

Widening Country Inspiration Story

“You can always address your questions to the National Contact Point.”

Organisation name: Comenius University in Bratislava
Organisation type: Higher education organisation
Country: Slovakia
Project Acronym: PlaTechMedi
Project start and end date: 03.10.2022-02.10.2024
Type of MSCA, Horizon Europe: Postdoctoral Fellowship
Is your organisation a coordinator? Yes



What is your project about?

The proposed project aims to gain in-depth insights into the plasma treatment of polymer medical tubes, specifically catheters, using a technique called Surface Dielectric Barrier Discharge with liquid electrodes. The project will involve comprehensive tests of the physical and chemical alterations induced by the plasma, not only on the material's surface but also by the analysis of the surrounding gas and the liquid used in the process. Investigating the discharge under specific 3-phase (plasma-liquid-polymer surface) conditions will enhance our understanding of the ongoing chemical and physical transformations.

The plasma discharge technique will potentially solve the challenging task of surface treatment directly inside narrow hollow objects (such as catheters) which would increase the disinfection efficiency. This will clean them and also increase the surface adhesion for future deposition of coatings and films.

Why is your project important for society?

The development of plasma technology capable of polymer treatment in continuous regimen and the application of such plasma systems for catheter

treatment will allow the impact of plasma processing to expand to a wide range of new industrial and medical applications.

What communication and public engagement measures have you foreseen?

Communication and public engagement measures include:

- Publishing of articles in Open-access journals;
- Presentations at scientific conferences and workshops;
- Dissemination of the project results to the broader research community via ResearchGate, LinkedIn, etc.;
- Participation in outreach events such as Open Days and European Researchers' Night;
- Participation in seminars/ webinars/ workshops for young researchers and students.

How did you find your fellow?

In fact, the fellow chose the host organisation, in particular, Prof. Machala to act as project supervisor, in

order to acquire expertise in the field of plasma-liquid interactions.

What kind of support did you get?

The project was designed together with the supervisor in the host organisation whose expertise was essential during the proposal preparation. The [MSCA-NET Handbook](#) was very helpful with regard to the administration procedures.



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

As a first step, try focusing on your field of expertise and work within that field. Be constantly attentive to the latest advancements in your area of research. Participate actively in conferences, COST actions, and other networks within your scientific domain to make connections with other researchers. You can always address your questions to the National Contact Point. They can help you prepare your proposal as well as finalise it.

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.

