quality for a diverse collection of authors, and many of these authors are well known for their contributions to the body of AIDS research.

Despite this book's high quality, it is an unusually expensive product aimed at a relatively narrow audience. A scientist who is not involved in AIDS issues would be better served by a more general and comprehensive reference. Conversely, any one particular review does not present much new information that cannot be found in the literature. Within the AIDS research community, this volume will serve as a useful reference, but its relevance may be hampered by the speed of AIDS research development.

ROGER J. CHIN
Medical Student
Yale University School of Medicine

STRESS: NEUROBIOLOGY AND NEUROENDOCRINOLOGY. Edited by Marvin R. Brown, George F. Koob, and Catherine Rivier. New York, Marcel Dekker, Inc., 1991. 703 pp. $165.00.

Stress: Neurobiology and Neuroendocrinology is an ambitious attempt to review the latest work in stress research to, state the editors, stimulate "...the development of innovative methods... for further studies in stress biology." The work presents a great deal of data on stress biology, endocrinology, and physiology, and is for the most part a well-written and fully referenced contribution to the field of stress research.

The book, a collection of 29 reviews by biomedical faculty at American institutions, is organized into four main sections: (1) a general overview regarding issues defining and measuring stress; (2) basic central nervous system (CNS) and endocrine biology during stress; (3) discussions of pathophysiology resulting from stress, such as ischemia, gastric ulcers, immune dysfunctions, and psychiatric disorders; and (4) stress management strategies with explanations of how they may work.

Section three, which concerns itself with stress pathophysiology, is perhaps the book's strongest section. Here the authors effectively demonstrate links between stressful events and eventual disease processes and provide critical reviews of their fields. For example, Chapter 3 tackles the role of mental stress in causing myocardial ischemia. The authors persuasively argue for ischemia as the best measurement of cardiac pathology vis-à-vis stress, and reproduce studies of ischemia during mental stress over an array of diagnostic modalities (technetium, echocardiography, PET). They further proceed to explain the possible endothelial pathophysiology in response to acetylcholine, resulting in coronary vasoconstriction and subsequent ischemia. In their summary, the authors lucidly delineate avenues of further research.

Chapter 27 reviews stress-induced immune dysfunction in humans. In this chapter, the author ably points out the gap in current research: although studies exist which show an association between psychological stress and immune changes, and psychological stress and disease, there exists a dearth of studies to demonstrate a clear association among all three. He questions the current assumption of the role of endogenous cortisol in immunosuppression by showing studies in which elevated cortisol during stressful events did not always result in depressed natural killer cell activity. Laudably, the author does not leave the reader to wonder about other
mechanisms of immune suppression and presents studies which demonstrate that the autonomic nervous system may be ultimately responsible.

The book's major missed opportunity is a cohesive chapter which connects the disparate discussions of neurobiology and pathophysiology. Chapter 2, the closest stab at this goal, is clearly written, yet digresses into dozens of areas. Instead, a lucid summary of the basic science chapters which follow, demonstrating stress as an insult to the CNS and the endocrine system, which filters down to other organ systems, would have been highly valuable. Aside from suggestive studies, however, this chapter does not include sufficient evidence to support such a theory. Chapter 29 on "Stress Technology Medicine," another chapter which could demonstrate how various systems interact with one another, spends much of its force explaining the theory of autonomic rhythms and laterality (supported by a collection of one-subject experiments). It leaves the reader disappointed, stating that "the credibility of these sophisticated tools" (fascinating yogi relaxation techniques combining breathing and body position) "comes best through their application" without showing any studies demonstrating stress-reducing effects of these relaxation techniques.

In summary, this book is, for the most part, a well-organized contribution to the field of stress research in its cataloging of the latest findings in one accessible work. Unarguably, much of this information is not easily obtained in the standard medical and scientific texts. This volume can be especially helpful to investigators, working with one particular area of stress biology and physiology, who wish to obtain rapid knowledge of other related fields. It may also be of use to physicians and to health personnel who have a strong desire to grasp the complex science underlying stress and its influence on disease. In many ways, such a work may represent one praiseworthy attempt to gather together the current knowledge of mind's effects and relate it to disparate organ dysfunctions. Yet it is perhaps too much to ask this work to make durable connections between the different research areas and to allow the reader "a look beyond the trees." More to the point, that flaw may be a reflection on this still unmapped and intertwined field of neurobiology and pathophysiology, and further editions on the subject will no doubt strive to achieve just such a goal.

Yuly Kipervarg
Medical Student
Yale University School of Medicine

Cell Communication in Health and Disease. Readings from Scientific American Magazine. Edited by Howard Rasmussen. New York, W.H. Freeman and Company, 1991. 185 pp. $13.95. Paperbound.

Experimental medicine has increasingly focused on questions defined at a molecular level. Successive descriptions of genetic defects correlated with disease promise to revolutionize both the diagnosis and therapy of a wide variety of debilitating illnesses. In the field of signal transduction, the application of molecular genetics provides unparalleled power in identifying new components of the transduction machinery and in understanding their structure/function relationships. The identification of oncogenes as mutated versions of G-proteins is only one dramatic example. With many investigators willing to work exclusively on the molecular aspects of a biological phenomenon, however, the pressing need arises for others willing to integrate these parts into a comprehensive, functional picture.