

Krumphanzl, V.; Sikyta, B.; Vaněk, Z (eds.): Overproduction of microbial products. London New York: Academic Press 1982. xvi + 731 pp., several figs., several tabs. Hard bound £ 39.50/ \$ 75,-.

This FEMS Symposium on the Overproduction of Microbial Products was held at Charles University, Hradec Králová, August 1981. The purpose of this meeting was to discuss recent achievements in the fields of microbial physiology, genetics and biotechnology in relation to overproduction of important metabolites by microbes. Genetic improvement of prokaryotic and eucaryotic producer strains was widely discussed during this symposium. Today many different methods exist to facilitate overproduction, ranging from the most modern elements of recombinant DNA-technology to random mutation and screening procedures. Auxotrophic mutations were found to increase bacitracin production in a high producer strain of *Bacillus licheniformis*. Techniques resulting in the improvement of β -Lactam production by eucaryotics include the use of the parasexual cycle and protoplast fusion in *Aspergillus* and *Penicillium*. The possibilities of recombinant DNA-technology to improve industrially important bacteria and fungi appear numerous and received considerable attention during this symposium. Important lectures concerning this field were given by Hinnen (Development of a yeast expression system for cloned genes), Lomovskaja (Multi-copy plasmids for gene amplification in *Streptomyces*) and Cape (Expression of interferon in *E. coli*).

R. Borriss, Gatersleben

Busch H (ed): The cell nucleus, vol. VIII. nuclear particles, part A. New York London: Academic Press 1981. 401 pp., several figs., several tabs.

This, the eighth volume in the series "The Cell Nucleus", continues this all-embracing series into the area of ribonucleo-

protein structures of the nucleus. It contains ten chapters, beginning with one on nascent RNA transcripts and then localization of RNA structures within the nucleus. Following this is an interesting chapter on perichromatin granules. There is discussion on the possibility that the granules may be "carrier" elements from the chromatin to the nucleoplasmic spaces, and that they may be involved in processing of nascent nuclear RNA. The isolation of nuclei from a variety of cells (animal, plant, fungi) is dealt with in a very practical and informative manner in a chapter dealing with transcription in isolated nuclei. The difficulties encountered with algal and plant cells are outlined.

The remaining half of the book comprises six chapters on the isolation, structure and processing of ribonucleoprotein. The chapter on isolation and structure of large heterogeneous nuclear RNA (hn RNA) is especially dealt with in great detail, with clear descriptions of the two classes of hn RNA and their units, which provide an explanation of some of the difficulties encountered in their isolation. This is followed by a chapter on low molecular weight nuclear ribonucleoprotein particles and then an extensive section dealing with the structure of the U-rich nucleolar sn RNA. Six major species of U-rich RNA are described, including nucleotide sequences and illustrations of "fingerprint" autoradiographs. The function of this RNA is not at all clear at present and the authors point out that the time is now ripe for investigation of associated enzymes and controls of their activities.

The book is completed with chapters on the maturation of the low molecular weight RNA species, hn RNA protein complexes, and human antibodies to RNA-containing particles. References are to be found at the end of each chapter, while an extensive index is given at the end of the volume. A valuable addition to any scientific library, this volume reviews very well the processing of pre-messenger and preribosomal RNA.

J. F. Jackson, Glen Osmond