

## **Science Patron, Jeffrey Epstein, Applauds the FDA's Approval of Melanoma Inhibitor Cocktails**

The well-known science philanthropist and founder of the Program for Evolutionary Dynamics at Harvard University, has heralded the Food and Drug Administration's approval of the first inhibitor combination clinical trial for melanoma patients.

"It's about time," Jeffrey Epstein remarked who has donated substantial funds to the Melanoma Research Alliance (MRA) over the last few years. Based in Washington DC, the MRA is the largest private funder of melanoma research and has awarded more than \$49 million to researchers around the world.

One of the key areas of research that the MRA has funded is the use of inhibitor drugs to block melanoma cancer cells. Inhibitor drugs are molecules that bind uniquely to a cancer cell's surface and block an aspect of that cell's functionality. For example, PARP inhibitors, designed to stop breast cancer, bind to an enzyme pathway found distinctly on breast cancer cells with a BRAC genetic mutation. The PARP molecule's attachment prevents the cell from performing DNA repair, leading to its death.

What researchers are realizing however is that a simultaneous cocktail of inhibitors is the most likely way to tackle the real problem of resistance to inhibitor treatment. Indeed, the Program for Evolutionary Dynamics, along with Johns Hopkins University, has mathematically shown how cell resistance to a drug can quickly evolve from a tiny mutational pool to predominance and tumor level.

The inhibitor cocktail that was approved by the FDA is Dabrafenib and trametinib, designed to block certain BRAF enzyme pathway genetic mutations. These mutations occur in approximately 50% of melanoma patients and can be identified with a diagnostic test.

"Many more inhibitors and combination drugs need to pass through the FDA's Accelerated Program," Jeffrey Epstein remarked, who also heads the Jeffrey Epstein VI Foundation, which funds science research around the world. Indeed, the FDA only started to approve inhibitor drugs as a combined pill a few years ago. Prior to that, inhibitors had to be approved separately from each other prolonging the FDA process substantially.

The situation is still dire. According to the National Cancer Institute, only 16% survive fully metastasized melanoma.

Jeffrey Epstein is a former board member of the Mind, Brain and Behavior Committee at Harvard and plays an active role at the Institute for Advanced Studies at Princeton and the Santa Fe Institute.