Diagnostic and Treatment Method for Chronic Fatigue Syndrome and Other Neuroimmune Disorders

Technology:

Complex chronic medical disorders such as Chronic Fatigue Syndrome (CFS) and Gulf War Illness are currently diagnosed chiefly through description of symptoms by patients. Clinically relevant diagnostic tests do not yet exist. CFS affects up to approximately 2.5 million people in the US.

Inventors at Nova Southeastern University have found that specific immunologic cell populations and cytokines, which are small proteins important in affecting cell behavior, can be used as indicators for complex disorders. Blood samples taken from patients are analyzed for interleukin-15 (IL-15) and 12 lymphocyte populations; the resulting data is analyzed by a unique computational projection-based parameter estimation technique. This provides a quantitative measure of a physiological condition that has been difficult to diagnose and treat thus far. Further, administration of IL-15 as a therapeutic shows promise; the cytokine has recently been shown to be safe and tolerated to 0.3 µg/kg per day from Phase I clinical trials as a treatment for cancer.

Opportunity:

Complex neuroimmune diseases such as Myalgic Encephalomyelitis/CFS and GWI may be diagnosed by a clinically relevant, laboratory test based on this method.

Nova Southeastern University is seeking to develop collaborative partnerships and licensing opportunities for this technology.

Inventors: Drs. Mary Ann Fletcher, Gordon Broderick, Nancy Klimas, Zachary Barnes. The researchers have been recently granted a VA Merit Award and both diagnostic and treatment aspects are being further explored with more patient samples. Dr. Mary Ann Fletcher is with the College of Osteopathic Medicine.

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