

Going with the Flow

It's long been established that many people with CFS experience symptoms like light-headedness associated with upright posture, broadly called orthostatic intolerance. Is it possible that these symptoms could be connected to blood flow, ultimately reducing the amount of blood that flows to the brain? That's what researcher **Marvin Medow, PhD**, and his team will be investigating with their grant from the CFIDS Association.

Medow is a physiologist and associate director of the Center for Hypotension at New York Medical College where he works with Julian Stewart, MD, a longtime CFS researcher with NIH funding.

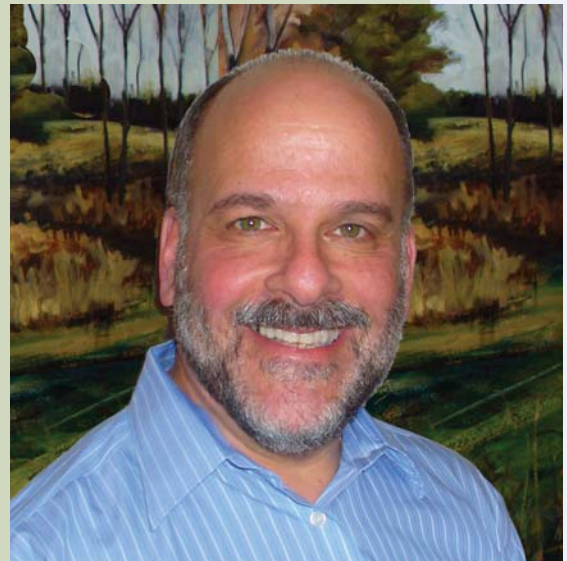
This grant will allow Medow's team to examine if CFS patients have increased pooling of blood in the abdomen, resulting in decreased blood flow to the brain when patients are in an upright position, and whether this causes changes in blood chemistry including increased oxidative stress.

Says Medow, "These blood flow and chemical changes could explain many of the symptoms experienced by CFS patients."

Medow's work also has the potential to more clearly characterize the large subset of CFS patients who have autonomic problems. Understanding more about individual subtypes of CFS is the first step to developing effective targeted treatments that can improve function and quality of life.

Another defining feature of this study is the extensive testing Medow's team will employ, including tilt table testing, transcranial Doppler and microdialysis. Medow is also collaborating with CFIDS Association grant recipients Dikoma Shungu, PhD, (see profile at left) and Bud Mishra, PhD, (see profile on page 26) to run brain scans on the same group of patients and to analyze the resulting combined data using cutting-edge bioinformatic techniques.

The combination of Medow's significant expertise, the use of his top-notch hypotension facility and the scope of sophisticated tools and collaboration he'll employ, marks the most intensive exploration of blood flow in CFS and what implications and consequences impairments in these circulatory functions may have for people living with the illness.



Marvin Medow, PhD

Study: Splanchnic vasoconstriction is impaired by microbiomic nitric oxide production reducing cerebral blood flow in CFS

Institution: New York Medical College

Collaborators: Benjamin Natelson, MD, Julian Stewart, MD

Perspective

from our scientific director
Suzanne Vernon, PhD

"An exciting aspect of the awards to Shungu and Medow is that they'll be able to share study subjects to see if the blood flow disturbances Medow finds could help explain the elevated brain lactate levels that Shungu has reported. Each independent study is full of investigative potential, but the collaborative approach marks an exciting advance in the field of CFS science."