Meet Dr. Fabiana Nador, Thieme Chemistry Journals Awardee 2025!

Dr. Fabiana Nador *has been a researcher at INQUISUR (CONICET), Argentina, since 2017 and a Full Professor at the Universidad Nacional del Sur (UNS), Argentina, since 2023. She obtained her PhD in Chemistry from UNS in 2013 and, alongside her research, had been building a teaching career, working as a Teaching and Laboratory Assistant since 2008. During her doctoral studies, she completed a research stay at the Organic Chemistry Institute at Leibniz University in Germany (2011). She also conducted postdoctoral research at ICN2 in Spain from 2013 to 2016.*

Thieme: Which field of organic chemistry are you interested in the most and why?

Dr. Nador: My main interest in organic chemistry lies in the field of organic synthesis, particularly in the development of new organic molecules through high-yielding multi-component reactions. These reactions provide an efficient and sustainable approach to molecular construction, enabling the creation of diverse and complex structures. My ultimate goal is to apply these newly synthesized molecules in the field of organic materials chemistry, where they can contribute to advancements in biotechnology and the development of novel functional materials.

Thieme: Following that, what is the focus of your current research activity?

Dr. Nador: I specialize in catechol derivatives, which have unique properties that allow them to act as versatile ligands for metal coordination and adhere to various surfaces. My research focuses on designing and synthesizing multifunctional catechol derivatives for applications in adhesives, capsules, coatings, and Nanoscale Coordination Polymer Particles (NCPs). In my current position at Helmholtz Institute for Pharmaceutical Research Saarland (HIPS), I am working on developing innovative metal-organic NCPs for the treatment of alopecia areata. These materials offer versatility, stability, and a wide range of potential combinations for the targeted delivery of therapeutics for immune diseases affecting hair follicles.

Thieme: What do you think about the modern role and prospects of organic chemistry?

Dr. Nador: I believe organic chemistry plays a crucial role in modern science, driving innovations in pharmaceuticals, materials science, and sustainable technologies. The ability to design and synthesize complex molecules has led to major breakthroughs in drug discovery, nanotechnology, and renewable energy solutions. Looking ahead, I see organic chemistry becoming even more interdisciplinary, integrating with computational chemistry, artificial intelligence, and biomedicine.

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Additionally, the growing emphasis on green and sustainable synthetic methods will shape the future, ensuring that organic chemistry continues to evolve toward more efficient and environmentally friendly approaches.

Thieme: Which difficulties are there for young upcoming chemists in your field? Do you have any tips?

Dr. Nador: Rather than difficulties, I see one of the main challenges as learning to work in an interdisciplinary manner. Specializing in a single field has its advantages, but throughout my career, I have found that making progress often requires acquiring knowledge from multiple disciplines. I am passionate about organic chemistry, but when I started applying my expertise to materials chemistry, I had to learn new approaches and perspectives. Now, I find myself in a similar situation as I explore biomedical applications. My advice to young chemists is to remain open to learning beyond their main area of expertise, seek collaborations, and embrace the dynamic and evolving nature of scientific research.

Thieme: What is your most important scientific achievement to date and why?

Dr. Nador: One of the most significant scientific achievements I have been involved in date is our work on catechol chemistry, particularly in developing new strategies to derivatize these challenging molecules. Catechols have unique properties that make them difficult to modify selectively, yet we have successfully applied organic synthesis techniques to generate novel ligands with diverse applications. Through our recent publications, we have demonstrated how organic chemistry can be used to functionalize catechols, leading to the development of multifunctional materials. These new catechol-based ligands have proven to be highly effective in various applications, including adhesives, coatings, coordination polymers, and capsules for controlled release systems. Overcoming the synthetic challenges associated with catechols has allowed us to expand their potential uses, bridging organic synthesis with materials science and biomedical applications. This achievement is particularly meaningful because it highlights the power of organic chemistry in tackling complex molecular challenges and creating innovative solutions with real-world impact. Our findings open new possibilities for designing functional materials with improved performance and tailored properties.

Thieme: Could you tell us something about yourself outside the lab, such as your hobbies or extra-work interests?

Dr. Nador: I love traveling. Coming from Argentina, where distances are long, I truly appreciate the opportunities my profession has given me to explore Europe and experience different cultures. I also enjoy reading, listening to music, and, most importantly, spending time with family and friends. I highly value social connections, both in and outside the workplace, and I believe that a positive and collaborative environment is essential for both personal and professional growth.