BioMed Travel Grant Report

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With the support from the BioMed Travel Grant, I had the pleasure to attend the 46th Annual Meeting and Scientific Sessions of the International Society for Heart and Lung Transplantation (ISHLT) in Toronto, Canada. The meeting brought together clinicians, cardio-thoracic surgeons, and researchers in pulmonary vascular disease, heart and lung transplantation. I had the privilege to present two projects regarding our work on chronic thromboembolic pulmonary hypertension and pulmonary endarterectomy.

In the Pulmonary Vascular Disease Session, I gave an oral presentation entitled *Minimally Invasive Porcine In Vivo Model for Chronic Thromboembolic Pulmonary Hypertension*. We developed a less invasive large-animal model that reproduced key hemodynamic, morphological, and molecular features of the disease. The oral session allowed me to explain the model's rationale, its alignment with the 3R (Reduce, Refine, Replace) principles in animal research, and its potential value for investigating disease mechanisms and future treatments. During the session there was also a chance to exchange and discuss our project with international experts on chronic thromboembolic pulmonary hypertension. This exchange led to a renowned pulmonary endarterectomy center in Paris, France also planning to establish our minimally invasive procedure in their translational research department. I also presented the poster *Management of Triple-Positive Antiphospholipid Syndrome During Pulmonary Endarterectomy for Chronic Thromboembolic Pulmonary Hypertension*. The work described three patients with this rare, high-risk condition and proposed a multidisciplinary perioperative approach. The cases showed that pulmonary endarterectomy can improve hemodynamics and symptoms while illustrating the importance of coordinated anticoagulation, immunosuppression, and plasma exchange. The poster presentation led to lively discussions about the clinical decisions and complications represented in this case series and through these discussions I was able to learn about the experience of other centers with these high-risk patients.

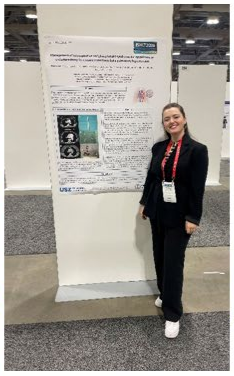
Two further projects within the scope of my PhD were presented as oral presentations by co-authors: *Lipid Oxidation in Chronic Thromboembolic Pulmonary Hypertension: A Clue to Residual Pulmonary Hypertension After Surgery?* was presented by our postdoc Fabien Robert and *Endothelial-to-Mesenchymal Transition in Fibrotic Lesion Formation in CTEPH* was presented by our postdoc Upasana Maheshwari. Their presentations during the Advancements in Chronic Thromboembolic Pulmonary Hypertension Session showed me how the different projects within my doctoral research contribute to a broader understanding of chronic thromboembolic pulmonary hypertension. Together, our four abstracts connected experimental model development, perioperative care, and molecular mechanisms of vascular remodeling.

Beyond the presentations, the scientific program and conversations with colleagues provided useful perspectives on pulmonary vascular research, pulmonary endarterectomy and lung transplantation. The meeting strengthened my experience in communicating experimental and clinical work to specialist audiences and enabled exchanges with researchers outside Zurich.

I am grateful to the BioMed PhD Program at the University of Zurich for supporting my participation in ISHLT 2026.








Teams, institutions & funding

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