



# newsletter

Issue 2 — April 2016



The First IPCOS School and meeting took place in Trieste, Italy, from the 8th to the 10th of February 2016.

All 5 IPCOS ESRs attended, as well as all the Scientists in charge. There were also 14 external participants, some from Trieste but others from different Universities in the region.

Here are some of the ESR's impressions about the IPCOS winter school, detailed in this Newsletter :

**“W**e gained a perspective on the role our project plays in science and industry” - “All the lecturers were expert in their fields and they answered all questions in deep details” - “We got to better know and exchange ideas with our present and future mentors”.



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## What happened in the last months?

A lot happened in the past few months for the IPCOS project...

As announced in the first issue of this Newsletter, Rosemarie Anastasiadi joined the IPCOS team, beginning her work at QMUL. She is the last ESR to be appointed by the project. With her arrival, the team is now complete! She prepared an article to describe her first impressions, after 3 months of intense work! (Page 3)

Angelo Monteiro has come back from Trieste to London in February, after having spent 3 months on secondment there. He shares his experience with us in his article. (page 4)

The first IPCOS school and meeting took place in Trieste from the 8th to the 10th of February. This convivial moment has been the occasion to exchange a lot, to progress in the project, and for the ESRs to learn about new scientific subjects and to gain new skills. Luca's, Ana's and Anggy's articles will help us get an insider view of this important meeting. (Pages 6,7,8)

Communication and outreach activities have been initiated throughout the partners and their networks - The "news" section of the IPCOS website has been improved and is now ready to reflect the diversity of the project activities: <http://www.ipcos.qmul.ac.uk/news2.html>

The first Year Progress Report came to remind us that we already have been working together for one year. This was a good occasion to take a step back and look at the achievements so far. This comforted us in the certainty that we are well on track to fulfil all the IPCOS deliverables!



*Let's take a closer look!*

## Rosemarie's first 3 months in IPCOS!

*An article from Rosemarie Anastasiadi, ESR.*

**A**t the start of 2016, and therefore no more than 3 months ago, I joined the IPCOS project as the last Early Stage Researcher of the network! I moved to London where I will spend the first 15 months of my PhD, at Queen Mary University of London under the supervision of Prof. Marina Resmini.

**T**he first weeks were busy with the necessary trainings and inductions prior entering the lab. In the meantime I started introducing myself in Molecular Imprinting... Luca helped me to get a better insight of the project and also with some initial experiments in the lab. During these first months I had also the chance to carry out some demonstrating by assisting academics in the laboratory for bachelor students. When it comes to the life in London, I am enjoying it but I must say that London is a 'tricky' city!

**E**arly February the first IPCOS School took place in Trieste where for the first time I met Ana, Anggy and the rest of the people involved in the IPCOS project. It was a great opportunity to also meet several professors from different Universities, attend interesting lectures and get to know about their work and at the same time obtain information that can be useful for our work. During the school new interesting objectives were set for my project. We definitely enjoyed our stay in Trieste and everybody had the chance to introduce himself and his work. We enjoyed good food, wine and coffee! Moreover, I had the opportunity to 'get a taste' of Illy coffee and life in Trieste where I will spend the second half of my PhD!



**N**ow back in London with Luca and Angelo, time for some imprinting!

## Trieste with a special coffee touch!

*Angelo Monteiro, ESR, shares his experience about his secondment in Trieste.*

After one month at Queen Mary in London, where I got to know the facilities where I'll spend my second secondment, from February 2016 to March 2017, and where I was introduced to the project itself, I started my first secondment in Trieste.

My first secondment took place at the University of Trieste where I could count on the precious help of Professor Federico Berti to introduce me to Computational Chemistry. Additionally, Professor Berti's help was complemented with lectures attended at Scuola Internazionale Superiore di Studi Avanzati (SISSA), taught by Professor Giovanni Bussi, about Molecular Dynamics, a specific computer simulation method. All this training in computational methods allowed me to gain some knowledge in this specific area and, consequently, start to work on my project.

In a few words, the work developed in Trieste consisted in the computational design and synthesis of the potential functional monomers that will interact through non-covalent interactions with chlorogenic acids. The chlorogenic acids are one of the most important markers of coffee quality, responsible for the flavour and aroma of coffee brew, which in turn will dictate the final commercial value of coffee. Said

that, I ended up giving you to know a little bit about rational behind my project.

Geographically speaking, it was in Trieste that I had the opportunity to meet the other Early Stage Researchers (ESRs) of the IPCOS project: Anggy Gutiérrez Ortiz, Ana Oreski, and Rozalia-Maria Anastasiadi, later on at the 1<sup>st</sup> Winter School. All of them interesting people, with different backgrounds that somehow can contribute to the success of this project. In my opinion, we are in the presence of a multidisciplinary team, capable of achieving great things, and the most



The City Hall in Trieste, Piazza Dell'Unita d'Italia.

important thing, we are a cohesive and united group.

Talking about Trieste itself, it was with amazement that I found a very similar city with Lisbon, hence the title of this article... Both cities have several characteristics in common: the weather, warm and sunny; the downtowns, both a very similar architecture; the big square facing the sea, "Piazza Unità d'Italia" in Trieste and "Praça do Comércio" in Portugal; the overall atmosphere... Well, a conjugation of several things that reminded me very much of Lisbon. Besides that, it was a great opportunity to taste the real Italian pasta and pizza and to travel around, getting advantage of Trieste's great localization, next to the border with Slovenia and a few kilometres far from Croatia.

Now back in London, it's time to start with some molecular imprinting with my fellows at Queen Mary University of London, for a quality coffee!

## The first IPCOS school in Trieste - February 2016

*"Three intensive and enlightening days" - This is how Luca Redivo, ESR, describes this first school and meeting in Trieste. A unique moment of conviviality, the occasion to many exchanges!*



## Ana's wrap up about the IPCOS school

An article from Ana Oreski, ESR

The usual day of an IPCOS researcher usually takes place in the laboratory. With the 1<sup>st</sup> IPCOS winter school that, however, changed a little and moved us from our fume hoods into a classroom. In three days we were able to listen to many lectures, connected with the content of our research or with more general topics, regarding all “how to”s of doing a PhD.

Thus, the winter school united not only all of us, PhD students, but also introduced us a bit more closely to the importance of our present and future work. Through the days we gained a perspective on the role our project plays in science and industry. At the same time we got to better know and exchange ideas with our present and future mentors. During the coffee breaks and lunches there were more than enough opportunities for networking, let it be through small talks or brainstorming for new solutions in a very relaxed atmosphere.

On the last day of the IPCOS winter school every early stage researcher presented his/her results and possible objectives and it is worth mentioning, that interest taken in them was substantial - not only from our supervisors, but from winter school attendants, not directly involved in the project, as well.

The winter school concluded with a final dinner, a great chance for all the participants to exchange their impressions of the past three days and to propose improvements for organizing IPCOS schools in the future.



## *The lectures during the first IPCOS school*

*An article from Luca Redivo, ESR*

On Monday we started with a talk about Project Management, given by Stefano Puissa (from T&B associati, an associated partner of the IPCOS network). He explained us the importance of having our objectives clear in mind, both when a project has to be design and when changing are needed, trying to avoid surprise. The next talk was given by Professor Benedetti, from the University of Trieste. In one hour and half he went through different types of interactions that can happen between two molecules, reporting some examples taken from our experienced teacher, nature. On the afternoon it was Professor Berti's turn, who explained us the different experimental techniques available to study the interaction between two molecules, well pointing out the pro and cons of the different methods. Last talk of the day was given by Dr Laio, from the SISSA of Trieste, who is an expert on the use of computer to simulate and predict the interaction between two molecules. Although the audience had generally a low background on this subject, he made the topic interesting and understandable for all.

On Tuesday, the lectures were centred on compounds present in food, in particular coffee but also oil. Professor Forzato, from the University of Trieste, broke the ice with a nice lecture about the most important compound present in coffee, explaining why they are present and how they are synthesized by the plant. The second talk was from Professor Conte from the University of Udine, who gave us an overview about the organisation responsible for food quality, and what methodology are accepted to assess limit values of danger compounds. After a proper italian lunch, we then listen carefully to Professor Adami, from the University of

Trieste, who focused the lecture on the importance of having a good and robust method when the amount of a compound must be measured, and how it is possible to evaluate the reliability of our numbers that must become scientific data.

On Wednesday morning there were two very interactive lectures given by Professor Resmini, who gave us some good tips on how to succeed during the PhD. Thanks to her experience in training PhD students she explained what the relationship with the supervisor should look like, who is responsible for what, and all the steps you go through during your PhD. The second lecture was on how to give a good scientific oral presentation, in a few words how to explain our work in a clear way, and without making the audience sleep or wishing to be elsewhere. The school then ended with the lecture from Professor Engelhardt, from the University of Braunschweig. He is an expert in the chemistry of chlorogenic acid, one of the most important compound present in coffee, and he explained us what we know about it and how it is still a very important molecule, not only for the taste of coffee but also for its biological activity.

All of us, ESRs enjoyed the time in Trieste and found all the lectures extremely interesting, and centred on important topics of chemistry that our projects are involved in. All the lecturers were expert in their fields and they answered all questions in deep details, also continuing the discussion during the coffee breaks, with a good piece of cake in one hand and a good Illy coffee in the other. And now we are all looking forward to the next one.

## The ESR's presentations

An article from Anggy Gutierrez, ESR



**T**he last day of the IPCOS School arrived and it was our turn to talk. The day started with the presentation of Professor Resmini on how to carry out a successful PhD and how to give a scientific presentation, which, from my point of view was the best presentation we could have just before our speaking. I am certain that each of us took notes of all the good advices we

received; However, our anxiety and nerves did not stop growing. I cannot say exactly how many times we checked our presentations and how many copies of the PowerPoint file we saved.

**T**he time for having lunch arrived and we were not as talkative as the two days before, I guess we were trying to be as focused as possible, in my specific case I was not particularly hungry. As good friends that we are, we promised each other not ask questions after each other's presentation. It is enough with the questions from the professor, is it not? Lunch finished and we had around 20 min to get ready.

**T**here we were for the first time all together for the first presentation in our first IPCOS School. So, we were allowed to be nervous. I spoke first trying to hold breath and not to stop until the end of my presentation and trying to remember all the advices that we received before. Angelo came after me, then Ana, Luca and finally Rozalia. At the end of each presentation we gave to each other the classical "hi five", we are a team and that is what teams do, support each other. And within the blink of an eye, we were all finished. I must say we did a great job. We were able to answer the questions, to remember all the things that we wanted to say and to show in a simple and organized way the results we had until now. By the end we were really happy with our job but also really tired, so in the farewell dinner, the time to relax arrived.





# The MIP Conference in Lund

The IPCOS fellows will attend the 9th International Conference on Molecular Imprinting (MIP2016) in Lund, Sweden, from the 26th to the 30st of June 2016.

The series of molecular imprinting conferences started in 2000 in Cardiff, UK. Over the past years this international conference has acted as the most important forum for researchers to exchange ideas and to network with experts in the area.

Prof. Marina Resmini, QMUL, will give an invited lecture on “Molecularly Imprinted Polymers for the detection and delivery of drugs”, and 4 of the Fellows will present their posters:

*“Computational selection of functional monomers for the synthesis of molecularly imprinted polymers specific for caffeine”. (Luca Redivo)*

*“Coffee Terpenes: Extraction and selection of functional monomers”. (Ana Oreski)*

*“Synthesis of p-coumaroylquinic acids and evaluation of functional monomers for a mip based sensing element” (Anggy Gutiérrez Ortíz)*

*“Design, synthesis and evaluation of functional monomers for detection of chlorogenic acids in coffee” (Ângelo Filipe Monteiro)*



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# Forthcoming events

## Network event



The Midterm review meeting will take place in Brussels on the 1st of December.

We are currently working at organising the 2nd IPCOS school and meeting.

## Conference

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The MSCA ESOF satellite event: "Researcher and Society" will take place in Manchester University from the 28th to the 29th of Jult 2016. Have a look at the programme here!  
<https://msca-esof2016.teamwork.fr/en/home>

## Workshop

The Illy Coffee research and quality workshop will take place in Trieste on the 1st and 2nd of September 2016.

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