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BOOK REVIEW

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M. Oehmichen, S. Ritz-Timme, C. Meissner (2002) Aging: morphological, biochemical, molecular and social aspects

Research in legal medicine, vol. 27. Schmidt-Römhild, Lübeck, 440 pp, ISBN 3-7950-0324-5

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The authors of this interesting book deal with the theme of human aging from morphological, biochemical, molecular and social aspects. They were invited by the editors M. Oehmichen and S.-K. Saternus to present their papers on the occasion of the 1st Kiel-Lübeck Workshop of Legal Medicine in December 2000. This book is the result of the papers presented at this workshop and the discussions thereafter.

M. Oehmichen, S. Ritz-Timme and C. Meissner introduce the process of aging and describe the socioepidemiological and biological principles of aging.

The basic principles of aging are dealt with by various authors. D. von Engelhardt reviews aging and old age in the perspective of the history of medicine and culture as well as its ethical aspects. Further papers are dealing with the evolutionary aspects of aging (I. Schröder), the aging process and its major risk factors for disease and death (D. Harman), demographic and biological implications of human aging (U. Wittwer-Backofen), and research on elderly persons who are not able to consent (H.-J. Kaatsch).

The second chapter of the book deals with the neuropathological aspects of human aging. Here the papers are about the problems of programmed cell death in neurodegenerative disorders (K.A. Jellinger, C. Stadelmann), age-related and disease-related changes of the human cerebral cortex and its implications for forensic medicine (H. Braak et al.), the molecular mechanisms in Alzheimer's disease (H. Kimura et al.), the old controversy concerning aluminium and Alzheimer's (E. Reusche), and the blood plasma proteins in Alzheimer's disease patients (I. Ueno and A. Tsugita).

Very interesting papers are presented in the third chapter concerning protein biochemistry and aging: the role of collagen in the aging of bone (A.J. Bailey and L. Knott), the accumulation of non-enzymatic glycation products on proteins and DNA (T. Kislinger et al.), the age-dependent changes in proteoglycans of the extracellular matrix (W. Völker), and protein modifications and aging by S. Ritz-Timme.

The fourth chapter deals with the role of molecular biology and aging. Here the authors refer to aging, longevity, determination and the telomere replicometer (L. Hayflick), the molecular basis of aging (R. Parwaresch and G. Krupp), poly(ADP-ribosyl)ation, genomic instability and mammalian life span (A. Bürkle), apoptosis in the aging skin (K. Muradian and D.O. Schachtschabel), and a very interesting paper on aging and mitochondria (C. Meissner et al.).

Two papers are about the immunology of aging: G. Pawelec describes the impact of immunosenescence on disease and aging and discusses the role of telomere attrition, telomerase and oxidative damage as factors controlling human T lymphocyte clonal expansion ability, and P. Gabriel and L. Rink refer to alterations in the cytokine system of the elderly.

The final chapter is discussing the forensic aspects of aging: the very important theme on abuse and neglect of elderly people in residential care (T. Görgen), the epidemiology of crimes (homicide abuse and sexual violence) against the elderly in Milano (C. Cattaneo et al.) and Hamburg (C. Mohsenian et al.), and the problem of pressure sores among the elderly in nursing homes (A. Heinemann et al.).

The book is interesting and presents the present state of the research on the aging process in humans. As the papers in the different chapters have been written by various authors, reading the book is not always easy, but the presentations are excellent and give a good basis for further research.

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