

Matthews, S. (ed.): Advances in Research and Technology of Seeds, Part 10. PUDOC, Wageningen, The Netherlands 1987. 74 pp

The penultimate issue of the series edited by the International Seed Testing Association contains three contributions. M. Perl reviews the biochemical aspects of germination and maturation (seen the intention of the series, it is not surprising that the advances contributed by investigations on weed seeds, eg. *Agrostemma githago*, are not included). A. Boyd considers technological aspects of seed processing (or seed conditioning in American terms). Strangely enough, grading and pickling are not included. The final contribution, by Arne Wood, on the organization and legislative background to seed quality control in the marketing of seeds within and between countries, contains a short chapter which is interesting to breeders: it is on the effects of developments in plant breeding on seed quality control. It is evident that the breeding of hybrids and the introduction of legal protection for new cultivars of many crops is a special challenge for institutions involved in seed testing. The introduction of legal protection for new improved varieties has generated the expectation that seed quality control agencies will cooperate with breeders. The Federation of International Seed Trade (FIS) has published the "FIS Arbitration Procedure Rules for the International Seed Trade, 1979" which may be a help in protecting seed breeders from fraud.

H. F. Linskens, Nijmegen

Goodridge, K. G.; Hanson, R. W.: Metabolic Regulation: Application of Recombinant DNA Techniques. Annals of the New York Academy of Sciences, Vol. 478. New York Academy of Sciences, New York, N.Y. 1986. 320 pp

The phenomena involved in the regulation of the flux of carbon through metabolic pathways are still technical barriers to a clearer understanding of the regulatory processes. Many constraints make it difficult to verify the mechanisms responsible for coordinating the metabolic responses between tissues. However, recombinant DNA technology has made a breakthrough possible: it is now possible to introduce the gene responsible into cellular processes. Although this approach is still in its formative stage, it provides a powerful weapon in the study of metabolic regulation. The proceedings of the conference held by the NY Academy in 1985 reviews major advances in hormonal regulation and differentiation of metabolism, the role of cAMP in regulation, structure-function relationships in metabolically important proteins, as well as the expression and function of foreign cells in culture and in intact animals. Some of the new techniques described that combine the application of recombinant DNA technology with existing techniques of animal genetics and somatic cell genetics, result in even more powerful analytical approaches.

H. F. Linskens, Nijmegen

Bernal, J. E.: Human Immunogenetics – Principles and Clinical Applications. London, Philadelphia: Taylor & Francis 1986. 217 pp., 39 figs., 26 tabs. Soft bound £ 12.00.

"This introductory text will meet the needs of students, clinicians and researchers by covering immunology and

genetics . . .". The author accomplishes this aim with his book in a striking manner. After an introductory chapter on the general aspects of the human immune system, the molecular structures, biochemistry and genetic controls of immunoglobulin molecules, the HLA- and complement system and of the T- and B-cell mediated immune response is clearly described in subsequent chapters. Both recent advances of recombinant DNA technology and results from classical methods in genetics (like population studies) are discussed according to the basic concepts in the development and the expression of the immune system.

Disorders of T- and B-cell metabolism, of the complement system and of phagocytosis are dealt with in the second part. Thereby, aspects of clinical situations, diagnosis and genetics of these disorders are clearly presented. The problems of transplantation, and the association of different diseases with the HLA- or ABO-system are discussed in other chapters.

The last part of the book deals with the chromosomal location of genes which are involved in the expression of the immune response and with the association of chromosomal aberrations and immuno defects. Short appendices on the clinical symptoms of immune diseases and the methods of immunological diagnosis, and an extensive glossary complete this book, which will be especially interesting to students and clinicians.

L. Petruschka, Greifswald

Botchan, M.; Grodzicker, T.; Sharp P. A. (eds.): DNA Tumor Viruses: Control of Gene Expression and Replication. Cancer Cells Cold Spring Harbor Laboratory, Vol. 4. Cold Spring Harbor Laboratory 1986. 620 pp, many figs. Soft bound \$ 75.00.

"DNA Tumor Viruses: Control of Gene Expression and Replication" is the fourth volume of "Cancer Cells" and was published after the third Cold Spring Harbor Meeting on cancer cells in September 1985 (the other three are: vol. 1, "The Transformed Phenotype"; vol. 2, "Oncogenes and Viral Genes"; vol. 3, "Growth Factors and Transformation"). The articles presented in this volume reflect the latest, and very exciting advances in molecular biology and biochemistry of Simian virus 40, polyomavirus, adenovirus, papillomavirus, herpes simplex virus, and the Epstein-Barr virus. They encompass RNA transcription and the interaction of proteins with promoter and enhancer elements; RNA processing and control of translation; transformation, transforming proteins, and replication regulations. The roles of viral trans-activating regulatory proteins such as Simian virus 40 T antigen, adenovirus E1A proteins, herpes virus immediate early proteins, and the bovine papillomavirus E2 protein are emphasized. Special introductory articles written by several leading investigators cover the extensive history, current developments, and possible future of research into these DNA tumor viruses. Readers of this book will not only update their knowledge of molecular biology and biochemistry of these DNA tumor viruses, but also benefit from the resulting overviews in the field.

Li Yi Qin, Beijing

Announcement

Australian Plant Breeding Conference

The 9th Australian Plant Breeding Conference will take place between June 27 and July 1, 1988, at Wagga Wagga, NSW (Australia). It will provide a forum for the exchange and discussion of technical information and viewpoints relevant to plant improvement.

The themes of the conference will be: Plant Breeding

Objectives; Genetic Resources and Variability; Selection at the Cell and Handling; Public, Private and International Plant Improvement; Achievements and Benefits from Plant Breeding.

The organization committee is chaired by Dr. E.C. Wolfe; further information and second circular from the secretary – Dr. Barbara Read, NSW Department of Agriculture, Agricultural Research Institute, Private Mail Bag, Wagga Wagga 2650, Australia.