ins to yellow fever are given their due. Also helpful is the comprehensive index and the "Dosing Regimens" section, which includes recommended drug therapies for exposure to BCN weapons.

The text has a broad scope, organized into five logical sections (Clinical Principles and Practices; Infectious Agents; Biotoxins and Category B and C Agents; Chemical Weapons; and Nuclear and Radiation Syndromes), each composed of chapters surveying more specific examples. Most chapters open with a "clinical vignette" or include a historical incident of note, providing a helpful real-world perspective as to the effects a biological, chemical, or nuclear (BCN) agent may have on the population. Each chapter also contains a brief background of the agent, pathogenesis, means of transmission, a diagnostic checklist of symptoms, and current methods of treatment. Illustrations and photographs are useful for identification of visible symptoms.

In a post 9/11-world, and with events such as North Korea's revelation of nuclear tests, there is a great need for texts like *The Bioterrorism Sourcebook*. Unfortunately, these are few and far between.

The Bioterrorism Sourcebook would be best viewed as an introductory primer in preparing healthcare professionals for a bioterrorist attack. While thorough and informative, this text is just the first step in promoting awareness of BCN agents and readying the community as a whole for potential threats.

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Developmental Biology. *Eighth edition. By Scott F. Gilbert. Massachusetts: Sinauer Associates Inc.; 2006, 751 pp. $114.95 Hardcover.*

Developmental Biology is, from the start, a text geared toward students. Instead of filling a book with dense text that leaves the reader with a headache, Gilbert has adopted a writing style that is easy to follow and does not require a wealth of knowledge to understand. That is, this is a text geared toward undergraduates who have received training in general biology. Graduate and medical students may find some of the topics to be slightly basic, but Gilbert does include discussions of many of the recent developments in the field as well as the methods employed in reaching those new findings. Thus, much of the text would be a worthwhile read even for higher level students looking for a solid introduction to the field of developmental biology that they may have missed as undergraduates.

Everyone should enjoy the vast array of figures presented throughout the text that complement the passages and further create a fantastic integration of the classic topics of developmental biology with some of the more recent studies that corroborate or call for modifications of previous theories. Gilbert takes the time to introduce the reader to some of history's pioneering biologists, which helps provide a unique perspective with which to understand their scientific contributions. After spending close to a quarter of the text explaining the basics of the field (great for undergraduates), Gilbert gives an in-depth description of all of the phases of embryonic development, including descriptions of how cells differentiate and miraculously form organs at the right location — along with descriptions and images of what happens when they don't find the right location. Also included are modern hot topics like stem cells (and their all-important niches), sex determination in the brain (and how many factors beyond the X and Y chromosomes relate to it), and a short description of aging (including an discussion of an interesting medusa that is arguably immortal).

Gilbert devotes the final section of the text to explaining why developmental biology is important to scientists in other fields. Medical students will find the descriptions of Down syndrome, disease states involving pleiotropy, the effects of teratogens, the potential uses of adult stem cells, and the issue of prenatal diagnosis of genetic diseases to

be particularly interesting. Ecologists also will find information geared toward them with descriptions of phenotypic plasticity, including changes in sex due to the environment and even modifications that occur in response to potential predation. Gilbert closes the text by discussing how developmental variation can lead to evolutionary change, addressing the questions of why insects only have six legs (while spiders, shrimp, and most other arthropods have many more) and why chordates have heads.

In all, this text serves as a great introduction to the classical field of developmental biology while introducing the reader to many of the questions that current developmental biologists study. With its conversational writing style and heavy use of images to help explain topics, undergraduates, graduate students, and medical students alike will find *Developmental Biology* to be a quick read by textbook standards. The book's organization — whereby development is explained chronologically — takes the reader on an exciting journal through the stages of life from sperm and egg to, well, immortal medusa.

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Phosphoinositide 3-Kinase signaling pathway: the key to cell proliferation and death. *Edited by Eric W-F Lam. London: Imperial College Press; 2006, 238 pp. $75 Hardcover.*

Phosphoinositide 3-Kinase (PI3K) has emerged in biology as a key regulator of an ever-increasing number of cellular processes. In particular, recent interest in research is devoted to the numerous survival and apoptotic pathways controlled by PI3K and its common downstream targets in relation to cancer biology. An ever-increasing array of kinases, enzymes and transcription factors are activated in response to the simple act of PI3K 3' phosphorylation on the inositol heads of membrane phospholipids. In *Phosphoinositide 3-Kinase signaling pathway*, Lam and co-authors attempt the daunting task of dissecting and synthesizing the current research in PI3K signaling as it relates to cell survival and apoptosis. Up-to-date research is laid out alongside reviews of important signaling pathways, so advanced undergraduates are able to understand it, yet it retains the novelty of current research in the field, particularly relating to FoxO transcription factors, so the experts in the field will find it useful.

Phosphoinositide 3-Kinase signaling pathway outlines the essays in a straightforward and clear manner, beginning with a review on general cell cycle signaling pathways key to PI3K signaling. Next, a thorough description of the PI3K family is given, including known homologs, their domain structures, their tissue distributions, preferred substrates, and cellular activities. The book proceeds to describe key downstream effectors of PI3K signaling, including Akt/PKB, PDK1, and FOXO transcription factors. Lam and co-authors also tend to focus on other components in phospholipid signaling such as phospholipases and phosphoinositide phosphatases. *Phosphoinositide 3-Kinase signaling pathway* describes the effects of PI3K and its targets on cell survival, apoptosis, and other cellular pathways. The authors clearly focus on PI3K's role in cancer-related pathways through Akt/PKD and PDK1. An interesting aspect in the section on PI3K and cancer is a treatment on cancer therapies and inhibitors designed to counteract PI3K-related cancers. Lastly, Lam gives a thorough description of PI3K's role in FoxO transcription factor regulation and its effect on cell cycle and organismal development control.

Phosphoinositide 3-Kinase signaling pathway, while informative on many topics related to PI3K, did not seem to have a cohesive front. The chapters were often full of data from many different experiments, but lacked a given focus or direction. Many authors repeated the same information in different chapters, leading to an uninterest-

Evolutionary Developmental Biology. Evo-devo is a relatively new field focusing on how mechanisms controlling development have changed during evolution. From: Current Topics in Developmental Biology, 2016. Related terms: Nested Gene. Developmental biology This article needs additional citations for verification.Please help improve this article by adding reliable references. Unsourced.Â This article needs additional citations for verification. Please help improve this article by adding reliable references. Unsourced material may be challenged and removed. (July 2007). Developmental biology is the study of the process by which organisms grow and develop.