The Plausibility of Life

Insect Molecular Biology and Biochemistry

Models and modelling play a central role in the nature of science, in its conduct, in the accreditation and dissemination of its outcomes, as well as forming a bridge to technology. They therefore have an important place in both the formal and informal science education provision made for people of all ages. This book is a product of five years collaborative work by eighteen researchers from four countries. It addresses four key issues: the roles of models in science and their implications for science education; the place of models in curricula for major science subjects; the ways that models can be presented to, are learned about, and can be produced by, individuals; the implications of all these for research and for science teacher education. The work draws on insights from the history and philosophy of science, cognitive psychology, sociology, linguistics, and classroom research, to establish what may be done and what is done. The book will be of interest to researchers in science education and to those taking courses of advanced study throughout the world.

Developing Models in Science Education

The tenth edition of Operating System Concepts has been revised to keep it fresh and up-to-date with contemporary examples of how operating systems function, as well as enhanced interactive elements to improve learning and the student’s experience with the material. It combines instruction on concepts with real-world applications so that students can understand the practical usage of the content. End-of-chapter problems, exercises, review questions, and programming exercises help to further reinforce important concepts. New interactive self-assessment problems are provided throughout the text to help students monitor their level of understanding and progress. A Linux virtual machine (including C and Java source code and development tools) allows students to complete programming exercises that help them engage further with the material. The Enhanced E-Text is also available bundled with an abridged print companion and can be ordered by contacting customer service here: ISBN: 9781119456339 Price: $97.95 Canadian Price: $111.50

Human Embryology & Developmental Biology

Developmental Biology :

Biophysics is the science of physical principles underlying all processes of life, including the dynamics and kinetics of biological systems. This fully revised 2nd English edition is an introductory text that spans all steps of biological organization, from the molecular, to the organism level, as well as influences of environmental factors. In response to the enormous progress recently made, especially in theoretical and molecular biophysics, the author has updated the text, integrating new results and developments concerning protein folding and dynamics, molecular aspects of membrane assembly and transport, noise-enhanced processes, and photo-biophysics. The advances made in theoretical biology in the last decade call for a fully new conception of the corresponding sections. Thus, the book provides the background needed for fundamental training in biophysics and, in addition, offers a great deal of advanced biophysical knowledge.

A Photographic Atlas of Developmental Biology

This book captivates student interest, opening minds to the wonder of developmental biology, whilst covering required material with scientific rigour. The tenth edition reflects the exciting new age of genomics, genetic regulatory networks and digital visualization techniques while keeping focus on the major questions of animal development.

Introduction Plant Taxonomy

"This brief textbook of human development covers the events of fertilization, gestation, and sex determination, followed by descriptions of the science of cloning, stem cells, and genome sequencing. The chapter covering the science is juxtaposed with a chapter discussing ethical questions that arise, such as when does life begin, should assisted reproductive technologies be regulated, and should parents be allowed to choose their child's sex"--Provided by publisher.

Developmental Biology

This new publication of the National Kidney Foundation offers an up-to-date review of kidney disease, fluid and electrolyte disorders, hypertension, dialysis, and renal transplantation. It summarizes key information of practical value to primary care physicians, family practitioners, internists, house staff, medical students, nephrologists, and other professionals providing health care to patients with kidney disease. Key features: "Contains authoritative, up-to-date information from the National Kidney Foundation * User-friendly, in-depth summaries of major areas in nephrology * Practical approach to diagnosis and management of kidney disease

Analysis of Biological Development

*A concise account of what we know about development discusses the first vital steps of growth and explores one of the liveliest areas of scientific research."--P. [2] of cover.

Operating System Concepts
Developmental Biology

Now in its third edition, Osteoporosis, is the most comprehensive, authoritative reference on this disease. Written by renowned experts in the field, this two-volume reference is a must-have for academic and medical libraries, physicians, researchers, and any company involved in osteoporosis research and development. Worldwide, 200 million women between 60-80 suffer from osteoporosis and have a lifetime risk of fracture between 30 and 40 percent continuing to make osteoporosis a hot topic in medicine. This newest edition covers everything from basic anatomy and physiology to diagnosis, management and treatment in a field where direct care costs for osteoporotic fractures in the U.S. reach up to $18 billion each year. NEW TO THIS EDITION: *Recognizes the critical importance of the Wnt signaling pathway for bone health *Incorporates new chapters on osteocytes, phosphatonins, mouse genetics, and CNS and bone *Examines essential updates on estrogen prevention and treatment and the recent results from the WHI *Discusses the controversial topics of screening and clinical trial design for drug registration *Includes essential updates on therapeutic uses of calcium, vitamin D, SERMs, bisphosphonates, and parathyroid hormone * Offers critical reviews of reproductive and hormonal risk factors, ethnicity, nutrition, therapeutics, management, and economics comprising a tremendous wealth of knowledge in a single source not found elsewhere

Molecular Biology of the Cell 6E - The Problems Book

Balances coverage of the concepts of cell and molecular biology, using examples of experimentation to support those concepts. As experimental techniques become more diverse and complex, it is increasingly necessary to identify individual studies that have a broad impact on our understanding of cell biology. This text describes in detail some of the key experimental findings, along with the original data and figures. This edition features a new chapter on immunology, chapter overviews, modification to figures, and the latest experimental data is incorporated.

Principles of Animal Physiology

A textbook for a laboratory-based, sophomore-level course. Discusses species the development of which is little understood on a cellular or molecular level as well as the conventional examples used in developmental biology courses. Emphasizes both the similarities between groups of organisms and the differences that make each group unique. Annotation copyrighted by Book News, Inc., Portland, OR

The Biochemistry of Animal Development

Principles of Animal Physiology, by Chris Moyes and Trish Schulte, is designed to provide second- and third-year, undergraduate university students enrolled in animal physiology courses with an approach that balances its presentation of comparative physiology with mechanistic topics. The book delivers the fundamentals of animal physiology, while providing an integrative learning experience, drawing on ideas from chemistry, physics, mathematics, molecular biology and cell biology for its conceptual underpinnings.

Evolutionary Analysis

A fascinating chronicle of the evolution of humankind traces the genetic history of the organs of the human body, offering a revealing correlation between the distant past and present-day human anatomy and physiology, behavior, illness, and DNA. Reprint. 75,000 first printing.

Cell and Molecular Biology

This acclaimed text has been fully revised and updated, now incorporating issues including aging of the reproductive system, and updates on the chapters on conception and Gamete Transport and Fertilization, and Pregnancy. Human Reproductive Biology, Third Edition emphasizes the biological and biomedical aspects of human reproduction, explains advances in reproductive science and discusses the choices and concerns of today. Generously illustrated in full color, the text provides current information about human reproductive anatomy and physiology. The ideal book for courses on human reproductive biology - includes chapter introductions, sidebars on related topics of interest, chapter summaries and suggestions for further reading. All material completely updated with the latest research results, methods, and topics now organized to facilitate logical presentation of topics New chapters on Reproductive Senescence, Conception: Gamete Transport, Fertilization, Pregnancy: Maternal Aspects and Pregnancy: Fetal Development Full color illustrations

The Cellular Basis of Morphogenesis

For the latest information about embryological development, turn to HUMAN EMBRYOLOGY AND DEVELOPMENTAL BIOLOGY. This comprehensive, clearly written textbook emphasizes the molecular basis of human embryological development, explaining the "why" in addition to the "how." Many full-color clinical photographs and illustrations stress the function of embryological structures and the progression of development. All information has been updated to include the most current research findings and contemporary clinical applications. Chapter summaries and review questions aid in students' learning. This edition includes new clinical photographs, Clinical Correlation boxes, and clinical vignettes. Discusses development in terms of activity at the molecular and cellular level to explain embryological development, instead of just describing structure and function. Includes over 300 color drawings in striking detail, drawn in accordance with the universally-accepted embryological color code for more realistic representation. Contains end-of-chapter questions to provide quick review of the most important concepts for better comprehension. Features chapter summaries of the key concepts to reinforce comprehension and encourage student self-assessment. Uses boldface key terms to emphasize the terms and concepts that students most need to know. Features a clear, concise, understandable narrative that focuses on the progression of development to provide easy comprehension of difficult and complex material. Provides many full color photographs of clinical conditions. Spanish version also available, ISBN: 84-8174-471-9

An Introduction to Epidemiology

Developmental Biology

Vol. 3.

Iron Metabolism

Concepts of Biology

CD-ROM contains: Interactive videos -- Labeled photographs.
Developmental Biology

This text for advanced undergraduate and graduate students can also serve as a reference for epidemiologists working in the field, industrial hygienists, infectious disease nurses, and staff epidemiologists. Coverage progresses from foundations, disease concepts, and epidemiological measures of heal

Primer on Kidney Diseases

Two biologists tackle the unresolved question in the field of evolution: how have living organisms on Earth developed with such variety and complexity? In the 150 years since Darwin, the field of evolutionary biology has left a glaring gap in understanding how animals developed their astonishing variety and complexity. The standard answer has been that small genetic mutations accumulate over time to produce wondrous innovations such as eyes and wings. Drawing on cutting-edge research across the spectrum of modern biology, Marc Kirschner and John Gerhart demonstrate how this stock answer is woefully inadequate. Rather they offer an original solution to the longstanding puzzle of how small random genetic change can be converted into complex, useful innovations. In a new theory they call “facilitated variation,” Kirschner and Gerhart elevate the individual organism from a passive target of natural selection to a central player in the 3-billion-year history of evolution. In clear, accessible language, the authors invite every reader to contemplate daring new ideas about evolution. By closing the major gap in Darwin’s theory Kirschner and Gerhart also provide a timely scientific rebuttal to modern critics of evolution who champion “intelligent design.” “Makes for informative and enjoyable reading, and the issues the authors raise are worthy of attention.”—American Scientist “Thought-provoking and lucidly written... The Plausibility of Life will help readers understand not just the plausibility of evolution, but its remarkable, inventive powers.”—Sean Carroll, author of Endless Forms Most Beautiful: The New Science of Evo Devo

Osteoporosis

How does one make decisions today about in vitro fertilization, abortion, egg freezing, surrogacy, and other matters of reproduction? This book provides the intellectual and emotional intelligence to help individuals make informed choices amid misinformation and competing claims. Scott Gilbert and Clara Pinto-Correia speak to the couple trying to become pregnant, the woman contemplating an abortion, and the student searching for sound information about human sex and reproduction. Their book is an enlightening read for men as well as for women, describing in clear terms how babies come into existence through both natural and assisted reproductive pathways. They update “the talk” for the twenty-first century: the birds, the bees, and the Petri dishes. Fear, Wonder, and Science in the New Age of Reproductive Biotechnology first covers the most recent and well-grounded scientific conclusions about fertilization and early human embryology. It then discusses the reasons why some of the major forms of assisted reproductive technologies were invented, how they are used, and what they can and cannot accomplish. Most important, the authors explore the emotional side of using these technologies, focusing on those who have emptied their emotions and bank accounts in a valiant effort to conceive a child. This work of science and human biology is informed by a moral concern for our common humanity.

Developmental Biology/ Bioethics and the New Embryology

Developmental Biology: A Very Short Introduction

The ultimate guide to understanding biology Have you ever wondered how the food you eat becomes the energy your body needs to keep going? The theory of evolution says that humans and chimps descended from a common ancestor, but does it tell us how and why? We humans are insatiably curious creatures who can't help wondering how things work—starting with our own bodies. Wouldn't it be great to have a single source of quick answers to all our questions about how living things work? Now there is. From molecules to animals, cells to ecosystems, Biology For Dummies answers all your questions about how living things work. Written in plain English and packed with dozens of enlightening illustrations, this reference guide covers the most recent developments and discoveries in evolutionary, reproductive, and ecological biology. It's also complemented with lots of practical, up-to-date examples to bring the information to life. Discover how living things work Think like a biologist and use scientific methods Understand lifecycle processes Whether you're enrolled in a biology class or just want to know more about this fascinating and ever-evolving field of study, Biology For Dummies will help you unlock the mysteries of how life works.

Your Inner Fish

Human Reproductive Biology

Iron is indispensable for the growth, development and well-being of almost all living organisms. Biological systems from bacteria, fungi and plants to humans have evolved systems for the uptake, utilisation, storage and homeostasis of iron. Its importance for microbial growth makes its uptake systems a natural target for pathogenic microorganisms and parasites. Uniquely, humans suffer from both iron deficiency and iron overload, while the capacity of iron to generate highly reactive free radicals, causing oxidative stress, is associated with a wide range of human pathologies, including many neurodegenerative diseases. Whereas some essential metal ions like copper and zinc are closely linked with iron metabolism, toxic metals like aluminium and cadmium can interfere with iron metabolism. Finally, iron metabolism and homeostasis are key targets for the development of new drugs for human health. The 4th edition of Iron Metabolism is written in a lively style by one of the leaders in the field, presented in colour and covers the latest discoveries in this exciting area. It will be essential reading for researchers and students in biochemistry, molecular biology, microbiology, cell biology, nutrition and medical sciences. Other interested groups include biological inorganic chemists with an interest in iron metabolism, health professionals with an interest in diseases of iron metabolism, or of diseases in which iron uptake systems are involved (eg, microbial and fungal infections, cancer, neurodegenerative disorders), and researchers in the pharmaceutical industry interested in developing novel drugs targeting iron metabolism/homeostasis.

Essential Developmental Biology

This series was established to create comprehensive treatises on specialized topics in developmental biology. Such volumes are especially vital in develop mental biology, since it is a very diverse field that receives contributions from a wide variety of disciplines. This series is a meeting-ground for the various practitioners of this science, facilitating an integration of heterogeneous information on specific topics. Each volume is intended to provide the conceptual basis for a comprehensive understanding of its topic as well as an analysis of the key experiments upon which that understanding is based. The specialist in any aspect of developmental biology should understand the experimental background of the field and be able to place that body of information in context to ascertain where additional research would be fruitful. At that point, the creative process takes over, and new experiments are designed. This series is intended to be a vital link in that ongoing process of learning and discovery. If it facilitates scholarly progress, it will serve an important function.

Biology of Root Formation and Development

The Problems Book helps students appreciate the ways in which experiments and simple calculations can lead to an understanding of how cells work by introducing the experimental foundation of cell and molecular biology. Each chapter reviews key terms, tests for understanding
basic concepts, and poses research-based problems. The Problems Book has be

Fear, Wonder, and Science in the New Age of Reproductive Biotechnology

CD-ROM contains: Interactive videos -- Labeled photographs.

Essential Developmental Biology

This book contains the majority of the presentations of the Second International Symposium on the Biology of Root Formation and Development that was held in Jerusalem, Israel, June 23---28, 1996. Following the First Symposium on the Biology of Adventitious Root Formation, held in Dallas, USA, 1993, we perceived the need to include all kinds of roots, not only the shoot-borne ones. The endogenous signals that control root formation, and the subsequent growth and development processes, are very much alike, re gardless of the sites and sources of origin of the roots. Therefore, we included in the Sec ond Symposium contributions on both shoot-borne (i.e., adventitious) roots and root-borne (i.e., lateral) roots. Plant roots have remained an exciting and an intriguing field of science. During the years that followed the first symposium, an exceptional proliferation of interest in root biology has developed, associated with the intensive research activity in this field and the contemporary developments in the understanding of root function and development. New methods have been applied, and old ideas and interpretations were reexamined. Altogether, it became necessary to update our viewpoints and to expand them.

Bioethics and the New Embryology

The publication of the extensive seven-volume work Comprehensive Molecular Insect Science provided a complete reference encompassing important developments and achievements in modern insect science. One of the most swiftly moving areas in entomological and comparative research is molecular biology, and this volume, Insect Molecular Biology and Biochemistry, is designed for those who desire a comprehensive yet concise work on important aspects of this topic. This volume contains ten fully revised or rewritten chapters from the original series as well as five completely new chapters on topics such as insect immunology, insect genomics, RNAi, and molecular biology of circadian rhythms and circadian behavior. The topics included are key to an understanding of insect development, with emphasis on the cuticle, digestive properties, and the transport of lipids; extensive and integrated chapters on cytochrome P450s; and the role of transposable elements in the developmental processes as well as programmed cell death. This volume will be of great value to senior investigators, graduate students, post-doctoral fellows and advanced undergraduate research students. It can also be used as a reference for graduate courses and seminars on the topic. Chapters will also be valuable to the applied biologist or entomologist, providing the requisite understanding necessary for probing the more applied research areas related to insect control. Topics specially selected by the editor-in-chief of the original major reference work Fully revised and updated contributions bring together the latest research in the rapidly moving fields of insect molecular biology and insect biochemistry, including coverage of development, physiology, immunity and proteomics. Full-color provides readers with clear, useful illustrations to highlight important research findings.

Biology For Dummies

Concepts of Biology is designed for the single-semester introduction to biology course for non-science majors, which for many students is their only college-level science course. As such, this course represents an important opportunity for students to develop the necessary knowledge, tools, and skills to make informed decisions as they continue with their lives. Rather than being mired down with facts and vocabulary, the typical non-science major student needs information presented in a way that is easy to read and understand. Even more importantly, the content should be meaningful. Students do much better when they understand why biology is relevant to their everyday lives. For these reasons, Concepts of Biology is grounded on an evolutionary basis and includes exciting features that highlight careers in the biological sciences and everyday applications of the concepts at hand. We also strive to show the interconnectedness of topics within this extremely broad discipline. In order to meet the needs of today's instructors and students, we maintain the overall organization and coverage found in most syllabi for this course. A strength of Concepts of Biology is that instructors can customize the book, adapting it to the approach that works best in their classroom. Concepts of Biology also includes an innovative art program that incorporates critical thinking and clicker questions to help students understand--and apply--key concepts.

Embryology

TO ACCESS THE DEDICATED TEXTBOOK WEBSITE, PLEASE VISIT www.blackwellpublishing.com/slack Essential Developmental Biology, 2nd Edition, is a concise and well-illustrated treatment of this subject for undergraduates. With an emphasis throughout on the evidence underpinning the main conclusions, this book is suitable as the key text for both introductory and more advanced courses in developmental biology. Includes new chapters on Evolution & Development, Gut Development, & Growth and Aging. Contains expanded treatment of mammalian fertilization, the heart and stem cells. Now features a glossary, notated further reading, and key discovery boxes. Illustrated with over 250 detailed, full-color drawings. Accompanied by a dedicated website, featuring animated developmental processes, a photo gallery of selected model organisms, and all art in PowerPoint and jpeg formats (also available to instructors on CD-ROM). An Instructor manual CD-ROM for this title is available. Please contact our Higher Education team at HigherEducation@wiley.com for more information.

Developmental Biology, 10th Ed. + A Student Handbook for Writing in Biology, 4th Ed.

Biophysics

This book explains in simple terms how plants are classified and named.

Principles of Development

This text, now available in FULL COLOR, presents developmental biology as an ongoing process of enquiry, giving students a sense of the ways developmental biologists gain knowledge and see the challenges ahead. The first part of the text focuses on the classical methods of analysis and the stages of embryonic development from gametogenesis to histogenesis. Part Two introduces the genetic and molecular analysis of development. The final part combines classical and modern types of analysis towards the investigation of long standing problems in development. Key experiments are described throughout to reinforce the relationship between scientific models and experimental data.

Developmental Biology, 10th Ed. + Flycycle 2

Essential Developmental Biology is a comprehensive, richly illustrated introduction to all aspects of developmental biology. Written in a clear and accessible style, the third edition of this popular textbook has been expanded and updated. In addition, an accompanying website provides instructional materials for both student and lecturer use, including animated developmental processes, a photo gallery of selected model organisms, and all artwork in downloadable format. With an emphasis throughout on the evidence underpinning the main conclusions, this book is an essential text for both introductory and more advanced courses in developmental biology. Shortlisted for the Society of Biology Book Awards 2013 in the Undergraduate Textbook category. Reviews of the Second Edition: "The second edition is a must have for anyone
interested in development biology. New findings in hot fields such as stem cells, regeneration, and aging should make it attractive to a wide readership. Overall, the book is concise, well structured, and illustrated. I can highly recommend it." —Peter Gruss, Max Planck Society "I have always found Jonathan Slack’s writing thoughtful, provocative, and engaging, and simply fun to read. This effort is no exception. Every student of developmental biology should experience his holistic yet analytical view of the subject." —Margaret Saha, College of William & Mary

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