J. Steroid Biochem. Molec. Biol. Vol. 42, No. 3/4, pp. 435–437, 1992
Pergamon Press Ltd. Printed in Great Britain

BOOK REVIEWS

Genes and Genomes. By MAXINE SINGER and PAUL BERG. Published 1990 by University Science Books, 20 Edgehill Road, Mill Valley, CA 94941, U.S.A. No. of pages: 930. ISBN: 0-935702-17-2. Price as of July 1990: $52.00.

Genes and Genomes is a graduate level text and reference book that discusses the molecular structures and mechanisms underlying the utilization of genetic information by complex organisms. Written by two world-renowned researchers in molecular biology, this book captures the sense of discovery, understanding, and anticipation that has followed the recombinant DNA breakthrough. Over 700 two-colour, original illustrations complement the text and communicate genetic concepts clearly and precisely.

There are four main sections covering the following topics:

—Part I: Molecular basis of heredity: an overview
  —the genetic molecules;
  —replication, maintenance, and modification of the genome;
  —the logic and machinery of gene expression.
—Part II: The recombinant DNA breakthrough
  —the tools: enzymes;
  —the tools: host–vector systems;
  —the means: constructing, cloning, and selecting recombinant DNA;
  —the products: characterizing and manipulating recombinants.
—Part III: The molecular anatomy, expression, and regulation of eukaryotic genes
  —the structure and regulated expression of eukaryotic genes;
  —the molecular anatomy of eukaryotic genomes;
  —genomic rearrangements.
—Part IV: Understanding and manipulating biological systems

This book would be very useful for people working in the fields of biochemistry, biology, biophysics, molecular biology and physiology.

The Biologic Role of Dehydroepiandrosterone (DHEA). Edited by M. KALIMI and W. REGELSON. Published 1990 by Walter de Gruyter, Berlin, New York. No. of pages: 450. ISBN: 3-11-012243-X. Price: DM 340 (hardcover).

Dehydroepiandrosterone (DHEA) is a native steroid that declines with progressive age, and is found in the brain in concentrations equal to that in the adrenal cortex. There is a growing interest in DHEAs clinical place in atherosclerosis, hypertension, memory disorders, fat mobilization, and cancer prevention treatment. DHEA acts as a precursor steroid and/or a 'buffer hormone' that alters state dependency by interacting with other hormones. The text of this book explores DHEA's broad biologic action and its potential relevance to clinical disease. The following main chapters are included:

—Dehydroepiandrosterone: the precursor steroid.
—The biological significance of dehydroepiandrosterone.
—Dehydroepiandrosterone (DHEA) and its sulfate (DHEAS) as neural facilitators: effects on brain tissue in culture and on memory in young and old mice. A cyclic GMP hypothesis of action of DHEA and DHEAS in the nervous system and other tissues.
—Serum steroid levels in two old men with Alzheimer's disease before, during and after oral administration of dehydroepiandrosterone. Pregnenolone synthesis may become rate-limiting in aging.
—Cognitive effects of DHEA replacement therapy.
—Oral DHEA in multiple sclerosis. Results of a Phase One, open study.
—DHEA in multiple sclerosis: positive effects on the fatigue syndrome in a non-randomized study.
—Reduced plasma DHEA concentrations in HIV infection and Alzheimer's disease.
—Immune response facilitation and resistance to virus and bacterial infections with DHEA.
—DHEA and thymus integrity in the mouse.
—Effect of DHEA in lymphocytes and macrophages infected with human immunodeficiency viruses.
—DHEA and diabetic syndromes in mice.
—Regulation of DHEA metabolism by insulin, and metabolic effects of DHEA in man.
—The role of DHEA in obesity.
—DHEA and mitochondrial respiration.
—Effect of DHEA on rodent liver microsomal, mitochondrial, and peroxisomal proteins.
—The epidemiology of DHEAS with particular reference to cardiovascular disease: the Rancho Bernardo study.
—DHEA effects on cholesterol and lipoproteins.
—Digitalis-like materials and DHEA sulfate.
—Glucose-6-phosphate dehydrogenase and the relation of DHEA to carcinogenesis.
—Modulation of liver carcinogenesis by DHEA.
—DHEA alters the morphology and phospholipid content of cultured human endothelial cells.