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Book reviews

Michell, R.H.; Putney, J.W. (eds.): Inositol Lipids on Cellular Signaling in Series Current Communications in Molecular Biology. 1st edn. Cold Spring Harbor Laboratory: Cold Spring Harbor 1987. i-xi, 1-165 pp., figs. and tabs.

This latest publication in the series Current Communications in Molecular Biology, put out by the Cold Spring Harbor Laboratory, is the result of a small group of researchers brought together to consider some key aspects of the role of inositol lipids in transmembrane signalling. The meeting was held in April 1987 and set out to focus on the following questions: (a) Is only phosphatidylinositol 4,5-bisphosphate hydrolyzed in response to receptor stimulation? (b) How is coupling between receptors and phospholipase achieved? (c) How are inositol polyphosphates interconverted? (d) How is Ca^{2+} concentration increased by inositol phosphates? (e) How does inositol-mediated signalling regulate cell growth?

A perusal of the 28 papers presented in the book shows that the meeting did address itself in depth to these questions. The book provides the best approaches to the answers to these questions so far available. It is fitting that R. H. Michell was one of the organizers for this gathering and a co-editor of this book, as he was the first (in 1975) to show that inositol lipid hydrolysis somehow gives rise to an increase in cytosolic Ca^{2+}, and therefore he set the stage for this entire field of research. Naturally the book deals only with animal cells, as the advances in inositol lipid metabolism in plants are a long way behind those being made in the animal field. However, the book makes good reading and perhaps will inspire a plant biochemist to take up the challenge of cellular signalling by inositol lipids, if indeed it does exist in plant cells.

J. F. Jackson, Glen Osmond

Srivastava, J. P.; Porceddu, E.; Acevedo, E.; Varma, S. (eds.): Drought Tolerance in Winter Cereals. Proceedings of an International Workshop, October 27–31 1985, Capri, Italy. Chichester, New York: Wiley 1987. 387 pp. Hard bound £ 25.50.

No one doubts that availability of water is a major constraint of food production in the world. Approximately one-third of the wheat-producing areas in developing countries are in semi-arid, rainfed regions (Byerlee and Winkelmann 1980) where productivity is not only poor, but also very unstable. Under the pressure of increasing populations, the development of more stable and highly productive agricultural systems in these regions has a high research priority in various disciplines of the agricultural sciences. The breeding of drought-tolerant cultivars is one of the more direct ways to achieve this.

An international symposium that focussed especially on this topic was held in Capri, Italy in October 1985 by the joint organization of the International Center for Agricultural Research in the Dry Areas (ICARDA) and the National Research Council of Italy (CNR). The objectives of this symposium were to integrate knowledge in agroclimatology and crop physiology in order to develop more efficient methods for breeding of drought-tolerant cultivars of wheat and barley. Accordingly, the book, which reflects the proceedings of the symposium, consists of the following four sections: Section I deals with the role of agroclimatology and of agroecological models in crop improvement. Section II describes the efficiency of current breeding methods and possibilities of new approaches. Section III deals with 'Physiological Research for Drought Avoidance and Tolerance and its Implication in Breeding Programs', and Section IV is on 'Plant Characteristics Required for Improved Performance in Moisture-limiting Environments'.

In this book, 29 topics relating to the four sections are presented by research workers from different countries. Some of the topics are location-specific case studies, while others are rather general aspects of crop-water relations. Only a few new ideas or concepts relating to the identification of important physiological traits in drought tolerance and avoidance and to their utilization in breeding are presented. Despite this, this book on a whole can stimulate further studies on crop-water relations and on their application to breeding. This book can also be recommended as a review that deals with the complexity of drought tolerance and avoidance.

T. Horie, Kyoto

Announcements

Second Symposium on Genetic Engineering of Animals, June 25–28, 1989, Cornell University, Ithaca/NY, USA

The Cornell University Biotechnology Program is pleased to announce that the Second Symposium on Genetic Engineering of Animals will be held June 25–28, 1989 at Cornell University in Ithaca/NY. This symposium will review the major developments in this rapidly progressing field since the inaugural symposium which was held in Davis/CA in 1985. The focus of this symposium will be the recent technical advances in genetic engineering as they apply primarily to animals of agricultural significance.

For *further information* and detailed registration forms please contact:

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Registration deadline: April 30, 1989