knowledge has accumulated concerning these compounds, and this book represents the state of the art of this knowledge.

One criticism that can usually be levelled against proceedings of symposia is that it is not worth collating the secondary publications, often having been published elsewhere, into a hardcover book. Component articles or chapters are often out of date, and do not form a coherent textbook. None of this obtains in the present volume. The articles are current, contain new or recently published information, and together give a comprehensive background in the field of excitatory amino acids, which cannot yet be obtained in any other book, since this information has not yet filtered into classical textbooks.

The book is organized into an introductory overview, and sections on receptor classification, receptor interaction, neurotransmitter identification and localization, clinical implications, subcortical synaptic transmitters and cortical synaptic transmitters. These divisions are logical and organize the book well. Information derived from cell culture and tissue slice preparations forms the bulk of the book, which might therefore be thought to interest only neurophysiologists. However, as emphasized by a section on clinical implications, this is a field which the practising neurologist and neurosurgeon can no longer afford to ignore. The reason for this is that these compounds are often capable of killing neurons, which has given rise to their appelation "excitotoxins" as coined by Olney, when considered in this context of neurotoxicity.

It is impossible to mention individually all the tantalizing concepts and tidbits of information in the various chapters. Suffice it to say that this book is a must for any neurophysiologist working in the field of excitatory amino acids, and also for any clinical neuroscientist who wishes to have a grasp of the vast and burgeoning literature of excitatory amino acids in a current volume.

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ELECTROMYOGRAPHY FOR EXPERIMENTALISTS. By Gerald E. Loeb and Carl Gans. Published by University of Chicago Press, 1986. 373 pages.

Gerry Loeb and Carl Gans are scientists interested in the architecture and neural control of muscles in various animal species. Amongst their studies the authors have tackled the difficult task of recording from neurons, peripheral nerves and muscles in awake behaving animals in order to correlate neural activity with the changes in muscle length and tension. In the course of these studies they have developed enormous expertise in recording electrical and mechanical events and it is this practical experience that they share in this book. The book is in two sections. The first covers the theoretical background. This includes chapters on electricity and electronics, how muscles generate electrical signals and how these depend on muscle's overall architecture. There are chapters on recording electrodes, the principles of material science relevant to such electrodes and how to decide where the recorded signals are coming from. The second half of the book is entirely practical and includes chapters on the design and construction of electrodes (with such basic information as good soldering techniques), choosing and using amplifiers, tape recorders and stimulators and dealing with noise and artifact. There are also sections on mechanical recording, surgical and histological techniques and even one on preparing illustrations.

All of this is written in a practical and down to earth style like the explanations of a sympathetic supervisor anxious to get information across to a new student. The book is clearly directed at neuroscientists working in an animal neurophysiology lab and doubtless all research students in this situation will thank the authors for this "hands on guide". Even experienced scientists in this field will find something new and useful in this book. For clinical neurophysiologists the theoretical sections on electricity, muscle physiology, amplifiers, artifact, and noise are all relevant and this information is not readily available elsewhere. The practical advice on designing electrodes, the use of electronic equipment and on understanding and reducing noise would be invaluable to clinical neurophysiologists embarking on research projects.

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Books Received

ADVANCES IN HEADACHE RESEARCH SERIES: Current Problems in Neurology: 4. Edited by F. Clifford Rose. Published by John Libbey and Company. 280 pages. £28

CELLULAR AND MOLECULAR BASIS OF CHOLINERGIC FUNCTION. Edited by M.J. Dowall and J.N. Hawthorne. Published by VCH Publishers. 941 pages.

CONSCIOUSNESS, AWARENESS AND PAIN IN GENERAL ANAESTHESIA. M. Rosen and J.N. Lunn. Published by Butterworths. 195 pages. $46Cdn approx.

CORRELATIVE MICROSCOPY IN BIOLOGY-INSTRUMENTATION AND METHODS. Edited by M.A. Hayat. Published by Harcourt Brace Jovanovich (Academic Press) 437 pages. $116Cdn approx.

FROM MESSAGE TO MIND: DIRECTIONS IN DEVELOPMENTAL NEUROBIOLOGY. Edited by Stephen S. Easter, Jr., Kate F. Barald, Bruce M. Carlson. Published by Sinauer Associates, Inc. 368 pages.

INFECTIONS OF THE NERVOUS SYSTEM. Edited by Peter G.E. Kennedy and Richard T. Johnson. Published by Butterworths. 284 pages. $60Cdn approx.

INTEGRATIVE NEUROENDOCRINOLOGY: MOLECULAR, CELLULAR AND CLINICAL ASPECTS. Edited by S.M. McCann, R.I. Weiner. Published by Karger. 244 pages. $160Cdn approx.

NEUROLINGUISTICS AND LINGUISTIC APHASIOLOGY: AN INTRODUCTION. By David Caplan. Published by Cam-