



Research Funded by Hutchins Family Foundation’s Chronic Fatigue Initiative Reveals Chronic Fatigue Syndrome as Biological Illness

Findings Represent First Robust Physical Evidence of CFS as a Biological Illness; Results Open Door to Better Diagnosis and Treatment

New York, New York (March 2, 2015) – Supported by funding from the Chronic Fatigue Initiative of the Hutchins Family Foundation, researchers at the [Center for Infection and Immunity](#) at Columbia University’s Mailman School of Public Health have identified distinct immune changes in patients diagnosed with chronic fatigue syndrome (CFS). These immune signatures demonstrate that CFS is a biological illness as opposed to a psychological disorder, and are the first evidence that the disease has distinct stages. The findings could help improve diagnosis and identify treatments for the disabling disorder, the symptoms of which range from extreme fatigue and difficulty concentrating to headaches and muscle pain.

The [Chronic Fatigue Initiative](#) (CFI), which was created and funded by the Hutchins Family Foundation, has mounted the first scientifically-rigorous and statistically-significant wide-scale research into the underlying infectious, immunological and toxicological causes of CFS, which had previously attracted little to no resources for basic research.

According to the study’s co-principal investigators Dr. Ian Lipkin and Dr. Mady Hornig, the study delivers unequivocal evidence of immunological dysfunction in CFS patients and diagnostic biomarkers for the disease. The study’s results should accelerate the diagnosis process after patients first fall ill and the discovery of new treatment strategies. Results appear online in the latest American Association for the Advancement of Science journal, *Science Advances*.

“This study marks a significant breakthrough in the field of chronic fatigue syndrome research,” said Scott Carlson, Executive Director of the Hutchins Family Foundation’s Chronic Fatigue Initiative. “We’re pleased to partner with world-class researchers Dr. Ian Lipkin and Dr. Mady Hornig and these findings will provide a pathway forward for improved diagnosis and treatment of this disease.”

The researchers used immunoassay testing methods to determine the levels of 51 immune biomarkers in blood plasma samples collected through two studies – involving many medical centers across the country – that represented a total of 298 patients with CFS and 348 healthy patients used as “controls.” They found specific patterns in patients who had the disease for three years or less that were not present in controls or in patients who had the disease for more than three years. The shorter duration patients had increased amounts of many different types of immune molecules called cytokines. The association was unusually strong with a cytokine called interferon gamma that has been linked to the fatigue that follows many viral infections, including Epstein-Barr virus which is the cause of infectious mononucleosis.

In addition to funding the research of Dr. Lipkin and Dr. Hornig, CFI also funded the collection of medical data and bio-samples of the CFS patients and the healthy controls recruited for the study. The Institute of Medicine recently used this data to propose that the illness, which is medically known as myalgic encephalomyelitis/chronic fatigue syndrome (“ME/CFS”), be renamed as systemic exertion intolerance disease (“SEID”).

CFI is also funding an ongoing study of the microbiome of patients and controls by Dr. Lipkin and Dr. Hornig to identify triggers of the immunological dysfunction of ME/CFS/SEID sufferers. As the causes of the illness are deciphered, CFI's goal is to disseminate its findings in order to equip the broader research community to work on mechanisms of the disease as well as diagnostics, treatment and prevention.

About Hutchins Family Foundation (HFF)

The Chronic Fatigue Initiative is a program created by the Hutchins Family Foundation, which was established by Debbie and Glenn Hutchins to support initiatives that have personal meaning to their family. To date, it has focused on programs in public policy, education, and health. The HFF seeks to have the greatest impact in the shortest period of time with the most efficient use of its resources. It insists that the outcome of its philanthropy is as tangible, measurable and valuable as possible.

Related Articles:

Stronger Biological Link to Chronic Fatigue Syndrome – The Wall Street Journal

<http://www.wsj.com/articles/more-evidence-found-of-biological-basis-to-chronic-fatigue-syndrome-1425063603>

Study on Chronic Fatigue May Help With Diagnoses – The New York Times

<http://www.nytimes.com/2015/02/28/health/chronic-fatigue-syndrome-study-findings-may-lead-to-diagnostic-tool.html? r=0>

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