eukaryotes, and there is evidence that they exist even in slime mold. The complexity and versatility of GPCR biology is apparent if we consider the fact that this signaling pathway evolved almost 1.2 billion years ago. The editors of *G Protein-Coupled Receptors: Structure, Signaling, and Physiology* successfully synthesize decades of research into a well-organized reference textbook.

The layout of this text is one of its best features. The beginning of each chapter provides a concise but detailed list of the individual topics covered and, together with a master list of figures and tables following the table of contents, it enables easy navigation throughout the text. The authors and editors do not attempt to inundate the reader with every known fact about GPCRs, but instead summarize the most current and profound knowledge within the chapters and supplement the information with extensive reference lists.

There is an overarching theme throughout the book of using the GPCR family as a model to demonstrate the implications of basic research on patients and the clinic. As mentioned several times in the text, it is estimated that 30 percent of currently prescribed therapeutics target GPCRs. This is in large part due to novel techniques that allowed details about GPCR structure and function to be discovered, including incorporation of GPCRs into lipoprotein particles for structural analysis, and FRET (fluorescent energy transfer) for activation assays. Many of these techniques and their applications are discussed in the text, and the accompanying figures help illustrate the complex principles. There is a particular focus on the basic theories, limitations, and applications of FRET technology in the context of GPCRs, and the vivid images presented capture the utility and power of this method.

Though there are chapters discussing the role of GPCRs in disease and emerging novel therapeutic targets within this protein family, the strengths of this text would be most appreciated by the structural pharmacologist hoping to gain a comprehensive overview of GPCR biology. The well-outlined chapters balance the abundance and often overwhelming supply of references, while the simple figures and summary tables provide valuable information for the GPCR novice.

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*Harrison's Infectious Diseases.* By Dennis L. Kasper and Anthony S. Fauci. New York: The McGraw-Hill Companies, Inc.; 2010. 1294 pp. US $93.95 Paperback. ISBN: 978-0071702935.

Over the past 100 years, humanity has benefited enormously from improvements in sanitation and the development of vaccines. Increasingly, those of us who grew up in the developed world lack familiarity with previously common diseases such as measles and polio. Unfortunately, these diseases still exist, and air travel makes the risk of outbreaks very real, which forces doctors to remain aware of their symptoms. Many infectious agents, however, provoke a similar range of symptoms that can make it difficult to diagnose a specific disease. In *Harrison's Infectious Diseases*, Kasper and Fauci familiarize readers with a range of diseases, both common and rare, and provide extensive information on the best methodology for diagnosis and treatment.

The book itself is derived from the classic medical text *Harrison's Principles of Internal Medicine*, and it contains all the chapters on infectious diseases that appeared in the 17th edition of the original textbook. More than 100 experts contributed to these chapters, but there is no lack of continuity in quality or organization. The book starts with a brief but sufficient introduction to epidemiology and immunobiology. Next, there is an excellent chapter on immunization regimens in the United States and the principles behind immunization. Given the ongoing, though completely unfounded,
concerns about vaccine safety, it is vital that doctors have a good understanding of how vaccines work so they can assuage patient concerns. The rest of the book is divided into several sections that focus on the inflammatory response, infections in individual organ systems, and infections generated by different kinds of agents: bacteria, viruses, prions, fungi, and protozoa and helminthes. Of particular note is the chapter on health care-associated diseases, which is an important issue due to antibiotic resistance.

Each chapter follows roughly the same format with highlighted boxes focusing on diagnostic and drug treatment approaches. For those students and ambitious doctors who want to test their knowledge, the book ends with a review and self-assessment of more than 100 questions. Professors could easily divide up these questions for testing periodically over the course of a semester or year and/or they can be used to prepare students for medical exams. Almost all the multiple-choice questions are presented as clinical cases.

*Harrison’s Infectious Diseases* is necessarily general, but chapters end with further readings, which is a nice feature for those clinicians who want or need a more in-depth understanding of a particular disease. Both aspiring doctors and current clinicians can benefit from this book. It would also be an excellent supplemental textbook for a graduate or upper-level undergraduate pathology course.

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*Modular Evolution: How Natural Selection Produces Biological Complexity.* By L. Vinicius. Cambridge, UK: Cambridge University Press; 2010. 235 pp. US $48.00 Paperback. ISBN: 978-0521429641.

Evolutionary biology is a fascinating field with a degree of conceptual complexity that is unique among the biological sciences. As such, many biology students may find that discussions of evolutionary biology tend to wax esoteric and become almost philosophical. This can make the details of the discipline seem aimless or wandering to uninitiated readers. Such issues will not be a problem for readers of *Modular Evolution.*

*Modular Evolution* has a refreshingly narrative structure. It begins with fundamental discussions of the nature of evolutionary biology and covers relevant debates from the evolution of multicellularity to the basis of human culture. Each chapter introduction artfully sets the stage, biologically and historically, with the subject discussed in a flowing, chronological fashion. The conclusions generally summarize the material and introduce the reader to the next chapter.

The material is discussed in an engaging fashion with examples that are typically crisp and simple. Moreover, the narrative structure enables the reader to follow the development of ideas, thus facilitating understanding of a concept. Unfortunately, the book could benefit from more diagrams. For example, *Drosophila* embryogenesis is discussed in the context of the evolution of development, but the process of embryogenesis is difficult to envision from a strictly verbal description. In such instances, the book would benefit from illustration. Those diagrams that are included, however, are clear, informative, and well integrated.

The author does not shy away from the nature of biological complexity. Notably, he does not settle for the Biological Unit Concept, which focused on the aggregation of biological units into interdependent “superunits,” but instead presents his own. He defines biological complexity as having a basis in “Schroedinger’s principle of Order from Order,” such that each carrier of modular information produces a disposable phenotype for selection to act upon, which can itself evolve into an information carrier, creating hierarchal levels of information. Based on this, the complexity of an organism should be determined by the number of levels in which information is stored. Organisms with both a genetic and developmental code (multicellular organisms) are more complex