March 22, 2025

Cure RTD Awards $100,000 USD to Dr. Veedamali S. Subramanian at University of California, Irvine

The Cure RTD Foundation is pleased to award Dr. Veedamali S. Subramanian, Associate Professor at the University of California, Irvine, a $100,000 grant for his project, “Molecular Mechanism Underlying Riboflavin Transporter Deficiency in Neurodegenerative Disorder.”

This newly funded research project will focus on understanding how riboflavin is absorbed by neurons and how this process is regulated at the molecular level. Specifically, the study will investigate human riboflavin transporter 2 (hRFVT2)—the predominant riboflavin transporter in the brain—and identify the protein partners that interact with it. These interactions are believed to play a crucial role in regulating riboflavin uptake and may be disrupted in RTD.

Using cutting-edge techniques such as yeast two-hybrid screening, co-immunoprecipitation, and studies with induced pluripotent stem cells (iPSCs) derived from RTD patients, the research team aims to map the hRFVT2 interactome and evaluate how these protein interactions affect neuronal health and differentiation.

“Our goal with this project is to decode the molecular machinery that governs riboflavin transport in the brain,” said Dr. Subramanian, the lead investigator on the grant. “By identifying key regulatory proteins that interact with hRFVT2, we hope to open the door to new therapeutic targets that could restore riboflavin homeostasis in RTD patients.”

Meet Dr. Veedamali S. Subramanian

Dr. Veedamali S. Subramanian is a Scientist and Associate Professor at the University of California, Irvine, School of Medicine, specializing in the cellular and molecular mechanisms of nutrient absorption and regulation, particularly water-soluble vitamin transporters. Over the past 25 years, he has published hundreds of peer-reviewed articles, including over 15 focused on riboflavin transporters.

Dr. Subramanian’s research has significantly advanced the understanding of vitamin transport biology and its role in human health and disease. His expertise in molecular physiology, cell biology, and translational research makes him a leading figure in the field and a key contributor to efforts aimed at developing new therapies for disorders such as RTD.

About University of California, Irvine

Founded in 1965, the University of California, Irvine (UCI) is a top-ranked public research university in Southern California, known for excellence in education, research, and public service. Part of the prestigious UC system, UCI serves over 37,000 students across 14 schools, including its highly regarded School of Medicine, a leader in biomedical research and innovation. UCI is recognized globally for cutting-edge work in neuroscience, health sciences, engineering, and sustainability, with a mission to advance knowledge and improve lives.

Cure RTD Research Funding

This grant to Dr. Veedamali S. Subramanian is part of Cure RTD's Basic Research and Drug Discovery programs that we are announcing for our 2024-2025 grant cycle.