

# Prof Anabela CORDEIRO-DA-SILVA Action Vice Chair, Faculty of Pharmacy, University of Porto



# How did you get interested in Science?

Enlightened by a researcher/teacher during the early stages of my university training.

# Where and when did you obtain your PhD diploma?

Porto, 1997, Biomedical Sciences - Immunology, University of Porto, Portugal

# What was the topic of your PhD project?

Immune response in Chagas Disease

# Where did you have your postdoc position?

Pasteur Institute in Paris

## Where are you currently working and what is your current position?

I am Full Professor in Immunology at University of Porto, Portugal

# What are your current research interests?

Leishmaniasis, Malaria, Neglected Tropical Diseases

## How would you explain what your research area is to non-scientists?

My research focuses on examining how invading microorganisms, specifically parasites, interact with the body's defence cells. The goal is to develop ground-breaking drugs that can prevent these parasites from causing diseases..

# What do you like best about your work?

My freedom at work and every day being unique

# What kind of tasks does your work involve?

Teaching and research.

People and project management Evaluation in different contexts

# What kind of skills does your work require?

Dedication and unwavering commitment.

# What do you consider your greatest achievement in your scientific career?

Logical thinking, focused concentration, and dynamic engagement.

## Which of your papers are you most proud of and why?

The article "Revealing the Vital Role of Ribose-5-Phosphate Isomerase B in Trypanosomatids" in 2016 stands as a symbol of the high-quality achievements of my research group.

# How many PhD students and postdocs do you currently supervise? Are you currently looking for a new PhD student or a postdoc?

I currently supervise 6 PhD students and 2 postdoc. zWe are actively seeking new collaborators who possess both talent and a strong commitment to advancing scientific pursuits.

# What are the features of a successful PhD student or postdoc?

S/he should establish her/himself as an independent researcher, adept at posing novel questions, designing projects to address them, and guiding new students. Carry forward the legacy that has been entrusted to you.

# How would you describe yourself as a supervisor?

Driven, dedicated, and passionate about science.

# What is the most embarrassing thing you have done in the lab while doing experiments, e.g. explosions?

Parasitic projection.

# What are your recommendations for a book, podcast, website, blog, YouTube channel or film?

Accuracy in transmitting information in any format.

#### Which scientist do you admire the most and why?

There are several, but always for their contributions to science.

Have you experienced any unfair situations during your scientific career? Career progression is always unfair.

# What advice would you give to someone who wants to know more about your field?

Contact the scientists you most admire in the field.

# Why the contribution of women in science is essential?

The contribution of each human being in science is essential. Why do we consider differences (between man and woman, between an individual and another) as an issue and not a resource?

Men and women exhibit distinct sensitivities and approaches to problemsolving, as well as the simultaneous execution of various tasks. The diversity inherent in the characteristics of both women and men enriches and adds value to the field of science. Clara Lima -PHD candidate - Instituto de Investigação e Inovação em Saúde, University of Porto, WGL 6 "Promote the transfer of knowledge"



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## How did you get interested in Science?

I realized I should join Science when I raised questions for which I couldn't find answers.

# Where and when did you obtain your PhD diploma?

Currently, I am a PhD candidate at University of Porto, Faculty of Pharmacy.

# What was the topic of your PhD project?

"Changing paradigm to confront zoonotic leishmaniasis: a One Health perspective from Portugal"

# Where are you currently working and what is your current position?

Currently, I am a PhD candidate at University of Porto, Faculty of Pharmacy.

# What are your current research interests?

Neglected Tropical Diseases, Parasitic Diseases Diagnosis, Zoonoses, OneHealth

# How would you explain what your research area is to non-scientists?

I work to assess the current burden of leishmaniasis in Portugal. This is a disease caused by a microscopic parasite transmitted through the bite of an insect, and affects animals (mostly dogs) and humans.

## What do you like best about your work?

The fact that, from my research work, I expect to bring evidence to support veterinary and public health strategies aiming at reducing the cases of animal and human Leishmania infections in Portugal.

# What kind of tasks does your work involve?

My research work involves mostly field and laboratory epidemiology. I collect biological samples form animals living in all districts of the country and work them up them in the lab. For their study, I rely on a variety of tests and tools that go from parasite isolation in culture, molecular characterization of isolated Leishmania strains, drug-sensitivity assays and clinical and serological characterization of the tested animals.

# What kind of skills does your work require?

Requires my skills as a Veterinary Doctor, and skills on clinical laboratory analysis (on both serological and molecular tests).

# What do you consider your greatest achievement in your scientific career?

Until this moment, the greatest achievements are being granted with a PhD scholarship to pursue this study; received a positive appreciation from the preliminary findings presented at national and intentional conferences (being awarded with two prices); have established solid collaborations with different

research groups working on Leishmaniasis (from our joint efforts and sharing resources we can produce more and reach further) and I am also very proud to be a member and WG leader for OneHealthDrugs COST Action!

# What is the most embarrassing thing you have done in the lab while doing experiments, e.g. explosions?

Don't get me started! I guess splashing Giemsa stain all over the lab's walls and overheating glycerine in the microwave to the point it popped in an explosion.

# What are your recommendations for a book, podcast, website, blog, YouTube channel or film?

For those like me who vibrate with epidemiology, I recommend "ECDC: on air" podcast.

On a non-scientific basis, Snap Judgement podcast have amazing stories.

Books I recommend: White Tigger, from Aravind Adiga; Blindness, from José Saramago; Patagonia Express, from Luís Sepulveda.

Film: Lagaan, from Amir Khan; 8½, Federico Fellini; Buffalo 66, Vincent Gallo.

## Which scientist do you admire the most and why?

I really can't pick up a name. I admire all of those who work with dignity, integrity, with altruism, respecting their team-mates and the environment. These are my mentors.

Have you experienced any unfair situations during your scientific career? Yes.

# What advice would you give to someone who wants to know more about your field?

Come and join me in the lab and on my field trips! Before fantasising the wonders of Science, you should experience reality.

#### Why the contribution of women in science is essential?

Women's contribution is essential in every aspect and activity performed for the good of mankind. In the specific context of Science and R&D, women's participation reflects gender equality and social justice. Bringing women into science is supporting new perspectives, innovation, fairness, equality, and compassion.

# Maria Laura Bolognesi - Full Professor, Alma Mater Studiorum Università di Bologna Società Chimica Italiana





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# How did you get interested in Science?

I had a science teacher who was a pharmacist, and she inspired me at Middle School. Although I went on with classical studies and humanities, then at the University I entered a Master degree in Chemistry and Pharmaceutical Technology: this definitively triggered the spark!

## Where and when did you obtain your PhD diploma?

Unfortunately, long ago, back in 1996 from the Alma Mater Studiorum -University of Bologna;)

# What was the topic of your PhD project?

I was fortunate to have been supervised by the Prof. Carlo Melchiorre and to contribute to the discovery of tripitramine, one of the most selective muscarinic M2 receptor antagonists. This is an interesting chemical probe, which has been, and still is, widely used in the characterization of muscarinic receptor subtypes.

# Where did you have your postdoc position?

I had the opportunity and the privilege to know and work with Prof. Phil Portoghese at the University of Minnesota, a father of medicinal chemistry, a long-standing Editor for ACS Journal of Medicinal Chemistry and a fantastic mentor. Joining his lab was the best career choice I ever made!

# Where are you currently working and what is your current position?

I am proudly a Full Professor of Medicinal Chemistry at the Department of Pharmacy and Biotechnology of the Alma Mater Studiorum - University of Bologna.

I am also a very happy Coordinator of the local Biotechnological, Biocomputational, Pharmaceutical and Pharmacological Sciences PhD Program.

# What are your current research interests?

A common thread of my research is the development of bifunctional/bivalent chemical probes resulting from the combination of two bioactive frameworks, which I was introduced to Prof. Portoghese. Very recently, we have turned our attention to an emerging class of bivalent ligands, i.e., PROTACs for infectious and neurodegenerative diseases.

# How would you explain what your research area is to non-scientists?

We are those working in the lab (with safety glasses and labcoats) creating new drugs. The alchemists of our time!

# What do you like best about your work?

The fact that it is very diverse, with research, lecturing, and service to the community. The academic career is a very hectic one, but truly rewarding: it is a privilege, a responsibility, and a true opportunity.

## What kind of tasks does your work involve?

Open-mindedness, creativity, together with communication and networking abilities. At this stage of the career, surely time management and organization are also very important to effectively combine work with personal life

# What kind of skills does your work require?

Open-mindedness, creativity, together with communication and networking abilities. At this stage of the career, surely time management and organization are also very important to effectively combine work with personal life.

# What do you consider your greatest achievement in your scientific career?

Well, probably being selected as Associate Editor of J Med Chem. Being trained by two JMC Editors (Portoghese and Melchiorre), it was a fulfilment of a dream long conceived! I am still deeply honored and feel the responsibility of being involved in the peer review process and contribute to the advancement of medicinal chemistry.

## Which of your papers are you most proud of and why?

All those related to the discovery of memoquin, the first rationally designed multi-target-directed ligand for neurodegeneration (e.g., J. Med. Chem. 2007, 50, 20, 4882–4897).

# How many PhD students and postdocs do you currently supervise? Are you currently looking for a new PhD student or a postdoc?

At the moment, I am very proud of supervising an international and diverse team of six PhD students and one post-doc (see our "rainbow" picture). In any case, new ones are always welcome!

# What are the features of a successful PhD student or postdoc?

There is not a single feature, but rather the right blend of passion, dedication, perseverance, resilience, and creativity, all very important for a successful career in science.

# How would you describe yourself as a supervisor?

With my students, I try to create (and maintain) an environment that not only fosters motivation but is also based on mutual recognition, respect, and support. Spending time together, as well as establishing a channel for open communication, is central.

# What is the most embarrassing thing you have done in the lab while doing experiments, e.g. explosions?

It was not an explosion, but it was embarrassing as well! When I was in the US, it happened that I did not fix properly the inlet tube to the condenser, and this caused flood in the lab. Be on guard and don't panic!

# What are your recommendations for a book, podcast, website, blog, YouTube channel or film?

My recommendation is coming from a film I watched last week-end. "There's Still Tomorrow" (Italian: C'è ancora domani), a neorealist-style movie, dealing with issues related to women empowerment in a delicate, ironical and touching way.

# Which scientist do you admire the most and why?

This is a truly challenge. But on the occasion of the Women Day, two names always spring to my mind. Gunda Georg, a female role model for those working in medicinal chemistry and drug discovery. From the past, Laura Bassi, a 18th-century scientist and the first woman to hold a university professorship in STEM.

Have you experienced any unfair situations during your scientific career? When I started my career, the presence of women at all levels was becoming normal, but now and then you get subtle signs showing that prejudices still exist. There isn't an open opposition, but sometimes (fortunately few) unpleasant small things happen, and we want to stop that.

# What advice would you give to someone who wants to know more about your field?

Read this, https://www.nature.com/articles/s41467-023-39949-6, a glimpse on medicinal chemistry from three different career-stage scientists involved in the field

## Why the contribution of women in science is essential?

We know that men and women's skills, approaches and ideas are different, but these differences should be recognized, celebrated, and taken advantage of to complement one another in the big challenges of science.

# Jennifer Keiser - Prof at Swiss Tropical Institute



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## How did you get interested in Science?

As a high-school student I was working in a pharmacy and became interested in drugs. This influenced my choice to study pharmacy.

# Where and when did you obtain your PhD diploma?

At the University of Basel 1999

# What was the topic of your PhD project?

The PhD topic was about an old drug (melarsoprol used for human African trypanosomiasis)

# Where did you have your postdoc position?

In Princeton

## Where are you currently working and what is your current position?

I am a Professor and Unit head at the Swiss Tropical and Public Health Institute

## What are your current research interests?

We work on drug discovery and development of novel drugs for helminth infections.

## How would you explain what your research area is to non-scientists?

We test new compounds in the laboratory against worms and conduct clinical trials.

## What do you like best about your work?

The freedom to decide what to work on and the collaborations with many partners nationally and internationally.

# What kind of tasks does your work involve?

Correcting and writing manuscripts, teaching, thinking about new work ideas and writing grants, travelling to field sites and conferences, administration

#### What kind of skills does your work require?

Management skills, flexibility, communication and teaching skills, research and mentoring skills

## What do you consider your greatest achievement in your scientific career?

We have contributed to improvements in the treatment of soil-transmitted helminth infections, placing albendazole-ivermectin on the essential medicine list and we are developing a new drug, emodepside for Trichuris trichiura infections.

# Which of your papers are you most proud of and why?

Our recent article in the NEJM on emodepside as it paves the way for a new treatment for soil-transmitted helminth infections https://pubmed.ncbi.nlm.nih.gov/37195942/

# How many PhD students and postdocs do you currently supervise? Are you currently looking for a new PhD student or a postdoc?

About 9 PhD students and 4 Postdocs. No, but we often advertise new positions

# What are the features of a successful PhD student or postdoc?

To be motivated, interested, open to dive into new fields

## How would you describe yourself as a supervisor?

We have a very horizontal hierarchy. I give my students the freedom to work independently. If they like to talk to me my door is always open.

# What is the most embarrassing thing you have done in the lab while doing experiments, e.g. explosions?

I do not remember anything embarrassing

# Which scientist do you admire the most and why?

Not sure

# Have you experienced any unfair situations during your scientific career?

Yes, for sure. We still have to fight hard that women are treated equally. Women have to work harder to achieve the same goals as we do not "Play Like a Man"

# What advice would you give to someone who wants to know more about your field?

Come and meet me

# Why the contribution of women in science is essential?

Because they make an enormous contribution and impact. Women leaders have many skills which make science a better world.

# Dr Gülşah BAYRAKTAR - Research Assistant, **Ege University Faculty of Pharmacy**





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## How did you get interested in Science?

I was fascinated by scientific discoveries/explanations of daily life such as thunders etc. since I was a little kid. When I realized that I, myself, could find explanations/make discoveries, even though the small ones, it was the only and the best career option for me.

# Where and when did you obtain your PhD diploma?

I obtained my PhD at Ege University Faculty of Pharmacy Department of Pharmaceutical Chemistry (Izmir-Türkiye) in 2019.

# What was the topic of your PhD project?

My PhD studies focussed on design, synthesis, and bioactivity evaluations of MTDLs against Alzheimer's Disease.

# Where did you have your postdoc position?

I continued to work at the same department after my PhD as I had a permanent position.

# Where are you currently working and what is your current position?

I currently work at Ege University Faculty of Pharmacy Department of Pharmaceutical Chemistry as a research assistant, PhD.

# What are your current research interests?

After my PhD, I continued to work on the small molecules for neurodegenerative diseases, meanwhile my research interests have grown towards design and synthesis of novel compounds for various molecular targets to treat leishmaniasis.

# How would you explain what your research area is to non-scientists?

Drug discovery is extremely long and challenging path so every medicine that we use today has hundreds of scientists work behind it. As medicinal chemists, we try to design and synthesize novel molecules that has a potential to be a medicine after many bioactivity and toxicology evaluations.

I broke lots of glassware, unfortunately sometimes the rare and expensive ones, during my experiments and I often felt very embarrassed to tell my supervisors about it. Luckily, I worked in a very supportive environment and all my supervisors and lab mates encouraged me and told me that 'Don't worry! You at least broke things while trying to figure out new things.'

# Which scientist do you admire the most and why?

I was affected by great physicist Richard Feynman very much although our fields are different. I am sure his curiosity, way of thinking and ability to explain extremely difficult concepts very basically has affected many scientists.

Additionally, Marie Curie's passion for science and her restless fight as a woman in research has always encouraged me.

# Why the contribution of women in science is essential?

The curiosity is the driving force in science, and the basic sense, curiosity, is definitely for everyone. Women are underrepresented in most of the fields therefore we must highly encourage curious minds to make new discoveries for a better world. I want to finish saying every contribution to science is very valuable and science is for everyone!

# **Gunel Aliyeva - Baku State University**





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# How did you get interested in Science?

When I was in school, I saw an announcement about the opening of a new high school. In order to be admitted to that school, it was necessary to take an exam, and I prepared and was admitted. My chemistry teacher at that school encouraged me in this field. Perhaps the luckiest people in the world are those who met a good teacher in their childhood. I can even say that I am the first chemist in my family. My mom always wonders, chemistry is so hard, how do you like it?!

# Where and when did you obtain your PhD diploma?

I am currently a PhD student. It's my final year and I'm already preparing for defence.

## What was the topic of your PhD project?

I am an organic chemist, the subject of my PhD project is the synthesis of new derivatives from the functionalization of heterocyclic compounds based on Suzuki Miyaura cross-coupling reactions and the study of their biological activity. In fact, I would like them to be tested as medicinal substances. But unfortunately, the university where I study and work does not have a base for such research. This is actually my purpose for joining COST projects.

# Where did you have your postdoc position?

# Where are you currently working and what is your current position?

Currently, I am a researcher at the Nano Research Center of Baku State University

## What are your current research interests?

Obtaining hybrids of the organic compounds I have synthesized with nanoscale structures and testing their biological activity.

# How would you explain what your research area is to non-scientists?

A nanometer is 10-9. When structures move to the nanoscale, their activity can increase, decrease, or acquire completely new properties. These nanoscale structures are used in the targeted delivery of drugs. Targeted drug delivery means that drug compounds move to the diseased organ without spreading to other organs and causing damage. We also aim to test nanostructures with organic compounds as a targeted drug delivery system.

#### What do you like best about your work?

Working in the laboratory. For hours and days. I don't get tired.

# What kind of tasks does your work involve?

Literature review Implementation of experiments Analysis of results Discussion of results

Preparation of reports Meeting with the supervisor

# What kind of skills does your work require?

I am able to conduct a detailed and extensive literature review and accurately analyze the obtained data. I think this should be done first before starting any scientific research. Since 2017, I have been involved in organic synthesis research in the laboratory, and I can say that I have the skills to conduct experimental processes. In addition, I attended training schools for studying various physical-chemical research methods (NMR, HPLC, GC, MS, UV-Vis, FTIR) (on the basis of grants funded by the Azerbaijan Science Foundation). I can write articles, make presentations at conferences, participate in various scientific discussions.

# What do you consider your greatest achievement in your scientific career?

I wouldn't say that I consider any particular event a success. But everything I have achieved so far has been through certain difficulties. Financial difficulties, lack of support in the family, difficulties I face because I am a woman, poor conditions in my work environment, etc. The greatest success is being able to overcome them and become who I am today.

# Which of your papers are you most proud of and why?

During my master's period, I studied for 1 semester at Yıldız Technical University on the basis of an Erasmus+ Mobility grant. At that time, there were 2 molecules that I synthesized and the effects of those molecules on oxidative stress and DNA repair gene profiles in neuroblastoma cell lines were tested. This research paper is my first paper and I am very proud.

# How many PhD students and postdocs do you currently supervise? Are you currently looking for a new PhD student or a postdoc?

#### What are the features of a successful PhD student or postdoc?

I am currently also teaching. But I can say that doing research, working in the laboratory is my way of life. When I come to work every morning, I'm not tired if I'm going to work in the wrong lab that day. I think a successful PhD student should just have love. If you have love for a job, you are responsible and tireless, you work hard and you are always looking for something new, and solving problems is just a pleasure.

# How would you describe yourself as a supervisor?

I have undergraduate students. We perform research in the laboratory. According to what they say, I am demanding. I think maybe if you ask them this question, they will answer better.

# What is the most embarrassing thing you have done in the lab while doing experiments, e.g. explosions?

This happened during my undergraduate days. It made me understand the responsibility of work better. On the other hand, it made me more motivated.

# What are your recommendations for a book, podcast, website, blog, YouTube channel or film?

It may sound a little funny to you, but I really like Paulo Coelho's The Alchemist. I think we are all in search of truth. And in fact, we are all a part of that truth.

I love autobiographical films about the lives of scientists. I try to watch as much as I can. Of course, as a woman, I am most impressed by the one about Marie Curie.

## Which scientist do you admire the most and why?

I can say a few actually. As I mentioned before, Marie Curie. Oppenheimer, which I later explored more after Nolan's film.

Ben Feringa for his current research. It would be safe to say that I read all his articles on the day they were first published. If I can get a scholarship, I am thinking of becoming a PhD (second) or postdoc in his team.

# Have you experienced any unfair situations during your scientific career? Have you experienced any unfair situations during your scientific career? Life is unfair but beautiful. I have faced, and there are moments that I still face. However, if we look at the lives of all scientists, they have faced various

injustices. Maybe the secret to being successful is fighting them.

# What advice would you give to someone who wants to know more about your field?

First, decide what you want. Love this field or not. If there is love, read more, research more and spend more time with people who are passionate about science.

# Why the contribution of women in science is essential?

Because women approach problems differently. More creative and more solution oriented. I know from myself.

# Simona Rapposelli - Associate Professor at Department of Pharmacy, University of Pisa





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How did you get interested in Science?

It was completely accidental! I was in the last years of high school when a person very dear to me passed away due to a pathology that was incurable at the time... that moment in my life made me change my "plans" and I decided to dedicate myself to research in the pharmaceutical field

# Where and when did you obtain your PhD diploma?

I obtained my PhD in 2003, at the University of Pisa

# What was the topic of your PhD project?

After graduating, I obtained a scholarship for the synthesis of new selective anti-inflammatory molecules (COX-2 inhibitors). At that time this topic was much investigated in Academia given that in those years the FDA had authorized the marketing of the first two selective COX2 inhibitors: celecoxib and rofecoxib. Therefore, during my PhD in Pharmaceutical Science I worked on the design and synthesis of new COX-2 inhibitors.

# Where did you have your postdoc position?

Where are you currently working and what is your current position? I am associate professor in medicinal chemistry, at the University of Pisa

## What are your current research interests?

Today my research is focused on the design and development of novel chemical entities for several diseases such as neurodegenerative disorders, cancer, and hepatic diseases.

## How would you explain what your research area is to non-scientists?

Medicinal chemistry focuses on creating new compounds that can interact with specific targets in the body, such as proteins or enzymes, to affect biological processes. These substances are carefully designed to have desired pharmacological activities, in order to act on the body in a specific manner producing a therapeutic effect.

# What do you like best about your work?

The best I like in my work is multidisciplinary and dynamism of research. Indeed, in my opinion, a great research is always the result of continuous networking between different disciplines such as chemistry, biology, pharmacology, genetics.

## What kind of tasks does your work involve?

Although I would like to pass more time in the lab with my team, I spend most of my day at my desk reading scientific articles to keep up to date, analysing data and writing scientific publications and research proposals to intercept funds and develop my ideas

## What kind of skills does your work require?

Good knowledge in medicinal chemistry, biochemistry and pharmacology. My work is mainly based on the synthesis of new active molecules able to induce a beneficial effect on humans or animals and to achieve this objective it is essential to have a good knowledge of both biological targets and pathways in which they are involved is a requirement

# What do you consider your greatest achievement in your scientific career?

The greatest achievement of my scientific career is independence. Apply the knowledge acquired through study and years of experience by developing my ideas in full autonomy

# Which of your papers are you most proud of and why?

This is a difficult question because all the papers represent an achieved outcome. Maybe, the paper of which I am most proud today is the discovery and synthesis of new thyroid hormone agonists which proved to reduce the number and the size of preneoplastic lesions in HFD-rats without significant side-effects. This result let us to be funded by AIRC association for a three-year proposal starting from January 2024

# How many PhD students and postdocs do you currently supervise? Are you currently looking for a new PhD student or a postdoc? At the moment I am currently supervising three PhD students.

## What are the features of a successful PhD student or postdoc?

Passion, ambition, and multidisciplinary skills. Perhaps, the most important features are the ability to share knowledges and made network

#### Why the contribution of women in science is essential?

The contribution of women to science guarantees real representation of the entire society. In my opinion, their contribution is essential to ensure a diversified perspective and to address scientific problems in a more pragmatic way.

# Dijana Blazhekovikj - Dimovska, University "St. Kliment Ohridski", Faculty of Biotechnical Sciences



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## How did you get interested in Science?

The initiative to engage in Science represents a significant mechanism for stimulating competition and supporting the intellectual elite. This initiative enables the exchange of ideas, creativity and interdisciplinary collaboration. The key to success is objectivity and transparency in the selection process, ensuring that the best scientists get the opportunity to develop and influence their fields of research.

A challenge that will guide me in my scientific career is the realization of my unique mission, to work in the direction of encouraging youthful enthusiasm, guided by the thought that "The real teacher learns from his heart, not from books".

## Where and when did you obtain your PhD diploma?

I obtained my PhD diploma in 2013, at the age of 31, at the University "St. Kliment Ohridski" (www.uklo.edu.mk), the second public university in R.N.Macedonia, but considering the multidisciplinary of the field of research, I did most of the research at the Hydrobiological Institute in Ohrid.

# What was the topic of your PhD project?

The topic of my doctoral dissertation was "Parasite fauna and mycoses in cyprinid fish in the fish breeding facilities in the Republic of Macedonia". During my research I had the opportunity to be in direct contact with the stakeholders of the larger aquaculture facilities in my country, in order to be able to work on essential problems related to fish welfare, diagnosing fish diseases, but with special reference to the appearance of parasites in fish, as well as the causes and consequences thereof. Regarding my PhD project and the fact that there has been little investigation on the parasitic fauna of cyprinid fish from fish breeding facilities in Macedonia, I obtained more detailed data about the species composition of the fish parasites, the dynamics of infestation with parasites by seasons, as well as by adult stages and sex, that is very important for determining the health status of fish, and maintaining the biodiversity in the water ecosystems. Parasites of fish are very sensitive indicators of the health of the environment, so these results should have practical significance for freshwater ecology.

# Where did you have your postdoc position?

To date I have not had the opportunity to continue my education in postdoctoral studies, but in the foreseeable future my ambitions are aimed at another higher chapter in my career, postdoc position, certainly in the direction of previous research related to fish parasitology.

# Where are you currently working and what is your current position?

I have been working for 17 years at the Faculty of Biotechnical Sciences within the University "St. Kliment Ohridski" - Bitola, R. N. Macedonia (www.uklo.edu.mk), starting as a Junior assistant, Teaching assistant, Assistant professor, Associate professor and currently Full - time professor. Also, for the fourth year in a row, I am performing the function of Vice-Dean for Science and International Cooperation, as well as faculty Erasmus + coordinator.

## What are your current research interests?

Apart from my narrower area of research, fish parasitology, my field of interest is everything related to fisheries and aquaculture, with special reference to fish quality and safety.

# How would you explain what your research area is to non-scientists?

Indeed, this is a great challenge for a scientist to be able to reduce the scope and weight of his work to a level that can be understood by anyone who does not have a point of contact with science, which is not easy in any case. In the simplest way, I would explain that I "look for bugs" in fish , which can be harmful not only to the fish population, but also to human health.

# What do you like best about your work?

Discovery is a never-ending process, and research is the key that unlocks doors to new dimensions of knowledge. In science, every question is a spark for a new idea, and every research is a path to understanding the immense secrets of the world. In research, we find not only answers, but also many questions, which selflessly leads us to endless possibilities.

## What kind of tasks does your work involve?

My work at the Faculty includes primarily working with students, teaching and performing laboratory exercises, doing field teaching and visiting fish breeding facilities. Mentoring of master's and doctoral students is an essential part of the work. Besides, as part of the scientific activity, I work on projects and developing scientific networks. Regarding the current position, Vice Dean for Science and International cooperation, networking and formation of consortia for projects and collaborations, establishment of contracts with foreign higher education institutions and intensive work with the Erasmus + program, where I mainly work on the implementation of student mobility at Universities with we have signed cooperation agreements.

My field work includes, visiting the site where samples are to be taken for analysis (fish ponds or open waters), safety transport of the samples to the laboratory, dissection of the fish and examination for the presence of parasites.

#### What kind of skills does your work require?

Knowledge, promptness and labour, because the detection and determination of parasites in fish requires time and patience.

# What do you consider your greatest achievement in your scientific career?

During my scientific career, in addition to numerous results, for the first time, in Macedonian waters, I determined and published the findings of 8 parasite species in common carp (Cyprinus carpio): Apiosoma piscicola, Chilodonella hexasticha, Myxobolus müelleri, Dactylogyrus vastator Ergasilus sieboldi, Ergasilus briani, Argulus foliaceus and Lamproglena pulchella; 5 parasite species in grass carp (Ctenopharyngodon idella): Ichthyophthirius multifiliis, Trichodina sp., Dactylogyrus lamellatus, Tylodelphys clavata (larvae) and Sinergasilus major; 3 parasite species in bighead carp (Aristichthys nobilis): Ichthyophthirius multifiliis, Dactylogyrus aristichthys and Sinergasilus polycolpus; 1 parasite species in silver carp (Hypophthalmichthys molitrix) - Sinergasilus polycolpus.

Also, this academic year I received the <u>award</u> for the most active scientist at my University, which was solemnly awarded to me by the Rector on the day of the patron saint of the University "St. Kliement Ohridski".

# Which of your papers are you most proud of and why?

I am proud of all my publications so far, which in authorship and co-authorship, in the past 17 years reach a number of over 130 papers, but I am especially proud of the papers published in the last 5 years, with which I reached the highest academic title, full professor, and the same refer to results for which I worked hard in the field in recent years and which have been published in reference journals, indexed in Scopus, Web of Sciences, etc.

# How many PhD students and postdocs do you currently supervise? Are you currently looking for a new PhD student or a postdoc?

I am currently supervising two PhD students in the field of fish quality and safety, with the possibility of one more candidate, because the legal regulations provide for a maximum of three doctoral students at the same time.

## What are the features of a successful PhD student or postdoc?

To be successful, a PhD student must be smart, motivated, creative, hard-working, skilful, and to have the following features: curiosity, ability to think, academic ability, good writing skills, commitment, ability to communicate, as well as, time management skills.

## How would you describe yourself as a supervisor?

Being a good supervisor is an important part of maintaining productivity. Individuals who are successful in this role often possess both interpersonal and management skills, plus an approachable, confident and supportive personality. I consider myself to meet all these characteristics, and in terms of my approach to students, my motto reads "If you are planning for a year, sow rice; if you are planning for a decade, plant trees; if you are planning for a lifetime, educate people" (Chinese proverb).

# What is the most embarrassing thing you have done in the lab while doing experiments, e.g. explosions?

Fortunately, I have no experience with explosions in the laboratory yet  $\bigcirc$ , but on one occasion, when starting a fish dissection and parasite research, the fish began to jump, that is, it jumped from the desk to the floor and rolled over several more times, probably due to the fact that it was not completely killed, so there was a very explosive reaction from my students.  $\bigcirc$ 

# What are your recommendations for a book, podcast, website, blog, YouTube channel or film?

As a great lover of the written word, from a scientific and educational point of view, I recommend the book "Food safety management - A practical guide for the food industry" (published by Elsevier), where I have a contribution to the chapter "Hygiene in primary production - Fish hygiene", and from the classical literature I recommend "To dance with kings" (author Rosalind Laker).

## Which scientist do you admire the most and why?

In my opinion, every prominent scientist who left traces on the planet Earth should be respected and it is not grateful to make a distinction, because everyone in his/her own way contributed to our better tomorrow.

Have you experienced any unfair situations during your scientific career? My scientific career has spanned 17 years and at the moment I cannot recall any unfair work, perhaps because it was not worth remembering.

# What advice would you give to someone who wants to know more about your field?

The best advice a scientist can give someone, especially for their field of work, is to really love their work, their field of research, because without passion for what you do, you will not achieve visible success.

## Why the contribution of women in science is essential?

The involvement and contribution of women in science is an extremely significant investment in the development of society. With our research and engagements, as women scientists, we have the ability to shape and improve our everyday life, the world of our children, future generations. Let our work be guided by the goals of national and global progress. The priority of women in science is to share knowledge, encourage innovation and build a community of scientists who will act as a team and be the leaders of the time to come.

Being a female scientist means actively devoting yourself to research work and an eternal search for new knowledge. Successful scientific research processes require strategic planning, collaboration, critical thinking, ethical behavior, good communication, education and mentoring, financial support, use of technological tools, and the ability to adapt to novelties and challenges. These are key elements for a successful scientific career, which women generally possess.

# Sarah D'Alessandro - Università degli Studi di Milano



# How did you get interested in Science?

Thanks to my high school Science teacher.

# Where and when did you obtain your PhD diploma?

Milan, 2009, Molecular Medicine, University of Milan

# What was the topic of your PhD project?

Malaria

# Where are you currently working and what is your current position?

I am Associate Professor at University of Milan

# What are your current research interests?

Malaria, Leishmaniases, Neglected Tropical Diseases

# How would you explain what your research area is to non-scientists?

We study how parasites (and viruses) interact with the human body to find new ways to cure diseases.

# What do you like best about your work?

You never get bored because you have always something to think of and something new to do.

# What kind of tasks does your work involve?

Thinking and performing experiments, teaching to students in the lab and in class, speaking of science to non-scientists, interacting with people, reading, studying.

# What do you consider your greatest achievement in your scientific career?

Working with people I think highly of.

## Which of your papers are you most proud of and why?

The review "The Use of Antimalarial Drugs against Viral Infection" because it is the first work of our ParvirusLab.

# How many PhD students and postdocs do you currently supervise? Are you currently looking for a new PhD student or a postdoc?

Are you currently looking for a new PhD student or a postdoc?

# Have you experienced any unfair situations during your scientific career? Too many precarious researchers for too long.

# Why the contribution of women in science is essential?

The contribution of each human being in science is essential. Why do we consider differences (between man and woman, between an individual and another) as an issue and not a resource?