Systematic: How Systems Biology Is Transforming Modern Medicine

James R. Valcourt
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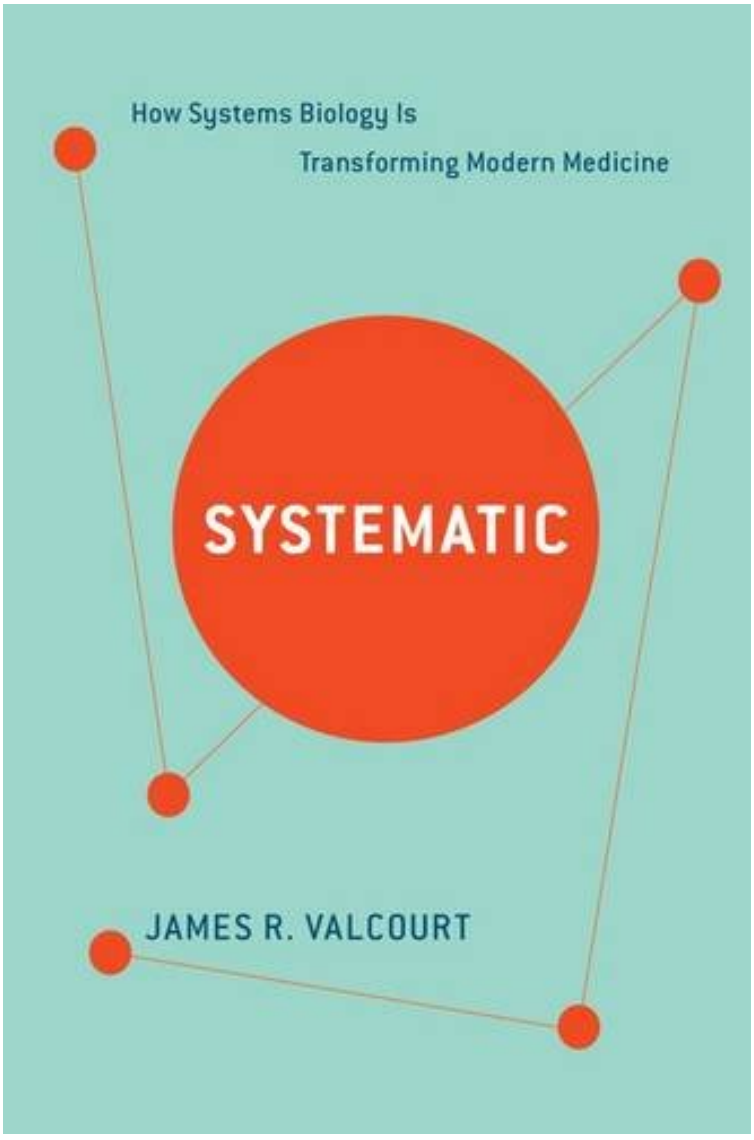

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James R. Valcourt : Systematic: How Systems Biology Is Transforming Modern Medicine before purchasing it in order to gage whether or not it would be worth my time, and all praised Systematic: How Systems Biology Is Transforming Modern Medicine:

2 of 3 people found the following review helpful. An insightful and entertaining overview of systems biology!By Kelly M.This is a thoughtful overview of how systems biology is changing research and medicine. The language is

easily digestible for non-scientists and the writing is entertaining, interspersed with anecdotes and insightful commentary. Diverse topics are covered, from the body's microbiome to tumor immunotherapy, and one is left with the impression that systems biology, though a burgeoning field, is already transforming biology and medicine. Highly recommend!2 of 3 people found the following review helpful. I found the book to be an easy read and the examples a great way to get ...By Cancer survivorSystematicI have always been interested in the field of medicine and have recently battled cancer. So, I read Systematic in the hopes of understanding what is going on within my body. Im not in the field of science so having a lay-mans explanations of how the body works is interesting. I found the book to be an easy read and the examples a great way to get the authors point across. I learned things I didnt know about breast and other types of cancer. Hopefully, scientists will solve the problems we all battle.4 of 6 people found the following review helpful. Breezy walk through exciting stuffBy star9gazerThis compact tome is a delightful stroll through some of the latest developments in modern science and medicine from the viewpoint of systems biology. The author has a breezy and anecdotal style which he uses to explain how mathematical models of networks can be used to explore a wide variety of biological and medical findings. The confluence of unprecedented computational power and new concepts for modeling complex systems is yielding insights in a wide variety of areas. Valcourt walks the reader through genetics, cellular biology, synthetic biology, neuroscience, the microbiome and more. There is no math to trip up the anxious. Conceptual clarity does not suffer from its absence.This accessible book is suitable for any reasonably scientifically literate reader. I would especially recommend it for bright high school or college students interested in STEM fields.

A brilliant young scientist introduces us to the fascinating field that is changing our understanding of how the body works and the way we can approach healing.SYSTEMATIC is the first book to introduce general readers to systems biology, which is improving medical treatments and our understanding of living things. In traditional bottom-up biology, a biologist might spend years studying how a single protein works, but systems biology studies how networks of those proteins work together--how they promote health and how to remedy the situation when the system isn't functioning properly. Breakthroughs in systems biology became possible only when powerful computer technology enabled researchers to process massive amounts of data to study complete systems, and has led to progress in the study of gene regulation and inheritance, cancer drugs personalized to an individual's genetically unique tumor, insights into how the brain works, and the discovery that the bacteria and other microbes that live in the gut may drive malnutrition and obesity. Systems biology is allowing us to understand more complex phenomena than ever before. In accessible prose, SYSTEMATIC sheds light not only on how systems within the body work, but also on how research is yielding new kinds of remedies that enhance and harness the body's own defenses.

"An expert overview of a spectacularly burgeoning field." - Kirkus s"Accessible introduction to systems biology . . . Valcourt delivers a lucid introduction to this ingenious combination of the hard sciences and advanced technology that adopts a holistic view of natural phenomena." - Publishers Weekly"Odd and interesting." - BooklistAbout the AuthorJames R. Valcourt is pursuing a Ph.D. in systems biology at Harvard University. As a former researcher at D. E. Shaw Research in New York City, he used supercomputer simulations to study pharmaceutical drugs. He is a recipient of the quarter-million-dollar Hertz Foundation Graduate Fellowship, and graduated magna cum laude from Princeton University with an A.B. in molecular biology, receiving the Pyne Prize. This is his first book and he lives in Cambridge, Massachusetts.