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Research and Career Development Funded by Grants from ISHLT and the ISHLT Foundation

Three grant recipients announced at Annual Meeting

The International Society for Heart and Lung Transplantation (ISHLT) announced \$175,000 USD in funding for research designed to improve care for patients with advanced heart and lung disease. The grants were funded by the ISHLT Foundation, and announced at the 44th ISHLT Annual Meeting & Scientific Sessions, held 10-13 April in Prague. These grants are the first of two 2024 ISHLT grant cycles. The second cycle opens in May 2024.



ISHLT/O.H. Frazier Grant in MCS Translational Research

Awarded to: Daniel Silverman, MD

Medical University of South Carolina, Charleston, SC USA

Research Title: *The Interaction Between Pulsatility and Persistent Fibrosis in the Failing, Mechanically Unloaded Left Ventricle: Human Cardiac Fibroblast-Dependent Mechanisms*

Purpose: The objective of this study is to confirm whether mechanical pulsatility can "reprogram" persistently activated human cardiac fibroblasts in heart failure. Following this confirmation, the aim is to identify the pathways affected in these responsive fibroblasts and investigate established medications or new molecules that can target these pathways. These efforts ultimately aim to promote myocardial recovery in patients supported by left ventricular assist devices.

With the funding, the team will be able to explore 1) whether Angiotensin II deficiency contributes to the pathophysiology of cardiogenic shock, 2) whether cardiogenic shock can be identified earlier in patients with chronic failure by monitoring circulating Angiotensin II levels, 3) whether Angiotensin II levels can be used to inform optimal timing of temporary mechanical support initiation, escalation, and de-escalation, and 4) whether there is sufficient rationale to study Angiotensin II as therapy to improve survival in patients requiring temporary mechanical circulatory support.



ISHLT/ICCAC VAD Coordinator Career Development Grant

Given by ISHLT in partnership with the International Consortium of Circulatory Assist Clinicians (ICCAC)

Awarded to: Sarah Schroeder, PhD, ACNP-BC, MSN RN, AACC

Bryan Heart, Lincoln, NE USA

Research Title: *Multi-Site Testing of the Durable Left Ventricular Assist Device Anticipatory Guidance Tool*

Purpose: This project aims to developing an anticipatory guidance (AG) tool for potential durable left ventricular assist device (dLVAD) patients that could improve preoperative education, reduce anxiety and depression post-implant, enhance health-related quality of life (HRQoL), and decrease hospitalizations.



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While Phase 1 of development of an dLVAD AG tool is underway, funding from this grant will support Phase 2, which is set to evaluate its effectiveness across multiple dLVAD sites in the US, incorporating feedback from both patients and clinicians.



ISHLT Extracorporeal Photopheresis Immunomodulation in Thoracic Transplantation Challenge Grant, supported by Mallinckrodt Pharmaceuticals

Awarded to: Rachel Crossland, PhD

Newcastle University, Newcastle upon Tyne, United Kingdom

Research Title: *Extracellular Vesicles as Novel Tools in the Management of ECP for Chronic Lung Allograft Dysfunction (EVENT-CLAD)*

Purpose: The study aims to investigate the underlying mechanisms that contribute to ECP success, allowing for earlier or preventative therapy. This, in turn, will advance the use of ECP to improve Chronic Lung Allograft Dysfunction (CLAD) patient survival, enhancing health related quality of life and outcomes for lung transplant patients.

The funding from this grant will allow Dr. Crossland to perform studies that help understand the role of extracellular vesicles (EV) during ECP treatment for CLAD, and how EVs contribute to the mechanism of ECP action and immune system modulation. This information will also help to assess whether EVs can be used to identify the patients that are most likely to benefit from ECP treatment.

For more information about ISHLT and ISHLT Foundation Research Grants, visit

<https://www.ishlt.org/grants-and-awards/research-grants>.

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About ISHLT

The International Society for Heart and Lung Transplantation is a not-for-profit, multidisciplinary professional organization dedicated to improving the care of patients with advanced heart or lung disease through transplantation, mechanical support and innovative therapies. ISHLT is the world's largest organization dedicated to the research, education and advocacy of end-stage heart and lung disease. ISHLT members represent more than 15 different professional disciplines.

<https://www.ishlt.org/>

About Mallinckrodt Pharmaceuticals

Mallinckrodt is a global business focused on providing specialty pharmaceutical products and therapies for rare and critical conditions as well as specialty generics and active pharmaceutical ingredients whose mission is centered on listening for needs and delivering solutions to better serve patients and customers.

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