Roche Institute of Molecular Biology. Camera-ready copies were employed but care has been taken to ensure a higher quality of paper for particular figures.

The book is divided into five main sections entitled (i) Gene regulation in prokaryotes, (ii) gene regulation in eukaryotes, (iii) mRNA splicing and regulation of translation, (iv) control of stable RNA synthesis, and (v) role of oncogene proteins in normal and abnormal cellular responses. The latter four sections pertain to eukaryotes. In toto, there are twenty-nine research papers and two discussion summaries which report other talks presented at the meeting. I note that all but nine of the contributors listed were from the States.

The general flavour is transcriptional control and transcript splicing, with particular emphasis on eukaryotic systems. In general, the papers fit well into the individual sections (except for one paper in section iv and two in section v), leading to an excellently cohensive volume.

I should like to conclude with a suggestion for future symposium volumes: ring-bind double-sided photocopies of participants' manuscripts. This would alleviate the delay in publishing. Moreover, the resultant low cost would permit acquisition by both libraries and interested parties, thereby permitting wider access to the material reported – surely the ultimate reasons for publication.

Robert E. Glass

Symposium in Nucleic Acids Technology

Nucleic Acids Symposium Series No. 19

Edited by H. Hayatsu

IRL Press; Oxford, Washington, 1988

207 pages. £30.00, $60.00

For the price, the presentation of this Symposium leaves a bit to be desired. The technology of nucleic acids is undoubtedly a major area of present scientific progress, however at first glance the volume is reminiscent of an early issue of *Nucleic Acids Research* also published by IRL Press. Even in current issues of that journal, trouble is taken to subdivide the contents pages as well as the individual contributions according to specific subject areas. No such effort is made with this volume making it irritatingly difficult to locate items of particular interest. Another point of concern relates to the considerable variability in individual presentations. For example, some are little more than abstract, which is really not very helpful. One paper, grandioscly entitled 'The Molecular Biology of the Immune Response', runs to less than two pages! More thoughtful editorial control is required. The present result gives the appearance of papers collected together in the order they were received by the organizers of the Symposium. It might have been helpful to see how the actual day-by-day programme was constructed.

Despite these rather carping criticisms a key question of course is whether this volume would be a worthwhile purchase. Despite a lack of international flavour – only two of the fifty four contributions are not from Japanese laboratories – there are some very useful papers. Moreover the volume has appeared within four months of the meeting. Whilst it is not possible in this space to list all the various contributions some idea of the scope of the volume can nevertheless be given.

There are papers on novel oligonucleotide synthetic methods; the use of novel nucleotides and other strategies for in vitro mutagenesis; new chromatographic techniques for separation of nucleic acids and their constituents; messenger RNA isolation and separation by two-dimensional techniques; immunological characterisation of

DNA structure; 'universal probes' for DNA hybridisation; unidirectional deletion of DNA with Bal31 nuclease using 2-*O*-Me RNA-DNA chimeric adaptors; sequence-specific cleavage of RNA using chimeric DNA splits and RNase H. At the biological end, as well as details of new methods for constructing chimeric genes and novel expression vectors a new transfection technique is presented which involves polybrene, and which is a hundred-fold more effective than with DNA-calcium phosphate and does not require carrier DNA.

On balance this volume would certainly be a useful buy for the research laboratory, but probably of less value as a personal purchase. There are certainly some useful technological advances described but some of these may well appear elsewhere in the fullness of time.

R.H. Burdon

Micro-algal Biotechnology

Edited by M.A. Borowitzka and L.J. Borowitzka

Cambridge University Press; Cambridge, 1988

x + 477 pages. £45.00, $79.50

This book reflects an increasing awareness of the potential of microalgae, including the prokaryotic cyanobacteria, for biotechnological exploitation. It aims to provide a comprehensive introduction to existing and potential applications, with emphasis on processing, engineering and genetic engineering. Three sections of in all 16 chapters, mostly single-author, deal with: the algae; products and uses of micro-algae; and the technology of micro-algal mass culture.

The first section deals with five algae of major importance in the context of biotechnology; *Chlorella*, *Dunaliella*, *Scenedesmus*, *Spirulina* and *Porphyridium*, with the sixth chapter encompassing the species of lesser importance. A general pattern of dealing in turn with taxonomy, morphology, ecology, cell composition and culture is followed. The coverage is indeed comprehensive and little of significance to 1986 seems to have been omitted. The inclusion of half-tone plates of the organisms would have been appropriate, but were presumably precluded by publication costs, balanced against potential sales. Elsewhere, labelling of figures of production facilities would sometimes have helped correlation to the descriptions in accompanying legends, but the presentation otherwise is good with few errors.

The second section on products and uses covers vitamins and fine chemicals, lipids and hydrocarbons, in the first category and aquaculture, agriculture, food consumption, and waste-water treatment in the latter. The order of presentation of the six chapters would have benefitted from rearrangement. Again, the treatment is comprehensive, but with concentration seemingly on kilogramme production targets the value of micro-algae as sources of a number of very high-value products (e.g. restriction endonucleases) seems to have been overlooked. Another omission is a discussion of the potential of immobilized cells, where some interesting work deserves mention. Throughout the book, appropriately, there are intriguing insights into economic considerations; here, a potential wholesale value of *Porphyridium* phycoerythrin, which is estimated at \$50 kg^{-1}, contrasts markedly with a current selling price of \$90 mg^{-1} for the purified protein!

The final section of 4 chapters, opened by a discussion of growth limitation, goes on to the practicalities of mass culture and harvesting, and the potential of genetic engineering; again all sound stuff if maybe not the material of best-sellers.

My overall view of the book was favourable. It is authoritative and constitutes a valuable reference text. Acquisition of a personal copy will