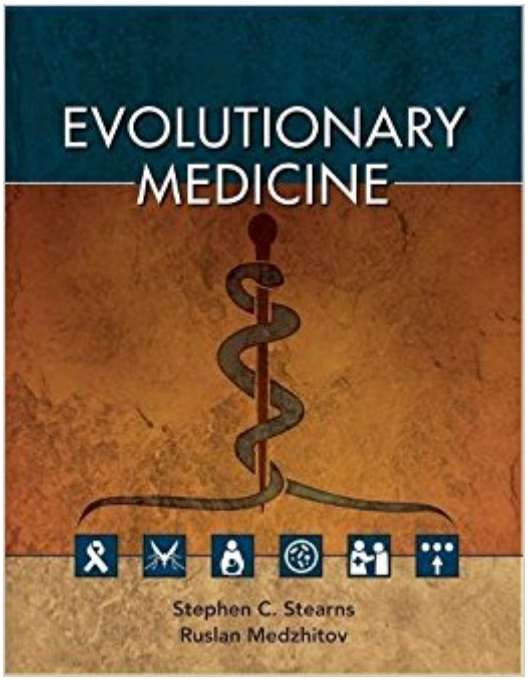
Evolutionary Medicine



Synopsis

Evolutionary Medicine is a textbook intended for use in undergraduate, graduate, medical school, and continuing medical education (CME) courses. Its professional illustrations and summaries of chapters and sections make its messages readily accessible.Chapter 1 introduces evolutionary thinking about both current dynamic processes and the deep patterns of history and relationship.Chapter 2 asks, "What is a patient?" and answers from a series of perspectives.Chapter 3 asks, "What is a disease?" Some causes are found in patients; others in pathogens; many in the interactions between them.Chapter 4 discusses the nature of defenses, the strategies that determine how they are deployed, and their costs as well as their benefits.Chapter 5 discusses pathogen evolution: the evolution of intrinsic virulence, of evasion and manipulation of host defenses, and of resistance to treatment, and how therapy might be made evolution-proof.Chapter 6 describes cancer as an evolutionary process with a history traced in the genome and with major implications for treatment.Chapter 7 discusses conflicts in reproduction: between mother and offspring, between maternally and paternally derived genes in the offspring, and among siblings. It also discusses menstruation, menopause, and the connection between invasive placentas and metastatic cancer.Chapter 8 discusses mismatches to modern environments, including obesity, cardiovascular disease, and autoimmune diseases.Chapter 9 discusses evolutionary perspectives on addiction, anxiety, depression, obsessive-compulsive disorder, autism, and schizophrenia.Chapter 10 explores the tension between individual and group interests and shows how medicine is creating new problems while solving old ones.Chapter 11 starts with questions that have not yet been answered, discusses why we have not chosen to address some issues, and concludes by comparing classical with evolutionary medicine.RESOURCESInstructor’s Resource LibraryAvailable to qualified adopters, the Instructor’s Resource Library includes the following resources:*Textbook Figures & Tables: All figures (line-art illustrations and photographs) and tables from the textbook, provided as both high- and low-resolution JPEGs. All have been formatted and optimized for excellent projection quality. Also included are ready-to-use PowerPoint presentations of all figures and tables.*Lecture Presentations: For each chapter of the textbook, the authors have prepared ready-to-use lecture presentations that include text reviewing the key facts and concepts from the chapter, along with selected figures and tables.

Book Information

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Customer Reviews

"Stearns and Medzhitov provide a valuable, authoritative resource for students encountering evolutionary medicine for the first time. For biomedical scientists, medical students, and students of evolution, it is a valuable introduction to an important emerging field." --John D. Nagy, BioScience"This book is a gem of a textbook about the principles of evolutionary thinking and the relevance of evolutionary biology to clinical medicine. The authors draw upon decades of experience teaching medical students at Yale, with interesting examples, including experimental observations in other species." --Gilbert S. Omenn, Evolution, Medicine, and Public Health"In addition to being intelligent, engaging, clear, and concise (prerequisites for any good textbook), Evolutionary Medicine outlines the field as a series of problems and questions rather than as a set of facts and concepts. Stearns and Medzhitov repeatedly challenge the reader to think critically and logically, to question common assumptions, and to demand good, critical scientific data and thinking. The book is also fun to read because the authors' passion and pleasure in the topic are evident from start to finish. All in all, anyone reading Evolutionary Medicine will get a solid foundation and plenty of stimulus for thinking broadly and critically about how to apply evolutionary data and theory to medicine." --Daniel E. Lieberman, American Journal of Human Biology"Evolutionary Medicine is intended for undergraduate, graduate, or medical school courses. It draws from fields as diverse as anthropology to molecular biology in order to illustrate the vast landscape of an organism in all its complexity. In contrast to the reductionist approach often taken to answer complex biological questions, much of the strength of the book derives from the authors' ability to step back and describe themes that are broadly generalizable. This alternative perspective allows for an innovative understanding of basic biological processes with profound translational

potential. The striking simplicity of the author's overall thesis allows the book to address, in a novel light, questions as fundamental as 'What is a patient?' as well as 'What is a disease?'" --Alexandra Kuhlmann, Yale Journal of Biology and Medicine

Stephen C. Stearns is the Edward P Bass Professor of Ecology and Evolutionary Biology at Yale University. A 1967 Yale graduate, he earned an M.S. from the University of Wisconsin and a Ph.D. from the University of British Columbia. He was a Miller Fellow at the University of California, Berkeley prior to his first academic appointment at Reed College. In 1983, he assumed the directorship of the Zoology Institute at the University of Basel, Switzerland, returning to Yale in 2000. In addition to Evolutionary Medicine, his books include Evolution: An Introduction; Watching, from the Edge of Extinction (coauthored with his wife, Beverly Peterson Stearns); and The Evolution of Life Histories. A founder of the European Society for Evolutionary Biology (and its journal) as well as the Tropical Biology Association, Dr. Stearns has served as President of both. In 2011 he received the Devane Medal for undergraduate teaching from the Yale chapter of Phi Beta Kappa. In 2015 he received an honorary degree from the University of Zurich. His research focuses on life history evolution and contemporary human evolution.Ruslan Medzhitov is the David W. Wallace Professor of Immunobiology at Yale University School of Medicine. He is also an Investigator with the Howard Hughes Medical Institute. He obtained his B.A. (Biology) from Tashkent State University (1990) and Ph.D. (Biochemistry) from the Moscow State University (1993). Beginning his career as a visiting student at the University of California at San Diego, he became a Postdoctoral Associate with HHMI in January 1994, working at Yale University School of Medicine. With the late Charles A. Janeway, Jr. (with whom he worked as a postdoctoral fellow from 1994ÃƒÂ¢$e"1999), Dr. Medzhitov co-discovered and characterized mammalian Toll-like receptors, now recognized as integral to the innate immune system. Widely recognized for his research, he is a member of the National Academy of Sciences, a Fellow of the American Academy of Microbiology, and a member of the Institute of Medicine of the National Academy of Sciences. His research interests include inflammation and inflammatory diseases, allergy, infection and immunity, and evolutionary medicine.

It is a very good Book !!!Everyone who reads about Evolution or Medicine have to read it !!!Excellent Book !!!

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