AGING AND HEALTH A SYSTEMS BIOLOGY PERSPECTIVE INTERDISCIPLINARY TOPICS IN GERONTOLOGY AND GERIATRICS VOL FILE PDF

Aging and Health - A Systems Biology Perspective

Aging is a major risk factor for chronic diseases, which in turn can provide information about the aging of a biological system. This publication serves as an introduction to systems biology and its application to biological aging. Key pathways and processes that impinge on aging are reviewed, and how they contribute to health and disease during aging is discussed. The evolution of this situation is analyzed, and the consequences for the study of genetic effects on aging are presented. Epigenetic programming of aging, as a continuation of development, creates an interface between the genome and the environment. New research into the gut microbiome describes how this interface may operate in practice with marked consequences for a variety of disorders. This analysis is bolstered by a view of the aging organism as a whole, with conclusions about the mechanisms underlying resilience of the organism to change, and is expanded with a discussion of circadian rhythms in aging. Finally, the book presents an outlook for the development of interventions to delay or to reverse the features of aging. The publication is recommended to students, researchers as well as professionals dealing with public health and public policy related to an aging society.

Frailty in Aging

Frailty represents an important challenge for aging populations. As a concept it is full of 'known unknowns' such as which mechanisms lead to frailty and how it is best managed. In order to examine these circumstances, the new science of understanding and managing frailty requires an appropriate framing of the problem. This publication investigates the biology and management of frailty and its social aspects. It considers these and related questions: How can we recognize frailty? How does an understanding of frailty increase our comprehension of the aging process? What are its implications for health care systems, including primary care, hospitals and rehabilitation? How will a growing number of frail older adults affect society more generally? The book focuses on frailty as a state of vulnerability, which is related to aging, but which can occur across the life course, and aims to improve the life of frail people and those around them. The book is highly recommended to researchers in aging, health science researchers, health care professionals and anyone interested in the understanding of the aging process.

Annual Review of Gerontology and Geriatrics, Volume 21, 2001

Presenting the latest research in the biology of aging, this volume addresses important theoretical issues focusing on the basis for why humans live as long as they do. Expert authors combine three general paradigms of aging research: demographic studies, evolutionary studies, and studies of biological mechanisms. Topics explored include: Why does aging occur? Cellular aging Models in aging research Modern approaches to the mechanisms of aging The genetics of behavioral aging

Health Aspects of Aging

This second edition of Health Aspects of Aging serves to broaden the perspectives of societal change due to increases in life expectancy, as well as the effects of age-related changes as they impinge upon the provision of health care for older persons. The growing presence of a large number of persons aged 65 and older worldwide has propelled a re-evaluation of the nature of life that is protracted to 100 years and beyond. The emphasis in this second edition is to replace the prevailing problem approach to aging by a problem-solving approach. The problem-solving approach of this volume has allowed for the incorporation of the concept of new social structures and the development of intervention and prevention strategies along with new technologies. Such new products and health care measures include those that are deliberately aimed to offset debilities due to normal age changes, the onslaught of diseases, incongruous environments, and altered social states. Such a multi-disciplinary perspective underscores the fact that aging permeates not only biological systems, but clinical medicine, economics, ethics, and the very fabric of society. The chapters in this volume address these issues from the standpoints of diverse disciplines and professional positions. Since biological changes are primary issues, the aging process is largely described from the perspective of biological changes related to age and to particular dysfunctions. The environmental features and the potential introduction of technological interventions are interspersed within chapters, as well as finding primary focus in particular chapters. The maturity of the technology described in the chapters varies, from devices and systems that are nearly ready to be marketed to concepts and prototypes that are still in the design and developmental stages in the laboratory. The relationship between the provision of appropriate health care and the responsible utilization of technologies as described in this volume will serve to enhance the nature of life extension.

Annual Review of Gerontology and Geriatrics, Volume 30, 2010

A must-have professional reference for researchers and educators in psychology, sociology, anthropology, public health, genetics, medicine, and the biological sciences, this issue of the Annual Review of Gerontology and Geriatrics discusses how complex biological, behavioral, and social systems interact to create and impact health. This knowledge is essential to maintaining positive health outcomes over the life span and across a variety of populations and settings. With contributions by leading world scientists, this trusted annual volume reviews the current literature and presents examples of how biological factors underlie behavioral factors to impact health in later life. It also offers methods for examining these complex systems of biology and behavior, and explores how social scientists use this information in their research. Key Topics: Genetic and environmental contributions to Alzheimer's disease and age-associated memory changes Vascular depression, including cardiovascular implications for mental health The impact of spirituality on health Family comorbidity and the family context as a source of health Stress and coping Exercise and oxidative damage

Aging

Aging inspired a large number of theories trying to rationalize the aging process common to all living beings. In this publication the most important environmental and intrinsic mechanisms involved in the aging process and in its pathological consequences are reviewed. Furthermore theoretical and experimental evidence of the most important theoretical elements based on Darwinian evolution, cellular aging, role of cell membranes, free radicals and oxidative processes, receptor-mediated reactions, the extracellular matrix and immune functions as well as the most important environmental and intrinsic mechanisms involved in the aging process and in its pathological consequences are discussed. These presentations of theories and related experimental facts give a global overview of up to date concepts of the biology of the aging process and are of essential reading not only for specialists in this field but also for practitioners of scientific, medical, social and experimental sciences.

Encyclopedia of Biomedical Gerontology

Encyclopedia of Biomedical Gerontology, Three Volume Set presents a wide range of topics, ranging from what happens in the body during aging, the reasons and mechanisms relating to those age-related changes,

and their clinical, psychological and social modulators and determinants. The book covers the biological and medical aspects of gerontology within the general framework of the biological basis of assessing age, biological mechanisms of aging, age-related changes in biological systems, human age-related diseases, the biomedical practicality and impracticality of interventions, and finally, the ethics of intervention. Provides a 'one-stop' resource to information written by world-leading scholars in the field of biomedical gerontology Fills a critical gap of information in a field that has seen significant progress in the last 10 years

Aging Research - Methodological Issues

This is the second edition of a well received book that reviews classical epidemiological and clinical research designs, with a specific focus on aging. Chapters cover basic topics like the scientific method, ethics, and the consequences of certain exclusion criteria. The work also includes a look at clinical concepts like multimorbidity, frailty and functionality. New material includes chapters such as geroscience, health systems research, big data and data mining, financing and future of aging research. The authors reveal the issues and challenges for researchers of age and aging, and also consider, from basic to clinical, and from clinical to public policies of social and health care. The focus on aging is what gives this book its valuable perspective on research methodology. All authors have considerable experience in aging, geriatrics or gerontology, and each chapter includes both a theoretical framework and practical examples of studies in aging. Readers will discover study designs that are reviewed for basic structure, main flaws and advantages, and are analyzed for specific conditions and variables regarding aging. This text is suited to both health care professionals caring for older adults, and researchers who are new to research in aging. It is relevant across the disciplines, including medicine, psychology, social sciences and dentistry, and it supports learning with graphs and figures.

Health, Illness, and Optimal Aging

Uniquely bridging a gap in the gerontology literature between the biological and psychosocial aspects of aging, this interdisciplinary text provides key updates on an abundance of cutting-edge research; expands information on diversity issues in aging; and examines in great depth the physiology of aging, theories of biological aging, and methodological issues. Instructors will also welcome the availability of an Instructor's Manual and PowerPoint slides. Written for upper-level undergraduate and graduate students, and invigorated by the addition of new coauthors, the third edition integrates findings in biology, psychology, and the social sciences to provide comprehensive, multidisciplinary coverage of the aging process. Included is key information on age-related changes and disease-related processes, the demography of the aging population worldwide, theories of aging, and ways to promote optimal aging. From a psychosocial perspective, the book examines mental health, stress and coping, spirituality, and caregiving in later years. Also included is crucial information on longitudinal design and statistics as they relate to research on aging, promising new trends in gerontechnology and Green Houses, and information on health promotion programs. Real-life examples throughout the text help students to understand practical applications of the material. New to the Third Edition: Abundant new cutting-edge research on biological and psychosocial aspects of aging Expands information on diversity issues Updated theories of biological aging: microRNA, proteasomes, and gut microsomes Psychology of aging: How variability in responses to stress affects health and mortality Aging and public policy: How the recent recession has affected poverty rates resulting in increases in mortality among poor, middle-aged Whites Gerontechnology: The \"Internet of things,\" assistive devices, and the potential of robots Instructor's Manual and PowerPoint slides Key Features: Examines age-related changes, disease-related processes, theories of aging, and ways to promote optimal aging Encompasses mental health, stress and coping, spirituality, and caregiving in later years Provides information on aging-related longitudinal design and statistics Covers promising new trends such as gerontechnology and Green Houses

Annual Review of Gerontology and Geriatrics, Volume 29, 2009

It is increasingly recognized that an individual's experience of old age is fundamentally influenced by their

earlier life experiences. This volume of the Annual Review of Gerontology and Geriatrics begins with an overview of the theoretical underpinnings of both the Life Span and the Life Course perspectives on health disparities in aging populations, examining them in the context of a changing structure of society. This volume focuses on morbidities in general as well as specific morbidities such as diabetes, cardiovascular disease and hypertension, giving special attention to life-time influences on cognition and functional abilities. Finally, this new volume addresses broader policy issues with relation to Life Span and Life Course perspectives on aging. Key Features: Addresses an important topic of increasing relevance. Addresses the issue of disparities from genes to geography Presents traditional and emerging scientific perspectives\"

Molecular and Cellular Gerontology

This work covers a number of relevant aspects of the molecular and cellular biology of ageing, a timely general topic highlighted by the United Nations' having declared 1999 the Year of the Elderly. The papers published here represent a wide range of complementary research areas: molecular and cellular aspects; theories of ageing; molecular basis of the loss of homeostatic maintenance mechanisms; lower and higher model organisms including transgenic animal models; the genetics of human longevity; clinical and molecular aspects of age-related diseases; and integrated systems like brain and immune system aging. It is hoped that the additions to knowledge of the molecular mechanisms of ageing provided by this volume may ultimately lead to the prevention of age-related diseases.

Topics in Biomedical Gerontology

This book presents a collection of articles on various aspects of current research on aging. These include model systems, cellular, biochemical and molecular aspects of experimental aging research, as well as selected intervention studies on age-related diseases. Aging is a global challenge to human society. Children are always in a hurry to become adults, while adults produce offspring and add to the gene pool. However, after adulthood or the attainment of reproductive maturity, all physiological parameters of the living organism start to undergo the aging process. Old age sets in slowly but surely, and usually continues for a prolonged period. If vigor and vitality are the main advantages of adulthood, old age offers the rewards of experience and maturity. Biologists ask questions such as: Why do we age? How do we become old? Is it possible to slow down, postpone or even prevent aging? In turn, medical experts ask: What are the diseases associated with old age? Are there medicines that can help affected elderly patients? In fact both groups are asking themselves how can we add more health to old age. Healthy aging is the dream of every individual. But to achieve this, it is fundamental that we first understand the cellular, biochemical and molecular basis of the aging process in mammalian cells, tissues and intact living organisms, which can serve as experimental model systems in Biomedical Gerontology. Once the biology of aging is understood at the genetic and molecular levels, interventional approaches to aging and its associated diseases may be easier to plan and implement at the preclinical level.

Genetics and Ageing

Aging, Place, and Health: A Global Perspective examines the interplay of biological, social, and environmental factors affecting the health and well-being of aging individuals, their families, and communities. With a strong interdisciplinary focus, this book provides a clear, coherent structure to address the diversity of topics in this increasingly vital field. The second edition maintains the ecological approach using the same framework as in the first edition. The ecological model serves as a template for the organization of the book. The new edition provides a more global focus and introduces new topics such as the impact of technology. This edition also introduces a new co-editor as well as specific chapters prepared by leading experts in the field.

Aging, Place, and Health

An international monthly lifestyle journal from Writers' Kalam.

The Holistic Pine: Volume 1, Issue 2

The power of the gerontological imagination -- Causality -- Life course analysis -- Multifaceted change -- Heterogeneity -- Accumulation process -- Ageism -- The gerontological imagination at work in scientific communities

Medical and Health Care Books and Serials in Print

Includes subject section, name section, and 1968-1970, technical reports.

The Gerontological Imagination

The authors undertake the difficult task of assembling an objective and holistic picture of human aging, including the physical aspects of aging, chronic disease and health promotion in the later years, for students and professionals.

Subject Guide to Books in Print

Translational Autoimmunity: Treatment of Autoimmune Diseases, Volume Two in the Translational Immunology series, focuses on advances in therapeutic modalities in autoimmune diseases. Efficacy and safety of not only the current biologic therapies, but also novel drug targets are discussed. Therapeutic targeting of B regulatory cells, T regulatory cells, as well as the immunomodulation effects of nanoparticles and organisms are also covered, along with our understanding and future challenges of prognostic significance of treatments in autoimmune diseases. Covers the clinical aspects and treatment of autoimmunite diseases Meets the needs of basic scientists, clinicians and translational scientists and industry partners Mentions each and every key concept after background is drawn Supported by a systematic appraisal of the most recent evidence Helps students at all academic levels, but is also applicable to scientists who work with autoimmunity

Medical Books and Serials in Print, 1979

First multi-year cumulation covers six years: 1965-70.

Current Catalog

This authoritative handbook covers all aspects of immunosenescence, with contributions from experts in the research and clinical areas. It examines methods and models for studying immunosenescence; genetics; mechanisms including receptors and signal transduction; clinical relevance in disease states including infections, autoimmunity, cancer, metabolic syndrome, neurodegenerative diseases, frailty and osteoporosis; and much more.

Medical Books and Serials in Print

As the baby boom generation ages, the number of older adults continues to increase at a dramatic rate. This trend has created a need for well-educated professionals in the rapidly expanding fields of psychology, social work, health care, education, public administration and policy, and human services. Because of this, the growth of courses in gerontology has created a demand for appropriate textbooks, particularly at the graduate level. Gerontology: An Interdisciplinary Perspective provides a thorough and broad-based survey of the current knowledge base and is the first gerontology text aimed at the graduate level. The authors of each

chapter are leading experts in their respective fields. Topics covered include: theory; methodology; physiological processes; health; culture and ethnicity; dying and bereavement; basic cognitive processes; intellectual abilities; personality; assessment; mental health and intervention; caregiving; work, retirement and leisure; competency and nursing homes; and public policy issues. Each chapter reflects current trends and emerging issues, as well as a firm grounding in previous research and theory, and includes review questions and a list of additional references. The interdisciplinary nature of the text clearly reflects the state of the field and emphasizes the need to take a broader view of age-related phenomena. Ideal for master's level students in gerontology, psychology, sociology, nursing, geriatrics, and related disciplines, Gerontology: An Interdisciplinary Perspective can also serve as a core text in appropriate advanced undergraduate courses.

Health, Illness, and Optimal Aging

Many infectious diseases are more frequent and are associated with high morbidity and mortality in older adults. Vaccination is the most efficient strategy to prevent infections, and older adults are an important target population for vaccination in order to promote health in this age group. Age-related changes in the immune system as well as other factors, such as comorbidities, obesity or frailty, influence vaccine-induced immune responses in old age. Awareness that vaccines developed for children might not be optimal for adults, and particularly for the older population, has only arisen in the recent past. Vaccination against influenza, pneumococcal disease, and herpes zoster is specifically recommended for older adults in many countries, and various strategies have been pursued in order to optimize these vaccines. However, there are still many pathogens, which severely affect the older population, but for which no vaccines are currently available. Extensive research and development are ongoing to further improve existing vaccines and to design novel vaccines in order to provide protection for this vulnerable age group. In order to exploit the full protective potential of vaccines it is essential to improve vaccine uptake and overcome vaccine hesitancy by providing information and education to stakeholders, health care professionals, and the general public. This book is relevant for researchers working on age-related changes in the immune system or on vaccine development, for health care professionals treating older patients, and for the stakeholders and decision makers involved in vaccination recommendations and implementation.

Subject Guide to Children's Books in Print 1997

This book provides sufficient background for students who do not have any knowledge of psychology without watering down the concepts or terminology. It features breadth of coverage, an inter-disciplinary viewpoint, and extensive applications from a variety of disciplines.

Translational Autoimmunity, Volume 2

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