Kiran even got a positive verdict from the venture capitalist: “in this project I would invest”! After this training, if I have an idea with a potential to be commercialized I have no fear to go for finding funds to start my own company. Also, during two lab sessions we had hands-on experience on synthesis of biomolecules and characterizing nanoparticles. During the first lab session we first listened to the theory behind the qRT-PCR technique (quantitative reverse transcription polymerase chain reaction). After we had to realize this in practice by putting different solutions in a correct proportion to a test-tube and then place it in a thermal cycler. For me as a computational chemist it was of great interest to see how the experimentalists do things in reality. Prof. Marina Resmini gave a lecture on complementary skills on how to efficiently give and



receive feedback in your professional life. It was very helpful to shape my own understanding of this problem.

It was the first time I met the NANODRUG community and I was very pleased to find very warm, friendly, family-like atmosphere in interpersonal communications on all levels. I am very happy to become a member of this network. After this experience I realized how great is to start your scientific career inside an ITN network: you immediately know many principal investigators in the field and make friends with

other fellows, which later on might become a fruitful scientific collaboration. I must say that Marie Curie funding agency makes a very good job by organizing ITNs.

I have only positive memories from the Cantanhede summer school. With this I would like to thank all the organizers, and especially Dr. Lino Ferreira, Michela and Josephine.

Andrey





3rd NANODRUG International Scientific Meeting in Coimbra, Portugal

by Josephine and Michela



Coimbra, 40° 15' N, 8° 27' W is one of the oldest University cities in Europe. The academic society meets here since 1290 to discuss world moving topics. So we did in the first week of July, gathering the Network from all over Europe in Coimbra, to communicate and discuss the progress of our work. Living at the riverside of the Mondego, we had to climb every morning the hill to reach on his top the University. Always surrounded by a wonderful view over the city, we listened to the talks of the Fellows and Burseries of the Network, as well as to our invited speakers. Maria José Alonso from the University Santiago de Compostella (Spain) gave us a view of her expertise about nanomaterial design to pass different physiological barriers. Wilhelm Jahn-Dechent from the RWTH Aachen (Germany) was speaking more in detail about Toxicity of Gold Nanoparticles, emphasizing how much size matters. It was great to see how much all of us advanced since the last year. Seeing projects growing, publications coming, some of us finishing their PhDs soon made us feeling proud of being part of this family.

Also it was a great possibility for us to learn, how to organize a scientific meeting. To understand how many thoughts are behind a program and of course also



to show the NanoDrug family our life in Portugal. It was great to have all of you here. To visit the old University with its beautiful golden library with the bats and the old monastery Santa Clara a Velha at the riverside, listening to the scary story from Pedro and Inês. About true love and a horrible end. Differently was ours. We had a beautiful moment at the side of the river called St. Clara looking to the University hill and listening to the warming and also a bit sad Fado from students of Coimbra, having a warm goodbye and saying see you soon in Innsbruck.

Thank you all for the moments we shared here. It was so great to have you here, that we were for a while in Fado mood after we were alone again. We hope that some of you come back for a Secondment and some of you come back to visit more of this beautiful and colourful country.

Obrigada, Abraços e Beijinhos da Portugal, Michela & Joséphine



News from CNBC, Portugal:

Inauguration of our new Laboratories by Durão Barroso



“Our Marie Curie Fellows (Michela Comune and Josephine Blersch) with the President of the European Commission, José Manuel Barroso, the President of CNC, Catarina Resende de Oliveira and Lino Ferreira Principal Investigator of Biomaterials and Stem cell based therapeutics Lab, recently awarded with a prestigious ERC Starting Grant.”

Barroso emphasized in his speech the importance of research as the base of the potential growth of a country and its economy. In Biocant Park that idea gets more visible by the symbiosis of translational research and entrepreneurship. After the ceremony our guests visited the incubator with biotech-based start-ups and spin-offs and the new equipped, UC Biotech building. The UC Biotech goals are to attract the best researchers and to increase the competitiveness of the projects, through the growth of the number of ERC grants as well as to increase the number of patents licensed or as a base for new start-up projects.

The inspiring talk from the President of the European Commission during the inauguration of the new UC Biotech building was an inspiration to all of our group and motivated us to achieve even more ambitious goals.

On the 25th of April 1974 a revolution initiated a new chapter of Portugal’s history. Fourty years later, at the 24th of April, a new chapter of Biocant Park was opened by the President of the European Commission, José Manuel Durão Barroso, through the inaugurating of the UC Biotech building. The ceremony was hosted by Catarina Resende de Oliveira, President of the Center for Neuroscience and Cell Biology (CNC, Coimbra), Carlos Faro, Vice-President of CNC, João Gabriel Silva, the Rector of the University of Coimbra and João Moura, the Major of Cantanhede.



“Michela, establishing her network to the head of the European Commission”



Forthcoming Events

**4th NANODRUG
International Scientific Meeting**
22-25 February 2015
Innsbruck, Austria

Researchers to give presentations of the progress of their research projects, and on the evolution of PDP. Evaluation by SiCs

**4th NANODRUG
Summer Training School**
25-28 February 2015
Innsbruck, Austria

Computational chemistry and molecular modelling: applications in the life sciences. Particular aspects of the industrial R&D environment

NANODRUG



Cranfield
UNIVERSITY



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