

Where To Download Power Sex Suicide Mitochondria And The Meaning Of Life Nick Lane

than that. Mitochondria have their own DNA, with their own small collection of genes, separate from those in the cell nucleus. It is thought that they were once bacteria living independent lives. Their enslavement within the larger cell was a turning point in the evolution of life, enabling the development of complex organisms and, closely related, the origin of two sexes. Unlike the DNA in the nucleus, mitochondrial DNA is passed down exclusively (or almost exclusively) via the female line. That's why it has been used by some researchers to trace human ancestry daughter-to-mother, to 'Mitochondrial Eve'. Mitochondria give us important information about our evolutionary history. And that's not all. Mitochondrial genes mutate much faster than those in the nucleus because of the free radicals produced in their energy-generating role. This high mutation rate lies behind our ageing and certain congenital diseases. The latest research suggests that mitochondria play a key role in degenerative diseases such as cancer, through their involvement in precipitating cell suicide. Mitochondria, then, are pivotal in power, sex, and suicide. In this fascinating and thought-provoking book, Nick Lane brings together the latest research findings in this exciting field to show how our growing understanding of mitochondria is shedding light on how complex life evolved, why sex arose (why don't we just bud?), and why we age and die. This understanding is of fundamental importance, both in understanding how we and all other complex life came to be, but also in order to be able to control our own illnesses, and delay our degeneration and death. Oxford Landmark Science books are 'must-read' classics of modern science writing which have crystallized big ideas, and shaped the way we think.

Power, Sex, Suicide Mitochondria and the Meaning of Life Oxford University Press, USA

The Chinese translation of The Secret History by Donna Tartt, winner of the 2014 Pulitzer Prize for her most recent novel, The Goldfinch. Originally published in 1992, this Tartts first novel has become a bestseller and contemporary classic. This ambitious book considers social scientific topics such as identity, community, sexual difference, self, and ecology from a microbial perspective. Harnessing research and evidence from earth systems science and microbiology, and particularly focusing on symbiosis and symbiogenesis, the book argues for the development of a microontology of life.

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Why is life the way it is? Bacteria evolved into complex life just once in four billion years of life on earth-and all complex life shares many strange properties, from sex to ageing and death. If life evolved on other planets, would it be the same or completely different? In The Vital Question, Nick Lane radically reframes evolutionary history, putting forward a cogent solution to conundrums that have troubled scientists for decades. The answer, he argues, lies in energy: how all life on Earth lives off a voltage with the strength of a bolt of lightning. In unravelling these scientific enigmas, making sense of life's quirks, Lane's explanation provides a solution to life's vital questions: why are we as we are, and why are we here at all? This is ground-breaking science in an accessible form, in the tradition of Charles Darwin's The Origin of Species, Richard Dawkins' The Selfish Gene, and Jared Diamond's Guns, Germs and Steel.

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Evolution of Melanism, Flowering Plants: Evolution Above the Species Level.

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Please note that the content of this book primarily consists of articles available from Wikipedia or other free sources online. Commentary (books not included). Pages: 44. Chapters: 13 Things That Don't Make Sense, A Briefer History of Time (Hawking and Mlodinow book), A Brief History of Time, A Child Is Born (book), A Short History of Nearly Everything, A Universe from Nothing, Bad Science (book), Becoming Batman: The Possibility of a Superhero, Big Bang (book), Chaos: Making a New Science, Collapse: How Societies Choose to Fail or Succeed, Conscious Robots, Conversations on the Plurality of Worlds, Cosmos (book), Death from the Skies, Decoding Reality, Dynamical Theory of Crystal Lattices, Fermat's Last Theorem (book), Five Equations That Changed the World: The Power and Poetry of Mathematics, From Eternity to Here, George's Cosmic Treasure Hunt, George's Secret Key to the Universe, George and the Big Bang, Guns, Germs, and Steel, Hyperspace (book), Incognito: The Secret Lives of the Brain, Infinite Worlds: An Illustrated Voyage to Planets Beyond Our Sun, Inventing Iron Man: The Possibility of a Human Machine, List of popular science books on evolution, Mathematics and the Imagination (book), Microcosm: E. coli and the New Science of Life, Moonwalking with Einstein, Out of the Cradle (book), Parallel Worlds (book), Physics of the Future, Power, Sex, Suicide: Mitochondria and the Meaning of Life, Quantum (book), ReAction! Chemistry in the Movies, Sally Ride Science, Science Friction: Where the Known Meets the Unknown, Seeds of Change: Five Plants That Transformed Mankind, SuperFreakonomics, Survival of the Sickest (book), The Blind Watchmaker, The Brain That Changes Itself, The Canon, The Code Book, The Five Ages of the Universe, The God Particle: If the Universe Is the Answer, What Is the Question?, The Grand Design (book), The Greatest Show on Earth: The Evidence for Evolution, The G Spot and Other Recent Discoveries About Human Sexuality, The Hidden...

Conversations About Biology include the following five carefully-edited Ideas Roadshow Conversations featuring leading researchers with a detailed preface highlighting the connections between the different books: I. Autism: A Genetic Perspective - A conversation with Jay Gargus, Professor of Physiology, Biophysics and Pediatrics and Director of the Center for Autism Research and Translation at UC Irvine. This wide-ranging conversation examines the recent explosion in our genetic understanding of autism and its implications for the future of medicine, together with the importance of understanding the underlying molecular mechanisms in order to successfully treat a wide range of genetic disorders. Jay Gargus focuses on autism, dispelling myths associated with the condition, advocating why a treatment should be actively pursued, and illustrating what we can learn from the recent breakthrough in cystic fibrosis research. II. Learning and Memory - A conversation with Alcino Silva, Distinguished Professor of Neurobiology, Psychiatry and Psychology at the David Geffen School of Medicine and Director of the Integrated Center for Learning and Memory at UCLA. This book is based on an in-depth filmed conversation between Howard Burton and Alcino Silva who runs a learning and memory lab at UCLA that is focused on a vast number of topics, from schizophrenia and autism to learning and memory. This fascinating conversation explores how he and his colleagues focus on understanding the specific molecular mechanisms of neurobiology with the goal of being able to intervene and repair these mechanisms when they go awry. III. A Matter of Energy: Biology From First Principles - A conversation with Nick Lane, Professor of Evolutionary Biochemistry at University College London. This book is based on an in-depth filmed conversation between Howard Burton and Nick Lane.. After an inspiring story of Nick Lane's career path, this wide-ranging conversation covers his bioenergetic view of early, evolutionary history, the origin of life and how all complex life is composed of a very particular cell type that we all share, and more. IV. Our Human Variability - A conversation with Stephen Scherer, the GlaxoSmithKline Research Chair in Genome Sciences at the Hospital for Sick

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Children and University of Toronto. This book is based on an in-depth filmed conversation between Howard Burton and Stephen Scherer who discusses his lifelong passion for science that culminated in his groundbreaking discovery of copy-number variation. This conversation also covers his exciting work in autism research and how copy number variation brings us a deeper understanding of both human variability and disease. V. Sleep Insights - A conversation with Matthew Walker, Professor of Neuroscience and Psychology and Founder and Director of the Center for Human Sleep Science at UC Berkeley. This book is based on an in-depth filmed conversation between Howard Burton and Matthew Walker. This extensive conversation gives a clear and compelling picture of our recent understanding of sleep's essential role in our daily lives, from reinforcing learning and memory to regulating emotion. Howard Burton is the creator and host of Ideas Roadshow and was the Founding Executive Director of Perimeter Institute for Theoretical Physics.

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One of the deepest, most illuminating books about the history of life to have been published in recent years. The Economist"

??????? : The neutral theory of molecular evolution/Kimura Motoo. -- 1983. -- ? : 1. ?????; 2. ?????; 3. ?????

A groundbreaking, evidence-based text to the growing field of evolutionary medicine Evidence-Based Evolutionary Medicine offers a comprehensive review of the burgeoning field of evolutionary medicine and explores vital topics such as evolution, ecology, and aging as they relate to mainstream medicine. The text integrates Darwinian principles and evidence-based medicine in order to offer a clear picture of the underlying principles that reflect how and why organisms have evolved on a cellular level. The authors—noted authorities in their respective fields—address evolutionary medicine from a developmental cell-molecular perspective. They explore the first principles of physiology that explain the generation of existing tissues, organs, and organ systems. The text offers an understanding of the overall biology as a vertically integrated whole, from unicellular to multicellular organisms. In addition, it addresses clinical diagnostic and therapeutic approaches, both traditional and cell-homeostatic. This groundbreaking text: • Offers a much-needed, logical, and fundamental approach to biology and medicine • Provides a clear explanation of complex physiology and pathophysiology • Integrates topics like evolution, ecology and aging into mainstream medicine, making them more relevant • Contains the first evidence-based text on evolutionary medicine Written for medical and graduate students in biology, physiology, anatomy, endocrinology, reproductive biology, medicine, pathology, systems biology, this vital resource offers a unique text of both biology as an integrated whole with universal properties; and of medicine seeing the individual as a whole, not an inventory of parts and diseases.

Why can salamanders grow new legs, and young children grow new finger tips, but adult humans can't regenerate? What is the electricity that flows through the human body? Is it the same thing that the Chinese call Qi? If so, what does Chinese medicine know, that western medicine ignores? Dan Keown's highly accessible, witty, and original book shows how western medicine validates the theories of Chinese medicine, and how Chinese medicine explains the mysteries of the body that western medicine largely ignores. He explains the generative force of embryology, how the hearts of two people in love (or in scientific terms `quantum entanglement') truly beat as one, how a cheating heart is also an ill heart (which is why men are twice as likely to die of a

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sudden heart attack with their mistress than with their wife), how neural crest cells determine our lifespan, and why Proust's madeleines evoked the memories they did. The book shows how the theories of western and Chinese medicine support each other, and how the integrated theory enlarges our understanding of how bodies work on every level. Full of good stories and surprising details, Dan Keown's book is essential reading for anyone who has ever wanted to know how the body really works.

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