

of hundreds of years to pertinent works in sociology, cultural history, and anthropology.

Although I think some of Pomata's arguments about the vertical practice of medicine (paternalistic and protective, as exemplified by the Protomedicato) as compared with the horizontal approach (contractual and therefore peer-defined, as exemplified by the agreement for a cure between a patient and a healer) are oversimplified, they are nonetheless well stated and stimulating. As Edmund Pellegrino has pointed out many times in many places, there is no such thing as parity in a supposedly horizontal healer-patient relationship (a fact Pomata eventually acknowledges). Other minor criticisms are the author's scant references to the much-cited fear of poisoning during this time, generalizations that all modern medicine is physician-centered, and her assertion that one of the basic tenets of medical professionalism is that medical practitioners "deserve to be paid because they are licensed members of the profession." Physicians have never sat in their offices and been paid merely for pointing to the sheepskins on their walls. They are paid for the service they provide. Whether that service is cure-defined is a separate criterion for payment. Even smaller quibbles are occasional lapses in the translation of foreign passages in the notes, especially those in Latin, and inelegances of style (repeated use of "basically" and "in any case") that are ungenerously uncorrected by the translators or are editorial lapses. The editing is otherwise very good, as one has come to expect from the Johns Hopkins University Press.

Contracting a Cure is a book that medical legislators, public health administrators, physicians, and historians of medicine would do well to read and reread. Besides, it is so enjoyable that the reader forgets, when looking up from the page every now and then, that he or she has just been living in a different century, or, rather, the same century some 300 years ago.

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MARIHUANA AND MEDICINE

Edited by Gabriel G. Nahas, Kenneth M. Sutin, David J. Harvey, and Stig Agurell, with Nicholas Pace and Robert Cancro.

826 pp., illustrated. Totowa, N.J., Humana Press, 1999. \$125.

ISBN 0-89603-593-X.

THE medical use of marijuana has polarized public opinion, particularly because of its widespread recreational use over the past 30 years. Those in favor of its medical use point to the apparent safety of this ancient and "natural" remedy, the profusion of anecdotal and survey-based evidence of marijuana's effectiveness, and the importance in today's culture of personal choice. This view has been expressed at the ballot box since November 1996 by referendums in several states. Those opposed, troubled by this potential gateway to serious drug abuse, especially among adolescents, regard acceptance of the medical use of marijuana as the camel's nose under the tent, legitimiz-

ing a dangerous relaxation of the nation's "war on drugs." Both sides come from all age groups and levels of society, and both claim their own scientific evidence.

In this rancorous climate of claim and counterclaim, both physicians and policy makers seek rational solutions based on credible evidence. Since 1986, basic science has helped enormously with discoveries of potent cannabinoid agonists; specific cannabinoid receptors and the correlation between their concentration in brain centers and their relevant functions; endogenous or natural substances that act on those receptors; and more recently, specific cannabinoid antagonists. Regrettably, societal concerns have focused attention on drug abuse rather than on the promise of drug development. Hence, a thorough scientific exposition of the medical value of marijuana would be welcome. But this book disappoints.

Marihuana and Medicine, edited by a veteran in the field, New York University's Gabriel Nahas, and his colleagues, stems from the latest (March 1998) of several international conferences held since 1974. In the preface, Nahas states that "today the verdict of marihuana in medicine is finally at hand." In the last of 71 chapters by 109 authors, he concludes that "marihuana or THC [Δ^9 -tetrahydrocannabinol] do not qualify as safe and effective medications . . . [and] have no place in modern pharmacopeia," despite the interesting potential of cannabinoids described by several of the clinicians who have contributed to the book. Nahas does acknowledge that the "invaluable information" provided by the experimental use of THC and its synthetic analogues has facilitated "a better understanding of membrane signal transduction." It can be anticipated that there will be much to mine from research when its emphasis and funding shift from drug abuse to evidence-based medical use.

Structurally, this book is flawed by its dependence on annoyingly brief contributions by so many of the authorities who participated in the two-day conference. Figures that were projected as slides and embellished by the conference's speakers often lack legends to assist the reader. Instead of critical editing, there are summary reports of previous conferences and reprinted articles, which add mostly outmoded data or opinions. Unbridled redundancy abounds, whether it concerns the history of marijuana use and regulation or the receptor story. Acronyms go unexplained, the index is incomplete, and there are scores of typographic errors. Organized progression through the chapters is frequently interrupted, too often by material unrelated to the medical use of marijuana.

Some parts of the book are valuable. Though scattered and repetitious, the historical information is interesting. The reference lists after each chapter are extraordinarily complete, with many citations from the 1970s. The new chapters begin with helpful abstracts. Parts of the book should appeal to pharmacologists, particularly as a source of references. Molecular neurobiologists will generally be less gratified. Yet there are recognized, contemporary scientists among the contributors, including Mechoulam, Devane, and Glaser (on pharmacology), Pertwee (on receptors and their ligands), Gardner and Hiroi (on the activation of dopamine receptors to induce genes involved in brain reward systems), and Sutin and Nahas (on the interactions of THC with other drugs and anesthetics). Although conclusions about immune suppression by cannabinoids seem

premature, if not unfounded, the chapters on the **pathophysiology** of the cardiovascular and pulmonary systems offer useful material. Paria and colleagues offer original data suggesting that activation of embryonic CB1 receptors by natural and synthetic ligands interferes with **preimplantation** development in embryonic mice. Parker and Zuckerman convincingly demonstrate that marijuana use during pregnancy is associated with impaired fetal growth and lower birth weight and that those effects are magnified by **unhealthy lifestyles**.

Perhaps the book's most compact and yet comprehensive chapter — and guide to potential drug development — is provided by Lichtman and Martin, who focus on the **receptor-mediated** analgesic properties of THC and **endogenous** anandamide in animals and humans. They suggest **coadministration** of these compounds with opioids to escape the side effects of either agent and even **pharmaceutical** manipulation of the endogenous cannabinoid system to relieve pain. In a subsequent chapter, Clark describes an experiment in which habitual users smoked marijuana during the second of three months' surveillance in a research facility. Both the subjects' ability to discriminate among thermal stimuli of different intensities and the response bias (which reflects attitudinal and emotional factors that influence reporting bias, or responses based on expectation) were measured. Marijuana at low doses appeared to create both better discrimination among graded stimuli and **hyperalgesia**. Higher doses had no effect on the amount of pain experienced. Such sensory decision-theory models recognize the emotional side of pain and are recommended for **future** studies of analgesia. And analgesia has commercial value.

Practicing physicians will gain most from six well-referenced chapters that address therapy for specific symptoms. Green dismisses cannabinoids for the treatment of **glaucoma**, despite their effectiveness in reducing intraocular pressure through aqueous outflow pathways; perhaps **receptor-independent** substances that are structurally related, such as HU211, will be proved neuroprotective. Gralla elaborates on one of the two approved uses of dronabinol (a synthetic THC): control of chemotherapy-induced nausea and vomiting, for which very effective serotonin-receptor antagonists with dexamethasone are superior therapy. He also forecasts the potential for neurokinin-receptor antagonists. Consroe summarizes the rationale for their use and the largely anecdotal evidence that cannabinoids relieve muscle spasticity in multiple sclerosis and spinal cord injury.

In dealing with therapy for the cachexia associated with AIDS, the other approved use of cannabinoids, Tirnpone and colleagues carefully compare dronabinol and **megestrol** acetate therapy; the latter in high doses was critical for any weight gain, even though both drugs increased appetite in placebo-controlled trials. Negrete and Gill warn of troubling negative effects of marijuana in persons with schizophrenia.

The book ends with brief attention to public policy and with repetition of the editors' conclusion that THC "deregulates the physiological signaling role of a receptor protein to which it binds and of the membrane bilipid layer which it permeates. This deregulation of membrane signaling will result in discordant and partial therapeutic effects coupled with unwanted side effects." One can agree that, to date, drugs more effective than **cannabinoids** have

prevailed. But the editors' drug-control bias obscures the promise of drug development.

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FISHMAN'S PULMONARY DISEASES AND DISORDERS

Third edition. Edited by Alfred P. Fishman, with Jack A. Elias, Jay A. Fishman, Michael A. Grippi, Larry R. Kaiser, and Robert M. Senior. 2777 pp. in two volumes, illustrated. New York, McGraw-Hill, 1998. \$295. ISBN 0-07-91 1167-X.

THE end of the 20th century marks a pivotal point in the development of respiratory medicine. There has been an explosive growth in knowledge relevant to the field and the application of bioengineering, molecular biology, and microbiology to improve the treatment of acute and chronic disorders of the respiratory system. Some innovations, such as the discovery of the cystic fibrosis gene and progress in the field of adult respiratory distress syndrome, were so important that *Fishman's Pulmonary Diseases and Disorders* had to be updated between editions. This information is incorporated in the third edition, which was edited by an editorial board as a way of acknowledging the diversity of pulmonary medicine.

This edition of *Fishman's* is well illustrated with high-quality color reproductions and radiographs. The 2777-page, two-volume textbook offers contributions from almost 250 authors. The arrangement of the contents differs from that of the second edition and now consists of 182 chapters, which are organized into 24 sections and 17 parts. A review of the history of respiratory medicine, lung architecture, and pulmonary physiology during various states such as exercise and pregnancy serves as a prelude to the general description of lung immunology, injury, and repair. The coverage of lung diseases and disorders includes chronic obstructive pulmonary disease, interstitial and inflammatory diseases, and neoplasms and infections.

We tried to reach a balanced judgment of this book by reviewing topics we felt quite comfortable with as well as some fields far from our areas of expertise. There is a high risk that depth and detail will suffer if a single book attempts to cover the entire field of respiratory medicine. However, in this case we think that the authors and editors have found a good balance. Among the more than 600 pages dedicated to infectious diseases of the lung, we found many refreshingly new chapters, such as the one on bacterial colonization, which contains most of the important information on this subject. Concepts about the causes of pneumonia are now presented in a single chapter, which makes the subject apparent to physicians who are not routinely involved with this disease. A stronger commitment to the use of one of the methods of diagnosing pneumonia would have been desirable, but we understand that issues currently under debate should not be discussed to a great extent in a textbook.

Sleep and sleep disorders are now presented in a fo-