
IDWGS 2026

This year, on the occasion of International Day of Women and Girls in Science, we interviewed two female scientists working at our faculty whose work we would like to introduce to you.

Dr. Olga Lenčová, Ph.D., Department of Pharmacology

Dr. Qianli Meng, Ph.D., Department of Medical Biophysics

Dr. Olga Lenčová, Ph.D.

„I am convinced that women definitely belong in science: they often bring a different perspective and attention to detail.“

What originally led you to science and your field? Was it a long-held dream, or more a combination of circumstances?

More a combination of circumstances – but looking back, I can see that it was a very fortunate one. After graduating from the Faculty of Pharmacy at Charles University, I decided to continue my doctoral studies and was interested in a topic proposed by Prof. Vladimír Geršl at the Department of Pharmacology at the Faculty of Medicine at Charles University in Hradec Králové. Scientific work gradually absorbed me, mainly because you are constantly discovering something new and looking at problems from different angles.



What is the main focus of your current research, and why is this topic important?

For more than twenty years, I have been involved in cardio-oncology – an interdisciplinary field that seeks ways to minimize heart damage caused by anticancer treatment.

At CardioTox Hradec Králové, we focus primarily on the cardiotoxicity of anthracycline cytostatics, which are an integral part of some chemotherapy regimens. Their serious side effects on the heart can manifest themselves even after a long period of time, sometimes years after the successful completion of cancer treatment. Some patients may gradually develop heart failure, and in the most severe cases, the only solution is a heart transplant. This is another reason why I consider this research to be extremely important.

We are studying the molecular mechanisms leading to this cardiotoxicity and at the same time looking for ways to protect the heart – strategies to prevent damage to the heart. I consider the combination of basic research with the search for practical solutions to be one of the main benefits of our work.

What professional or scientific achievement are you most proud of so far?

I consider my professional achievement to be primarily that I can be part of the CardioTox Hradec Králové team. It is a team that connects various fields – from chemical synthesis to biological material analysis to in vitro and in vivo experiments – and it is precisely this interdisciplinarity that makes a lot of sense to me. I am proud of all our joint achievements, but if I had to mention one in particular, it would be our publication in the prestigious journal Nature Communications last year.

Have you encountered challenges related to being a woman in science?

Science is demanding in terms of time and concentration, and sometimes you need to be able to ask for support, but also for space. At the same time, I feel that conditions for women in science are gradually improving.

What brings you the most joy in your work as a scientist – and what is the most difficult part?

The most difficult moments are when things don't go according to plan and you hit a dead end. On the other hand, it is precisely these moments that push us forward: they force us to think differently, improve our methods, re-verify our

results, and look for better explanations. I get the most joy when everything “falls into place like a jigsaw puzzle” and long-term efforts turn into a publication with clear benefits.



How do you manage (or have you managed) to balance your scientific career with your personal and family life?

This is perhaps a question better suited for my family, but I hope I am succeeding. I am very grateful to my husband Juraj, who is understanding of my work. He is a scientist himself, so he knows very well what this work entails. I think the key is to find a balance and to have an environment at home and at work where you can communicate openly and be accommodating to each other.

Do you feel that the position of women in science has changed in recent years? If so, in what direction?

Yes, I see a shift towards greater openness and more discussion about the conditions that enable women to remain in science. I know many successful female scientists in my circle who have managed to combine scientific work with family life – it takes determination, hard work, and patience, but it is possible. And I am convinced that women definitely belong in science: they often bring a different perspective and attention to detail.

What advice would you give to girls or young women who are just considering a career in science?

I would definitely encourage them. Science is a varied job without stereotypes – you are constantly learning, discovering new things, and moving forward. It is important not to be afraid to ask questions, to have good mentors around you, and to be in an environment where cooperation and honest work are valued. And also not to be discouraged by not knowing something.

What do you think would help more women feel confident about entering the world of science and research?

I think that concrete support and good conditions help the most – not just “on paper,” but in practice. For example, accessible childcare or nursery schools, more flexible options after returning from parental leave, or clear career rules. Sharing the stories of female scientists who have succeeded both here and abroad also plays a big role, because it shows that science can be combined with personal and family life.

Dr. Qianli Meng, Ph.D.

„Inclusive and collaborative environments are essential. Such environments make it possible to balance scientific work with family life and sustain long-term careers in science.“

What originally led you to science and to your field of research?

My path into science was shaped by long-term curiosity rather than a single defining moment. I have always been interested in how the brain processes information and how perception shapes our understanding of the world. During my studies in biology and neurobiology, vision became a natural entry point into these questions.

Alongside experimental science, I have also been influenced by logic and philosophy, which helped me think more clearly about scientific questions, assumptions, and explanations. This combination gradually led me to cognitive neuroscience, where empirical methods and conceptual thinking naturally meet.



What is the main focus of your current research, and why is this topic important?

My current research focuses on understanding brain dynamics and neural connectivity using non-invasive brain stimulation and neurophysiological recordings. By combining transcranial magnetic stimulation (TMS) with electroencephalography (EEG), I study how cortical networks respond to perturbation and how neural plasticity can be measured in real time.

This work is important because it helps bridge basic neuroscience and clinical research, offering tools to better understand neurological and psychiatric conditions where network-level dysfunction plays a central role.

Which professional or scientific achievement are you most proud of so far?

I am particularly proud of my contributions to understanding sensory processing and neural network dysfunction across different populations, including children with developmental disorders and adults with reading difficulties. Integrating behavioral methods with neuroimaging and electrophysiology has allowed me to approach these questions from multiple levels.

My postdoctoral research experience in the United States was also an important milestone, as it provided valuable international training and helped establish long-term scientific collaborations.

What brings you the greatest joy in your work as a scientist, and what do you find most challenging?

The greatest joy in science comes from moments when complex data suddenly form a coherent picture. These moments often arise after long periods of uncertainty and careful reasoning, which makes them especially rewarding.

The most challenging aspect is learning to live with uncertainty. Scientific research requires patience, persistence, and acceptance that progress is often gradual rather than immediate.



Have you encountered challenges related to being a woman in science?

Balancing professional development with personal and family life is a challenge many women in science face. Working across different countries and academic systems added complexity, but it also strengthened my independence, adaptability, and ability to manage multiple responsibilities.

I have been fortunate to work with supportive mentors and colleagues, which reinforced my belief that inclusive and collaborative environments are essential. Such environments make it possible to balance scientific work with family life and sustain long-term careers in science.

What advice would you give to girls or young women considering a career in science?

I would encourage them to follow their curiosity and not be discouraged by temporary setbacks or stereotypes. Science benefits from diverse perspectives, and persistence is often more important than confidence at the beginning.

Developing strong analytical thinking—whether through science, logic, or philosophy—can provide a solid foundation for a fulfilling scientific career.

Dr. Qianli Meng, Ph.D.

- She studied Biology at Hebei Normal University, China, graduating in 2004.
- She completed her M.Sc. and Ph.D. in Neurobiology at the Institute of Biophysics, Chinese Academy of Sciences, with additional training at the Kunming Institute of Zoology.
- She worked as a Research Assistant at the State Key Laboratory of Brain and Cognitive Science, Chinese Academy of Sciences, using psychophysics, EEG, eye tracking, TMS, and fMRI.
- From 2019 to 2024, she was a postdoctoral researcher at the University of Delaware (USA), focusing on neural networks underlying sensory processing and reading disorders.
- Since 2024, she has been a postdoctoral researcher at the Department of Medical Biophysics, Faculty of Medicine in Hradec Králové, Charles University.
- Her current research combines transcranial magnetic stimulation (TMS) and electroencephalography (EEG) to study cortical excitability, connectivity, and plasticity.