

**A Genetic Approach for Crohn's and Colitis Diseases is Financed by The Jeffrey Epstein VI Foundation**

The Jeffrey Epstein VI Foundation, which supports cutting edge medical and scientific research around the world, has given substantial support to the Crohn's and Colitis Foundation of America to continue its Genetic Initiative for finding a cure to the devastating diseases.

Crohn's disease is a chronic inflammatory condition of the gastrointestinal tract. Every year, about 700,000 Americans are diagnosed with the disease, the vast majority being adolescents and young adults between the ages of 15 and 35. Crohn's affects the end of the small bowel called the ileum, the beginning of the colon and sometimes parts of the gastrointestinal tract. Ulcerative colitis only affects the colon or large intestine. Crohn's disease can also affect the thickness of the bowel wall, while ulcerative colitis only affects the innermost lining of the colon.

The cause of Crohn's and Colitis is still uncertain but the chronic inflammation stems from the body's immune system attacking the gastrointestinal tract, targeting microbial antigens or healthy bacteria. Because of this, Crohn's and Colitis is classified as an autoimmune disorder.

What is certain however is that Crohn's and Colitis has a strong genetic component. Siblings are 30 times more likely to develop Crohn's than the general population. Children of people with Crohn's disease are 3 to 20 times more likely to develop the disease and twins show a concordance of greater than 55%.

So far, the Genetic Initiative at the Crohn's and Colitis Foundation of America, which recently received funding from The Jeffrey Epstein VI Foundation, is by far the most comprehensive effort of its kind to isolate the mutated genes that lead to this disease. The Initiative hopes to raise six to ten million dollars over the next five years and now employs a dream team of specialists from different fields to identify genetic mutations and the chain of subsequent pathologies that cause Crohns and Colitis. The Initiative is headed by Ramnik Xavier, M.D., Ph.D., Chairman of the Department of Gastroenterology at Massachusetts General Hospital in Boston. Xavier's laboratory has identified the largest number of genes associated with Crohns to date. He is also a founding member of the Center for Computational and Integrative Biology.

The first mutation found to be associated with Crohn's was the NOD2 gene (or CARD15 gene) followed by the discovery of point mutations. Currently more than thirty genetic mutations have been found, along with their pathological consequences. For example, mutations in the XBP1 gene directly affect the unfolded protein response pathway of the endoplasmic reticulum. The genetic mutation of ATG16L1 typically induces autophagy of the cell and may hinder the body's ability to attack invasive bacteria.

“As induced pluripotent stem cell technology improves, databases like the Genetic Initiative will be invaluable resources to addressing the very root of diseases such as Crohns and Colitis,” Jeffrey Epstein remarks.

Founded in 1967, the Crohn's and Colitis Foundation of America (CCFA) is a non-profit, volunteer based organization dedicated to finding cures for Crohn's Disease and ulcerative colitis. The Jeffrey Epstein VI Foundation was established in 2000 by science investor and financier, Jeffrey Epstein. Jeffrey Epstein has been an active supporter of genetic research, including the renowned Broad Institute which studies the entire human genome.