very few copies will end up as the battered reagent-stained source books for whole laboratories, as some other volumes have. On the other hand the strength of this book lies in the large number of approaches it brings together. Almost anyone who works with neuropeptides could browse through this book and find something of interest, perhaps even the inspiration for a new line of investigation.

D.C. Parish

Meiotic Inhibition – Molecular Control of Meiosis

Progress in Clinical and Biological Research, Vol. 267

Edited by Florence P. Heseltine and Neal L. First

Alan R. Liss; New York, 1988

401 pages. $78.00

Meiosis is an intriguing biological process. Apart from being the only occasion where haploid cells are produced it is also a major event in the generation of genetic diversity. Moreover studies on meiosis are generally linked to a wider interest in fertility and with as many as one in six of the population suffering some level of clinically recognised infertility it warrants the type of research described in this volume.

The meiotic process in males and females is quite different. In males as soon as sexual maturity is reached there is a continuous production of large numbers of haploid sperm for most of the adult life. In contrast the number of mature haploid eggs released by a female is very limited and the meiotic process is separated into two parts with the egg held in meiotic prophase for many years prior to completion and release. This book concentrates mainly on the maturing oocyte with four contributions towards the end dealing with some aspects of spermatogenesis. For those not familiar with the nature of oocyte maturation the first chapter in this book is essential where some general rules are defined and some comparative studies between humans and other mammals are made. The more detailed papers which follow this are largely concerned with how the meiotic process is reactivated in the oocyte.

Two basic mechanisms are considered. Either a substance is produced to act in a positive way in restarting the meiotic process or there is release from control by a meiotic inhibitor. cAMP appears to have an important role in this process and Dekel gives a clear account of the way in which the follicular cells supply cAMP to the arrested egg to maintain meiotic arrest. When this supply is stopped meiosis may resume. Hormones play a key role in this process and this is summarised in a paper by Behrman and co-workers. The actual consequences of high cAMP levels on the biochemistry are discussed by Schultz with respect to changes in the activity of protein kinase C, and this is extended in a chapter considering the possible role of Mullerian inhibiting substance. In the only paper not dealing with mammals, Mitchell describes the work in yeast on how the entry of cells into meiosis is governed and concludes that at least some of the mechanisms may be conserved.

Spermatogenesis provides the biologist with a beautifully synchronised pathway of cellular differentiation. In this book two papers deal with the possible role of oncogenes in this process. One is a description of where and when a battery of these genes are expressed with particular reference to abl and mos which seem to have specific roles. The second is discussing the action of G proteins which are found in all mammalian sperm and of which the ras gene product is a member. Hecht provides a clear idea of how molecular biology can be used to dissect spermatogenesis and describes what is known of two genes expressed abundantly after meiosis.

In summary, this book will be important reading to anyone interested in germ cell function. However I hope it achieves a wider readership than those already in the field as it provides an insight into some fascinating problems of interest to all biologists.

Keith Dudley

Biology of Normal Proliferating Cells In Vitro: Relevance for In Vivo Aging

Interdisciplinary Topics in Gerontology, Vol. 23

By A. Macieira-Coelho

Karger; Basel, 1988

vi + 218 pages. £77.00, $114.00, DM 240.00

During the course of the last decade there has been a marked increase in public awareness of ageing, primarily induced by growing numbers of old people in the community. This has led to the expectation that medical scientists should, in some generally unspecified manner, 'do something' about ageing and, more specifically, age-related diseases. While it would appear churlish to deny the general public the fulfilment of their wishes in this matter, it must be noted that as yet our knowledge of ageing effectively is minimal. Hence there is no sound scientific rationale on which therapeutic intervention in diseases of ageing can be based. The present volume represents an attempt to summarize experimental evidence on ageing gained from cell culture techniques, the discipline of cytogerontology.

There is a brief but useful introductory discussion on justification for the employment of cell culture systems in the study of ageing. The book then covers a number of subject areas central to the application of such systems to gerontological research. These include the relationship between the behaviour of cells in culture and pathophysiology of the donor individuals, mechanisms held to be responsible for the differential growth potential of somatic cells with ageing in vitro, dynamics of the loss of proliferative potential during cell senescence, and parameters of the cell cycle during age-dependent growth decline. Finally, the author considers the nature of individual cells in culture and how factors such as the anatomical site of the explant and ante- or postnatal status of the donor may influence the interpretation of results.

By current norms in gerontology the book is somewhat unusual, being the product of a single author. This has resulted in a more coherent and critical approach to the subject than often is the case with multi-authored volumes. Occasionally the text is somewhat stilted, and there are a number of printer's errors and examples of references cited but missing from the list of references. However these are minor quibbles. The overall quality of production is good, with generous and appropriate use of figures and tables. The end product is a useful, balanced survey of cytogerontology which can be strongly recommended as a reference source both to gerontologists and those wishing to embark on a career in the subject.

A.H. Bittles

volume, and cellular macromolecular contents in cell cultures from old and young human donors (aging in vivo) as well as in early and late passage cell cultures ("aging" in vitro). Materials and methods. Cell Culture.Â For a comparison with in vitro cellular "aging" the results of determinations performed on early and late passage WI-38 cell cultures are presented in Fig. 4B.Â variety of tissues with normal aging (23, 24). However, since we measured migration distance and not the number of cells that migrated from the explant, we feel that our results reflect a real difference in migration ability and not merely a secon-dary effect of decreased cellularity. A 2-fold difference in ex-plant cellularity, if present, could lead to a culture from an older. In vitro CFSE proliferation assay Proliferation of splenic CD8 T cells upon FV3 infection has been recently characterized in vivo using a BrdU incorporation Peritoneal leukocytes (PLs) from outbred frogs infected once for 6 method and fluorescence activated cell sorting (FACS) (18). In 3 weeks with 3x10 pfu FV3 (primed) or uninfected (unprimed) this review, we describe in detail these methods, adapted for were isolated by peritoneal lavage (2), washed with APBS and Xenopus, to monitor the proliferating responses to virus of infected with FV3 at 1 multiplicity of infection (MOI) for 24 splenocy Rubrics: Cells Aging Cell proliferation Cell culture Cell Division Cell Survival Cells, Cultured.Â ISBN: 3786111685 Author: Scho? nberger, Hans, 1916- Publication & Distribution: Berlin . G. Mann, (c)1978. An Appraisal of minerals availability for 34 commodities compiled by staff, Bureau of Mines. by compiled by staff, Bureau of Mines. Publication & Distribution: [Pittsburgh, Pa.] .