

## Widening Country Success Story

“Pick a project that you deeply believe in!”

**Name of the fellow:** András Füredi  
**Country of the host:** Hungary  
**Project Acronym:** POC-TDM  
**Project start and end date:** 01.09.2022 – 31.08.2024  
**Type of MSCA, Horizon 2020:** Postdoctoral Fellowships



### What is your project about and why is the topic important for science advancement?

Chemotherapy is the most used approach to treat cancer, but it is still applied sub-optimally due to ignoring inherent differences between patients. Our POC-TDM MSCA project aimed to increase the efficiency of chemotherapy by developing a microfluidic device capable of monitoring drug levels in patients' blood and determining their personal pharmacokinetic profile. This profile then can be used as a novel biomarker to create patient-tailored treatment protocols and to individualise chemotherapy.

### Why is your project important for society?

Cancer is one of the leading causes of death worldwide, claiming millions of lives annually. Most of these deaths, according to some estimates as high as 90%, are the result of drug resistance, the ability of cancer cells to withstand or even thrive under therapy. Drug resistance often emerges from improper dosing: chronically low drug levels will help cancer cells adapt to treatment. Therefore, improving chemotherapy through personalised protocols would positively impact cancer treatment, something beneficial for the whole of society.

### What communication and public engagement measures have you foreseen?

At various events during its run, the POC-TDM project managed to attract the interest of different groups. High school students showed great enthusiasm for the project evidenced by invitations from several high school organisations to present our work there.

### Why did you choose a widening country as a host?

It was an easy decision, because Hungary is my home country. I used the MSCA Postdoctoral Fellowship to return home from Vienna (Austria) after I finished my first postdoc period.

### How did you find your host organisation?

It was only natural that I would pick Péter Fürjes, a well-known expert in the field of microfluidics, as my supervisor, as we had worked together on a previous project. His microsystems lab at the HUN-REN Centre for Energy Research is well-established and equipped, therefore it was a no-brainer decision to make.

### What kind of support did you get?

As a postdoc researcher, I was in a special situation when I decided to apply for the MSCA Postdoctoral Fellowship – there was only a month left until the deadline, however I had a great advantage: I knew my future supervisor very well, because we had an active project together already. Still, I remained undecided, until I participated in an MSCA Postdoctoral Fellowships workshop organised by the National Contact Points. The workshop not only helped me decide to apply, but it gave me so much tips, tricks and ideas how to approach this grant that I won it on my first try! Actually, it was so useful that my wife also got the MSCA Postdoctoral Fellowship on her first try in the same year! I felt that I owe so much to this workshop, and so these days I often participate in it,, helping others to successfully apply for the MSCA Postdoctoral Fellowships.



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

1. Pick a project that you deeply believe in! Do not apply with an idea that you do not fully embrace.
2. As soon as possible contact your host institute during the application process and see what they can assist you with! In my case, the Project Office of the host

was absolutely great and provided everything for the administrative part of my proposal automatically.

3. Take your time to know your supervisor beforehand! It will make your stay and project much more enjoyable and efficient!

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.

