cognition. Although he provides non-biased information throughout, especially in referencing both promising and unfavorable results from animal and clinical studies, Iversen admits to supporting the use of THC as human medicine; readers should keep this in mind in order to recognize potential bias.

In what appears to be a misplaced chapter, located toward the end of the book rather than at the beginning, Iversen describes the recreational use of marijuana according to its prevalence, methods of consumption, and reported effects. His aim may have been to prevent readers from immediately forming incorrect notions about the potential medical uses of marijuana; however, some of the section becomes redundant, duplicating information documented in previous chapters. Regardless of his intentions, Iversen presents up-to-date data concerning the patterns of recreational use worldwide, leaving the reader to contemplate its role in recreational, medicinal, and religious arenas.

Overall, this riveting book far exceeds Iversen's goal of merely informing the general public about the numerous scientific advances that have contributed to recent research on the topic of marijuana use. Through a comprehensive, well-balanced review of the powerful drug, he urges readers to consider the breadth of scientific knowledge before choosing one side of the polarized debate. Given its inexpensive purchase price and fascinating, easy-to-read, stand-alone chapters, we would undoubtedly recommend this review to interested students, cannabis users, researchers, and political figures alike. According to Iversen, it remains unclear how laws will change in the future, but "the pace of change toward a grudging acceptance of cannabis as part of modern life may ultimately prove irresistible." After reading this review, we'll let you be the judge of that.

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Rabies, 2nd ed, Alan C. Jackson, William H. Wunner (Eds.), Academic Press, NY, NY (2007), ISBN 978-0-12-369366-2, $130.00

Rabies is a zoonotic disease which can infect humans to cause a unique and frightening disease, almost always fatal. It is an ancient scourge, its effects chronicled in texts several thousand years ago, with the first description in the Eshnunna code, in the 23rd century BC. Despite our current sophistication on the pathogenesis of the disease, the main advances are in palliative treatment. While rare in Europe and North America, it is relatively common in the tropics and results in considerable mortality in the developing world. Much is known about this fascinating virus and is well covered in the book under review. This is the second edition of Rabies, a comprehensive treatise on the disease, edited by Alan Jackson and William Wunner, both experts in the field.

The book begins with a history of rabies, how it was viewed in the ancient world and how it was treated. The story of Pasteur's invention of a vaccine is well told and is enlivened by inclusion of Emil Roux's protocol for the series of injections as well as reproductions of contemporary newspaper clippings. The importance of this prophylactic treatment is well illustrated by a table showing the number of doses dispensed in different cities worldwide when it became available. The next two chapters deal with the basic virology of rabies, and its molecular epidemiology, such as how a panel of monoclonal antibodies can show relatedness of viral strains or how sequencing by PCR can be used to construct family trees. More conventional epidemiology and epizootiology are covered in the next few chapters; a fascinating catalog of different variants in different hosts in different parts of the world causing different illnesses, with the dynamics of the disease affected by population densities of the various hosts. There is considerable discussion of newly discovered rabies-like viruses, the Mokola virus, Duvenhage virus, Lagos bat virus and European bat virus types 1 and 2, which have some antigens that cross react with conventional rabies virus, but not others, and can cause a rabies-like illness in humans. These viruses are important since an area may be declared rabies-free when this is not quite the case, and because the usual rabies vaccine may not protect against them. Their presence exclusively in bats suggests that rabies is originally a bat virus and mammals are "accidental reservoirs."

The clinical disease in animals and humans is discussed next, with separate chapters on the clinical manifestations, pathogenesis, pathology and diagnostic evaluation. Fascinating new information can be found here, including the first case of human rabies with survival through the full clinical illness, and not previously vaccinated, as well as the intriguing observation that spotted hyenas in the Serengeti can carry rabies virus with essentially no harm to the host for years, even with detection of rabies RNA in the brain. The serology of rabies, an important assessment of the presence of the virus, is dealt with in a clinical chapter which is followed by a chapter on the immunology of the disease. This latter is of particular importance since there appears to be significant interaction between the virus and the immune system.

The most effective protection from rabies to those with high risk exposures is that of vaccination, and the next part of the book deals with this. Vaccination is not only given before and after exposures in humans (discussed with details and photographic illustrations), but can also be used to stop the spread of animal rabies. The oral rabies vaccine packaged in attractive baits has been used in Ontario and Texas to stop rabies epizootics in raccoons and coyotes. The success of these programs is based on earlier European experience, as detailed in the book. New generation vaccines, which are cheaper, easier to use and have a broader spectrum of protection are needed, and strategies for getting them are reviewed.

The control of rabies in the wild is the key to preventing rabies in humans, and the last part of the book describes some of the methods used and some of the considerations in optimizing them. Thus, simply hunting or culling large numbers of bats or dogs has not been very successful for various reasons. However, selective placement of baits in carefully chosen areas has. This is reminiscent of the campaign for the elimination of smallpox, where the obvious strategy of vaccinating everyone proved impossible, but the selective vaccination of the contacts of a single (quarantined) patient proved to eliminate the disease from a particular place.

Finally, the book ends in a discussion of what the outstanding questions rabies poses are, and how they can be answered. The book is well written, with considerable detail. It is the standard text. The editors are to be thanked for their clearly considerable efforts in editing and producing this text.

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