



# NANOSTEM

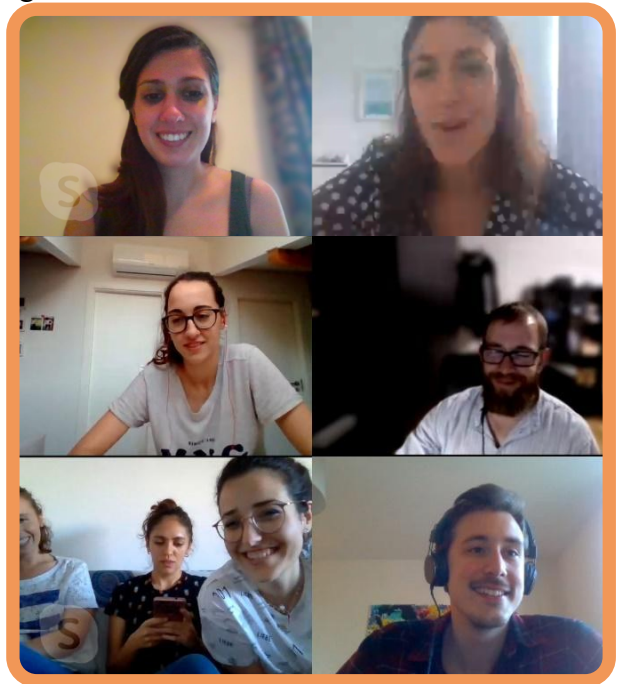
Developing new **NANO**materials for neural **STEM** cells drug delivery

# Newsletter

Issue 4 — July 2020

## *Welcome to the 4th issue of the NANOSTEM newsletter*

Shortly after the release of the 3rd issue of NANOSTEM Newsletter, the entire World stopped altogether. You all know what we are talking about: the global pandemic of COVID-19. The virus hit Europe during the first few weeks of March 2020. However, every country has been affected differently and every Government took various precautionary measures. Our ESRs are spread all over Europe, and we asked them to tell us more about their situations. Some of them, like **Sara**, **Eleonora** and **Elisa**, were doing their secondments when the virus outbreak happened. So they got stranded in a new country, different from their host ones, which is also different from their home country. Others, like **Sonia** and **Patrick**,



*Some of the ESRs kept in touch throughout the quarantine with periodic video calls*

were preparing themselves to start their secondment, which inevitably got cancelled. The circumstances forced all the ESRs to either work from home or to reduce their research activities to a minimum, in order to adhere to the restrictions in place.

Have a look inside and read more about their experiences and how they have been affected by the pandemic.



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**Queen Mary**  
University of London

# GREETINGS FROM THE NEW PROJECT MANAGER OF NANOSTEM

*An article by Fosca Mirata*

I must say that I joined the NANOSTEM family in what turned out to be the most difficult times in recent history. I had my interview for the position based at Queen Mary University of London in mid-March, and shortly after it, I received the thrilling news that I got the job! It was great! However, that left me in a state of confusion as the global pandemic of COVID-19 was in full spring. At that moment, I was living in Spain where the numbers of cases of Corona Virus were rapidly increasing, and rumours had it that the country would have soon gone in lockdown, exactly as Italy did just two weeks earlier. Spain did not take long to declare the state of emergency; however, the UK was still fully operational. In my view, those were the two most complicated weeks of the whole quarantine. I was constantly checking the news to understand how and when I was going to move to London, as planes were being grounded and borders closed. When also the UK entered the lockdown, it was clear I had to start working remotely. Starting a new job always presents its challenges. Beginning it while being in another country, in a moment when all staff are working from home and trying their best to adapt to the new situation, was quite challenging! Nevertheless, apart from some initial hiccups, in April, I was ready for diving in!

My quarantine went quite smoothly, apart from some sporadic waves of sadness, especially when thinking about the conditions that most of the population was experiencing. Fortunately, I live in Bilbao, in the north of Spain, and the situation there was not as bad as in the main



*My tiny balcony!*



cities. Just as fortunately, also my family in Italy was in a relatively safe area, and all my friends, scattered in Europe and Asia, were safe and sound. During the lockdown, especially in the first few weeks before

being able to start working, I found time to cook more and learn new recipes. I also finally mastered the fine art of making pizza dough thanks to a little help from home - my mum on FaceTime! I also enjoyed daily work-outs; I am very glad for the wide variety of YouTube videos and gym training courses that were made available. I kept in touch with my friends and family using online platforms and social media. I played board games. I spent the occasional sunny days on the “balcony”, which is nothing more than a tiny 50 cm space that extends outdoors.

But it was enough to catch some sunshine during the confinement! I also befriended my neighbours and we had a lovely dinner party when the quarantine was over. The total confinement in Spain lasted seven weeks, during which I could only go to the supermarket down the road and back home. However, it was not as unbearable as I thought. In May, "la fase de desescalada" started, and we went through different phases to slowly go back to normality! Although it is still mandatory the use of facemasks and hands disinfectants in shops and closed spaces.

Before moving to Spain, I lived in Japan for nearly two years. The use of surgical masks is a common practice in Japan. Japanese people use them for respect to others as they prevent their own germs from spreading in public places. It is considered very rude and disrespectful not wearing a mask if you are sick. I had experienced this on my own skin one day when a Japanese colleague handed me a white facemask after coughing in the office. Back then, I still did not know how to keep my glasses from fogging, so I wore them on my head! Japan has been left relatively unaffected by COVID with only 18000 cases confirmed and it is believed that the everyday use of facemasks and social distance contributed to the low numbers. Although I am used to seeing faces half-covered in masks, seeing the same in European cities it is still weird, but I hope this habit will stick with the population.



*First time using a facemask in Japan. I did not know how to put it properly and keep my glasses to get foggy.*

As for now, Queen Mary reopened its laboratories allowing the researchers to resume their work, but the staff is still working from home, so I am still in Bilbao. I will probably move to London in September or October if the situation allows! I look forward to meeting all the fellows I've been exchanging email with and given annoying deadlines to.

In the meantime, I enjoy the hiking in the beautiful surroundings of the city while of course respecting social distancing!



FOSCA



# ***LOCKED-DOWN IN PORTUGAL***

*An article by Sara Bernardo Castro*

On 10<sup>th</sup> March 2020, I started my secondment at the ICNAS institute. The excitement of getting close to the scans, the set-up of a new promising and dynamic research-method...all of that was starting and I was going to take my project to the next step but, just one week after, the world stopped. All non-essential activity was cancelled, and that included me. I remember my first question was: “*for how long?*” and, of course, the answer was: “*we don't know*”. That may be the most feared answer for a PhD student, the uncertainty. I moved my research to home-working and told myself: “*now I will have all the time in the world to write*”. But the truth is that it is not so easy. As you try to work, you have the constant need to know not only what is happening in the place you are (in my case Coimbra, Portugal) but also what is happening in the world, precisely at your home (my case, Spain). Portugal has had a light lockdown. Even though all non-essential activity stopped, the personal lockdown was recommended but not mandatory. But the situation in Spain was completely different, it soon started to get out of control and the lockdown was forced in the entire country. Knowing your home is in that situation makes it really hard to focus on your work. Also, with the border closed, being so close and yet so far from home, was one of the most stressful things of this time for me. One other major struggle in my situation was the uncertainty of not knowing when I would be able to restart my secondment at ICNAS and get back to presential work. My research is focused on the clinical side of NANOSTEM, so getting in touch with patients in this situation was completely forbidden. Luckily for me, CHUC and ICNAS team has been in close contact with me, keeping me updated with the situation and continually encouraging me with my research. I have kept my work going by writing part of my results and starting a new review on my research topic. Also, taking advantage of this at-home period, I had time to read all accumulated literature to try to engage new approaches for my project.

As measures were started to relax in Portugal and travelling between cities was again permitted, Inês, Ángela, Francesca, Eleonora and I didn't hesitate to meet again finally. Having the girls around has been one of my biggest support during this time.





*The joy of sharing a coffee again!*

If something constructive COVID-19 has given me, is resilience. I've learned how to overcome the situation in both my personal and my professional life.

And what I hope the world takes from this, is for everybody to realize how important science is and how we need to take care of it.

*SARA*

Videocalls and social media have made a huge impact on keeping all of us in touch. But the reality is that, after two months, a coffee outside tastes better, the sun on the skin feels warmer and the air smells better... As the world seems to be getting back on track little by little, I try to do a little balance of what has happened.



*Always keep you and the others safe!*

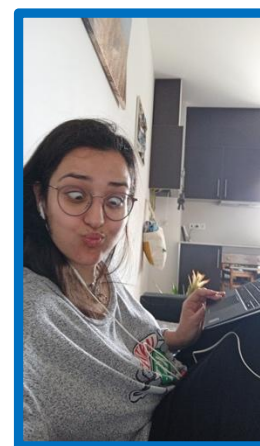
# STRANDED IN PORTUGAL

*An article by Eleonora Rizzi*

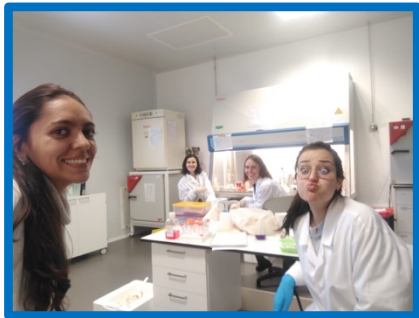
Quarantine, COVID19, pandemic, closure of borders... who would have thought these words would have characterized this 2020?!? Who would have thought about the rollercoaster of emotions and feelings that filled our lives in the past months?

Some moments are imprinted in our minds, like the terrorist attack at the Twin Towers in New York. I still remember where I was and what I was doing when the news arrived. At that time, I was young, and although I didn't understand the gravity of the situation, I surely realized that something was wrong, something was off. And this is another moment that will be forever engraved in our memories. I believe that all of us had a different experience regarding this situation. I think that I went through different phases, but what characterized all of them was the fear. Fear not for me, I actually thought about myself real little, but for my family in Italy. I was constantly concerned for my grandparents and parents and for my brother, who lives in Milan, and this feeling is still vivid. It was tough to stay away from them in this situation; the only thing I wanted to do was hug them and never let them go. I am used to living abroad far from my family, which has never been a problem because I always had the chance to visit them and vice versa. However, this situation was particularly tough because it forced us into a long-distance relationship.

This constant fear made my job particularly tricky. I lacked concentration; the tasks that I used to do effortlessly, turned out to require more of my time. I also had sleeping issues, and it was hard for me to maintain a routine, both workwise and not. Luckily, we didn't stop working altogether. Even if the laboratory was closed for safety reasons, we kept working on working as much as possible. Deadlines, Journal Club, Meetings, and Planning the work for whenever the labs re-opened characterized my quarantine. About that... During quarantine, all of us had online meetings and presentations. I refuse to think I was the only one who just wore a sweater on top of my pyjamas to look a little more presentable in the meetings! Right? Right? Ok, reality check!! I admit it, sometimes I just wore my pyjamas and switched off the camera button!



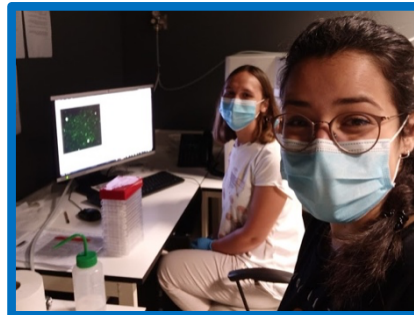
When the situation collapsed, and it collapsed quickly, I was in the middle of my secondment in



*Working in the lab before COVID-19*

Portugal. I decided not to go back home to avoid traveling in the messy condition of the means of transportation and give the possibility to travel to someone else who was in real need. It was challenging to find flights with a minimum number of stopovers. Moreover, a considerable amount of flights were being cancelled, so they weren't very

reliable. I mean, it was a real mess... and a really difficult decision! So, I ended up spending quarantine in Portugal, and I didn't even have the possibility to properly visit this amazing country as much as I planned!



*Working in the lab after COVID-19*

The quarantine photographic content is not appealing unless you are interested in my sleepover wardrobe a.k.a. Pyjamas!! So let's just stick to the time I spent with the girls.



After the quarantine I had the chance to visit Portugal, thanks to the team in Coimbra: Francesca, Angela, Sara and Ines! We had a great time together both 'mask to mask' and online meeting during quarantine to cheer up a little!

I also tried "Pastel De Nata" in one of the best bars at the beach near Aveiro.

*Eleonora*



# HOW THE GLOBAL PANDEMIC OF COVID-19 HAS AFFECTED ME IN FRANCE

*An article by Elisa Moya.*

It is still hard to believe that we are living a global pandemic and that our rhythm of life and social contact changed completely! I remember that the first time I heard about COVID-19 was from our Nanostem colleague Francesca, who in January 2020 was doing a short stage secondment of 2 weeks in LBHE. She told us about the circumstances that China was experiencing. However, at that moment, we could not have imagined what was about to happen in the world. A few days later, some of the first cases in the EU developed in Paris, just some kilometers from Lille!

On the 1<sup>st</sup> of March, I started my long-term secondment of 9 months in HCS Pharma, settle in Lille. I was supposed to perform a part of my project, which I was very happy with and wanted to start a long time ago. Just a few days later, on the 17<sup>th</sup> of March, the COVID-19 emergency state was declared in France, meaning that everything had to stop. Everything went so fast! I remember that the week before the lockdown was announced, was a particularly tough one. Mainly due to the uncertainty about the situation, the French government's measurements, and how long it could last. The general fear of the virus was made even worse by the awareness that my parents are high-risk people and that something could happen to them. I was afraid that I could get stuck in another country as the borders would be closed.

Deciding between running back to Spain to spend these difficult times with my family or remaining in France was hard. Finally, I decided to stay in France, hoping and wishing that everything would be okay and that the emergency could end soon. Thankfully, since HCS Pharma is a private start-up company focused on *in vitro* cells work, we had the chance to finish our ongoing experiments, even after the lockdown. We also had the opportunity to continue with production and R&D. However, the difficulties concerning working in this situation were many. We had to work in a group of 2, and we had to use the means of transportation to reach the company. The police were patrolling the streets, asking for signed documentation. Every time someone was moving from home had to have a document with personal details and the reasons for their mobility.

During the three months of lockdown, I managed to finish the experiment that I launched and performed two experiments more. However, we faced some problems due to the lack of material and delays in deliveries. Therefore, the lockdown's work time





was mainly dedicated to read papers, have online meetings, like R&D meetings or journal clubs, analyze data, or prepare overview presentations of previous results.

Now, we have restarted the lab work taking all the necessary precautions, like wearing masks, frequently using disinfectants, and keeping the social distance between the co-workers. But I cannot believe that already almost five months of my secondment has gone! I hope to have enough time to achieve what I planned to do in HCS Pharma. I wish that this COVID-19 pandemic situation, for all of us, does not get worse again, for our health and future social lifestyle.

Best wishes to all of you!

*Elisa Moya*

# MY EXPERIENCE IN GERMANY

*An article by Sonia Lombardo*

On March 14th, I was supposed to take the plane from Luxemburg to Porto, to start my two-months long secondment in Coimbra. At that time, no one knew that the COVID-19 situation would stop all our lives the way it did. However, we decided to postpone my departure, fearing I could get stuck in quarantine in Portugal, where the university was already closing. This decision was taken heavyhearted but turned out to be the right one as, just a few weeks later, almost the whole world was in lockdown.

Luckily for me, Germany managed to handle the situation pretty well. Despite lockdown, most companies could continue to work, including MyBiotech. I was lucky to be able to go to the lab every day and continue working on their research. Of course, every precaution was taken to prevent the virus from spreading in the company: we



reorganized the offices to respect social distancing. We now have outdoor lunch seating



far away from each other, and we also started producing our disinfectant. The company even provided us with reusable fabric masks. What was weird initially, it soon turned out to be the new normality, and April to June passed like this for me: home-work-home

and repeat. Living alone, I could feel the isolation, especially during the weekends. I got very used to going back to Paris (my hometown) regularly, which was impossible for me to do, even after the end of the lockdown in May. Living so close to the French border and not being allowed to cross was a new challenge for my patience. I had to wait until the border opened in mid-June to go home and see my family and friends for the first time after three months.

Now, life is just starting back slowly, and scientists are already worried about a second wave when the weather gets colder again. Hopefully, this time, we will all be better prepared. For sure, I plan on enjoying my close ones' company this summer as much as I can, just in case!

SONIA

# WHAT I DID DURING QUARANTINE IN AUSTRIA

*An article by Patrick Quoika*

I guess 2020 was a bit of a crazy year for all of us. Living in Innsbruck – the capital of Tyrol – I experienced the COVID-19 pandemic close to the epicenter within Europe. Firstly, Innsbruck is not far from the border to Italy and secondly, it is very close to the skiing resorts, where a large number of tourists have been infected in spring. Shortly after it became clear that the disease reached the region, Tyrol went into a severe lockdown. These measures were implemented very suddenly. Therefore, even though everybody in the lab was aware that this might have happened at some point, nobody was prepared for the situation. As theoretical chemists, we work mostly at the computer so we could easily adapt to the changes in the working condition. Still, organizing our work (including meetings) and our whole lives (including basically everything) at home was challenging.

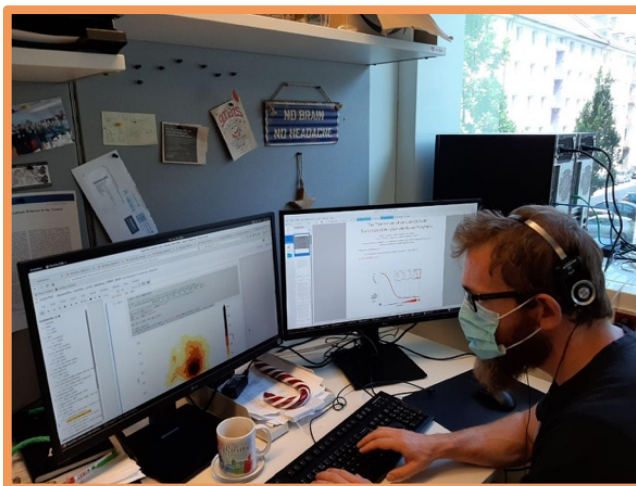
I consider myself lucky to live in a shared flat. During strict social distancing and home-isolation, I could hang out with my flatmates, whenever I liked. We had barbecues on our (small) balcony, we had beers and watched tv shows together. (Honestly, what do you do in-home isolation? I even newly subscribed to a renowned video-on-demand provider within this period.) Especially in the very beginning – when the quarantine measures were particularly strict, and we were not allowed to leave our house, if not for a *specific reason* – it was very nice to have company. This early period was quite a challenge for me. Sometimes, my flatmates would find me taking laps in the kitchen to *stretch my legs*... During this time, we all had good and bad days, honestly. Therefore, after being only in personal contact with the same two people for weeks, we got to know each other in every possible form. For a while, it was impossible to anticipate, what extend this crisis might take in Austria. Eventually, the severe lockdown did not last long; after a few weeks, we could leave the house to do some sports. For me, this was quite a turning point, already. Being able to go for a walk in the forest made a huge difference to me.

I missed my friends and family a lot during this period. But I guess most of us rediscovered the proverb “*necessity begets ingenuity*” lately. There are a lot of options on how you can still spend time online with people you love. You can have online movie nights, online game nights, online cocktail parties... I even attended a 30<sup>th</sup> birthday, remotely, which was a lot of fun.

Nevertheless, I will most probably not continue doing most of these things remotely. To me, digital meetings do not provide a complete substitution for personal get-togethers. Anyway, it was better than nothing. Getting back to the first larger group of people after the time of social distancing was a bit alienating, though. I remember that the first dinner in a restaurant was quite an event for my colleagues and me.



The theoretical chemistry department members were able to continue their regular work, as they work mostly at their computers. But working remotely from home may still be a bit of a challenge for computational scientists, besides other technical complications, like difficulties in obtaining webcams and other home-office equipment. To me, the biggest difference was not having a clear separation of work and free time



anymore. Being particularly aware that many people could not progress with their research, I felt obligated to use my opportunities even more. I am happy to be able to go back to working in the office and eventually spend my weekends outside again.

Generally, the last few months of work were completely different than planned. I would have had two secondments this year, to which I was looking forward to. Unfortunately, these have been postponed indefinitely. I will probably visit Coimbra and London sometime next year. Instead, I continued working on the project I started last year, and I was even able to finish my first paper draft as a first author. That was very exciting!

In sum, I probably shouldn't complain. Compared to others, the pandemic did not affect my life tremendously. Lately, things have been getting back to as they were before the pandemic in Austria. There are still restrictions, but the development has been very positive. Luckily, my friends, my family, and I were not harmed by the disease, and I was even able to get on with my research. Nobody can say for sure, yet, which consequences the pandemic may have on our lives in the long run, but so far I got away scot-free. Since the last Nanostem meeting did not occur, I can only look forward to the next meeting. I would be very happy to meet the rest of the network again after such a long time, hoping that everybody is equally up and well after these complicated months.

PATRICK

# MY QUARANTINE IN ITALY!

*An article by Roberta Biliardo*

The coronavirus spreading has messed up the daily life of everyone around the world. Sooner or later, every country has been finding itself in the condition of facing a deep crisis and this has regarded the United Kingdom as well.

It was mid-March when news about the imminent closure of QMUL arrived in our corridors. We then rushed to complete the latest sets of experiments and organised the material necessary to work remotely. It sounded very challenging to imagine carrying on the PhD from home, without doing practical research for a while. Nevertheless, the closure happened a couple of days after, and, given the toughness of the situation, I decided to fly back to my home country.

In fact, at the end of March, I got to Sicily, where I followed the quarantine rules for people coming from abroad and could spend this particular time close to my family after a series of tests.

Once settled into my quarantine environment, I was able to start my period in smart working. Doing research from home has been not so easy, though. Being able to achieve a good work-life balance resulted in the hardest task, even if I had much more time to read scientific papers and update myself on the most recent advances in the research fields I am more interested in.

Another aspect that I missed during this period was the possibility of sharing time and opinions with colleagues. Fortunately, we kept the weekly appointment of group meetings and the habit of calling or texting each other for asking for advice. We also found some time for alternative coffee breaks and friendly video chats!

Luckily, in the last few weeks, the situation seems improved in both Italy and the UK. We all are trying to return to the normality, gradually. QMUL reopened its laboratories to researchers at the beginning of June, although with teams working in shifts and some other restrictions. So far, I could enjoy what my colleagues enthusiastically told me about their resume, but I am going to return to London in a few weeks. It will be a great step forward to get back my beloved “normal” lab life.



*My travel back to Italy.*



*The new normality after COVID-19*

*Roberta*

# HOW DIFFERENTLY THE PANDEMIC HIT SWEDEN!

*An article by Georges Kiriako*

Take a walk in the streets of Stockholm; you wouldn't know that half of the world is amid a pandemic and that the rest of Europe is struggling with lockdown measures. After the long Scandinavian winter, pubs and restaurants are now full of life and laughter with people celebrating the return of good times. While Europe has become more and more sealed off, daily lives are carrying as usual, making Sweden an outlier in the coronavirus pandemic. The relaxed approach has received major criticism worldwide and it has raised alarms in the country's scientific community as cases continue to rise. Instead of implementing a strict lockdown, the government relied on recommendations and trusting people to

follow them. People were asked to behave sensibly and make their own decisions regarding their safety. Businesses have remained open, and gatherings up to 50 people were allowed. Young children continued going to school, although universities switched to online learning. Regardless of this relaxed approach, Stockholm saw some empty streets, especially when cases started to rise. Buses and metros were almost empty as people switched to cycling or stopped



*Gamla stan during the coronavirus pandemic.*

going to work. Some businesses were struggling, and many people were out of work. Still, pubs at night or parks were busier than ever. These totally different situations had me bewildered and created a huge dichotomy in Sweden. What should one do in this long-lasting crisis?

My daily life in Stockholm did not change since I don't mind staying at home, reading books or watching movies. However, my research work stopped for a while, which was frustrating because my experiments were becoming interesting. Karolinska Institutet, my host university, did not close but advised employees and students to work at home whenever possible. In April, the university was almost empty, and it was a bit sad to see it like this. When I stopped doing experiments, I took the opportunity to take courses required for my Ph.D. program. From biosafety to research ethics, the courses were relevant to this ongoing crisis. I resumed some experiments in May. They required a few hours at the microscope, while the rest of the experiments were done at the computer from home. We were advised to spend as little as possible in the lab, so this experiment came at the right time. Little by little, people were coming back and resuming their work. Now, the university is almost back



to normal. Researchers are working together and having Fika breaks (the Swedish coffee breaks) while maintaining social distancing. I'm really happy that the university is busy with people again. I hope that we can overcome this pandemic in the near future and see our families and friends again.

Georges

# AN ITALIAN LOOK AT THE CORONAVIRUS EMERGENCY IN PORTUGAL

*An article by Francesca Tomatis*

*“Girls, have you heard the news about the virus in China?”* When I first read the news about COVID-19, I was with two other ESRs: Eleonora, Italian like me, and Elisa, from Spain. It was the second week of my short secondment in Lens, at the University of Artois, and we were walking around the city. The girls and I planned to spend my last weekend in France by visiting Paris, but all our parents were worried when the first cases appeared in the city. When I went back to the country where I am based, Portugal, with Eleonora (who was starting her secondment at CNC), the first patients were admitted to the Italian hospitals. Our home Country saw the COVID-19 cases increasing rapidly, with families destroyed by multiple deaths and images that will probably become part of history books. After a few weeks, the situation collapsed, and Italy was put entirely in lockdown. Meanwhile, we continued working in Portugal, but with growing fear because of the news we were receiving from Italy. Then the borders with Spain were closed, and we suddenly got stuck in a foreign country, with no flights to join our families and with the lab finally closed. The last day at work was painful. We had to decide which experiments could be carried on by a designated person that would be allowed to enter the building and which ones needed to be stopped as no one could take care of them. We have been told to freeze the cells, stop the experiments and go home as soon as possible. The emergency state was declared the day before in Portugal, for the first time since 1975.

I was scared that something could happen to my relatives while I was stuck 1800 kilometers far away, without possibilities to go back home and maybe say the last goodbye to my grandparents. I called them every day, wondering at the end of each call if that would have been the last time I heard their voices. However, the lockdown also allowed me to finally have time for myself so that I could call my family more and speak more frequently with friends in other Countries through different platforms. I started exercising in the apartment and cooking new dishes. I turned 26 ten days after the beginning of the lockdown. Still, my friends and my family were able not to make me feel alone and I can say I will remember this birthday as different, but nice too.

Work-wise, with the "lab life" on a break, I finally had time to organize the data I collected in more than one year of PhD and, most of all, to realize at which point I was with my research. I had weekly Skype meetings with my co-supervisor. I could read more papers or study better useful techniques and methods. I felt like a phone completely out of power that could finally charge its batteries. I think



I really needed a break (for sure I would have preferred a less scary and deadly one) during which I could see my PhD project from the outside, and I tried to get the most out of it.

After one month and a half of lockdown, we have been allowed to go to the lab again. We are now working in shifts to keep the social distance, both in the office and in the cell culture rooms. But even this solution taught me something useful:

during the hours I need to stay at home, I can not only plan better the work in the lab but also commit more time to read papers.

So, at the end I know I was among the luckiest people during this emergency: my family is safe and I did not lose my job. Here in Cantanhede the life seems to be back almost to normality, except for masks. I hope it will be the same soon in all the other Countries.

*Francesca*



# THE QUARANTINE IN LONDON!

*An article by AlenaVdovchenko*

I returned from my six-month secondment at the University of Birmingham at the beginning of March, two weeks before the lockdown at QMUL. I was very lucky to find a perfect place to live in London right after I came back. Otherwise, my search would have been much more difficult during the lockdown. Therefore, when the university was closed, I was eager to organize a home office at my new place (see picture 1). Certainly, life during the pandemic was quite challenging, given all the concerns about family and friends, as well as disability to maintain a normal way of life. However, the feeling that we all are in this together was calming and encouraging. This was supported by online meetings with friends; weekly coffee breaks with the Resmini group, and "clap for NHS" that could



## “Following the flow” in summer 2020

Expectations

Reality



be heard every Thursday throughout London. Even if this was an uneasy period, it was an excellent chance to work on things that we usually put aside. Thus, Roberta, Federico, and I were busy reading and discussing literature to write a joint review. Writing the review was a new and useful experience for all three of us. It helped to improve a variety of skills, not only specific in scientific writing, but also team-working and self-organization skills. In early June, QMUL reopened, but with some significant changes in the way of work. Students and staff were divided

into two teams to work in the laboratories in turns. Also, a “flow” that everyone should follow was created to guarantee social distancing. This means that people should move in the building according to the assigning directions (see picture 2). Apart from jokes, these measures create a safer environment in the workplace, allowing us to continue the experimental work that we all missed during the lockdown.

*Alena*

# COVID-19: UPS AND DOWNS

*An article by Federico Traldi*

In the beginning, I did not take COVID-19 too seriously. Like many, I could not imagine that a virus that looked like the common flu would completely change the face of 2020 (and probably of the next few years). Life during a pandemic is not a pleasant situation *per se*, so living it in a foreign country can become seriously stressful and challenging. At first, I felt helpless for my family, as the virus spread in Northern Italy at a worrying pace. As things started to get bad in the rest of Europe and the UK, I started to realize that I was suddenly “trapped” and unable to go back to my beloved country. At least I could focus on my experiments in the laboratory and try not to overthink the pandemic... or this until Queen Mary was forced to close its laboratories and ask researchers to work from home. As an experimental chemist myself, there is nothing worse than not being able to reach my laboratory. Or at least I thought at the beginning of the lockdown. As time passed working from home, I realized how much value there is in taking a break from the experiments and focus on reviewing data, reading papers, organise and present results etc. These are, of course, all part of a scientist's daily routine, but for the first time, they were going to be the only accessible task for the months to come. In this period, I had the opportunity to dedicate more time to reading articles and improving my knowledge of the most recent advances in my research field. The break from the laboratory also gave me more time to look at my data under different points of view, which many times gave me ideas that I would have probably not conceived in a normal situation. This will improve my time management skills and make me a more careful scientist.

Luckily, London decided that, in these difficult times, it was time to gift its inhabitants with an anticipated summer. Having recently moved from West to East London, I had the opportunity to explore the surroundings and enjoy the new neighbourhood. With restaurant and pizzerias closed and a lot of free time, I also decided it was about time for me to learn how to make pizza from scratches. I always enjoyed cooking, but thanks to the lockdown, I discovered a new passion that I cultivated with online lessons and exiting new recipes. I believe this played a vital role in maintaining a balanced lifestyle and gave me a clear view of the importance of appreciating simple things.



Federico

# MAKE THE MOST OF COVID-19

*An article by Inês Albino*

2020 started like any other new year and nobody would have expected that a virus coming from the Far East would hit us as fast and as hard. Those were our thoughts in the westernmost point of Europe, in Portugal. But it did! In early March, “nuestros hermanos” in Spain were hit strong and the numbers were devastating. It was a matter of time before Portugal was hit too. On March 18, CNC closed their laboratories, which would only reopen on May 4<sup>th</sup>. It was heart-breaking to see all the reports and breaking news. Sitting at the table for dinner with the TV on, meant only bad news and it was rather hard to swallow stories. However, I was safe at home so the best I could do was take the most and positive side of it.

That week I wrote down a massive list of to-do things left undone with the rush of regular workdays. Finally, there was time to read the literature, finish writing that review paper, think about our projects, and adjust our roadmaps. Finally, there was time! So, I tried to keep a daily routine, waking up early to work regular working hours, even if it was from my home office. Some days I have allowed myself to have a flexible schedule and finish earlier. Other days I found myself being productive until late. Most of all, it gave me the freedom to organize my time and get things done.

On the other hand, I missed the long experiments in the laboratory. Despite the multiple experiments performed in the kitchen (bread, cakes, biscuits, etc.) I started to feel the urge to continue experiments in the laboratory. On May 4<sup>th</sup>, we came back to work fresher from the break, yet under some restrictions. Working in shifts requires a better organization and time management. Hiding behind masks is strange and sometimes suffocating. Avoiding social contact is hard; as Aristotle once said, "man is by nature a social animal" and scientists are too.



*Joyful NanoStem gatherings post COVID-19*

In the end, we are adapting quite well. As scientists, we are lucky to understand the outbreaks in perspective and therefore, it is important we set a good example. This situation had impacted the world in so many ways and fueled so many inequalities we failed to address before and became crucial opportunities for future change.

*Inês*

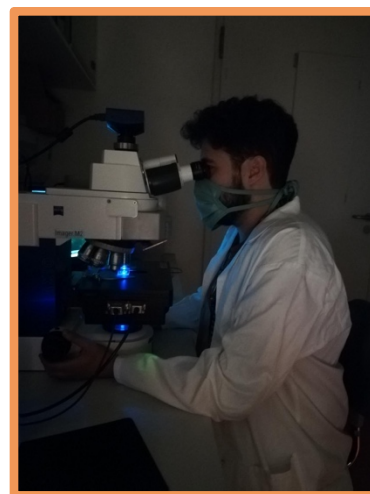
# AN ITALIAN IN GERMANY DURING THE COVID-19 PANDEMIC

*An article by Matteo Puglisi.*

As an Italian living in Germany, my experience of the COVID-19 pandemic was deeply centred on the daily comparison of what was happening in my home country and my host one.

Italy has definitely been one of the most affected countries in the initial phase of the European branch of the pandemic. Images of the overloaded intensive care units and heart-breaking messages from both health workers and families involved in fighting COVID-19 went all around the world to eventually reach my home in Munich. Having friends and family both in Sicily and in Lombardy, the epicenter of the Italian pandemic, I was seriously concerned about their personal safety. I clearly remember I was feeling useless in a situation that seemed out of control to me. When finally the Prime Minister of Italy announced the national lockdown at the beginning of March, I felt relieved. It definitely was a dramatic intervention, but in my opinion, the extraordinary situation was calling for such extraordinary containment measures.

While all of this was happening in Italy, I had to keep my life in Germany going. Indeed, a national lockdown has never been announced here. Universities suspended classes all over the country, but there were not consistent measures regarding lab activity. The kind and the timing of restrictions differed from one Institute to the other, even inside of Munich. For instance, I work at the Biomedical Centre, which slowly went into a “minimal operation mode”. Many core-facilities of the university closed and the Director recommended us to reduce the experimental activity as well as the number of people in the labs. Even if this sounds hard, we have definitely been lucky. I organized the ongoing *in vivo* and *in vitro* experiments so that they could be easily completed, and I collected as much raw data as possible so that I could analyse them at home. After doing that, I spent the whole of April and May doing as much home office as possible. I remember the stress of using public transportations while keeping the social distance during those few days when I had to go to the lab to work on essential experiments. During this whole time, our lab managed to keep our meetings routine going on and we have been able to meet multiple times a week. In terms of scientific work, the home office time was also a good chance to revise literature and keep pace with the most recent publication of the field. Thanks to this, many useful ideas about my project came out.



Now, as of June 2020, we are back to an almost regular working routine. Most of the facilities opened again (even if with a reduced schedule), and we are restarting most of our experiments while keeping distance and wearing facemasks. However, such minor changes in our daily life remind me that a pandemic is still ongoing. Even if many countries are finally experiencing a reduction of people affected by COVID-19, the emergency is not over for many others. Moreover, the pandemic had a huge impact on everyone's life. It will not be possible to come back to our previous lifestyle anytime soon. My only hope is that humanity will try to learn a lesson after all this pain. For example, COVID-19 really demonstrated that so far science had a marginal role in our society. We need more funds for scientific research to understand better how such microorganisms work and we can be prepared for future pandemics. We also need politicians to ask for help from scientists as data and scientific proofs should be the only things guiding their decision-making. Most importantly, the pandemic showed us that tragedies could affect everyone in the world, regardless of nationality. This situation was waking up call for many people and I hope it will make us always remember how important international cooperation and solidarity are, not only in dangerous times.

Matteo



# THE MIXED FEELINGS DURING THIS PANDEMIC

*An article by Angela Berrera*

How can I explain in a few words what has been happening lately? How uncontrollable the world has been during the last few months and how unruly my soul has been. The pandemic changed many things from what we all know. Probably, many things that we began to implement during these days will remain with us and will become normal; for example, hands cleaning and more disinfection habits.

I have had introspective days, happy days, hard days, conscious days, and productive days. I had plenty of emotions for such a short period of time. At the beginning of the pandemic, I felt too scared of going out and catching the virus, so I only went to the supermarket when it was really needed. I know myself, and based on my medical record, I know what kind of patient I could be, and I do not want to be sick and isolated from everyone. What a way to realize how scared of losing someone and of being alone I can be! The introspective/hard days were quite confusing. I felt sad some days because I did not know when I would see the people I love again: my family, my boyfriend, and my friends. They are in different countries and being apart from them was harder than ever. Other days, I was thinking a lot about myself, my life now, and what I am accomplishing. Some days I was doing well, others I was not. It was a time with mixed feelings. In my productive days, I tried new recipes and read books. Despite the quarantine, I never felt alone. I kept in touch with my family and friends, and I had video calls with the Portuguese Nanostem team and the rest of the fellows.

The happy days came when we could meet again. I went to Coimbra and Aveiro with the Nanostem girls. Being able to spend a bit of time outside, enjoying the good weather and the company, and having a good meal in a restaurant was fantastic!

The lab shut down in the last week of March, and we all had to work from home. During that time, we were able to continue organizing all the future work and better plan the project and the forthcoming experiments. We had six weeks of quarantine, but the time flew, and I did not have the chance to



do everything I planned to do. We went back to work in the lab during the first week of May. We now have to work in shifts, but it goes well as we only have a short time in the lab for our experiments, and therefore we have to plan well every test.

I continue to be worried about Colombia and my family. Unfortunately, it is not a country with many opportunities, poverty, and people's needs become more important than being protected from a virus. The country's situation is not easy now. The number of cases is growing fast, and the Government is worried that the healthcare system would collapse. I was not able to go home the past December, and with the current travel limitation, I have no idea when I will go back home again. I will probably see my family after two years or even more. My little brother will not be so little anymore, and my parents probably will have more grey hair than I remember. I only hope that I will meet them again someday; I know I am doing this for our best. At this moment, knowing that they are okay is already a lot. The situation in Portugal was not too bad compared to other countries. I think the Government made the right decisions regarding this issue. Fortunately, the cases did not reach such a high peak. In Cantanhede, the things were not so different from how they usually are, it is a small town and is often not crowded.

I never imagined going through something like this in my entire life. I believe that these experiences teach us to value more everything we have and the people we love. Also, it is time for people to realise that the scientific community is essential and that scientists contribute valuably to the world; the development of drug treatments and vaccines is vital!

I hope that everyone will get to meet their loved ones again soon! I already met my boyfriend, and I am sure I will also meet and hug my family and friends soon as well.

Angela

# COVID19 PANDEMIC AND SOCIAL EFFECTS IN ACADEMIA

*A personal perspective by Eirini Epitropaki*

The coronavirus COVID-19 pandemic is the defining global health crisis of our time and the most significant challenge we have yet to overcome. This disease has the potential to create devastating social, economic and political crises that will be difficult to recover from. As the majority of the institutes here in the UK, University of Birmingham shut its gates on 23<sup>rd</sup> of March and remained closed, while the working from home policy was adopted. The long-term experiments were stopped and labs closed, which limited our work to mostly analyzing data, writing reports and publications, and presentations through different platforms. While adjusting at the beginning was hard, the positive thing



was that we had the opportunity to gather and look at our data as a total of a thesis perspective, which will make the work back in the lab much more efficient and complete. The truth is that since the lockdown there were so many reports, responsibilities, online classes, valuable group meetings and webinars that the workload has multiplied. Apart from scientific education continuously evolving through the webinars, the O'Reilly group is holding online seminars about diversity, which is a significant issue nowadays. These webinars provided proper education to tackle injustice and inequality in every form in academia. Educational equity depends on two main factors. The first is fairness, which implies that factors specific to one's personal conditions should not interfere with the potential of academic success. The second important factor is inclusion, which refers to a comprehensive standard that applies to everyone in a specific education system. These two factors are closely related and depend on each other for an educational system's success. New approaches should be developed in an evolving society, like ours, to encounter any form of discrimination regarding race, gender, sexual orientation, or ethnicity. The O'Reilly group lab has participated in the movement #ShutDownSTEM to support education about any injustice. It is determined to speak out and push for change to tackle discrimination of any kind. We are first humans and then scientists, and it is our duty to create a better tomorrow.

*Eirin*

# Forthcoming events

## Network events



- Online 2<sup>nd</sup> NANOSTEM Summer School. 13<sup>th</sup> – 15<sup>th</sup> July 2020  
ZOOM
- Online 2<sup>nd</sup> NANOSTEM International Meeting, 16<sup>th</sup> July 2020.  
ZOOM
- Online NANOSTEM – NANOCARB joint Training School, 3<sup>rd</sup> – 4<sup>th</sup>  
September 2020. ZOOM

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