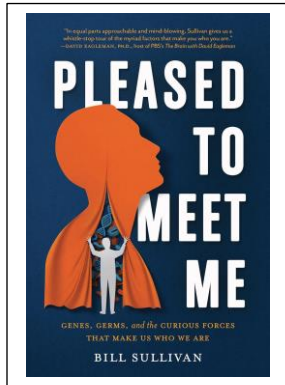


## BOOK REPORT



### INTERACTION BETWEEN GENES AND BEHAVIOR

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“There’s a rhyme and reason behind this.” This is a refrain often heard about the whys and hows of phenomena that we observe but are miffed to explain. Why do some people never get enough coffee while others don’t care about this brew? What about the infatuation with hot pepper? It’s a spicy mystery! The same pattern can be seen among some folks: some are very fond of it, while some get sick when exposed to it. The hic is that this variable pattern can occur among people of similar backgrounds, nary any cultural influence.

Embark on a captivating journey into the enigmatic realm of genetics and behavior with Professor Bill Sullivan, a distinguished expert in genetics, infectious disease, and cell and molecular biology from Indiana University School of Medicine. Unravel the perplexing mysteries of our innate choices dictated by our DNA and delve into the fascinating world of “supertasters” influenced by the TAS2R gene. Supertasters present a unique puzzle with their heightened ability to detect the bitterness of vegetables. As a result, these individuals reject broccoli, kale, and other nutrients due to their bitterness that others don’t detect. Similarly, we discovered that those with a so-called sweet tooth are heavily influenced by a gene named SLCa2. This gene, in turn, encodes for GLUT2, a protein that transports glucose to the brain. Any anomaly with its receptor and then diabetes emerges as an outcome.

The relationship between genes and their expression is not a one-way street. As much as DNA can encode for a protein that carries out a task, we also have the power to influence genetic expression. This influence, known as epigenetics, is a fascinating field of study. Simultaneously, nutrigenetics is the scientific endeavor to understand our taste for nutrients based on our unique DNA fingerprint. Some features are innate, like irreversible, whereas others we can influence. Genetic expression alteration occurs frequently via methylation, which can be thought of as the creation of a roadblock. It’s a simple chemical reaction where a methyl group gets attached to the base of the DNA. We willfully close one door and open another.

Reading this book is like diving into a rich tapestry of interdependent organs, not the least of which is our microbiota and their inherent push and pull. It’s brimming with fascinating scientific tidbits and strategies for understanding and navigating the complex interplay of nature and nurture. We discover that many life choices, a mate, food selection, and a slew of preferences have an underpinning of genetic influence that sometime goes back to the womb and the habits of our mother then. One needs to go through the pages of the book. Yet whatever information is related probably represents the tip of the iceberg.

Similarly to the previous books that I recommended, this one should go on our reference book list. There is no point in just reading it and forgetting it; it behooves one to go back and forth and discover or rediscover some pearls. Learning is a lifelong journey.