
 Book Reviews

M. Szekely: From DNA to Protein. The Transfer of Genetic Information.

London: The Macmillan press Ltd 1980. 284 pp., 94 figs., 13 tabs. Soft bound £ 9.95

An easy-to-read, up-to-date book about the way in which the living cell transfers genetic information from DNA to protein. Incorporating all the recent advances in molecular biology, this volume is ideal for the advanced undergraduate and postgraduate student, as well as research workers wishing to keep an eye on the general trends in modern biochemistry, biophysics and genetics.

The book deals with the subject in three sections, beginning with a comprehensive explanation of our present knowledge of genetic material. This incorporates chapters dealing with the structure of DNA and the structure and organization of genes, together with chapters on DNA replication. In keeping with the rules laid down in the Central Dogma, the next section of the book concerns itself with the transfer of information from DNA to RNA. This process of transcription in both prokaryotes and eukaryotes is dealt with in considerable detail. The section also contains a wealth of detail on the structure, primary and secondary, of messenger RNA, and on nucleic acid sequence determination. The fingerprinting technique of Sanger for sequencing RNA is clearly described with the aid of photographs of electrophoresis fingerprints, while the even more elegant direct readout method for DNA sequencing by the plusminus technique, again by Sanger, is explained and illustrated in full, together with the Maxam-Gilbert method for double stranded DNA. The third and final section describes the synthesis of proteins, dealing in turn with the site of protein synthesis (the ribosome), the role of transfer RNA

in decoding the message and the mechanism of translation. This section is extremely well illustrated, as indeed it needs to be to give the reader an adequate description of the workings of the complicated machinery necessary for protein synthesis in the cell.

The book is rounded off with a comprehensive index, while references are given at the end of each chapter. This book makes ideal reading for those who have an interest in new trends and new results in molecular biology; the author has been careful to include all the most recent information and techniques, while doing so in an immensely readable style.

J.F. Jackson, Glen Osmond

John Innes Institute: Seventieth Annual Report 1979. Norfolk: J. Innes Institute 1980.

127 pp., 28 figs., £ 3.00

The John Innes Institute is funded by the Agricultural Research Council and has a loose association with the University of East Anglia. I always read with constantly increasing interest the yearly report of this famous breeding institute. In addition to presenting the usual technical information on staff, facilities and publications, the report provides the reader with condensed up-to-date information on the institute's activities regarding pea, strawberry, cherry, Anemone, Asparagus and Antirrhinum breeding, as well as on such research activities as plant tissue culture, *Streptomyces*, *Rhizobium*, *Agrobacterium*, macoplasmas, spiroplasmas, viruses, nucleic acids, cell wall structure and plant protoplasts. The report in question stands apart from the earlier ones by the inclusion of the obituary for the former director, Professor Roy Markham, F.R.S., who died after a long illness. This was written by S.R. Elsdon.

H.F. Linskens, Nijmegen