

## Siddhartha Mukherjee: Gene research critical in fight against cancer

The human genome is integral to understanding the complex history of human health and disease. Dr. Siddhartha Mukherjee is a cancer geneticist and a 2011 Pulitzer Prize-winning author of *The Emperor of All Maladies*. Our reporter Anh Gray talks with him about his recent book, *The Gene: An Intimate History*, which explores the origins of gene science and examines the ethical conundrums involving genetic research.

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“Cancer is fundamentally a genetic disease at its very core. And by that, I mean that we now know that cancer is caused by mutations that accumulate in cells and change the physiology of the cells,” Mukherjee explains, “that the growth properties of the cells are no longer the same, the cells keep growing without appropriate controls.”

According to the National Human Genome Research Institute, the human body is made up of more than 20,000 genes. Mutations happen when there’s an alteration in the DNA sequence that makes up a gene, which can cause a variety of diseases, including cancer. In order to develop better treatments for cancer, Mukherjee says advancements in genetic research is imperative.

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As researchers work to develop genome-based strategies for the diagnosis and treatment of disease, these scientific explorations will continue to raise questions about the ethical, legal and social implications of genetic research.

**The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: [The Promise And Complexity Of Gene Science](#)**