

Widening Country Inspiration Story

“It is crucial for postdoctoral fellows to explore interdisciplinarity to go beyond the state-of-the-art of current research.”

Name of the fellow: Caroline G. Sanz

Country of the host: Romania

Project Acronym: PADMME

Project start and end date: 1.10.22-30.09.2024

Type of MSCA, Horizon Europe: Postdoctoral Fellowship



What is your project about?

PADMME addresses the construction of paper-based multiplexed electroanalytical platforms aiming to characterise proteasome overexpression and unimpaired activity in multiple myeloma (MM) care. It focuses on interdisciplinary approaches for immunosensing surface development based on conductive polymeric scaffolds with innovative signal recognition strategies for target quantification and extends to monitoring target activity and inhibition in cell cultures in the context of MM progression.

Why is your project important for society?

MM is an aggressive type of cancer with an extremely low survival rate with limited non-invasive treatment, for which proteasome inhibitors have been employed alongside regular chemotherapy to improve survival rate for transplant ineligible patients. PADMME aims to contribute to the current state-of-the-art of proteasome assessment to support therapeutic monitoring. Conductive polymeric scaffolds combined with low-cost sample supports are crucial for the electroanalytical device

commercialisation, bridging the gap in MM treatment for personalised medical care.

Why did you choose a widening country as a host?

I moved to Romania to learn and improve my research approach under the guidance of senior researchers at the National Institute of Materials Physics (NIMP). I wanted to increase my research outreach aiming at interdisciplinary biotechnologies in medical care. Since then, I have been able to gain experience in conceptualisation, synthesis and characterisation methodologies of advanced functional materials, as well as modelling innovative transducer platforms for electroanalytical designs.

How did you find your host organisation?

I found the host organisation through networking opportunities with Dr. Victor Diculescu in international conferences. Particularly, I wanted to work under his

guidance in light of his contributions in the field of bioelectrochemistry with recent focus on polymeric bioelectronics.

What kind of support did you get?

I was responsible for the project elaboration and have benefited from the [MSCA-NET handbook](#) as well as from information obtained in webinars designed for postdoctoral fellowships under the MSC actions. The supervisor, Dr. Victor Diculescu, supported the application through discussion of the compatibility of the project with his research group's scientific goals and overall objectives to retain feasibility, interdisciplinarity and innovative potential of the proposed methodology.

What tips can you give other researchers who would like to apply for MSCA?

Currently, it is crucial for postdoctoral fellows to explore interdisciplinarity to go beyond the state-of-the-art of current research. A thorough compatibility between the fellow and the supervisor is also paramount, and specific measures to support the postdoctoral fellow's career development should be thoughtfully considered in project proposals. Training activities as well as improved dissemination/communication skills are important parameters for current research and should be taken into account.

More information on the project:



The Marie Skłodowska-Curie Actions (MSCA) support researchers at all stage of their career across all disciplines. The MSCA also support cooperation between industry and academia and provide innovative trainings and career developments.

The MSCA Postdoctoral Fellowships (PF) enable talented researchers to work on project in Europe and beyond. They aim at enhancing the innovative potential of postdoctoral researchers through advanced trainings, international and intersectoral mobility.

The MSCA-NET project is the MSCA NCP project to facilitate the transnational cooperation to achieve a consistent and harmonised level of NCP support. The scientific community can also profit from our project to support their MSCA application.

