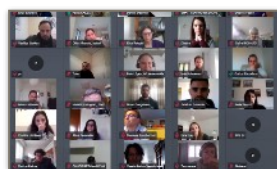




PROJECT, PARTNERS  
& BENEFICIARIES



FIFTH MEETING  
#WESTAYATHOME  
(NOT IN IOANNINA 😞)



ESR EXPERIENCES:  
EPISODE FOUR



AQUALITY BOOKLET

# AQUALITY NEWSLETTER

Welcome to AQUALITY newsletter. Last months of world history were strongly influenced by COVID-19 pandemic and AQUALITY is no exception. Our meetings, secondments and research have undergone a severe change due to the restrictive measures imposed by the authorities. However, we went ahead with our work and in this fifth number of our newsletter you can find, as usual, a short report of the last activities, together with the fourth episode of "ESR Experiences" written by three young ESRs. Stay safe and enjoy the reading!

## Fifth AQUALITY Meeting

The Fifth AQUALITY Symposium meeting could not be attended in person, but COVID19 didn't stop us! Such meeting took place all the same, totally in teleconference mode.



The project meeting lasted a whole day: it started with the session dedicated to WP1 (Project management), chaired by Project Coordinator Paola Calza. She gave welcome to new people involved in the project (Valeria Enrica Vasario - UNITO, who substituted Emilia Sannino in the role of Dissemination and Exploitation Manager from 29th October 2019 onwards, and Núria Zamorano López, the new reference person for AQUALITY within Partner Organisation FACSJA). A new member of the Supervisory Board was then elected: since Ilaria Schiavi left the consortium because she left Partner Organisation IRIS, Alessandro Cedrino, working in IRIS too, was formally appointed to take her place in such board.

Then, Paola Calza pointed out the steps made since the 4th AQUALITY meeting. Plans for deliverable submission in light of COVID19 lockdown were outlined by Paola Calza and further discussed in the sessions on WPs 2, 3 and 4, which included also result presentation by each ESR working on the WP. Then, sessions devoted to the transversal WPs followed: first, Isabel Oller Alberola (CIEMAT) discussed progress and milestones of WP5 (Recruitment and training); secondly Elisa Robotti (UNIUPPO) summarized the status of tasks in WP6

(Involvement of the industrial partners and result exploitation), focusing in particular on secondments; thirdly, Valeria Enrica Vasario (UNITO) chaired the session about WP7 (Data management, dissemination and outreach), describing the dissemination, outreach and networking activities performed and outlining some plans for the future. In conclusion, Prof. Calza thanked all speakers and participants for the very fruitful meeting.

## ESR Experiences - Episode Four

Our story of AQUALity ESRs' life and research continues in this issue. This time we have to thank Alice, Masho and Cristina for their contribution.

### Alice Pavanello

For me, a PhD abroad, in particular a Marie Skłodowska Curie one, is not only studying a new topic but it is also an inner growth. Before the PhD, I always lived with my family, so moving abroad was a big change in my life. Thus, I really think AQUALity project is changing my life in a positive way: it makes me realise what I can do alone, how much strength I have and I really feel I am becoming more mature every day. In these two years, I have been travelling a lot for conferences and for secondments abroad, I have been learning a new language, I have lived a lot of adventures and I have met a lot of incredible friends all across Europe. For these reasons, a



programme like this one is a big opportunity to interface with a lot of different situations and cultures. Sometimes, it could be difficult to leave our comfort zone and our friends and families, but it could be also useful for discovering who we are and what we are able to do.

When I landed in Oslo, I was super-scared, because I have always imagined Scandinavia as a frozen land, super-far from my habits. But at the end, my Norwegian experience was very significant: I met a lot of friends, I learnt about new cultures, I tried new foods and I experienced living with few hours of sun. I also loved the natural landscapes of Norway and I hiked a lot in the forests in the neighbourhood of Oslo. This impressed me a lot: differently from the cities I've seen before, Oslo is very small (even if it is a capital city) and in 20 minutes you can be in the middle of the forest and be surrounded by pure nature.

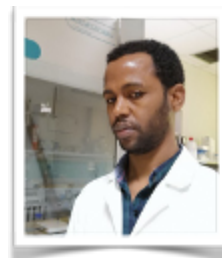
Ms. Pavanello studied Chemistry at the University of Padua (Italy). She received the Master's Degree in Chemistry working on advanced oxidation processes and in particular studying a new non thermal plasma reactor for the degradation of pollutants in water. Her research interest within the AQUALity project focuses on the photocatalytic reduction of micropollutants, based on steady-state and time-resolved experiments.

Also, from the scientific point of view, at NIVA I had the opportunity to sample water in the fjord and work on it with a lot of experts.

So, every day I thank myself for this challenge and for this opportunity and even in the bad periods, when everything is going wrong and I miss my family and my home, I know that I have my amazing and supportive colleagues who can help me. Because, at the end of the day, we are all in the same situation and we are a sort of family.

### Masho Hilawie Belay

I did my first travel abroad to Norway in 2014 with mixed feelings about leaving behind my family, friends, living styles, and all of that. I was eager to get most out of the opportunity to gain new knowledge, skills, and experience in the fields of Analytical and Environmental Chemistry. As a young but dynamic person coming from a developing country, moving to Norway was challenging, especially without any knowledge of its culture, language and weather. It took me a while to understand and thus adapt to the Norwegian culture and weather; but once I settled, I soon started to enjoy everything and then completed my education successfully.



When I got another opportunity to move to Europe with the AQUALity project (this time to Italy), I couldn't turn it down because I knew it was a chance to work with brilliant ESRs and qualified professionals coming from various cultural, academic and research backgrounds. With a better knowledge of the European culture and weather, I was happy and excited about joining the project. Of course, I visited Milan for two days, back in 2016, but that was just the tip of the iceberg. Hence, the language was the most difficult part of my first days in Alessandria, not to mention the hot July of 2018. A couple of weeks after my arrival, I started

Mr. Belay obtained a Bachelor's Degree in Chemistry from Jimma University and then a Master's Degree in Analytical Chemistry from Hawassa University in Ethiopia. He then obtained another Master's Degree in Environmental Chemistry and Toxicology with a specialization in Environmental Chemistry from the Norwegian University of Science and Technology in Trondheim.



to enjoy my time and job, thanks to the guidance and introduction of Italian culture and lifestyle by my Supervisor Prof. Elisa Robotti and the people around.

Almost two years have passed since the start of my Ph.D. at UNIUPO in Alessandria, and every single day has been a very important part of my experience both professionally and as a person. I have also gained valuable experience from my recent secondment at the Eurofins Lab in Vejle (Denmark). It gave me a different outlook on which research is performed at companies compared to universities. The AQUALity project offered me numerous travel opportunities to attend conferences, congresses, symposiums and to perform secondments. In all these travels, I had the chance to meet new people, creating opportunities for interaction and collaboration, discovery of new places, new experiences and personal development as a researcher. Obviously, in a project like this, where plenty of travels are in schedule, one needs to stay focused and well-organized. Imagine when a pandemic disrupts your schedule?! Meetings and conferences cancelled, laboratories abandoned; you only have to stay at, and work from, home. Well, that's when flexibility becomes crucial to learn a new digital experience!



Istanbul Tour in September 2019, right after the 4<sup>th</sup> AQUALity Meeting

## Cristina Jiménez Holgado

I had strongly thought about studying abroad but I had never set out to do it. I studied Chemistry and did a Master's Degree in Science and Technology of New Materials, and at the same time, I was doing an internship in a wastewater treatment plant, all in Seville (Spain), my hometown, where I had always lived with my parents. After finishing my studies, I worked for a short period of time in a drinking water treatment plant, located very close to my house. Later, I did not know very well what to do, until I received the news that would change my life. I had been accepted in the AQUALity Marie Skłodowska Curie project, which offered me a position at the University of Ioannina, a small town located in Northern Greece. I felt excited as well as frightened, to start a new life away from the comfort of home. It was the best decision of my life.

Ms. Jiménez Holgado studied Chemistry at the University of Seville in Spain. She obtained her Bachelor's Degree in Chemistry, working in the field of colloidal systems, and then her Master's Degree in Science and Technology of New Materials from the University of Seville. Her research interest within the AQUALity project is green analytical microextraction methods for CECs' determination and assessment of their photochemical behavior in natural waters.



Cristina and laboratory colleagues at CNRS, Clermont-Ferrand

After two years as an AQUALity ESR, I have met wonderful researchers and professors, and especially my fellow ESRs. I have travelled to different countries for research activities, secondments, conferences and training activities and have met people from almost all over the world. One month ago, I returned from my second secondment at CNRS in Clermont-Ferrand (France), where I spent 5 months. There, I worked with people of many different nationalities in an excellent professional environment. Now, in this difficult situation due to the coronavirus, I am working from home and waiting for everything to return to normality as soon as possible.

Summarizing, thanks to this MSCA project, I have become a more confident person and I have definitely opened my mind. I highly recommend this kind of experience, so take and enjoy these opportunities!

## Outreach activities

AQUALity Lab was replicated at Università degli Studi di Torino (UNITO) on 12<sup>th</sup> February 2020. Fellows Nuno Gonçalves, Zsuzsanna Varga and Dimitra Papagiannaki showed practical experiments to junior high school students at UNITO Chemistry Department. Such training, organised jointly with "ReHorti" Project funded

### The AQUALity project

- This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 765860. **AQUALity** is an Innovative Training Network (Call: H2020-MSCA-ITN-2017).
- **AQUALity** is a multidisciplinary European Training Network focused on creating the next generation of integrated Urban Water System management innovators: the project will train 15 highly skilled scientists in the removal of pollutants present in aqueous systems in very small amount.
- Info: [www.aquality-etn.eu/the-project/](http://www.aquality-etn.eu/the-project/)

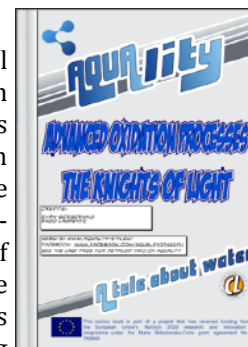
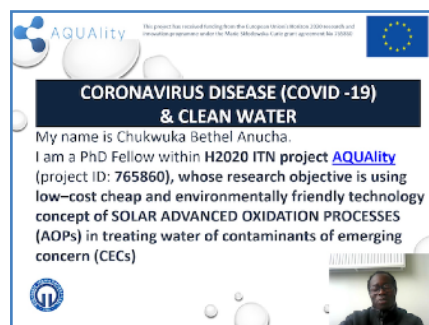
by Compagnia di San Paolo, was supervised by Paola Calza, Debora Fabbri, Giuliana Magnacca and Elisa Gaggero. UNITO students Monica Rigoletto, Lucia Iezzi and Francesca Rosso helped AQUALity Team to set up the training.

Besides, the third issue of the AQUALity Booklet was published on our website, at the link: [www.aquality-etn.eu/outreach/](http://www.aquality-etn.eu/outreach/), showing three years of communication and dissemination activities (2018-2019-2020).

## Enhancing educational resource-sharing

The AQUALity team, being prevented from performing many of the planned activities in person, have focussed on creating educational resources suitable for online learning. Then, we thought it would be valuable to share such resources directly with the REA, which has recently increased efforts to send EU Newsletters containing links to remote training.

In particular, in this period of remote working, two ESRs, Iván Sciscenko and Bethel Anucha, volunteered to create new training activities suitable for online learning in addition to the ones previously developed by AQUALity: Iván created a story for a comics book targeted to high school and university students and focused on Advanced Oxidation Processes. With the graphical revision of Enzo Laurenti (UNITO), the final product came out: the book tells the story of the fight of super-heroes A, O, and P against CECs – Contaminants of Emerging Concern. Bethel, instead, chose to create a Power Point and video lesson on Coronavirus Disease (COVID19) and clean water. Hand-washing



with soap and water is essential to prevent COVID19's aggressive spread, but clean water, free from whatever contaminant, is needed. The question posed by such lesson is: how can the 40% of humanity, lacking access to even the most basic hand-washing requirements, follow this recommendation? Links to think and dig deeper are provided at the end of the presentation, which is now available on YouTube ([www.youtube.com/watch?v=BwS6mT3r2w0](http://www.youtube.com/watch?v=BwS6mT3r2w0)). Both educational resources are displayed in the "Outreach" webpage of AQUALity website ([www.aquality-etn.eu/outreach/](http://www.aquality-etn.eu/outreach/)) and have been sent to the REA.

Besides, we sent the EC the link to training activities developed in 2019 and suitable for online learning: YouTube presentations and training materials of the AOP Summer School, held in Alcoy (Spain), 3-7 June, 2019 ([www.youtube.com/playlist?list=PLmHR6bx1yaalwErJiUbcRodwhEKcbirDG](http://www.youtube.com/playlist?list=PLmHR6bx1yaalwErJiUbcRodwhEKcbirDG)) and the link to the videos of the outreach presentations where the ESRs Ilaria Berruti, Dimitra Papagiannaki, Fabrício Bortot Coelho, Masho Hilawie Belay present their AQUALity Lab experiences ([www.aquality-etn.eu/outreach/](http://www.aquality-etn.eu/outreach/)).

## Networking

After ESRs' participation in events organised by other projects, the result was achieved to update the list of the projects AQUALity does networking with, adding the following 2 projects to the list of 11 which were already present in the "Networking" Section of the AQUALity website: Proyecto MAGNOX ([congresoeddyr.com/wp-content/uploads/2018/11/Ponencias/01-MARTES\\_23-S1\\_S2/SESION\\_1/2-ISABEL\\_TORMOS-FACSA/Aedyr\\_TOL18-10.pdf](http://congresoeddyr.com/wp-content/uploads/2018/11/Ponencias/01-MARTES_23-S1_S2/SESION_1/2-ISABEL_TORMOS-FACSA/Aedyr_TOL18-10.pdf)) – Project Identifier: IDI-20131105; duration: 28 months; funded by Centro para el Desarrollo Tecnológico Industrial (CDTI) and co-funded by the European Regional Development Fund (ERDF); SFERA III ([sfera3.sollab.eu](http://sfera3.sollab.eu)) "Solar Facilities for the European Research Area – Third Phase" – Project ID: 823802 – a Research and Innovation action funded within Horizon 2020 "Research Infrastructures" Call for proposal H2020-INFRAIA-2018-1. Duration: 2019-2022.

### The AQUALity consortium

#### • 7 universities:

- Università di Torino, Italy
- Aalborg Universitet, Denmark
- Università del Piemonte Orientale, Amedeo Avogadro, Italy
- Universitat Politècnica De Valencia, Spain
- Panepistimio Ioanninon, Greece
- Ecole Polytechnique, France
- Karadeniz Teknik Üniversitesi, Turkey

#### • 8 companies:

- Liqtech International A/S, Denmark
- Società Metropolitana Acque Torino S.p.A., Italy
- IRIS, Italy
- FACSA, Spain
- ISALIT, Italy
- MIRTEC, Greece
- Eurofins VBM Laboratoriet, Denmark
- NIVA, Norway

#### • 3 research institutes:

- CNRS Clermont-Ferrand, France
- Plataforma Solar De Almería, Spain
- INERIS, France

Info: [www.aquality-etn.eu/who-we-are/](http://www.aquality-etn.eu/who-we-are/)