ESOT Transplant Fellowship – Final detailed report

Name **Miki**
Last name **Scaravaglio**
Institution, Department **University of Milano-Bicocca to University of Cambridge**
City, Country **Italy**

The ESOT fellowship allowed me to spend a year within the transplant research environment at the Cambridge Stem Cell Institute and the Cambridge Liver Unit. Coming from a clinical academic background in hepatology, with most of my specialty training completed at the University of Milano-Bicocca, this fellowship represented a step in consolidating my transition from clinical training to translational transplant research.

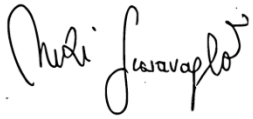
My primary aim during this year was to understand how normothermic machine perfusion could be used not only as a clinical tool, but as an experimental platform. Over the course of the fellowship, I learnt how to design and conduct long-term ex situ perfusion experiments, integrate functional organ assessment with molecular analyses, and deliver therapeutics directly into perfused human livers. The technical and conceptual shift from seeing the "pump" as a clinical tool to recognising it as a controlled research environment was one of the most important aspects of this fellowship.

The main highlight of the year was contributing to a study led by Teresa Brevini, a senior postdoc in the Sampaziotis group, demonstrating the feasibility of delivering AAV8-mediated gene therapy into a diseased human liver maintained on machine perfusion [PMID: 40774626]. This work provided proof-of-principle that ex situ perfused human organs can be used as a bridge between preclinical models and first-in-human studies. Being involved in this project allowed me to participate directly in long-term perfusion experiments (up to 11 days) and to learn how to monitor and characterise the liver and biliary function in this experimental setup to generate clinically meaningful translational data.

Equally important has been the collaborative network that I was able to build during this year. Working closely with transplant surgeons including Prof. Christopher Watson and Prof. Andrew Butler, alongside perfusion specialists such as Lisa Swift and the broader Cambridge Liver Unit team, has deepen my understanding of how to create a collaborative environment to support clinically meaningful innovation. This fellowship has significantly improved my ability to work across disciplines and positioned me within an established European transplant research network.

Beyond specific research projects, this year has shaped my scientific identity. It has given me confidence in designing translational studies independently and clarified the direction of my future research programme. The ESOT fellowship has not only supported a research project, but it has also accelerated my development as a clinician scientist.

ESOT Transplant fellow
Dr Miki Scaravaglio



Host centre research supervisor
Dr Fotios Sampaziotis