



**Dr. Mara Esposito** is a post-doctoral researcher working in the Infection Biology Research Area, Biozentrum, University of Basel. As part of the NCCR AntiResist Project, she works as a cell and molecular biologist studying host-pathogen interaction in the context of the human disease Brucellosis to find better antibiotic therapies. Human Brucellosis is a zoonosis, meaning it is a disease that was transferred from animals to humans, and it especially affects low-income countries. This disease is caused by the bacteria *Brucella spp* and can be transmitted through the air, which makes it very contagious. Because of this, Mara works in a

Biosafety level 3 (BSL3) laboratory, which has special safety features and restricted access. During a typical day, she works in the BSL3 laboratory analysing patient samples received from collaborators in Israel and developing new *in vitro* models that recapitulate frequent antibiotic failure in Brucellosis. The goal is to find out why antibiotics do not always work against this disease so that new treatment approaches can be developed.

Mara is originally from Agrano, a small village in northern Italy, surrounded by the Alps and beautiful Lake Orta. Although she has travelled a lot for her training and career, Agrano remains the most special and inspiring place for her because of its incredible nature and her family, who still live there.

She began her career path studying for a BSc degree in Industrial Biotechnology at the University of Milano-Bicocca, Italy. Mara then worked as a technician for one year in the cell and molecular biology department in a company where she gained expertise and a passion for human cell biology.

Mara returned to the University of Milano-Bicocca to earn a MSc in Molecular Biology. During this time, she received funding to spend a year in Paris to work on her master thesis, which focused on studying human lung diseases at the Alternative Energies and Atomic Energy Commission (CEA). Although she was working on human samples, the lab mainly worked on mice models. Mara quickly realized that the science she is interested in would never involve animal experiments. This research exchange helped Mara to both strengthen her character, since it was her first experience living abroad, and to define the direction of her career in human science.

Together with her husband, Mara moved to Brussels, Belgium, where she earned her PhD in understanding the molecular mechanisms involved in cell cycle regulation and cancer development in humans.

#### **An interview with Mara Esposito:**

*The biggest challenge women scientists face today is...*

...finding a good work-life balance. During my PhD research, I had my first child. Of course, finding a balance between family and work has been hard and requires many organizational aspects, but we can do it!

Sometimes women give up the idea of holding higher positions because these jobs are completely unbalanced towards work. As a PostDoc, I asked myself if I want to be a Principal Investigator (PI) or Professor someday. During a lab retreat, I had the opportunity to talk with a female PI, and when I asked if



Mara wearing her BSL3 protective gear

she found a good balance, she ironically answered: “What is private life?” For me, family is too important to sacrifice for work.

The point is that women can be PIs or hold higher positions, but we should receive enough support especially by governments that should develop legislation and institutions to help families and, as a result, encourage women to pursue their career in a well-balanced manner.

*I chose a scientific career because...*

...I am passionate about studying nature and human diseases.

*If I were not a scientist, I would be...*

...an artist. I like painting natural landscapes, drawing with my son and being creative. In my free time, I also enjoy listening to classical, jazz and soul music, and gardening; caring for and watching a new plant or flower grow makes me happy.

*What I like most about being part of the NCCR AntiResist...*

...is that you work in a very collaborative environment with colleagues with different backgrounds. We can learn a lot from each other. And most importantly, our research could help find better treatments to cure patients.

*What I am most proud of...*

... is the strength and self-confidence that I achieved during different job experiences, and the fact I could create a family while developing my career.