- □ I offer my expertise to participate as a Partner in a Horizon Europe Project
- \boxtimes I am planning to coordinate a project and I am looking for Project Partners

TOPICS OF INTEREST

EIC Pathfinder Open (HORIZON-EIC-2024-PATHFINDEROPEN-01-01): Developing an artificial kidney

PARTNER INFORMATION

NephFlo is an Israeli company developing a patented nanotube technology to be the basis of a compact, efficient, artificial kidney replacement device saving and improving the millions of lives affected by End Stage Renal Disease (ESRD). The core technology was invented by Dr.Herschel Herschman, who worked as a critical care anesthesiologist and forensic scientist, and cared for many patients treated with dialysis or undergoing renal transplants. NephFlo's patented technology is using advanced composites built from carbon nanotubes. With the help of experienced nanotube and material science experts, nanotechnology product development specialists, a serial entrepreneur CEO, and a vast medical board, NephFlo successfully demonstrated the fundamental scientific principles at the core of their technology and is currently looking to secure Pathfinder funding and continue development towards the Proof of Concept stage.

NephFlo's overarching objective and ambition is to save millions of lives by helping patients with severe chronic kidney disease and/or end stage renal failure. Our dream is to fundamentally shift the current state of the kidney healthcare system and eliminate the risk of dying while waiting for a kidney transplant.

SEARCHED PARTNER PROFILES

We are looking for:

1. Nanotube fabrication laboratory / research centre / research group

- Expertise with Chemical Vapour Deposition (CVD) method for fabrication of Nanotubes
- Capacity to characterise grown nanotubes

2. Technical / Testing laboratory

- Accredited Laboratory with experience in Proof of Concept experiments for medical device development;
- Expected profile of tests is: chemistry and liquid filtration;
- Experience with artificial blood or blood-like solutions is a plus;

Description of the Legal Entity

□ Higher Education	\Box Research Institution	Public Administration
⊠ Industry /SME		□ Other: <i>Please specify</i>

Description of the (Research) Team

NephFlo is a diverse, experienced, and interdisciplinary team of skilled professionals with existing prior collaborations. Our founder and CEO, **Saul Orbach**, has 35 years of experience as an international entrepreneur, VC expert, advisor and educator. He worked successfully with and in various startups across the USA, Europe and the Middle East, and operated as NephFlo's CEO since 2022 working hard to turn his vision into a reality.

Vladimir Rassushin, CTO, brings a wealth of experience that includes scientific background in nanotube development; nanotube product development; technological expertise; project management; company management; prior work as a CTO; and, fundraising experience. Prior to joining NephFlo's team, Vladimir

collaborated with Saul on several projects in the Czech Republic, and co-founded an online academy that teaches entrepreneurship and VC to Europeans.

Dr. Noa Lachman-Senesh, the Nanotube Development Lead is the Assistant Professor at the Department of Materials Science and Engineering in the Nanotube Section at Tel Aviv University. She has vast expertise in Nanotube-based Composite materials, specifically their mechanical and electrical properties. Moreover, her work included deep research on the correlation between micro- and nanostructure of said materials and their interfacial characteristics to the mechanisms controlling their behaviour as structural materials and materials in energy-systems.

Dr. Stuart Greenstein, our Chief Medical Officer, is a Professor of Surgery who cared for patients with CKD and kidney failure throughout his whole career. He is a kidney transplant specialist with over 1.000 kidney transplants and 138 professional publications. He brings his experience and knowledge of medicine, patient care and kidney health to help NephFlo shape and form the medical device we are developing.

Our Medical Advisory Board also includes **Dr. Samuel Saltzberg**, a Director of the Section of Transplant Nephrology and Associate Professor at the Department of Internal Medicine, Division of Nephrology, RUSH Medical College, and **Dr. Karl Skorecki**, Professor and former Dean, Azrieli Faculty of Medicine, Bar-Ilan University; **Professor Emeritus**, Technion – Israel Institute of Technology; and, Consultant, Clinical Research Institute at Rambam Health Care Campus

Potential role in the project

⊠ Research		Training				
□ Dissemination		Other: Coordination, product development, gathering medical expertise and feedback, R&D, IP, future exploitation.				
Already experience as a Coordinator		□ YES		\boxtimes NO		
	Partner		□ YES		⊠ NO	
	Expert Evaluato	r	□ YES			

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