

complex biological systems in development, disease, and evolution. Chapters cover such topics as morphogenesis and organ formation, conceptual foundations, and cell differentiation, and together demonstrate that the integration of epigenetics into mainstream developmental biology is essential for answering fundamental questions about how phenotypic traits are produced.

How gene editing will rewrite our futures

A Graphic Guide

How Modern Biology is Rewriting our Understanding of Genetics, Disease and Inheritance

The Laws of Medicine

Hacking Darwin

Genetics in Minutes

Extended Heredity

Michel Morange updates the history of molecular biology at a moment when scientists are making big strides in genetic engineering and exploring new avenues, from epigenetics to systems biology. Morange places the latest findings and ideas in historical context, describing in accessible terms how transformative the molecular revolution has been.

The Epigenetics RevolutionHow Modern Biology Is Rewriting Our Understanding of Genetics, Disease, and InheritanceColumbia University Press

The definitive compendium for the Insurance Digital Revolution From slow beginnings in 2014, InsurTech has captured US\$7billion in investment since 2010 – a 10% annual compound growth rate is predicted until at least 2020. Three in four insurance companies believe some part of their business is at risk of disruption and understanding the trends, drivers and emerging technologies behind Insurance’s Digital Revolution is a business-critical priority for all growth-minded firms. The InsurTech Book offers essential updates, critical thinking and actionable insight – globally – from start-ups, incumbents, investors, tech companies, advisors and other partners in this evolving ecosystem, in one volume. For some, Insurance is either facing an existential threat; for others, it is a sector on the brink of transforming itself. Either way, business models, value chains, customer understanding and engagement, organisational structures and even what Insurance is for, is never going to be the same. Be informed, be part of it. Learn from diverse experiences, mindsets and applications of technologies Discover new ways of defining and grasping growth opportunities Get the inside track from innovators, disruptors and incumbents Be updated on the evolution of InsurTech, why it is happening and how it will evolve Explore visions of the future of Insurance to help shape yours The InsurTech Book is your indispensable guide to a sector in transformation.

From the author of the acclaimed The Epigenetics Revolution (‘A book that would have had Darwin swooning’ - Guardian) comes another thrilling exploration of the cutting edge of human science. For decades after the structure of DNA was identified, scientists focused purely on genes, the regions of the genome that contain codes for the production of proteins. Other regions - 98% of the human genome - were dismissed as ‘junk’. But in recent years researchers have discovered that variations in this ‘junk’ DNA underlie many previously intractable diseases, and they can now generate new approaches to tackling them. Nessa Carey explores, for the first time for a general audience, the incredible story behind a controversy that has generated unusually vituperative public exchanges between scientists. She shows how junk DNA plays an important role in areas as diverse as genetic diseases, viral infections, sex determination in mammals, human biological complexity, disease treatments, even evolution itself - and reveals how we are only now truly unlocking its secrets, more than half a century after Crick and Watson won their Nobel prize for the discovery of the structure of DNA in 1962.

Essential, required reading for doctors and patients alike: A Pulitzer Prize-winning author and one of the world’s premiere cancer researchers reveals an urgent philosophy on the little-known principles that govern medicine—and how understanding these principles can empower us all. Over a decade ago, when Siddhartha Mukherjee was a young, exhausted, and isolated medical resident, he discovered a book that would forever change the way he understood the medical profession. The book, The Youngest Science, forced Dr. Mukherjee to ask himself an urgent, fundamental question: Is medicine a “science”? Sciences must have laws—statements of truth based on repeated experiments that describe some universal attribute of nature. But does medicine have laws like other sciences? Dr. Mukherjee has spent his career pondering this question—a question that would ultimately produce some of most serious thinking he would do around the tenets of his discipline—culminating in The Laws of Medicine. In this important treatise, he investigates the most perplexing and illuminating cases of his career that ultimately led him to identify the three key principles that govern medicine. Brimming with fascinating historical details and modern medical wonders, this important book is a fascinating glimpse into the struggles and Eureka! moments that people outside of the medical profession rarely see. Written with Dr. Mukherjee’s signature eloquence and passionate prose, The Laws of Medicine is a critical read, not just for those in the medical profession, but for everyone who is moved to better understand how their health and well-being is being treated. Ultimately, this book lays the groundwork for a new way of understanding medicine, now and into the future.

Gene Cloning and Manipulation

What Our Lips Are Telling Us

Evolutionary Genetics

How Genotype and Gene Interactions Affect Behavior

A Graphic Guide to the Molecule that Shook the World

Science in Black and White

How Modern Biology Is Rewriting Our Understanding of Genetics, Disease, and Inheritance

Epigenetics upends natural selection and genetic mutation as the sole engines of evolution, and offers startling insights into our future heritable traits. In the 1700s, Jean-Baptiste Lamarck first described epigenetics to explain the inheritance of acquired characteristics; however, his theory was supplanted in the 1800s by Darwin’s theory of evolution by natural selection through heritable genetic mutations. But natural selection could not adequately explain how rapidly species re-diversified and repopulated after mass extinctions. Now advances in the study of DNA and RNA have resurrected epigenetics, which can create radical physical and physiological changes in subsequent generations by the simple addition of a single small molecule, thus passing along a propensity for molecules to attach in the same places in the next generation! Epigenetics is a complex process, but paleontologist and astrobiologist Peter Ward breaks it down for general readers, using the epigenetic paradigm to reexamine how the history of our species—from deep time to the outbreak of the Black Plague and into the present—has left its mark on our physiology, behavior, and intelligence. Most alarming are chapters about epigenetic changes we are undergoing now triggered by toxins, environmental pollutants, famine, poor nutrition, and overexposure to violence. Lamarck’s Revenge is an eye-opening and controversial exploration of how traits are inherited, and how outside influences drive what we pass along to our progeny.

How Biology and Environment Shape Our Racial Divide

Creating Optimal Health with the New Science of Epigenetics

An Introduction to Behavioral Epigenetics

How Epigenetics Is Revolutionizing Our Understanding of Evolution’s Past and Present

Concepts, Analysis, and Practice

A Philosophical Study of Human Touch