Jeffrey Epstein, Science Investor, Heralds Key Discoveries in the Late Onset of Alzheimer's.

Although there is a genetic disposition for Alzheimer's Disease, the late onset of Alzheimer's and by far the most common, is still a mystery. It's also expected to double by 2050. Today however, renowned New York science investor, Jeffrey Epstein, whose foundation has provided funds to the American Alzheimer's Association, has heralded new findings into the late developing disease.

The findings come from researchers at Mount Sinai Hospital in New York City, the Icelandic Heart Association, Sage Bionetworks and Merck Research Laboratories, who have determined that a cluster of genes connected to the brain's inflammatory response mechanism, play a role in driving late onset Alzheimer's. Specifically, the research team analyzed the DNA of 376 deceased patients with late Alzheimer's along with gene expression and the emanating biological pathways. What resulted was a comparative mathematical model, a unified map of not only the prevailing genes present in late Alzheimer's but the various pathways that they trigger.

One such gene, *TYROBP*, not typically connected to Alzheimer's but linked to brain inflammation, was shown to interact with TREM2, a gene recently connected to Alzheimer's.

The discovery is critical, Dr. Bin Zhang explained, a co-author of the study and Associate Professor of Genetics and Genomic Sciences at Mount Sinai. "We can now evaluate drugs that impact the TREM2-TYROBP pathway as potential therapies… and design more specific compounds that target these key steps precisely, in contrast to existing anti-inflammatory drugs that may be less ideal for hitting this target."

"The use of mathematics to understand the inherent causes of disease is an exciting new field," Jeffrey Epstein asserted. "One can detect patterns that are otherwise hidden and target therapies to combat those patterns." Indeed, Jeffrey Epstein is not new to the use of mathematics in medical research. In 2003, he founded the Program for Evolutionary Dynamics, at Harvard University, the first of its kind to study the evolution of micro-biology with the use of mathematics. Since its inception, the Program has made critical discoveries into the evolution of cancer, HIV and other viruses.

Jeffrey Epstein is a former member of the Trilateral Commission, the Council on Foreign Relations, the New York Academy of Science and a former board member of Rockefeller University. He is actively involved in the Santa Fe Institute, the Theoretical Biology Initiative at the Institute for Advanced Study in Princeton and also sits on the Mind, Brain & Behavior Advisory Committee at Harvard University.