Attending the ISSCR Meeting in Montreal contributed directly to the development of my research on hiPSC-derived models of respiratory disease. The conference allowed me to create a collaboration with a Japanese group and establish new contacts with researchers developing complex hiPSC-based systems.

A particularly relevant learning point was the growing integration of hiPSC-derived immune cells into organoid and organ-on-chip models. This inspired me to explore the incorporation of hiPSC-derived macrophages into our alveolar models to better reproduce epithelial–immune interactions in respiratory disease.

The meeting also highlighted innovative approaches to improving the reproducibility and scalability of stem-cell models. These included imaging- and AI-based systems that predict differentiation outcomes, as well as droplet-based platforms in which individual organoids can be exposed to controlled compound combinations. Such technologies could (eventually) support standardized, high-throughput screening in our lung models.

A keynote talk by Nobel laureate Shinya Yamanaka provided a really inspiring overview of the progress made during the 20 years since the discovery of iPSCs and core challenges, giving us a strong motivation for the years ahead. Finally, the increasing development of clinical-grade hiPSC-derived products offered a perspective on the future potential of airway-cell transplantation, an area that remains underexplored in respiratory research.