

## WIKIPEDIA ARTICLE FOR: Jeffrey Epstein VI Foundation

[http://en.wikipedia.org/wiki/Wikipedia\\_talk:Articles\\_for\\_creation/Jeffrey\\_Epstein\\_VI\\_Foundation](http://en.wikipedia.org/wiki/Wikipedia_talk:Articles_for_creation/Jeffrey_Epstein_VI_Foundation)

The Jeffrey Epstein VI Foundation is known for establishing the Program for Evolutionary Dynamics at [[Harvard University]]. <ref name="reuters" />The Program for Evolutionary Dynamics is the first academic department to study the evolution of molecular biology and with the use of mathematics. It is also the first entity to develop mathematical models of how human cancer cells evolve as well as viruses such as HIV. <ref name="ped.harvard" /> The Jeffrey Epstein VI Foundation started the Program for Evolutionary Dynamics with a \$30 million dollar grant in 2003. [[Martin Nowak]], Professor of Mathematics and Biology at Harvard University, is its Director. <ref name="reuters" /><ref>{{cite news|url=http://www.thecrimson.com/article/2003/6/5/people-in-the-news-jeffrey-e/ The Harvard Crimson|newspaper=The Harvard Crimson}}</ref>

In 2012, the Program for Evolutionary Dynamics under the direction of Martin Nowak and with post-doctoral students, Benjamin Allen and Ivana Bozic, developed the first mathematical model of how human cancer cells evolve and specifically how they become immune to inhibitor therapy treatment. <ref name="news.harvard" />Their research was conducted from the request of the Pathology and Oncology Department at [[John Hopkins University]]. The Department was trying to understand how the KRAS gene in colon cancer cells becomes activated after inhibitor drug therapy, making the cells resistant to treatment. <ref name="news.harvard" />

By developing a mathematical model of colon cancer cell growth, Nowak and his team, showed how the KRAS gene is not actually activated or 'switched on' from inhibitor drugs but rather a small percentage of colon cancer cells with an already activated KRAS gene are immune from the start and evolve to predominance as the other cancer cells are destroyed by the inhibitor drug. <ref name="news.harvard" />The discovery was critical in changing the approach to inhibitor drug therapy. Instead of applying drugs in sequence to one another in efforts to fight secondary and tertiary resistance, the Pathology and Oncology Department at John Hopkins are now exploring the necessity of providing a cocktail of inhibitor drugs to capture all colon cancer cell types: those with the activated KRAS gene and those without. The same approach is underway for other cancer types. The findings also suggest that a cocktail of drugs will have to be tailor made to each person's cancer type, targeting both non-resistant and the minority resistant cells.<ref name="news.harvard" />

In 2006, the Program for Evolutionary Dynamics under the direction of Martin Nowak, published a paper in "Science" summarizing the mathematical rules for the five understood bases of the evolution of cooperation (kin selection, direct reciprocity, indirect reciprocity, network reciprocity, and group selection). <ref name="ped.fas.harvard" />In it, Nowak suggested that evolution is constructive because of cooperation, and that one should add "natural cooperation" as a third fundamental principle of evolution beside mutation and natural selection. More recently, in a front cover essay in "Nature",

Nowak and researchers at the Program for Evolutionary Dynamics also demonstrated that the transition of irregular verbs to regular verbs in English over time follows a simple inverse-square law, thus providing one of the first quantitative laws in the evolution of language.<ref name="ped.fas.harvard" /><ref>{{cite news|url=http://www.nature.com/nature/journal/v449/n7163/abs/nature06137.html|newspaper=Nature}}</ref>

In addition to working closely with The Program for Evolutionary Dynamics, the Jeffrey Epstein VI Foundation supports many other areas of science research, including neuroscience, artificial intelligence, signal cell intelligence, cancer research, and research in other diseases, such as Alzheimer's, Parkinson's, Multiple Sclerosis and Crohn's and Colitis disease. <ref name="finance.boston" />

The Jeffrey Epstein VI Foundation is also known for directly sponsoring famed scientists around the world such as [[Stephen Hawking]], [[Gerald Edelman]], Murray Gell-Mann, Eric Lander, George Church, Kip Thorne, [[Marvin Minsky]], Lawrence Krauss, [[Lee Smolin]], Gregory Benford and Nobel laureates, [[Gerard 't Hooft]], [[David Gross]] and [[Frank Wilczek]]. Over the years, the Foundation has convened many of these scientists in conferences to discuss the consensus on fundamental science topics such as gravity, global threats to the Earth and language.<ref name="finance.boston" />

The Jeffrey Epstein VI Foundation, is based in New York City and St. Thomas in the [[US Virgin Islands]]. It was founded in 2000 by New York financier and science philanthropist, [[Jeffrey Epstein]]. Jeffrey Epstein is currently the Chairman and CEO of a New York financial investment firm called the Financial Trust Co. In addition to supporting science and education, Jeffrey Epstein sits on the Board of the Mind, Brain and Behavior Committee at [[Harvard University]]. He is also actively involved in the [[Santa Fe Institute]], the Theoretical Biology Initiative at the [[Institute for Advanced Study]] in [[Princeton]] and the Quantum Gravity Program at the [[University of Pennsylvania]]. Cecile de Jongh, the wife of the Governor of the [[US Virgin Islands]] [[John Percy de Jongh]], sits on the Jeffrey Epstein VI Foundation's board.<ref name="finance.boston" /><ref name="markets.cbsnews" />

==References==

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\*<ref>[http://news.harvard.edu/gazette/story/2012/07/transforming-cancer-treatment/ Harvard Gazette]</ref>

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