

Name of the MSC Fellow: Piotr Hańczy

Nationality: Polish

Host organization: University of Warsaw

Country of the Host: Poland

Project Acronym: UPRECON

Project start and end date: 08/2018 – 07/2020

Type of MSC action, H2020: IF



Dr Piotr Hanczyc in the laser laboratory

Project objectives and research field:

My project is related to neurodegenerative diseases such as Alzheimer or Parkinson. The aim is to use laser light for detection and recognition of specific structures, named amyloid protein fibrils, involved in the process of neurodegeneration. This research paves the ground for developing the light-based early diagnostics for brain diseases.

Tell us why your topic is important and/ or how it brings to advancement in your research field:

The field of brain diseases is relevant to human health. There is no clear treatment for that type of diseases. It becomes especially important for aging societies to find solutions and therapies for brain malfunctioning. There is a tremendous need for emerging technologies capable of treating brain diseases before advanced stadium and symptoms can be noticed. Lasers can potentially be useful as they produce intense light that can interact with specific disease related structures - amyloid fibrils. In my project I would like to provide answers how this laser light interacts with amyloid protein fibrils and learn how to detect them at the early stage of formation in the brain. That could give a chance to medical doctors to act fast and before disease progression.

What are the benefits of participating in a MSC action?

MSCA allows me to keep the freedom in science and dedicate my efforts exclusively to the project. I decided to continue the career in my home country because it provides the best ground for photonic directed research in medical context. I plan to reintegrate with scientific community in Poland during MSCA grant period and to transfer my knowledge gained during research trainings in Sweden and the US and involve scientists from Poland in the mainstreams of research on neurodegeneration. I believe that together with scientists from the University of Warsaw using laser techniques available in Physics Department laboratories I will be able to address important questions regarding brain diseases.

Did you encounter any challenges during application/ implementation and did you get any help?

The application requires a clear writing plan and time for proper presentation of project goals, state-of-art, significance etc. It is important to prepare a good portfolio and describe the career path that the researcher followed until the MSCA application.

Why did you choose a widening country as a Host? What was the reason that convinced you? What is making you professionally happy here?

I'm returning to Poland after several years abroad including doctoral studies in Sweden and post-doctoral research project held in the United States. I believe my experience and knowledge can be well integrated in the national and the EU scientific community. Poland has a long-standing world recognition in physics and have outstanding research groups and facilities around the country. That base is essential for developing cutting edge research of interdisciplinary character. I'm thankful to MSCA programme that I have freedom to decide about the direction of my research. Beside that East or West, home is the best. I enjoy working in a place where I feel good and can maintain the highest research standards. Warsaw, and specifically University of Warsaw, is a perfect place.

Would you recommend others to apply? What useful advice/ tips can you give them?

MSCA is one of the most important programmes for young professionals. Its prestige and world recognition makes MSCA fellows respected in scientists', entrepreneurs' and engineers' communities worldwide. The reputation is helpful in establishing in a new place and creating unique network of collaborations. I strongly recommend applying for MSCA grants. It's important to note that the purpose of MSCA fellowships is to help developing skills of individuals. Thus one writing the proposal should keep in mind presenting potential MSCA influence on his/her professional career.