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Dementia, Diabetes, and Hypertension: Is There a Unified Theory through a Dysregulation of the Ca2+ Homeostasis?
Leandro Bueno Bergantin, PhD (Universidade Federal de São Paulo, Bentham Brand Ambassador, Jardim Brasil, Limeira, Brazil)

In series: Research Progress in Alzheimer’s Disease and Dementia
Publication Date: 02/17/2021
155 pp.
Softcover: 978-1-53619-227-8. $95.00
e-book: 978-1-53619-286-5. $95.00

Dementia, diabetes, and hypertension are considered huge medical problems around the world, costing many millions of dollars to the medical health systems. Curiously, hypertension has been clinically linked with a higher risk for decline of cognition, as shown in dementia patients. In addition, there is a clear clinical association between hypertension and diabetes, reflecting substantial similarities in their etiology. In fact, consistent data support that patients diagnosed with diabetes have shown an increased risk of presenting cognitive dysfunctions, clinical signs of dementia. Considering the cumulative knowledge from the scientific literature, we can now link Ca2+ signals dysregulations as an upstream issue for hypertension, diabetes and other inflammatory processes, and dementia. Regarding therapeutics, hypertensive patients have been classically treated with Ca2+ channel blockers (CCBs), medicines whose mechanism of action consists in reducing the influx of Ca2+ into the cells. Intriguingly, many clinical reports have been demonstrating off-label effects for CCBs. In hypertensive patients treated with CCBs, it can be observed a lower incidence of dementia such as Alzheimer’s disease. The possible mechanism of action could be attributed to a restoration of the Ca2+ homeostasis. In addition, in hypertensive patients treated with CCBs, it can be also observed an improvement of diabetes status such as glycemic control. A possible mechanism of action could be due to a restoration of insulin secretion, then achieving glycemic control, and a reduction of the pancreatic β-cell apoptosis. Thus, this book puts together fundamental concepts, and current therapies to treat dementia, hypertension, and diabetes, including novel therapeutics coming from the pharmacological manipulation of Ca2+/cAMP signalling. Finally, this book compiles more than 300 references from the scientific literature, including data of high evidence such as meta-analysis and systematic reviews, and discusses pharmaceuticals already approved and clinically safe, e.g., CCBs, then allowing sustained increments in the life quality of age-related patients.

Anthropometry: Types, Uses and Applications
Sébastien Legrand

In series: Human Anatomy and Physiology
Publication Date: 02/17/2021
120 pp.
Softcover: 978-1-53619-269-8. $82.00
e-book: 978-1-53619-293-3. $82.00

In Anthropometry: Types, Uses and Applications, the science of anthropometry, which deals with measurements of human size, shape and proportion, is examined in the context of obesity and overweight, common problems in developed countries and developing countries alike. An estimated 39% of the world’s adult population were overweight and 13% were obese over the past 3 decades, and these problems can cause diseases like type 2 diabetes mellitus (T2DM), cardiovascular diseases (CVD), and several cancers. While body mass index (BMI) is commonly used as a health risk phenotype, it has several limitations because BMI does not accurately depict different components of body composition and is therefore unable to predict the prognostic effect of individual tissues. Other anthropometric measurements, such as waist circumference (WC), waist to hip ratio (WHR), and waist to height ratio (WHtR) each have their advantages and disadvantages. As such, in Chapter 1, different novel anthropometric parameters and cardiovascular risk factors among obesity adults are compared and evaluated.

Chapter 2 describes a study of children aged 0-12 years conducted in the Middle Senegal River Valley (MISOS) in 1957-1958. This study was based on representative samples of children in urban and rural areas and included measurements of
weight, height, arm circumference, and more. These measurements were compared with American standards and showed an overwhelming anthropometric deficit compared with standards. This study is examined in the context of other studies conducted in the region as well as in connection with economic development in the valley. Chapter 3 describes the various methods of assessing body fat and their application for obese individuals to predict the risk of Coronary Heart Disease (CHD), and Chapter 4 reviews the effect of different modalities of physical exercise on anthropometric measurements and body composition in different populations of older adults.

The Forebrain: Development, Physiology and Functions
Morten F. Thorsen
In series: Human Anatomy and Physiology
Publication Date: 09/18/2020
140 pp.
Softcover: 978-1-53618-407-5. $82.00
e-book: 978-1-53618-426-6. $82.00
In this compilation, the authors provide an overview of neural plate pre-patterning and the concept of the organizing center, describing the contributions of informative cues and signaling pathways involved in zli positioning.
Continuing, The Forebrain: Development, Physiology and Functions aims to show the existence of specific neuronal populations in basal forebrain linking with specific sensory, motor and prefrontal cortices. In addition, the electrophysiological properties of cholinergic pathways that control cortical activity are examined.
In closing, the authors discuss the putative involvement of Reelin signal in motor-related impairments observed in neurological diseases, including lissencephaly, psychiatric disorders and brain injuries.

Physical Fitness and Exercise: An Overview
Quinzia Trevisano
In series: Physical Fitness, Diet and Exercise
Publication Date: 10/02/2020
154 pp.
Softcover: 978-1-53618-521-8. $82.00
e-book: 978-1-53618-595-9. $82.00
This compilation discusses how low levels of physical activity and excess body weight are considered key health risks in modern societies. This may be attributed to changes in the social and built environment, along with technical advances that reduced the requirement for physical activity in daily living.
The authors investigate population aging, the physiology of aging, and the prescription of physical activity for the elderly.
In addition, the effects of oxidative stress on skeletal muscle during high-intense resistance training are studied, particularly focusing on reactive oxygen species.

Perspectives in Aortic Valve Disease: Clinical and Morphological Characteristics, Diagnosis and Treatments
Giovanni Concistrè (Ospedale del Cuore “G. Pasquinucci”, Fondazione Toscana Gabriele Monasterio, Massa, Italy)
In series: Cardiology Research and Clinical Developments
Publication Date: 11/16/2020
426 pp.
Hardcover: 978-1-53618-769-4. $230.00
e-book: 978-1-53618-848-6. $230.00
This book describes the different aspects of aortic valve including comprehensive discussion of the state-of-the-art diagnostic imaging options, disease risk stratification, selection of candidates for valve repair or percutaneous intervention, and most recent
The growing prevalence of valvular heart disease represents a major challenge in terms of short- and long-term management and surveillance. Aortic valve diseases, including aortic stenosis and regurgitation, are among the most frequent of these, while the number of cases of aortic root disease is also on the rise. Aortic valve disease treatment options include valve surgery, valve repair, minimally invasive valve surgery, and percutaneous approaches and all are covered in this volume.


Dario Buccheri, MD (Interventional Cardiology, S. Antonio Abate Hospital, Trapani, Italy), Bernardo Cortese, MD (Cardiac Department, San Carlo Clinic, Milano, Italy) and Alessio Gaetano La Manna, MD (Cardiology Department, CAST, University Hospital, “Policlinico-Vittorio Emanuele”, Catania, Sicily, Italy)

In series: Cardiology Research and Clinical Developments

Publication Date: 11/04/2020

416 pp.

Hardcover: 978-1-53618-249-1. $230.00

e-book: 978-1-53618-675-8. $230.00

The Interventional Cardiology World is a basic but exhaustive manual treating the most diffuse tools and techniques on coronary artery disease invasively managed represented by basic coronary angiography, the most recent functional studies, namely fractional-flow reserve (FFR) and instant-Wave Free ratio (iFR), intravascular ultrasound analysis, optical coherence tomography study but also the newer biodegradable devices and drug-coated balloon application seen by renowned Experts in the matter.

Dentistry: Advances in Research and Future Directions

Dr. Kirti Chawla (Associate Professor, Department of Periodontology, Faculty of Dentistry, Jamia Millia Islamia, New Delhi, India) and Dr. Lata Goyal (Assistant Professor, Department of Dentistry (Periodontology), All India Institute of Medical Sciences (Aiims), Bathinda, Punjab, India)

In series: Dentistry and Oral Sciences

Publication Date: 02/10/2021

300 pp.

Hardcover: 978-1-53619-042-7. $230.00

e-book: 978-1-53619-088-5. $230.00

This book focuses on the future direction of dental research in every discipline. In this context, dental research must be deliverable to society, not just to churn out scientific publications but to truly change protocols applied in the clinic. Most of the topics covered in this book discuss the current trends and future advances in clinical dentistry as well as dental research. The book covers advances in research, future perspectives and challenges faced in different disciplines of dentistry. Various chapters discuss the recent advances in materials, methods and diagnostics, as well as their future implications. The contents review the applications of big data, artificial intelligence and machine learning in various branches of dentistry like orthodontics, prosthodontics, periodontics, pediatric dentistry, endodontics and oral and maxillofacial surgery. With the world moving into the digital age and advancing technology, we have collated the latest developments in the field of dental research.
Atopic Dermatitis: From Diagnosis to Treatment
Andreas Maur

In series: Dermatology - Laboratory and Clinical Research
Publication Date: 11/04/2020
277 pp.
Hardcover: 978-1-53618-520-1, $195.00
e-book: 978-1-53618-641-3, $195.00

Atopic dermatitis is a chronic inflammatory skin disease that is characterized by xerosis, eczema lesions with skin barrier defects, and severe itch. This compilation describes recent advances in our understanding of intractable itch mechanisms and the development of antipruritic therapies in this condition. Additionally, the authors summarize the current developments in understanding the comorbidities of atopic dermatitis.

Insight into various emerging therapies along with currently approved treatments is provided. Some proposed interventions are presented regarding the population group that can benefit the most according to the severity of the symptoms, the mechanism of action of the intervention and the possible adverse effects.

The authors use Pentaherbs Formula to educate readers on efforts in Traditional Chinese Medicine research to adopt this historic and unique complementary medicine as a safer and scientific-based therapy for atopic dermatitis.

In closing, Atopic Dermatitis: From Diagnosis to Treatment focuses on topical corticosteroids that are commonly used by dermatologists and general physicians to treat selected difficult dermatoses effectively.

Gestational Diabetes: From Diagnosis to Treatment
Hasan Aydın, MD (Yeditepe University Hospital, Department of Endocrinology and Metabolism, Istanbul, Turkey)

In series: Endocrinology Research and Clinical Developments
Publication Date: 10/09/2020
648 pp.
Hardcover: 978-1-53618-335-1, $295.00
e-book: 978-1-53618-578-2, $295.00

Gestational diabetes, because of its not only high prevalence but also resulting complications in both mother and fetus makes it one of the most important problems of a pregnant woman. The exact cause of gestational diabetes is unknown. Obviously, there is no one reason for the development of the disease. Placental hormones likely play a role. Insulin resistance is in the center and some factors like adipokines, lipids, inflammation, oxidative stress, heavy metals, gut microbiota, autoimmunity, metabolomics, genetic factors and vitamin D are the determinants for the development of insulin resistance and disease itself.

Worldwide distribution of the disease changes according to geography. Ethnic factors also play role. Although some well-known risk factors have role in the development of the disease, 1 in 20 women without any risk factors also develop GDM. There is no universal screening and diagnostic methods. Some countries use universal screening some others prefer selective screening of women with risk factors. In addition, some suggest use of one-step diagnosis, while others two-step.
The most challenging issue is use of some biomarkers in early (first trimester) diagnosis of pregnancy to prevent development of GDM.

Many modalities are used in treatment. Medical nutrition therapy is still the basis of management. Exercise has some roles, too. Besides pharmacotherapies like insulin and oral antidiabetics, some modern modalities like insulin pump therapy together with continuous glucose monitoring, telemedicine, dietary supplements like myoinositos are also covered in this book. Monitoring is important in diabetes and role of nurses in follow-up is incontrovertible.

If not treated well, both fetus and mother are open to complications. From congenital malformations to macrosomia, if inevitable, proper management of these problems has to be considered. Some comorbidities like hypertension, thyroid problems and psychosocial stress complicate the problem further.

Fetal monitorization, time and type of delivery and management of glycaemia during peripartum period are the issues to be considered towards to end of pregnancy.
The problem does not finish with the birth of baby. Both mother and newborn has to be followed for the development of future problems like postpartum diabetes and obesity. Nutrition and benefits of breastfeeding are important points for the health of the baby. In addition, every efforts has to be spent to prevent recurrence of the disease in subsequent pregnancies.

The most important instrument against fighting a disease is information i.e. how much we know about it. Understanding the problem thoroughly strengthens our hands to cope and overcome it more easily. The main target of this book is to handle every aspect of the disease from diagnosis to treatment as evident from the title. It is a candidate for a reference guide in this subject. It includes most recent and update data on gestational diabetes.

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**GASTROENTEROLOGY**

**Gut Bacteria: The Secret to Health**

*Dr. Ujjwal Sonika (Associate Professor, Department of Gastroenterology, GIPMER, Maulana Azad Medical College, University of Delhi, India) and Dr. Medha Kapoor (Chief Nutrition Consultant, Varsity Skin and Wellness Clinic, New Delhi, India)*

In series: *New Developments in Medical Research*

Publication Date: 01/29/2021

167 pp.

Softcover: 978-1-53619-084-7, $95.00
e-book: 978-1-53619-144-8, $95.00

This book provides the bird’s eye view of the latest scientific research centered around the importance of gut bacteria in influencing our health and well-being and their impact on lifestyle diseases.

The scientific information is presented in an easy-to-understand language while being interspersed with fun-facts and anecdotal accounts, which entertain the audience while helping them acquire this fundamental and relevant scientific knowledge.

The authors explain in a lay-person friendly terminology about the role of gut bacteria in determining the state of both our physical and mental well-being. The authors then share insights about the role of gut bacteria in predisposition to various lifestyle diseases such as diabetes, obesity, metabolic syndrome, and response to stress, utilizing the latest published scientific research in peer-reviewed journals.

- “What are the gut bacteria?”
- “What are the various factors which affect their composition and numbers?”
- “How do they perform such vital functions?”
- “How do they protect us from the biggest killers of today’s mankind- the lifestyle diseases?”
- “And most importantly, “how can we harness this knowledge for our benefit?”

This book answers these questions in an easy language for readers without any background in biology. The information provided in the book is useful to anyone who wants to lead a healthy life. It is worth reading even for the health care professionals as their current curriculum does not entail extensive information about the gut-bacteria and their significance in determining our health.

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**GENETICS**

**p53: Structure, Functions and Role in Disease**

*Monte Stevens*

In series: *Genetics - Research and Issues*

Publication Date: 11/06/2020

201 pp.

Softcover: 978-1-53618-771-7, $95.00
e-book: 978-1-53618-808-0, $95.00

p53: Structure, Functions and Role in Disease discusses the role of p53 dysregulation in different hematologic neoplasms defined by the current WHO classification. The prevalence of p53 aberration, mechanisms of p53 inactivation, regulation of p53 signaling pathway, and prognostic implications of p53 dysfunction in different hematologic malignancies are reviewed.

The authors also discuss the prevalence of p53 mutations in cancers and important mechanisms underlying the impact of p53 mutations such as loss of function, dominant negative effect and gain of function.
Recent findings related to the p53-mediated neuroprotective effects of natural compounds at the cellular, molecular, and behavioral level in various in vitro and in vivo models of neurodegenerative diseases are described, with a focus on Alzheimer’s disease.

**GERIATRICS**

**Combating Elder Abuse in Australia and India**

*Mala Kapur Shankardass, PhD (Sociologist, Gerontologist and Health Social Scientist, Associate Professor, Maitreyi College, South Campus, University of Delhi, New Delhi, India; Asia Representative, International Network for Prevention of Elder Abuse)*

In series: Geriatrics, Gerontology and Elderly Issues

Publication Date: 11/04/2020

359 pp.

Hardcover: 978-1-53618-606-2, $230.00

e-book: 978-1-53618-689-5, $230.00

This edited book is based on original work of authors. It discusses elder abuse issues and brings focus on different ways of combating it. The topic of elder abuse has gained importance in recent years especially with ageing of the populations and increase in the number of older people in societies. Australia and India are two important and leading countries in the Asia Pacific region. Their specific country responses are of interest in these regions and even for the world. Combating elder abuse has gained importance in recent times as there are not only different types of elder abuse identified in societies but also there exists various strategies to deal with the problem. What steps are being taken in Australia and India can be examples of combating the menace in the Pacific and Asian region. The book will of academic interest as it highlights an important concern with which academicians and researchers are increasingly getting involved in different countries and looking for solutions and ways to combat the growing problem from different disciplinary frameworks but mainly from social and legal perspectives which this book takes into account. This is first of its kind book which focuses on two important ageing countries, namely Australia and India, simultaneously, who are increasingly facing the problem of elder abuse, a growing global menace which requires different combating mechanisms to minimize its impact on societies. Social and legal perspectives on tackling the problem of elder abuse in different situations are gaining ground in countries and the chapters in this book discuss different aspects of ways to combat the problem by also discussing aspects of its occurrence in different sections of the society. Issues of vulnerabilities which older people face leading to elder abuse and what kind of societal responses are needed and are being adopted in societies to combat the problem has been highlighted by different authors in the book. Chapters written by experts from the social and legal field from the two countries, giving first-hand account of the situation in terms of care giving issues, financial abuse, rural areas, dementia patients, widows, prevailing legislations, residential care facilities, national and local responses, rights of senior citizens, and broader concerns related to combating the problem would be of interest to cross section of people across the world.

**Elderly Care: Current Issues and Challenges**

*Sean M. Eckstein*

In series: Geriatrics, Gerontology and Elderly Issues

Publication Date: 09/11/2020

227 pp.

Hardcover: 978-1-53618-446-4, $160.00

e-book: 978-1-53618-539-3, $160.00

Elderly Care: Current Issues and Challenges first presents an analysis of the ethical and societal issues related to the introduction of new patient and care/caregiver monitoring technologies.

A comprehensive review of assisted living technologies aimed at helping elderly people to perform activities of daily living is provided, and associated challenges identified through this review are discussed.

The authors go on to maintain how it is incumbent on the Lebanese government to find ways to invest in economic and social development targeted at providing accessible and high-quality services to its older population to ensure a respectful and independent life.

Socio-demographic changes, social and economic developments, health services and financing relative to the elderly population in Lebanon are discussed in further detail.
Additionally, this compilation investigates the impact of further training of care workers on the quality of care in nursing homes in Canada through a multiple regression analysis technique. An overview of the aging populations in Hong Kong, Japan, and Germany is presented. The perceptions of nursing homes held by older and middle-aged adults and their expectations of what nursing homes will be like in the future are explored. Following this, the effects of a non-drug pain management program for older adults in a nursing home environment are assessed.

A review of substance use and abuse coverage in Medicare home health is provided in conjunction with an exploratory study based on interviews of a sample of 26 home care social workers in the New York City metropolitan area. In closing, the authors discuss the findings of two studies on home care aides in Maine and, from the perspective of the study participants, offer recommendations for improving job conditions.

**HEALTH CARE**

**Computing Paradigms for Smart Healthcare**

*Dr. B Vinoth Kumar (Associate Professor, Department of Information Technology, PSG College of Technology, Coimbatore, Tamil Nadu, India), Dr. J Uma Maheswari (Assistant Professor, Department of Computer Science and Engineering, PSG College of Technology, Coimbatore, Tamil Nadu, India), Dr. G R Karpagam (Professor and Associate Head, Department of Computer Science and Engineering, PSG College of Technology, Coimbatore, Tamil Nadu, India) and Dr. P. Sivakumar (Assistant Professor, Department of Electrical and Electronics Engineering, PSG College of Technology, Coimbatore, Tamil Nadu, India)*

In series: *Health Care in Transition*

Publication Date: 11/20/2020

337 pp.

Hardcover: 978-1-53618-619-2. $230.00

e-book: 978-1-53618-849-3. $230.00

Smart healthcare has gradually gained its popularity because of the development of information technologies and computing paradigms such as internet of things (IoT), big data, Cloud computing and artificial intelligence. These technologies transform the conventional medical system into a smarter one by making healthcare more convenient, efficient, accurate, and more customized. Smart healthcare will lead to a revolutionized healthcare system that enables the participation of all people for the early prediction and prevention of diseases so that preemptive and pro-active treatment can be delivered.

The aim of this edited book is to publish the latest research advancements in the convergence of automation technology, artificial intelligence, biomedical engineering and health informatics. This will help the readers to grasp the extensive point of view and the essence of the recent advances in this field. This book solicits contributions which include theory, case studies and computing paradigms pertaining to the healthcare applications. The prospective audience would be researchers, professionals, practitioners, and students from academia and industry who work in this field. We hope the chapters presented will inspire future research both from theoretical and practical viewpoints to spur further advances in the field.

The entire book is the contribution of interdisciplinary expertise available in the esteemed Institution PSG College of Technology, an ISO 9001:2015 certified Government aided Institution, belonging to Department of Information Technology, Computer Science and Engineering, Electronics and Communication Engineering, Biomedical Engineering and Biotechnology. A brief introduction about each chapter is as follows.

Chapter 1 focuses on health informatics which provides an overview of the various types of data originating from the medical information.

Chapter 2 objective is to provide a ‘smart connected environment’ which includes storing, processing and exchange information seamlessly using technologies.

Chapter 3 deals with an intelligent healthcare system for automatic diagnosis of diseases based on IOT enabled cloud computing framework and deep learning.

Chapter 4 discuss about basic concepts of digital twin technology and implementation of digital twin in various health care domains.

Chapter 5 proposes a graph based framework for classification, feature selection method which uses the existing notion, histograms for extracting isotonic features from a data set.

Chapter 6 explains the significance of convolution neural network in medical image analysis.

Chapter 7 summarizes recent advances in AI tools applied in cancer diagnosis and research for disease prediction and biomarker discovery.
Chapter 8 explores DNA microarray data followed by the implementation of machine learning algorithms to obtain the highly predictive genes for classification.

Chapter 9 uses various data structures such as hash tables and prefix-based search trees to efficiently query the EHR data present in the Blockchain.

Chapter 10 focuses on agreeing upon a common symmetric cryptographic key generated from the ECG signal collected at different locations of a patient using linear prediction and error control coding techniques.

We are grateful to the authors and reviewers for their excellent contributions for making this book possible.

Patient Satisfaction: Determinants, Psychological Implications and Impact on Quality of Life

Dielle Morneau

In series: Health Care in Transition

Publication Date: 10/16/2020

137 pp.

Softcover: 978-1-53618-613-0, $82.00
e-book: 978-1-53618-639-0, $82.00

Patient Satisfaction: Determinants, Psychological Implications and Impact on Quality of Life first provides an in-depth, evidence-based review of the patient outcomes associated with patient experience measures across a wide range of specialties and settings.

The authors describe the instruments used to assess patient and family satisfaction, focusing on the presentation of various factors related to satisfaction in the field of child and adolescent psychiatry.

Current literature on the factors which impact patient quality of life are explored and reviewed in the context of breast reconstruction, using assessment tools such as the BREAST-Q.

The Journey to Universal Health Insurance Coverage: What are the lessons for Uganda and the other LMIC?

Robert Basaza (Professor of Public Health and Health Economics, Uganda Christian University, Uganda), Prossy Kiddu Namyalo (Public Health Expert and Lecturer, Ndejje University, Uganda), Chrispus Mayora (Lecturer and Health Economist, Makerere University School of Public Health, Uganda) and Donald S. Shepard (Professor at the Schneider Institute for Health Policy, Heller School for Social Policy and Management, Brandeis University, MA, US)

In series: Health Care in Transition

Publication Date: 09/02/2020

250 pp.

Hardcover: 978-1-53618-323-8, $160.00
e-book: 978-1-53618-470-9, $160.00

Access to healthcare is a universal human right and universal health insurance is one of the instruments towards attainment of universal health coverage. Universal health insurance has been proven to reduce catastrophic episodes at the point of receipt of healthcare to millions of households. This book elaborates on the Uganda’s Journey to universal health insurance coverage and provides lessons that apply to other LMICs. The book elucidates Uganda’s health financing system and details the proposed national health insurance schemes. Besides the local achievements, reference is also made to global success stories of Rwanda, Ghana, Tanzania, China, among others. Practitioners in similar settings will find this book handy in designing or operating appropriate health financing mechanisms. This book will further contribute towards global development of universal health coverage and subsequently ensure healthy lives and promote wellbeing.
HEMATOLOGY

A Guide to Paediatric Red Blood Cell Disorder
Dr. Sachith Mettananda (Professor in Paediatrics and Consultant Paediatrician, Department of Paediatrics, Faculty of Medicine, University of Kelaniya, Ragama, Sri Lanka), Dr. Duantida Songdej (Assistant Professor in Paediatrics and Consultant Paediatric Haematologist, Department of Paediatrics, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, Thailand) and Dr. Tharindi Suriapperuma (Lecturer in Paediatrics, Department of Paediatrics, Faculty of Medicine, University of Kelaniya, Sri Lanka)

In series: Recent Advances in Hematology Research
Publication Date: 11/04/2020
229 pp.
Hardcover: 978-1-53618-695-6. $160.00
e-book: 978-1-53618-745-8. $160.00

A Guide to Paediatric Red Blood Cell Disorders is a comprehensive text on common red blood cell disorders encountered in children. It is a useful guide to postgraduate doctors training in paediatrics and haematology, medical undergraduates, primary care physicians and practising clinicians. The book is divided into five sections. The first section provides a detailed understanding of the basic concepts and approach to red blood cell disorders in children. This section includes information on the structure and function of red blood cells and haemoglobin, epidemiology and aetiology of anaemia and clinical and laboratory evaluation of childhood anaemia. The next three sections will provide information on paediatric conditions that result in microcytic, normocytic and macrocytic anaemia, respectively. The final section will be on conditions leading to polycythaemia in neonates and children. Throughout the book, the emphasis is given to common conditions that are frequently encountered in clinical practice. However, rare but clinically important conditions have also been included. Each chapter is divided into subheadings to describe the epidemiology, aetiology, genetic basis, molecular pathology, pathophysiology, classification, clinical features, investigations, diagnosis, treatment, follow-up and prognosis of each disorder. At the end of each chapter, a section on recent advances provides information on promising novel developments and experimental approaches for treating these diseases. This book will help medical undergraduates to grasp concepts and understand the entire spectrum of red blood cell disorders in children. For practising clinicians, this will be a useful guide on how to approach a child with anaemia, which is one of the most common presentations to general practice, field clinics and hospitals. For postgraduate doctors training in paediatrics and haematology, the book will provide comprehensive information on how to manage common as well as complex red blood cell disorders in children. This book is concise, reader-friendly and written in simple English, which can be understood by non-native speakers. It will aid readers across the globe to grasp the concepts of paediatric red blood cell disorders easily and be knowledgeable and up to date in managing these patients.

IMMUNOLOGY

Vaccines: Operation Warp Speed, Regulation and Safety
Oliver Huerta

In series: Immunology and Immune System Disorders
Publication Date: 01/13/2021
361 pp.
Hardcover: 978-1-53619-059-5. $230.00
e-book: 978-1-53619-096-0. $230.00

In recent months, the Coronavirus Disease 2019 (COVID-19) pandemic has spread globally, with the United States now reporting the highest number of cases of any country in the world. Currently, there are few treatment options available to lessen the health impact of the disease and no vaccines or other prophylactic treatments to curb the spread of the virus. Researchers and product developers are testing numerous types of vaccines—both in the laboratory and in some early-stage testing in humans. This book answers frequently asked questions about current efforts related to research and development of vaccines, their regulation, and related policy issues.
COVID 19
Dr. Sujith Ovallath (Kannur Medical College, India)
In series: Infectious Diseases and Microbiology
Publication Date: 10/30/2020
125 pp.
Softcover: 978-1-53618-691-8, $82.00
e-book: 978-1-53618-729-8, $82.00
Coronavirus disease 2019 (COVID 19) is a viral infection caused by severe acute respiratory syndrome corona virus 2 (SARS-CoV-2). The disease was first identified in 2019 in Wuhan, China, and has since spread globally into a pandemic. The outbreak was declared a Public Health Emergency of International Concern on January 30, 2020 by the World Health Organization. The disease has spread to almost 200 countries and continues to do so, resulting in huge mortalities and morbidities, as well as economic burden on the affected countries. The pandemic has resulted in global shutdown and has impacted many lives.

This book analyzes the epidemiology of COVID 19, the characteristics of the virus, its mode of spread, pathogenesis, pathology, clinical presentation, diagnosis, prevention, and prognosis. The impact of the disease on the health care system, its psycho-social implications, and its impact on the economy is also discussed in detail. This will serve as a reference manual for physicians, students, epidemiologists and researchers in the field. Knowledge about the infection is fast-evolving, hence readers are advised to review the latest guidelines, especially concerning the management of cases of COVID 19.

COVID-19 by Cases: A Pandemic Review
Sujanthy Rajaram, MD, MPH (Professor of Medicine, Sidney Kimmel Medical College of Thomas Jefferson University, Philadelphia, Pennsylvania, USA, Critical Care Medicine, Gagnon Cardiovascular Institute - Morristown Medical Center, Atlantic Health System, Morristown, New Jersey, USA), Jacqueline Darcey, MD (Assistant Professor of Medicine Sidney Kimmel Medical College of Thomas Jefferson University Director of Medical Education Department of Medicine, Morristown Medical Center, Morristown, New Jersey, USA AAtlantic Health System, Morristown, New Jersey, USA), Anthony Longo, MD (Department of Medicine, Morristown Medical Center, Morristown, New Jersey, USA) and Nicole Burak, MD (Department of Medicine, Morristown Medical Center, Morristown, New Jersey, USA Atlantic Health System, Morristown, New Jersey, USA)
In series: New Developments in Medical Research
Publication Date: 03/09/2021
442 pp.
Hardcover: 978-1-53619-238-4, $230.00
e-book: 978-1-53619-288-9, $150.00
A clinical account written by front-line providers, COVID-19 by Cases is the first comprehensive review text on COVID-19. As such, the inventive format features a case-based and systems-based review of observations, clinical knowledge, basic science, ethics, and personal experiences during the COVID-19 pandemic. With each systems-based chapter encompassing a case report, literature review, and discussion, COVID-19 by Cases is intended for a broad audience, including clinical providers, clinical educators, and students. It also serves as a standalone account to preserve this unique time in human history. COVID-19 by Cases is a multi-institutional effort with input from hospitalists, outpatient physicians, specialists, residents, nurses, pharmacists, clinical educators, and students.
COVID-19 Pandemic: Questions, Answers and Hypotheses
A.K. Haghi (Professor Emeritus of Engineering Sciences, University of Guilan, Iran)
In series: Advances in Applied Science and Engineering
Publication Date: 10/16/2020
196 pp.
Softcover: 978-1-53618-565-2. $95.00
e-book: 978-1-53618-593-5. $95.00
Since the early 2020s, the entire world has been in panic and confusion due to the coronavirus that causes CoViD-19. To protect ourselves from the virus, national borders have been closed and people have been ordered to stay home. The world was practically isolated under martial law. The global lockdown caused a total social and economic disruption. After the events that have happened today, we need to be prepared for further changes that will soon affect our lives.
This book summarizes the Covid19 pandemic in general, warning us of the dangers it poses beyond the disease. The loss of freedom enjoyed by the western world could be at risk if governments do not moderate authoritarianism and follow the terrible example of countries that do not know or enjoy such freedoms. We save lives but preserve our lifestyle.

Understanding the Spread of Infectious Diseases
Andrew J. Hinerman
In series: Infectious Diseases and Microbiology
Publication Date: 12/02/2020
270 pp.
Hardcover: 978-1-53618-892-9. $195.00
e-book: 978-1-53618-917-9. $195.00
Outbreaks of infectious diseases—such as Ebola, Zika, and pandemic viruses—have raised concerns from Congress about how federal agencies use modeling to, among other things, predict disease distribution and potential impacts. Chapter 1 discusses emerging infectious diseases, in light of the recent coronavirus outbreak, and the modeling tools used to detect, predict, and understand the spread of such diseases. Chapter 2 examines the extent to which HHS used models to inform policy, planning, and resource allocation for public health decisions; the extent to which HHS coordinated modeling efforts; steps HHS generally takes to assess model development and performance; and the extent to which HHS has addressed challenges related to modeling.

Parasitology
Entamoeba: Species, Classification and Biology
Thomas L. Johnson
In series: Parasites and Parasitic Diseases
Publication Date: 10/30/2020
200 pp.
Softcover: 978-1-53618-506-5. $95.00
e-book: 978-1-53618-744-1. $95.00
Entamoeba: Species, Classification and Biology outlines the current knowledge about the global epidemiology, clinical manifestations, pathogenesis, available diagnostic tools and management of pathogenic Entamoeba species in humans.
The authors provide an overview of the various species belonging to the genus Entamoeba, including Entamoeba histolytica, Entamoeba dispar, Entamoeba gingivalis, Entamoeba coli, Entamoeba moshkovskii, Entamoeba invadens, Entamoeba polecki, Entamoeba hartmanni, Entamoeba suis, Entamoeba nuttalli, Entamoeba bangladeshi, Entamoeba struthionis and Entamoeba murbis.
The general pathogenic factors of Entamoeba histolytica are described, particularly focusing on how these factors participate in establishing infection.
Additionally, a review of studies centered on the morphological, biochemical and genetic changes during programmed cell death of Entamoeba histolytica is provided.
Current knowledge on the identification, characterisation, structure, and function of the enzymes of serine biosynthesis is also summarized.
Antibiotics have vastly changed the way we fight diseases. History is replete with examples of infectious diseases that have killed millions of people worldwide in the past and continues to do so in the present. However, there is one major difference. In the past there were novel classes of antibiotics that were being discovered at regular intervals, and in the present we are running out of options. Moreover, whatever antibiotics we have, microbes have developed resistance, which could primarily be attributed to the injudicious usage of antibiotics, not only for humans but also for veterinary purposes. A previous report from World Health Organization (WHO, 2017) suggests that antimicrobial resistance is a serious hazard and antibiotics under clinical development may not be sufficient (or efficient enough) to treat these emerging resistant pathogens. That report had identified 51 antibiotics and 11 biologicals. Of those, only 12 were found to be active against WHO classified critical priority pathogens and only two of them were found to be active against more than one specific pathogen. Starting with the sulphonamides in the 1930’s to lipopeptides in the early 2000’s, research and development on novel antibiotics is usually a slow and painful process and currently it will suffice to say that it is on the decline. As per the Infectious Diseases Society of America (IDSA), we are facing what is known as an “antibiotic paradox” that is pushing against the development of novel antibiotics. Interestingly, though there are studies that keep reporting on antibiotics, most of these are on combinatorial use of antibiotics. What could be their effectiveness and more importantly what could be their biotoxicity in the long run, remains unknown. Microbial antibiotic resistance is not a new phenomenon and there are numerous studies that have demonstrated the various mechanisms underlying it. An interesting study by Indian Council of Medical Research (ICMR), has shown that commensals in the gastrointestinal tract of humans might be responsible for the increasing ineffectiveness of antibiotics, at least in Indians. This makes it clear that microbes will keep on producing resistance to antibiotics at a faster rate compared to our ability to develop them. Under these circumstances, natural compounds, primarily plant-based, have become valuable tools and could be our answer to not only effective antimicrobial principles, but also to antimicrobial resistance. These compounds are abundant in nature and there is already a very rich literature on their usage and efficacy based on the various traditional systems of medicine. These natural compounds have been shown to be effective against both Gram positive and Gram-negative pathogens and interestingly microbes have a limited chance (as far as studies show) of developing resistance towards them. This is primarily attributed to the fact that most of these compounds are used as polyherbal formulations. Another advantage in studying these natural compounds is that there is a better probability of hitting upon that ‘jackpot’ molecule or molecules for antimicrobial applications. Being relatively safe and inexpensive makes them very attractive areas for clinical research. This book, in line with others in the field, is a small attempt to highlight the developments related to the antimicrobial compounds from natural sources and their mechanisms of action, particularly against ESKAPE pathogens. This book, we believe, will serve as a small but important piece of source material for students and researchers interested in this particular area of research. The chapters are divided to showcase the relevance and importance of natural compounds as novel antimicrobials, inhibitors of antimicrobial resistance and immunomodulators and we hope that the topics will kindle the interest of young researchers in these lines. In the end, we are grateful and whole heartedly acknowledge the authors for their valuable contribution and reviewers for their valuable suggestions and critical review of the manuscripts.
Calcium Signaling and Nervous System: Overview and Directions for Research
Victor V. Chaban, PhD (Professor of Medicine, Charles R. Drew University of Medicine and Science, Los Angeles, CA, USA; Professor of Medicine, University of California Los Angeles, Los Angeles, CA, USA)
In series: Neuroscience Research Progress
Publication Date: 09/11/2020
107 pp.
Softcover: 978-1-53618-403-7. $82.00
e-book: 978-1-53618-421-1. $82.00
This book provides comprehensive insights into emerging trends on calcium signaling in the nervous system from triggering signal transduction neuronal pathways to regulation of brain functions. Calcium signaling is one of the major coupling mechanism linking external stimuli with intracellular processes. Normal calcium signaling is important for functioning of all cells particularly neurons coupled to control mechanisms of the body inducing intra- and intercellular signaling and triggering biochemical cascade to control metabolism, gene expression, cell differentiation and apoptosis.

The author, Dr. Victor V. Chaban is Professor of Medicine with dual appointment at Charles R. Drew University of Medicine and Science (CDU) and University of California Los Angeles (UCLA). Dr. Chaban completed his post-doctoral training in Neuroscience at UCLA and graduate studies in Clinical Research at CDU. He serves on National Institute of Health and several international study sections and holds U.S. Patents. Prof. Chaban is established expert, who contributed significantly to a better understanding of neuroplasticity and neurodegeneration associated with changes in calcium signaling. Calcium Signaling and Nervous System: Overview and Directions for Research gives an up to date account of changes in intracellular Ca2+ associated with primary afferents sensitization, neuronal and glial reorganization, neuroprotection and neurodegeneration. This book is recommended to scientists, healthcare providers, students and patients.

Children and Young Adult Headache Disorders: A Clinical Guide
Sharoon Qaiser, MD (Director Children and Young Adult Headache Program, Kentucky Neuroscience Institute, Department of Neurology, University of Kentucky, Lexington, KY, USA) and Donita Lightner, MD (Director Children and Adult Neurofibromatosis Program, Kentucky Neuroscience Institute, Department of Neurology, University of Kentucky, Lexington, KY, USA)
In series: Neurology - Laboratory and Clinical Research Developments
Publication Date: 11/04/2020
275 pp.
 Hardcover: 978-1-53618-776-2. $195.00
e-book: 978-1-53618-815-8. $195.00
“Doc, I am not worried about my seizures because my family at home and friends at school are there to help. When I have a seizure, it goes away but oh my headaches, I must live my life through these headaches and my life never stops during my headache and I must keep on doing things. Can you make these headaches go away”? -Patient diaries

Everybody needs to hear that more than one million school days are missed in two weeks alone due to headaches and it is not school avoidance but a true medical disorder effecting our children. This is a challenging task to demystify subjective nature of ailment plagued with sense of familiarity. I felt this unmet need and this motivated me to write this book. This book describes historical journey from antiquity to present times, leading to our understanding of headache disorders. Children are not young adults, they may have different clinical presentation of similar disease. Many children have “non-headache” component of migraine equivalent syndromes which are either poorly recognized or under diagnosed. In this book, I focused on headache disorders in children and unique approach needed to recognize and manage these conditions. This book describes my health care philosophy i.e. managing common yet high morbidity causing conditions through
awareness and education. This book is written for health care providers and for any one who suffers from headache syndromes.

**Chronic Subdural Hematomas: Symptoms, Diagnosis and Treatment Options**  
*Earl C. Fernandez*

In series: Neurology - Laboratory and Clinical Research Developments  
Publication Date: 09/18/2020  
116 pp.  
Softcover: 978-1-53618-445-7. $82.00  
e-book: 978-1-53618-486-0. $82.00  
Chronic Subdural Hematomas: Symptoms, Diagnosis and Treatment Options provides a complete overview of the etiology, pathophysiology, clinical presentation, diagnostics and treatment of this disease. The importance of anatomical landmarks is highlighted, as well as the role of inflammatory cascades, inflammatory factors, coagulopathies and hyperfibrinolysis in the maintenance of bleeding and its healing. The incidence of chronic subdural hematomas is increasing gradually due to population aging and associated medication use, especially anticoagulants and antiaggregants. This condition also usually occurs following minor trauma, and in most cases the trauma is so minor that the patient may not have any recollection of the traumatic event. The authors discuss the main targets for surgical and non surgical chronic subdural hematoma treatment.

**Cranial Nerves: Anatomy, Function and Clinical Significance**  
*Thomas M. Yi*

In series: Neuroanatomy Research at the Leading Edge  
Publication Date: 12/04/2020  
173 pp.  
Softcover: 978-1-53618-823-3. $95.00  
e-book: 978-1-53618-582-9. $95.00  
Cranial Nerves: Anatomy, Function and Clinical Significance opens with a summary of the current data on the clinical anatomy and developmental anomalies of the first cranial nerve, the olfactory nerve. Following this, the authors provide an overview of the second cranial nerve, the optic nerve, which is a vital component of the visual pathway. The seventh cranial nerve, the facial nerve, which contains the somatic motor and visceral motor, as well as special sensory and general sensory fibers is discussed. The 10th cranial nerve, the vagus nerve, is explored in closing, focusing on its motor functions responsible for the innervations of the outer ear canal, pharynx, larynx, heart, lung, gastrointestinal tract, stomach, pancreas and liver.

**Horizons in Neuroscience Research. Volume 41**  
*Andres Costa and Eugenio Villalba*

In series: Horizons in Neuroscience Research  
Publication Date: 09/11/2020  
223 pp.  
Hardcover: 978-1-53618-443-3. $250.00  
e-book: 978-1-53618-480-8. $250.00  
This compilation opens with a review of the clinical and preclinical studies that reproduce type 1 diabetes, prediabetes and type 2 diabetes, along with an analysis of the complications at the central level, as well as cognitive impairment and its relation with dementia. Continuing, the authors review the typical neurocognitive deficits associated with alcohol exposure in pregnancy; the relationship between fetal alcohol spectrum disorder and attention-deficit hyperactivity disorder and autism spectrum disorder; and the combined effects of alcohol and drug abuse. In addition, recent literature summarizing the main roles of sirtuin 2 in the central nervous system is addressed in an attempt to understand the relationship between sirtuin 2, senescence and neurodegenerative diseases. The relationship between biological motion, emotions, and theory of mind in people with neurodevelopmental disorders is examined. Specifically, the authors use bottom-up and top-down investigations to systematically uncover behavioral and
neurological patterns of biological motion perception in people with Williams syndrome, autism spectrum disorder, and Down syndrome.

One study deals with the definition of consciousness, the description of the neural substrates that have been associated with it, and the examination of the main interpretative models.

In closing, theory of mind as an implication of empowerment is explored using empirical data on social competence development among children.

### Horizons in Neuroscience Research. Volume 42

*Andres Costa and Eugenio Villalba*

In series: *Horizons in Neuroscience Research*

Publication Date: 11/04/2020

252 pp.

Hardcover: 978-1-53618-787-8, $250.00
e-book: 978-1-53618-802-8, $250.00

In this compilation, the authors review studies that have been carried out using c-Fos as an activity marker for spatial navigation, discussing how this tool has helped researchers to unveil the brain’s functioning.

Brain regional ensembles in object novelty recognition are discussed as part of recognition memory. A broad review of neuroanatomical and functional pathways underlying these processes is provided, with special emphasis on the role played by the perirhinal cortex, mediiodorsal thalamic nucleus, amygdala, and prefrontal cortex, among others.

The “Pro-Truth Pledge” is proposed as an intervention for the deterioration of truth in democracies around the globe, combining behavioral science research with crowdsourcing to help address this problem.

The recent proteomics discoveries of degenerative protein modifications and their role in aging and age-associated processes are examined, particularly focusing on how these interventions could extend lifespan and be applied as targeted therapies for neurodegenerative diseases.

The authors go on to investigate the effects of various chemicals in the developing brain to raise awareness of the possible effects and outcomes of chemical exposure.

A case of auditory agnosia, a type of central deafness commonly seen in cases of bilateral temporal cerebral lesions, is discussed, and a literature review regarding this condition is provided.

### Imaging and Multiomic Biomarker Applications

*Yongxia Zhou, PhD (Imaging Scientist, University of Southern California, Los Angeles, CA, USA; Columbia University, New York, NY, USA)*

In series: *Neuroscience Research Progress*

Publication Date: 01/20/2021

251 pp.

Hardcover: 978-1-53619-079-3, $160.00
e-book: 978-1-53619-086-1, $160.00

The well-known Alzheimer’s Disease Neuroimaging Initiative (ADNI) Center provides the most advanced, comprehensive, multiparametric and up-to-date biomarkers for mild cognitive impairment (MCI) and early Alzheimer’s disease (AD) projects, including neuroimaging, clinical assessments, biospecimens and genetic data. Recent developments in imaging techniques, including new molecular tracers for imaging disease burden and systematic multi-modal integration, have emerged to overcome the limitations of each single modality and individual-dependent variability. The MRI-based high-resolution structural and morphological changes in the brain, such as atrophy, and the abnormal activity/connectivity patterns of the hippocampus subfields and default mode network (DMN) modulation, together with the amyloid and tau neuropathological quantification using PET molecular tracers, could be used to predict brain changes and cognitive performance declines in early AD, including transitional MCI. Finally, a generalized and integrative model with multiple biomarkers could be built to target disease progression and symptom prediction as well as to optimize patient management.

Multiomics investigates metabolic, lipidomic, genomic, transcriptomic and proteomic perspectives by presenting an accurate biochemical profile of the organism in health and disease. The Alzheimer’s Disease Metabolomics Consortium (ADMC) in partnership with ADNI is creating a comprehensive biochemical database for patients in the ADNI1 cohort, consisting of eight metabolomics datasets. The vast majorities of biospecimen data provide rich biological information to the human brain at normal and dementia status. One of the purposes is to reveal the connections between disease and multiomics such as obesity, hypertension, cholesterol imbalance and inflammation risks that might lead to neurodegenerative disease. Multiomic biomarker developments in the dementia field have provided earlier clues to novel treatments that help correct metabolic dysfunction and delay disease progression. Furthermore, the assembling of multiomics-based biomarkers including metabolites and lipids, cholesterol biosynthesis, purine metabolism, lipoprotein,
bile acids, and genetics as well as their relation to the pathological amyloid and tau network could improve disease diagnosis sensitivity and reveal more diverse and complementary molecular pathways to allow for the advancement of early AD diagnosis and therapeutic prevention.

In this book, we report on the significant differences of multiple biomarkers from the ADNI database including neuroimaging, clinical assessments and multomic biospecimen/genetic data in MCI and early probable AD (pAD), and elucidate the interconnections among different metrics at various domains. Classification results with high accuracies (0.95-1) for each early dementia subtype including early MCI (EMCI), late MCI (LMCI) and pAD, and better prediction of clinical symptoms is achieved with these comprehensive biomarkers. Further longitudinal changes of imaging and neuropsychological biomarkers, and inter-correlations with baseline parameters are examined for a better illustration of disease progression association. Additionally, an analysis of the post-traumatic stress disorder biomarkers is performed with high classification accuracy. With illustrative and rigorous data analyses and confirmative results, this book provides readers with a full spectrum of biomarker research for early dementia diagnosis and treatment, and helps convey the technical development and data evaluation perspectives in advanced medical imaging and various disease application fields.

Laboratory Animals and Neurosciences
Braulio Hernández Godínez (Non Human Unit of APREXBIO S.A.S., de C.V. Ciudad de México, México; Neurophysiology Laboratory of Investigación Biomédica, Aplicada (INBIOMA) S.A.S. de C.V., Ciudad de México, México), Martín García Servin (Instituto de Neurobiología, Universidad Nacional Autónoma, de México, Campus Juriquila, Queretaro, México) and Alejandra Ibáñez Contreras (Non Human Unit of APREXBIO S.A.S., de C.V. Ciudad de México, México; Neurophysiology Laboratory of Investigación Biomédica, Aplicada (INBIOMA) S.A.S. de C.V., Ciudad de México, México)

In series: Animal Science, Issues and Research
Publication Date: 10/16/2020

357 pp.
Hardcover: 978-1-53618-462-4. $230.00
e-book: 978-1-53618-588-1. $230.00

Laboratory animals are fundamental in learning and teaching within the various areas of neuroscience research. This from its proper management, animal welfare, standardization of protocols, use of the best biomodel in exprimentation. There are many different areas of study within neurosciences today. However, any use of any biomodel must be based on the context of the three Rs (Refinement, Reduction and Replacement). The objective of this book is to make known through different chapters the use of different laboratory animals in standardized research lines applied to neurosciences in different contexts and applications in basic research.

Recent Developments in Neurodegeneration
Roger M. Howe
In series: Neurology - Laboratory and Clinical Research Developments
Publication Date: 11/20/2020
159 pp.
Softcover: 978-1-53618-859-2. $95.00
e-book: 978-1-53618-861-5. $95.00

Recent Developments in Neurodegeneration discusses the diverse functions of nitric oxide regarding redox regulation, the cellular energy pool, modifications in genetic material, neurogenesis, the effects on protein degradation mechanisms and functional consociation with glial cells.

The authors consider the latest evidence that demonstrates that Alzheimer’s disease-associated proteins and their genes play a key role in the post-ischemic development of neurodegeneration with dementia.

The main processes associated with secondary tissue damage following traumatic injury to the nervous system are reviewed.

In closing, a comprehensive investigation of the combination of tremor and olfactory perception characteristics among patients with Parkinson’s disease and essential tremor is presented.
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Understanding and Treating Small Vessel Disease
Alina Gonzalez-Quevedo, MD, PhD (Institute of Neurology and Neurosurgery, Havana, Cuba), Svetlana Dambinova, PhD, DSc (Emory Decatur Hospital, Emory Healthcare, Decatur, GA, USA) and Kerstin Bettermann, MD, PhD (Department of Neurology, Penn State College of Medicine, Hershey, PA, USA)

In series: Neurology - Laboratory and Clinical Research Developments
Publication Date: 12/22/2020
476 pp.
Hardcover: 978-1-53618-944-5. $270.00
e-book: 978-1-53619-018-2. $270.00

Cerebral small vessel disease (CSVD) silently affects a large part of the population, increasing in prevalence with age and with the presence of vascular risk factors. Its harmful effects on brain parenchyma increase the risk of stroke, cognitive decline and dementia, and it is responsible for a spectrum of symptoms that are much less obvious, such as unrecognized mild signs or symptoms of neurocognitive dysfunction, mild mood or behavioral disturbances, gait dysfunction, and a general decline in function generally attributed to normal aging. These consequences pose a heavy burden on patients, families and countries that need to be addressed.

Understanding and Treating Cerebral Small Vessel Disease provides an insight into a broad area of research in this field, focusing on topics that deal with the underlying pathophysiological mechanisms of CSVD, recent clinical and neuroimaging findings, biomarker developments, comorbidities, prevention strategies and emerging therapeutic options. The contents are distributed in five sections that span these topics.

Section I, “Pathophysiology and Subtypes of Cerebral Small Vessels Disease”, includes three chapters that deal with the prevalence of different forms of small-vessels disease in vascular cognitive impairment, and the pathophysiological mechanisms of CSVD.

Section II, “New Approaches for Diagnosis and Treatment of CSVD”, includes six chapters which deal with the microvascular assessment of CSVD through the study of retinal blood (chapter four), a global vision of brain MRI findings in CSVD (chapter five), and digital electroencephalographic changes and computerized analysis methods in CSVD (chapter six). Chapters seven, eight and nine approach the treatment of CSVD, from the assessment of advanced immunoactive therapy for CSVD to the use of non-pharmacological therapies such as transcranial magnetic stimulation and extracorporeal shock wave therapy. The targeting of key pathogenic mechanisms is also discussed in light of experimental data and clinical trials, as well as the introduction of neuroprotection in the treatment of symptomatic and asymptomatic CSVD.

Section III, “Potential Biomarkers for CSVD”, includes chapters 10—13 dedicated to the early detection of CSVD through brain MRI imaging and the development of alternative circulating biomarkers (brain specific proteins, inflammatory and oxidative stress biomarkers, autoantibodies). The application of these biomarkers in other conditions closely associated with small vessel neurovascular networks, such as migraine, is also discussed.

Section IV, “Cerebral Small Vessels Disease and Comorbid Conditions” is comprised of five chapters (14—18) which approach the relationship of CSVD with infectious diseases (viral, bacterial and parasitic infections), highlighting findings in COVID-19. Conditions related with the nervous system, such as cognitive impairment, schizophrenia and chronic alcohol consumption in association with the development of small vessel pathology in the brain are also discussed.

Section V includes chapter 19, which briefly summarizes the main topics presented in this book and offers a quick vision from the editors of future trends in microangiopathy diagnosis and treatment.

Understanding Dyskinesia
Jan Dvořák

In series: Neurology - Laboratory and Clinical Research Developments
Publication Date: 09/18/2020
201 pp.
Hardcover: 978-1-53618-502-7. $95.00
e-book: 978-1-53618-558-4. $95.00

Primary Ciliary Dyskinesia is a rare disease with a prevalence of 1:20,000 births (ORPHA244). Understanding Dyskinesia aims to give an overview of what primary ciliary dyskinesia is, the differences in patients’ clinical manifestations throughout their lives, its genetics, and diagnostic tests available for this disease.

The authors present a systematic review of tardive dyskinesia, covering the clinical manifestations, epidemiology, etiology, and an update on the therapeutic approach. In addition, the acute effects of physical activity and exercise adaptation on different types of dyskinesia are assessed.
Breakfast: Nutrition, Consumption and Health Benefits

Petr Měchura

In series: Nutrition and Diet Research Progress
Publication Date: 10/02/2020
138 pp.
Softcover: 978-1-53618-500-3. $82.00
e-book: 978-1-53618-596-6. $82.00

Despite being one of the most important meals of the day, breakfast is also the most neglected meal of the day, and this practice increases progressively with age because of lack of time, organization, or individual’s preference.

Breakfast: Nutrition, Consumption and Health Benefits discusses how a breakfast based on fruits, vegetables, and whole grains can lead to a more favorable lipid profile, contributing to diabetes prevention and control without the harmful effects of eating sugary industrialized foods.

The authors advocate that evaluation of breakfast gluten-containing products and their counterparts without gluten is important for people with gluten-related disorders.

Additionally, they discuss how visibility of the difficulties faced in the implementation of special menus for children with celiac disease in Brazilian public schools can contribute to making the Human Right to Adequate Food a reality for this group.

In closing, the authors assess the importance of finding viable options with sensory and nutritional quality that can be part of the diet of individuals who restrict milk.

Gluten-Free Diets and Health

Hisham Castillo

In series: Nutrition and Diet Research Progress
Publication Date: 02/26/2021
178 pp.
Softcover: 978-1-53619-327-5. $95.00
e-book: 978-1-53619-345-9. $95.00

Over the past several decades, gluten-free diets have attracted wide public interest, in large part due to their efficacy in treating celiac disease. However, such diets present nutritional risks, as gluten-free products can be low in protein, dietary fiber, and other nutrients. Chapter One of this book discusses techniques for improving the nutritional value of gluten-free foods as well as their textural and sensorial features. The second chapter discusses gluten-free cheese bread enriched with essential fatty acids, and how such enrichment improves the overall quality of the food. Similarly, the third chapter explores the technological and sensory properties of gluten-free muffins made with chickpea flour and describes the effects of various muffin formulations. The final chapter describes gluten-free Mexican sweet bread and analyzes the physiochemical characteristics of taro flour and gluten-free muffins made with taro flour.

Healthy Lifestyles and Healthy Eating

Lena Wilson

In series: Nutrition and Diet Research Progress
Publication Date: 10/01/2020
321 pp.
Hardcover: 978-1-53618-399-3. $230.00
e-book: 978-1-53618-541-6. $230.00

Healthy Lifestyles and Healthy Eating opens with a study wherein a review is conducted to examine non-Hispanic blacks’ dietary patterns to determine the extent to which their dietary patterns conform to dietary recommendations.

Next, the authors present conclusions and reflections about the role of motivation-related variables on healthy eating habits among elementary school students.

Additionally, student engagement with Google Classroom as an online complementary tool in a hybrid school-based intervention to promote healthy eating among elementary school-aged children is explored and described.

Some results of the EATMOT project are presented, including perceptions about healthy eating, sources of information about healthy diet and healthy motivations for food choice.
A subsequent study aims to determine the role that eating motives and risk perception of potential diseases may play in adolescents’ health-conscious eating behavior. The authors summarize the potential effect of moderate exercise on responses to stressful situations, as well as describe its neurobiological underlying basis in different periods of life. Pharmacy students’ attitudes towards dietary supplements use are assessed through a cross-sectional questionnaire survey taken by 117 pharmacy students in the Medical University of Plovdiv, Bulgaria. The growing evidence regarding the influence of gender on the effectiveness of multifactorial interventions to improve lifestyles is assessed. Evidence linking maternal lifestyle to the offspring’s long-term clinical outcomes is described, focusing on hypertension and cardiovascular disease risk, as well as discussing the role of epigenetic processes in metabolic syndromes.

**Plants for Weight Loss – Myth and Reality**
*Dr. Alexander V. Sirotkin (Professor, Faculty of Natural Sciences, Constantine the Philosopher University, Nitra, Slovakia)*

In series: *Nutrition and Diet Research Progress*
Publication Date: 10/30/2020
193 pp.
Softcover: 978-1-53618-700-7. $95.00
E-book: 978-1-53618-747-2. $95.00

This is a unique book which critically summarizes the current scientific knowledge concerning manifestations, mechanisms, consequences and prevention of dysfunctions of metabolism of fat, as well as the main known functional food and medicinal plants which can be and which cannot be used for prevention and treatment of obesity. The provenance, biologically active molecules, positive and adverse side-effects on health, influence on obesity and potential applicability of tea, chicory, Garcinia cambogia, Hoodia gordonii, chia, Irvingia gabonensis, apple cider vinegar, coffee, konjac/glucosmannan, flaxseed, mulberry, oat, sweet and hot peppers, carob, cinnamon, plum, Cissus quadrangularis, Stevia rebaudiana, Yacon and ginger are described in details. In addition, less-known plants and plant molecules, as well as their combinations considered applicable for obesity treatments, are listed. It is demonstrated that more than half of the plant-based anti-obesity products available on the market are not properly clinically tested, or such tests, when performed, provided negative results. In addition, the author provides the reader with some practical advices and tips to combat obesity with healthy lifestyle. This book combines deep scientific analysis of physiological processes and popular form of their description. Such form enables to use this knowledge and advices for scientists, doctors, producers, distributors and consumers of functional food and medicinal plants, as well as for the common readers interested in healthy nutrition and lifestyle.

**Vitamin Deficiency: Prevalence, Management and Outcomes**
*Natalie Stewart and Dan Thomson*

In series: *Nutrition and Diet Research Progress*
Publication Date: 12/11/2020
134 pp.
Softcover: 978-1-53618-979-7. $82.00
E-book: 978-1-53618-996-4. $82.00

Vitamin Deficiency: Prevalence, Management and Outcomes first assesses the prevalence of vitamin D deficiency and summarizes published randomized controlled studies concerning the supplementation of vitamin D in pregnant women, reporting on the maternal and neonatal outcomes in Asia-Pacific, the United States, Europe, Africa, and the rest of world. The functions of vitamin K and D are discussed, along with the links between the two vitamins, providing insight on the underlying mechanisms responsible for their role in osteosarcoma and identify future perspectives. The closing study highlights the vitamin K-dependent biological pathways which are associated with the prevention and treatment of bone metabolism disorders.
**Vitamins and Supplements**

**The Diversified Benefits of Whey Protein**  
Zachary Hicks  
In series: *Nutrition and Diet Research Progress*  
Publication Date: 10/02/2020  
110 pp.  
Softcover: 978-1-53618-517-1. $82.00  
e-book: 978-1-53618-585-0. $82.00  
The Diversified Benefits of Whey Protein provides an overview of the main benefits of using whey proteins as targeted delivery systems in encapsulation processes, considering prerequisite steps such as binding mechanisms.  
The authors discuss how, according to current scientific knowledge, whey protein can reduce blood pressure and the risk of hypertension due to the presence of individual bioactive peptides formed after hydrolysis.  
The effect of whey protein on appetite/satiety of healthy overweight and obese individuals is investigated through a questionnaire wherein subjects were asked to indicate their feelings on the taste, aroma and edibility of a test beverage.

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**OBSTETRICS AND GYNECOLOGY**

**Fertility Preservation in Gynecological Cancer: Current Management and Novel Insights**  
Simone Garzon (Department of Obstetrics and Gynaecology, “Filippo Del Ponte” Hospital, University of Insubria, Varese, Italy) and Antonio Simone Laganà (Department of Obstetrics and Gynaecology, “Filippo Del Ponte” Hospital, University of Insubria, Varese, Italy)  
In series: *Obstetrics and Gynecology Advances*  
Publication Date: 02/10/2021  
317 pp.  
Hardcover: 978-1-53619-179-0. $230.00  
This book was written for the complex scenario of fertility-sparing management in gynecological cancer. In reproductive age women, appropriate counseling is mandatory in any cancer diagnosis, including discussing the long-term consequences of the different treatment options on fertility and the possibility of fertility preservation.  
However, women affected by gynecological cancer must consider that treatment options including hysterectomy and bilateral oophorectomy in most cases. Therefore, in gynecological cancer, the standard treatment often consists of an inevitable loss of fertility. The direct consequence is that fertility preservation management does not always result in the optimal treatment of the disease, which increases the risk of worsening oncologic outcomes.  
This book discusses all the elements involved in managing these patients to provide a complete and detailed overview of fertility preservation management options in young women affected by gynecological cancers. Specifically, this book discusses the role of genetic assessment and counseling, the effect of anticancer treatments for gynecological cancer on fertility, classic fertility preservation techniques adapted to gynecological cancer, detailed and specific fertility preservation management for cervical, ovarian, and endometrial cancer, and the role of a multidisciplinary approach in these patients.
Outcomes. However, these pregnancies are still at increased risk for maternal and/or fetal mortality or serious morbidity.

Preeclampsia is becoming an increasingly common diagnosis in the developed world and remains a high cause of maternal and fetal morbidity and mortality in the developing world. It is a multisystem progressive disorder of pregnancy characterized by the new onset of hypertension and proteinuria of ≥300 mg/day or of hypertension and significant end-organ dysfunction with or without proteinuria. It also presents with a variety of organ failures, including malfunction of kidneys, liver and lungs. It is estimated that about 5-7% of pregnancies are complicated by preeclampsia.

This disorder always resolves after delivery. In about 80% of cases, pregnancy ends with good maternal and fetal outcomes. However, these pregnancies are still at increased risk for maternal and/or fetal mortality or serious morbidity.
The remaining 20% of cases are at risk for preterm delivery and small gestational age infant. As regards the long-term consequences, women with preeclampsia are at high risk for cardiovascular, renal, and chronic hypertensive diseases. The exact pathophysiology of preeclampsia is poorly understood and, consequently, there are no well-established methods of primary prevention or of cost-effective screening.

Childbirth is the only known cure; however, the decision between delivery and expectant management depends on several factors, such as fetal gestational age, maternal and fetal status at time of initial evaluation, presence of labor or rupture of fetal membranes, and level of available neonatal and maternal services.

The aim of this book is to provide an overview of the latest developments about the physiopathology, diagnosis, and treatment of pre-eclampsia. Addressed to gynecologists, obstetricians, researchers and students, this text aims to become a reference for all operators who are interested in pregnancy complications and in the management and treatment of this specific disorder which is increasingly common in the population.

The Ovarian Reserve: Current Trends and Applications
Saad Ali Kamel S. Amer (Associate Professor and Consultant Gynaecologist, Division of Medical Science and Graduate Entry Medicine, School of Medicine, University of Nottingham, Derby, Derbyshire, United Kingdom)
In series: Obstetrics and Gynecology Advances
Publication Date: 12/30/2020
209 pp.
Hardcover: 978-1-53618-969-8, $160.00
e-book: 978-1-53618-981-0, $160.00

This is the first book that provides a comprehensive and in-depth account of the current state of knowledge on the ovarian reserve and its clinical applications in gynaecology and reproductive medicine. “Ovarian reserve” is a term commonly used to reflect the total number of remaining primordial follicles, which determines a woman’s fertility potential. Since its emergence in the late 1980s during the early days of assisted reproduction technology, the concept of ovarian reserve has continued to gain importance in clinical practice and research, as reflected by the exponentially growing number of publications on the topic. A wide range of ovarian reserve markers have been introduced over the years, starting with serum follicle stimulating hormone level in 1988 and most recently anti-Müllerian hormone in 2002. This book starts with a detailed background on the physiology of the ovarian reserve including early ovarian development, follicular dynamics, and the natural history of primordial follicles. This is followed by a comprehensive account of the various biochemical, sonographic, and dynamic markers and their current applications. A special chapter is devoted to anti-Müllerian hormone, which is the most extensively researched and widely used ovarian reserve marker. The role of anti-Müllerian hormone and its clinical utility in polycystic ovarian syndrome is presented in a separate chapter. The book then explores the clinical applications of ovarian reserve testing in various reproductive disorders, including early ovarian aging, diminished ovarian reserve (pathological and iatrogenic), poor ovarian response during assisted reproduction technology, and premature ovarian insufficiency.

Uterine Fibroids from Diagnosis to Treatment
Marco Mitidieri, MD (Sant’Anna Obstetric Gynecological hospital, SC4, Turin, Italy), Saverio Danese MD (Ginecologia e Ostetricia SC4, Città della Scienza e della Salute, Sant’Anna Hospital, Torino, Italy) and Elisa Picardo MD (Ginecologia e Ostetricia SC4, Città della Scienza e della Salute, Sant’Anna Hospital, Torino, Italy)
In series: Obstetrics and Gynecology Advances
Publication Date: 02/17/2021
156 pp.
Softcover: 978-1-53619-184-4, $95.00
e-book: 978-1-53619-284-1, $95.00

Uterine fibroids (UFs) are benign masses that develop from the smooth muscle cells and connective tissue of the wall of the uterus under the influence of genetic and/or hormonal stimuli. These benign tumors are postulated to arise from a single, genetically altered mesenchymal cell under the influence of gonadal hormones namely progesterone and 17β-estradiol. The annual societal cost for fibroids is estimated up to 34 billion dollars, calculated through combined expenditures for medical management of symptomatic fibroids, lost work attributable to diagnosis of fibroids, and obstetrical complications of fibroids in Italy, for example, they affect 3 million women.

Estimates say that 20 to 80% of women experience them throughout life, and are the most common form of benign cancer in childbearing age.
Various surgical and medical options are currently available to manage symptomatic uterine fibroids. The choice of the appropriate therapeutic approach for UFs depends on several factors, including women’s age, parity, childbearing aspirations and wish to preserve fertility, extent and severity of symptoms, size, number and location of myomas, risk of malignancy and proximity to menopause. This book reviews the diagnoses, management and treatment of uterine fibroids.

**A Biochemical View of Head and Neck Cancers**

*Dorota Bartusik-Aebisher (Professor, Medical College of The University of Rzeszow, Poland) and David Aebisher (Professor, Medical College of The University of Rzeszow, Poland)*

In series: *Cancer Etiology, Diagnosis and Treatments*  
Publication Date: 03/04/2021

144 pp.  
Softcover: 978-1-53619-370-1, $82.00  
e-book: 978-1-53619-376-3, $82.00

This book addresses major problem in the management of patients with cancer of the head and neck. The authors have written six chapters of particular importance for head and neck cancer diagnosis, treatment, and rehabilitation. Chapter 1 describes treatment of patients with squamous cell carcinoma of the head. Chapter 2 presents treatment of patients with squamous cell carcinoma of the neck. Biochemical studies of head and neck cancer treatments are presented in Chapter 3. In chapter 4 biochemical studies of head and neck cancer biomarkers are presented. Photodynamic therapy (PDT) exploits light interactions and photosensitizers to induce cytotoxic reactive oxygen species. Photodynamic diagnosis (PDD) uses the phenomenon of photosensitizer emitting fluorescence to distinguish some tumors from normal tissue. PDT offers a therapeutic solution that has been found to be cost-effective compared to palliative major surgery or chemotherapy. However, despite the significant improvement noted in preclinical and clinical trials, PDT is still not considered the standard treatment option for head and neck cancer. Multiple photosensitizers have been studied and tumors have been treated in a variety of head and neck sites over the last 30 years. Photodynamic therapy is a palliative treatment option for head and neck squamous cell carcinoma patients which induces local inflammation and alters tumor cell morphology.

**A Comprehensive Textbook of Primary and Metastatic Tumors of the Skeletal System**

*Babak Otoukesh, MD (Clinical Orthopedic Fellowship from Universitätsklinikum Bonn (UKB), Orthopedic Surgeon at Department of Orthopedic Surgery, Iran University of Medical Sciences in Rasoul-E-Akram hospital, Tehran, Iran), Mehrdad Bahrabadi, MD (Assistant Professor of Orthopedic Surgery, Musculoskeletal Tumor Fellowship, Iran University of Medical Sciences, Tehran, Iran), Raphaelle Vialle, MD (Professeur des Universités - Praticien Hospitalier, Chef du Service de Chirurgie Orthopédique et Réparatrice de l’Enfant, Département Hospitalo-Universitaire MAMUTH “Maladies Musculo-Squelettiques et Innovations Thérapeutiques”, Hôpital Armand Trousseau, Université Pierre et Marie Curie, Paris, France), Shayan Hosseinzadeh, MD (Orthopedic Surgery Research Fellow, Boston’s Children Hospital, Harvard Medical School, Boston, USA), Farnoosh Sedaghati, MD (Clinical and Anatomical Pathologist, Iran University of Medical Sciences, Tehran, Iran) and Shayan Amiri, MD (Clinical Orthopedic Surgery Resident, Bone and Joint Reconstruction Research Center, Iran University of Medical Sciences, Tehran, Iran)*

In series: *Cancer Etiology, Diagnosis and Treatments*  
Publication Date: 02/10/2021

243 pp.  
Hardcover: 978-1-53619-104-2, $195.00  
e-book: 978-1-53619-159-2, $195.00
This book is a comprehensive textbook of primary and metastatic skeletal system tumors which provide clinical, pathological and imaging data of the skeletal system tumors appropriate for all clinicians who are practicing in oncology wards, especially orthopaedic surgeons. In this book, we discuss the diagnosis and treatment of skeletal system tumors, their clinical signs, and symptoms and we also discuss their pathological aspects of the tumors. We conclude with important images such as plain radiographs, CT scans, MRIs, and bone scan. The most helpful data of each tumor is brought together in order to help patients and clinicians of this widespread part of medicine.

**An Introduction to Cancer Therapy**  
*Neville Charron*  
In series: *Cancer Etiology, Diagnosis and Treatments*  
Publication Date: 09/18/2020  
411 pp.  
Hardcover: 978-1-53618-450-1, $230.00  
e-book: 978-1-53618-587-4, $230.00  
This compilation attempts to provide readers with brief and concise information on different types of cancer, their origins, and available treatment options. Protein kinase inhibitors, currently in clinical practice and under research for potential clinical usefulness, are also reviewed. Currently employed gene therapy strategies, obstacles, and challenges in cancer gene therapy are presented, focusing on the latest nanotechnological advancements in this field including gene transfer methods, vectors, and their current successful applications in cancer gene therapy. Lastly, sulfamethoxazole is examined for its history of combating several microbial infections by affecting folic acid biosynthesis inhibiting dihydropteroate synthetase.

**Horizons in Cancer Research. Volume 76**  
*Hiroto S. Watanabe*  
In series: *Horizons in Cancer Research*  
Publication Date: 09/24/2020  
251 pp.  
Hardcover: 978-1-53618-374-0, $250.00  
e-book: 978-1-53618-483-9, $250.00  
In *Horizons in Cancer Research. Volume 76*, the molecular drivers associated with prostate cancers at different stages which can be exploited as drug targets are discussed. This information will be useful for designing rational targeted therapeutic strategies for treatment of this disease. Following this, the authors discuss lung cancer early diagnosis with traditional and alternative approaches. In lung cancer, smoking exposure has been identified as the main causative agent in smokers. A critical appraisal of the different updated techniques in the mediastinal staging of lymph nodes in lung cancer is provided. The authors also provide an overview of colorectal cancer and Ca2+ signalling in cells, focusing their discussion on a specific component of the Ca2+ signalling machinery, the transient receptor potential cation channel subfamily V member 4 channel. Breast cancer, a serious public health problem, is assessed, maintaining that women need accurate and effective information in order to attain early diagnosis. Lastly, a simple technique to decreases cell-culture pH while maintaining sterile technique is described.

**Horizons in Cancer Research. Volume 77**  
*Hiroto S. Watanabe*  
In series: *Horizons in Cancer Research*  
Publication Date: 11/04/2020  
254 pp.  
Hardcover: 978-1-53618-717-5, $250.00  
e-book: 978-1-53618-728-1, $250.00  
In this compilation, an overview of recent achievements in clinical and biosensor technology in the diagnosis of acute lymphoblastic leukemia is provided. Various aptasensors such as optical, electrochemical and mass-sensitive are presented along with a novel approach for the recognition of cancer markers by molecular imaging methods based on atomic force microscopy, single molecule force spectroscopy and topography and recognition imaging.
The authors review the strategies used to screen potential antimelanoma drugs, especially those involved in evaluating drugs in cancer cell lines, in vitro and in vivo, as well as in silico tests used for drug selection.

Following this, a study is presented focusing on gastroenteropancreatic carcinoids tumors, rare slow-growing lesions that derive from primitive stem cells of the gut.

The authors explore the influence of Traditional Formosan medicine on cancer therapy through a literature review and expert opinion. Three clinical experiences of using Formosan medicine for cancer therapy are discussed: acupuncture, herb, and Formosan medicine tongue diagnosis.

The concluding research utilizes the extensive pipelines of the Vienna RNA package for 2D RNA structure prediction, and the result exposes a satisfactory illustration and narration of the predicted RNA structures.

Horizons in Cancer Research. Volume 78
Hiroto S. Watanabe
In series: Horizons in Cancer Research
Publication Date: 11/04/2020
275 pp.
Hardcover: 978-1-53618-773-1, $250.00
e-book: 978-1-53618-827-1, $250.00

This compilation begins by discussing the common pediatric brain tumors, their key oncogenic drivers and signaling pathways. An update on the clinical trials against druggable targets is also provided.

An outline of the metabolizing pathways in cancer and the mode of action of aerobic glycolysis in cancer cells is presented, also highlighting the roles of nanotechnology in energy-based cancer therapies.

The authors review recent studies that characterize the specific mechanisms involved in mediating tocotrienol reversal of epithelial-to mesenchymal transition in malignant breast cancer cells.

The cytotoxic effects of Mannich bases derived from kojic acid on A375 human malignant melanoma are discussed and MRC-5 human lung cell lines are investigated using a sulphorhodamine B assay. Additionally, the cytotoxic effects and mechanisms displayed by metformin are assessed, alone or in combination with other agents. A better understanding of metformin-induced metabolic changes could aid in the discovery of new drugs, enhancing the efficacy of current melanoma therapeutics.

In closing, the authors explore the way in which physical activity and exercise are negatively correlated to most type of cancers, as exercise shares common underlying metabolic pathways with those of some bioactive food compounds, such as polyphenols.

Horizons in Cancer Research. Volume 79
Hiroto S. Watanabe
In series: Horizons in Cancer Research
Publication Date: 03/04/2021
210 pp.
Hardcover: 978-1-53619-330-5, $250.00
e-book: 978-1-53619-359-6, $250.00

This compilation includes details about recent innovations in the field of cancer treatment as well as best practices for managing the disease in various forms. The first chapter deals with the potential anticancer properties of the plant Trigonella foenum-graecum, also known as fenugreek. Following this, the authors provide clinically relevant information on physical therapy for women with breast cancer as well as targeted therapy for metastatic triple-negative breast cancer. Then, the authors discuss the evolution of the field of systematic therapy for urothelial cancer, which ranges from chemotherapy to immune checkpoint inhibitor use. The final chapter highlights the chemo-preventive efficacy of phytochemicals in modulating the epigenetic mechanisms involved in the initiation and progression of cancer.
Plant Flavonoids Against Metastasis: New Concepts For Cancer Treatment
Katrin Sak (Dip.Nut.Med., Head of the NGO Praeventio, Tartu, Estonia)

In series: Cancer Etiology, Diagnosis and Treatments
Publication Date: 01/27/2021
385 pp.
Hardcover: 978-1-53619-102-8. $270.00
e-book: 978-1-53619-105-9. $270.00

Cancer poses a major threat to human health and is one of the leading causes of death worldwide. Today, we know that metastasis, a multistep process whereby tumor cells spread from the site of origin to distant organs, is responsible for most cancer mortality. In fact, more than 90% of cancer-related deaths are attributed to tumor metastasis. Unfortunately, there are no therapies currently available to specifically target metastasis of any human cancer types, and patients with distant metasases ultimately die from their disease. Current conventional treatment modalities are focused on the removal of tumors by surgical resection and/or the killing of malignant cells using cytotoxic chemotherapeutic drugs or ionizing radiation, with no substantial inhibitory effects on the migratory and invasive abilities of cancer cells. Moreover, emerging evidence has shown that these standard treatment modes can unexpectedly increase the motility and invasiveness of surviving tumor cells, inducing or accelerating metastases formation and aggravating malignant progression. This paradoxical phenomenon can help us to understand why, despite the technological advancements in surgical procedures and drug delivery methods, the overall survival rate of numerous cancer types has barely changed over the past several decades, remaining unacceptably poor. Due to the insufficiency of existing therapies in improving the prognosis of cancer patients, new effective treatment options are urgently needed. To this end, the focus must be moved from a simply cytotoxic approach to a metastasis-preventing strategy, substituting the question of why cancer forms and how to kill it for the question of why tumors spread and how to prevent metastasis.

In this book, a conceptually new approach to cancer management is presented, by focusing not on the killing of transformed neoplastic cells, but blocking the spread of tumor cells to distant organs, thereby restricting malignant progression and targeting the main cause of cancer-related mortality. Plant-derived flavonoids might be ideal candidates for novel antimetastatic agents, as they are non-toxic and possess the capacity to inhibit multiple steps of metastatic cascade. These polyphenolic phytochemicals act through regulating a number of metastasis-associated signaling cascades in different tumor cells, and also modulate diverse components of tumor microenvironments and attenuate the formation of tumor-specific angiogenesis. Moreover, the combination of certain flavonoids with surgical resection, chemotherapy or radiotherapy may result in the abolishment of the metastasis-promoting effects of these conventional therapeutic modalities, providing novel treatment options for combating cancer in the future. It is expected that the development of flavonoids for antimetastatic drugs and their inclusion in further cancer treatment strategies can substantially improve the prognosis of patients with various types of malignancies in a time when cancer incidence is predicted to continuously increase throughout the world.

This book should be read by anyone who is interested in innovative advances in cancer care. Due to its systemic approach to cellular and molecular processes of metastatic cascade, this book might serve as a useful contemporary textbook for medical colleges and universities for studies of cancer development, progression and dissemination.

Orthopedics

The Fundamentals of Spine Surgery
Tim Bachmeier

In series: Surgery - Procedures, Complications, and Results
Publication Date: 10/23/2020
150 pp.
Softcover: 978-1-53618-570-6. $82.00
e-book: 978-1-53618-741-0. $82.00

The Fundamentals of Spine Surgery first aims to investigate the efficacy of several therapeutic modalities in the modern treatment of spinal pathologies. Following this, the authors aim to estimate fusion by 3D CT scan in XLIFs applied in adult lumbar deformities, evaluating the clinical results related to fusion. The safety and effectiveness of minimally invasive-transformaminal lumbar interbody fusion in the treatment of lumbar degenerative spondylolisthesis is evaluated, highlighting the steps and technical procedures of this operation as well as its short and long-term outcomes.
In the closing study, the authors compare the effectiveness of spino-pelvic parameters in minimally invasive posterior lumbar interbody fusion and traditional posterior open approach in the treatment of a prospective randomized series of high-grade adult isthmic spondylolisthesis.

### OTOLARYNGOLOGY / AUDITORY AND SPEECH

#### Deafness: Current Perspectives and Research Developments
*Paul R. Pettit*

In series: Otolaryngology Research Advances

Publication Date: 11/04/2020

219 pp.

Hardcover: 978-1-53618-752-6. $160.00
e-book: 978-1-53618-800-4. $160.00

Deafness: Current Perspectives and Research Developments presents the theoretical foundations for miscue analysis, its utilization with diverse and bilingual students, and prior research conducted with deaf and hard-of-hearing individuals. The authors focus on a significant challenge to improving the reading achievement of deaf and hard-of-hearing individuals: finding non-biased assessments and compiling test pools of sufficient size in order to identify meaningful patterns. The viability of vibrotactile stimulation as an alternative to complement and foster linguistic development in the profoundly deaf, particularly those with a prelingual age of onset, is examined.

The challenges, opportunities, and goals of researchers and clinicians working in the field of deafness and autism spectrum disorder are explored, emphasizing the need for training more culturally and linguistically competent deaf and hearing adults to conduct research and intervention with deaf children. In an effort to improve validity, the authors re-design a previous cross-sectional study to measure resilience when deaf/hard of hearing or blind/low vision students entered high school as well as when they exited, usually four years later, and compare the two data points. The first known project conducted within the United States to evaluate the use of assistive technology for healthcare interactions between student pharmacists and simulated deaf/hard of hearing patients is also discussed.

#### Understanding Auditory Processing Disorders in Children
*Dr. Jay R. Lucker (Director of the Five-Year Accelerated Master’s Degree Program in Speech-Language Pathology, Department of Communication Sciences and Disorders, Howard University, Washington, DC, USA)*

In series: Audiology and Hearing Research Advances

Publication Date: 12/22/2020

198 pp.

Hardcover: 978-1-53618-168-5. $160.00
e-book: 978-1-53618-924-7. $160.00

The field of auditory processing disorders is filled with many publications which may be confusing to someone trying to learn about this topic. The typical approach to auditory processing taken by authors is either viewing such processes as involving only the auditory system, or not differentiating between auditory processes and other processes such as sensory processing, language understanding, or cognitive/thinking factors. Understanding Auditory Processing Disorders by Dr. Jay R. Lucker presents a comprehensive, integrated approach identifying how auditory processing involves many systems—not merely the auditory system—and describing how different types of auditory processes involve specific systems. Understanding this multisystem approach to auditory processing helps to identify what is going on with children who have problems processing what they hear when hearing loss is not the primary contributing factor.

For educators, this book helps them better understand how auditory processing disorders can affect a child educationally, as well as provides recommendations for accommodations that teachers and other professionals can use to make understanding what is spoken in class lessons, conversations, and verbal interactions with adults and children easier. This book clarifies what is needed for the appropriate evaluation of auditory processing to better understand what systems may be malfunctioning and affecting children’s abilities to appropriately process and understand what they hear.
For speech-language pathologists and occupational therapists who may provide treatment for children with auditory processing disorder problems, this book identifies some specific treatments that have evidence-based research associated with improving different factors that contribute to auditory processing disorders. For audiologists, this book provides a better understanding of how the testing of auditory processing can be more successful in identifying what appropriate accommodations and treatments are needed based on the specific type of auditory processing disorder the child has.

**Childhood and Adolescence: Perspectives of Pain**

Donald E. Greydanus, MD (Department of Pediatric and Adolescent Medicine, Western Michigan University School of Medicine, Kalamazoo, MI, USA) and Joav Merrick, MD, MMedSci, DMSc (Medical Director, Health Services, Division for Intellectual and Developmental Disabilities, Ministry of Social Affairs and Social Services, Jerusalem, Israel; Division of Adolescent Medicine, KY Children’s Hospital, Department of Pediatrics, Lexington, Kentucky, USA; National Institute of Child Health and Human Development, Jerusalem, Israel; Division of Pediatrics, Hadassah Hebrew University Medical Centers, Mt Scopus Campus, Jerusalem, Israel; School of Public Health, Georgia State University, Atlanta, Georgia, USA)

In series: Pediatrics, Child and Adolescent Health
Publication Date: 10/01/2020
292 pp.
Hardcover: 978-1-53618-416-7. $195.00
e-book: 978-1-53618-633-8. $195.00

Marijuana (cannabis) remains a controversial drug in the 21st century, even though the plant has been known to human beings for at least 10,000 years with hemp-woven clothing material recorded in ancient China in 8,000 BCE and hemp foods in ancient China in 6000 BCE. It has been used for cancer pain, neuropathic pain and spasticity with multiple sclerosis, and other indications such as chronic pain and also in epilepsy management and current research is evaluating the anti-epileptic role. The potential role of specific cannabinoids for medical benefit will be revealed as the 21st century matures. However, potential dangerous adverse effects from smoking marijuana are well known and should be clearly taught to a public often confused by a media-driven, though false message and promise of benign pot consumption. In this book we will review not only cannabis, but pain and disorders causing pain in children and adolescents.

**Interventional Techniques for the Management of Sacroiliac Joint Pain**

Nomen Azeem, MD (Florida Spine & Pain Specialists, Riverview, FL, USA), Ajay Antony, MD (The Orthopedic Institute, Gainesville, FL, USA), Miguel Attias, MD (Ohmedica PA Joint and Spine Health Specialists, St. Petersburg, FL, USA), Michael Esposito, MD (Florida Pain Institute, Melbourne, FL, USA), Navdeep Jassal, MD (Spine & Pain Institute of Florida, Lakeland FL, USA) and Michael Hanes, MD (Jax Spine and Pain Centers, Jacksonville, FL, USA)

In series: Pain Management - Research and Technology
Publication Date: 11/25/2020
108 pp.
Softcover: 978-1-53618-767-0. $82.00
e-book: 978-1-53618-864-6. $82.00

As the growing prevalence of chronic low back pain continues to burden our healthcare system, identification and treatment of the appropriate source of pain is critical. There may be up to a million patients annually with low back complaints that have sacroiliac joint conditions likely to cause or contribute to the pain. There is an unmet need for a comprehensive clinically focused, fast reference on sacroiliac joint pain treatment. The book is structured into eight chapters that include a robust overview of anatomy, physiology, patient selection, and both conservative and advanced
treatments. As the body of evidence compiles for the utilization of minimally invasive techniques for the treatment of low back pain to in lieu of major back surgery, this book provides options that may benefit patients with low back pain with the use of both established and novel treatments. As the healthcare industry continues to invest in research and development of cutting-edge treatments for pain control, this book discusses in detail the most current treatment options available. Written by high profile, nationally recognized experts in the field of interventional pain management, Interventional Techniques for the Treatment of Sacroiliac Joint Pain is one of the first manuals of its kind to provide a focused and comprehensive approach to the effective treatment of sacroiliac joint pain.

**PEDIATRICS**

**Tropical Pediatrics: A Public Health Concern of International Proportions, 3rd Edition**

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In series: Pediatrics, Child and Adolescent Health
Publication Date: 12/14/2020
572 pp.
Hardcover: 978-1-53618-604-8. $310.00
e-book: 978-1-53618-928-5. $310.00

Tropical medicine is a branch of medicine focusing on disorders usually found in subtropical and tropical areas of the world. Tropical pediatrics is a branch of tropical medicine focusing on children and adolescents in these areas. The current process of global warming and the widespread issue of international travel are bringing these conditions to many places of the globe. This third edition of Tropical pediatrics highlights selective concepts of tropical pediatrics that are of importance to clinicians caring for children and adolescents. This book is dedicated to clinicians around the world who care for these precious patients growing up in often remote corners of globe. It should be remembered that sometimes these issues become important to civilized corners of the world as well. Issues of clean water for the world’s population are also considered.

**PHARMACOLOGY**

**A Closer Look at Antibiotic Resistance**

Victor Tsunoda

In series: Microbiology Research Advances
Publication Date: 03/04/2021
268 pp.
Hardcover: 978-1-53619-277-3. $195.00
e-book: 978-1-53619-319-0. $195.00

Bacterial infections have become more difficult, and sometimes impossible, to treat due to antibiotic resistance, which occurs when bacteria develop the ability to defeat the available drugs designed to kill them. According to the Centers for Disease Control and Prevention, each year, 2 million Americans become sick with antibiotic-resistant
infections, and of that, about 23,000 die. This book examines the challenges related to antibiotic resistance, the development and use of diagnostic testing to identify antibiotic resistance, the development of treatments for resistant infections, and appropriate antibiotic use.

A Comprehensive Chemical and Pharmacological Review of Cosmetics
Abdul Kader Mohiuddin (Secretary and Treasurer, Dr. M. Nasirullah Memorial Trust, Tejgaon, Bangladesh)
In series: Pharmacology - Research, Safety Testing and Regulation
Publication Date: 10/01/2020
463 pp.
Hardcover: 978-1-53618-571-3, $270.00
e-book: 978-1-53618-647-5, $270.00
The first finding of cosmetics comes from Ancient Egypt, some 6,000 years ago. The worldwide market for cosmetics now stands at more than $500 billion and is anticipated to raise $750 billion by 2025, growing at the rate of 6%. Growth in global economies, changes in lifestyle, increased competition for skin and sun care products, due to varying weather conditions, are encouraging the growth of the cosmetics market. Rising interest in natural, herbal, and biodynamic skin care products creates new opportunities for manufacturers to innovate and develop new products in line with consumer preferences.

The book “A Comprehensive Chemical and Pharmacological Review of Cosmetics” mostly focuses on the chemical and pharmacological aspects of using these additives along with the main ingredients. This rising market needs constant multifaceted control, i.e., monitoring of harmful chemicals and biological degradation. Adding artificial ingredients to consumer cosmetic products is a common practice for increasing cosmetic efficacy, maintaining cosmetic effectiveness, and producing a longer-lasting, more viable product. The chapters of the book cover an extensive list of topics, including, but not limited to, the basics of skincare products, such as the raw materials of cosmetics and their application; technical implications of the merits and demerits of ingredients used, as well as theoretical knowledge; skin creams, lighteners, tanners, sunscreens, facial powders, acne protection, and anti-aging formulations. Harmful cosmetics pose a risk to consumers owing to the presence of impermissible or prohibited substances under the current cosmetic legislation. Cosmetic hazards and regulations are therefore discussed in detail to give readers a clear idea.

A Comprehensive Guide to Non-Steroidal Anti-Inflammatory Drugs
Suleyman Kaplan, PhD (Full Professor and Head of Department, Department of Histology and Embryology, Faculty of Medicine, Ondokuz Mayas University, Samsun, Turkey)
In series: Pharmacology - Research, Safety Testing and Regulation
Publication Date: 02/10/2021
529 pp.
Hardcover: 978-1-53619-128-8, $310.00
e-book: 978-1-53619-215-5, $310.00
A Comprehensive Guide to Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) begins by describing the general characteristics, classification, pharmacokinetics, pharmacodynamics, clinical uses and adverse effects of NSAIDs. The adverse effects of NSAIDs, drug interactions and their clinical applications in neurological diseases, headaches, and cerebrovascular diseases are discussed. These drugs are also often used in dermatology, especially in the treatment of dermatosis. Extensive information concerning NSAIDs and dermatological diseases is provided. A broad perspective on the role of NSAIDs in infectious diseases is also provided.

The next chapter discusses findings concerning the effects of NSAIDs on bone and tendon healing, together with cellular and molecular factors. The authors suggest that NSAIDs may be a risk factor for tissue healing. Diclofenac sodium (DS), widely used in urology clinics, exhibits dose-dependent side effects on various systems. This chapter suggests that nanoparticle technology can be applied to the oral form of DS in order to reduce its side-effects. The effects of NSAIDs on the reproductive systems of both sexes are also evaluated. Both genders make extensive use of NSAIDs during infertility treatment.

Another chapter focuses on how DS affects spermatogenesis. The authors suggest that DS causes histopathological changes in the testes by disrupting the nutrition of testicular cells and impairing complete testis functions. Men wishing to have children should therefore use this drug with caution. The authors also review the effects of NSAIDs on prostatitis, benign prostatic hyperplasia and prostate cancer.

In the following chapter, the authors examine the role of NSAIDs in gynaecology and obstetrics. Advances in the use of NSAIDs and melatonin in reproductive medicine for both sexes are discussed. The authors describe the biological roles of

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NSAIDs and melatonin in human reproduction, diseases, pregnancy, and assisted reproductive treatment. The subsequent chapter highlights the side-effects of NSAIDs on the gastrointestinal system. This book goes on to assess how DS affects the nervous system in the light of molecular and cellular analysis. The authors first explore the dose-dependent effects of DS on the nervous system. They then examine the potential neuroprotective / neurotoxic effects of DS on the nervous system, including the spinal cord, brain, cerebellum and peripheral nerves. The effects of DS on the adult hippocampus are assessed based on experimental studies. The purpose of this section is to highlight the relationship between oxidative stresses and the role of antioxidants in reducing DS toxicity. The importance of melatonin administration against pre- and postnatal DS toxicity in the nervous system is evaluated in several chapters. Recent findings suggest that prenatal exposure to NSAIDs causes an alteration in the morphology of optic nerve fibres based on stereological, histological and electron microscopic analysis.

The authors evaluate histomorphometric results from light and electron microscopic analysis of the effects of prenatal DS exposure on male fertility. Numerous studies have shown that all elements of the male system are affected by this exposure. Lastly, the authors specifically focus on Sertoli cells and suggest that prenatal DS exposure produces toxic effects on Sertoli cell morphology.

Handbook of Novel Drug Delivery
Dr. Balram Ambade (Associate Professor & Head of Department, Department of Chemistry, National Institute of Technology, Jamshedpur, Jharkhand, India), Dr. Rajendra Kumar Jangde (Assistant Professor, University Institute of Pharmacy, Pt. Ravishankar Shukla University, Raipur (C.G.), India) and Sulekha Khute (University Institute of Pharmacy, Pt. Ravishankar Shukla University, Raipur (C.G.), India)
In series: Pharmacology - Research, Safety Testing and Regulation
Publication Date: 02/15/2021
110 pp.
Softcover: 978-1-53619-075-5, $82.00
E-book: 978-1-53619-091-5, $82.00
This book presents advances in the field of novel drug delivery, focusing on novel molecules with potential to transform the treatment and prevention of wound healing. However, such potential is severely compromised by significant obstacles to the delivery of these drugs in vivo. Sophisticated drug delivery and targeting can offer substantial advantages to conventional drugs, such as increased efficiency, handiness, and the potential for line extensions and market expansion. A simple, accessible, and easy-to-read handbook, Handbook of Novel Drug Delivery is the first book to provide a comprehensive introduction to the principles of advanced drug delivery systems.

Lipid Nanoparticles: Advances in Research and Applications
Sabine Ziegler
In series: Pharmacology - Research, Safety Testing and Regulation
Publication Date: 10/09/2020
112 pp.
Softcover: 978-1-53618-653-6, $82.00
E-book: 978-1-53618-658-1, $82.00
Lipid Nanoparticles: Advances in Research and Applications provides a review of the main types of lipid-based drug nanoparticles such as nanoemulsions, self-emulsifying drug release systems, liposomes, lipid nanocapsules, solid lipid nanoparticles, and nanostructured lipid carriers. The authors describe the advantages of using solid lipid nanoparticles in the treatment of infectious diseases that affect various organs located in areas of the body which are difficult to treat with common pharmaceutical formulations. Recent findings regarding solid lipid nanoparticles and their implications in breast cancer are summarized. Additionally, the therapeutic efficacy of solid lipid nanoparticle for overcoming multi-drug-resistance in breast cancer is highlighted.
Emotionality, Intimacy and Trauma of Intellectually Disabled Clients with Self Harm, Aggression, Disturbing Behaviors and/or Emotional Fluctuation (SADE): Humanistic Interpretation and Intervention

Kam-shing Yip (Professor, Department of Applied Social Studies, Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong)

In series: Psychiatry - Theory, Applications and Treatments
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217 pp.
Hardcover: 978-1-53615-280-7. $160.00
e-book: 978-1-53615-281-4. $160.00

Intellectual disabilities have long been a concern for both practitioners and academics alike. With the introduction and advocacy of concepts to the public in recent decades, and the normalization and valorization of intellectual disabilities, humanistic concern has become the dominant trend in providing interventions and services for people with these issues.

Today, various ideas for societal inclusion of those with intellectual disabilities have been introduced. However, many practitioners and academics have criticized these ideas as idealistic, and in many ways, inapplicable for actual social inclusion of people with intellectual disabilities.

The situation is particularly serious regarding those intellectually disabled individuals presenting various forms of self-harm, aggression, disturbing behaviors, and emotional fluctuation (SADE: S = Self harm, A = Aggression, D = Disturbing behaviors, E = Emotional fluctuation). In many instances, social exclusion, labelling, punishments, deprivation of rights, physical restraints, as well as psychiatric medications are commonly used in controlling intellectual disabled clients with SADE.

A thorough understanding of intellectually disabled clients has revealed that their self-harm, aggression, disturbing behaviors, and emotional fluctuations (SADE) are closely related to their unfulfilled needs, developmental traumas, abuse, neglect, and abandonment in their lives. These individuals have problems in expressing their views and emotions, as well as having severe attachment needs.

Based on the writers’ substantial experience, clinical practice, and supervision in working with intellectual disabled clients with SADE, this book is the first to formulate and consolidate the communication, emotionality, intimacy, and trauma based interpretation and intervention for intellectually disabled clients with SADE. This book provides methods for effective, humanistic, normalized, and integrated recovery of these individuals.

Trauma-Informed Care: Addressing Cultural Sensitivity of the Women Veterans with Post-traumatic Stress Disorder Related to Military Sexual Trauma in the Veterans Administration and Civilian Health Care Systems

Shemya Vaughn, PhD (Department of Counselor Education and Rehabilitation, Fresno State University, Fresno, CA, USA; The Sexuality & Disability Institute, Licensed Professional Counselor, Eureka, CA, USA), Barbara McEntee (Prineville, OR, USA) and Leslene della-Madre (Sebastopol, CA, USA)

In series: Military and Veteran Issues
Publication Date: 03/09/2021
382 pp.
Hardcover: 978-1-53619-210-0. $230.00
e-book: 978-1-53619-299-5. $230.00

Trauma-informed care: Addressing cultural sensitivity of the women veterans with posttraumatic stress disorder related to military sexual trauma in the Veterans Administration and civilian health care systems is a book born from the mind of a woman veteran. Providing a space for women to write about and for women veterans who receive services for military sexual trauma and posttraumatic stress disorder. This book is a call to action to Veterans Affairs, the Veterans Health Administration and the civilian health care system to provide trauma-informed care where our US women veterans sometimes go for treatment. Above all, Trauma-informed care: Addressing cultural sensitivity of the women veterans with posttraumatic stress disorder related to military sexual trauma in the Veterans Administration and civilian health care systems gives voice to the millions of women veterans who feel they have no voice when interacting with healthcare systems.
Addiction and Substance Abuse

Drug Addiction, Trauma and Mental Illness: Interpretation and Intervention

Kam-shing Yip (Department of Applied Social Sciences, Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong, China)

In series: Mental Illnesses and Treatments
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199 pp.
Hardcover: 978-1-53614-020-0, $210.00
e-book: 978-1-53614-021-7, $210.00

Research and clinical experiences show that people engaging in drug addiction for some years usually embrace severe mental illnesses including schizophrenia, borderline personality disorder, depression and post-traumatic stress disorder. Schizophrenia usually occurs in patients with prolonged use of amphetamines and hallucinogens. Borderline personality disorder commonly happens in female addicts who have experienced abandonment and childhood abuse. On the one hand, drug addiction can be used to cope with symptoms of severe mental illness. On the other hand, prolonged drug addiction can also induce severe mental illness. A close look into individuals with chronic drug addiction usually review that they encounter suffering, hardship and traumas. There are two types of traumas encountered by people with drug addiction. The first one is trauma before drug addiction and substance abuse. Many of them may have suffered through abuse, oppression and abandonment in their lives. Another one is drug led traumas because of psychosocial deprivation and medical problems induced by chronic addiction. In this book, apart from describing a comprehensive model in understanding and interpreting the complexity of trauma, mental illness and drug addiction, this model is applied and illustrated in clients with borderline personality disorder and schizophrenia, drug addiction and those who have experience different forms of trauma. Related psychosocial interventions are also thoroughly discussed.

The Knotted Cord: An Update on Transgenerational Alcohol

Kieran D. O’Malley (Child and Adolescent Psychiatrist, Slievemore Clinic, Stillorgan, Co. Dublin, Ireland)

In series: Alcohol and Drug Abuse
Publication Date: 12/22/2020
349 pp.
Hardcover: 978-1-53617-859-3, $230.00
e-book: 978-1-53617-860-9, $230.00

This book a follow up to the original The Knotted Cord published by Nova Science in 2014. It is written as a conversation between myself in 2014 and then in 2019. The conversation is structured around the chapters of the initial book. Thus Ireland’s toxic romance with alcohol, the stigma of transgenerational alcohol and the ethical dilemma of diagnosing and managing Neurodevelopmental Disorder prenatal alcohol exposure offer the beginning thrust to the book showing what has changed in the intervening five years and what has not changed.

Overall the book is a critical and academic update on the complexities of understanding transgenerational alcohol and its impacts on societies worldwide. Management has clearly been placed in a Systems of Care paradigm, which is consistent with the 2014 book. However the intervening five years have produced a new clinical instrument, the Early Childhood Service Intensity Instrument (ECSI). The clinical emphasis on mothers and children under five years of age has become the entry into decreasing the impact of transgenerational alcohol.

At the moment, the teratogenic effect of alcohol on the developing fetus remains frozen in being only related to a dysmorphic face. This is far from the truth as this prenatal acquired brain injury causes a mainly hidden, non-IQ, non-Face driven Global neurodevelopmental disorder, now more correctly diagnosed as Neurodevelopmental Disorder prenatal alcohol exposure, NDPAE, DSM 5 Code 315. Lastly, the challenge of approaching transgenerational alcohol and its impacts is a challenge to traditional medical practices of child and adult care. This disconnected model of care does not fit as medical, nursing, addiction and social workers need to move out of their silos and communicate with health professionals across the age range and accept this ‘orphan’ condition.
Child and Adolescent Psychiatry

Child and Adolescent Psychodynamic Psychotherapy

Stylianos Christogiorgos, MD, PhD (Associate Professor of Child Psychiatry, School of Medicine, National and Kapodistrian University of Athens, Athens, Greece; Hellenic Association of Child and Adolescent Psychoanalytic Psychotherapy, Athens, Greece) and Georgios Giannakopoulos, MD, PhD (Assistant Professor of Child Psychiatry, School of Medicine, National and Kapodistrian University of Athens, Athens, Greece)

In series: Psychiatry - Theory, Applications and Treatments
Publication Date: 03/09/2021
362 pp.
Hardcover: 978-1-53619-261-2. $230.00
e-book: 978-1-53619-313-8. $230.00

This edition is an attempt to present the reader with a lucid and concise, yet comprehensible text that outlines the key components that are required for practicing psychodynamic psychotherapy of children and adolescents. There is a brief exposition of the oeuvre of the three main successors of Sigmund Freud’s prodigious work, and their significant contribution to the formation of both the theory and technique of child and adolescent psychodynamic psychotherapy. In addition, there is a description of the key parameters of psychodynamic approach for the therapy of the most-often attested conditions in childhood and adolescence. Special reference is made to particular issues that have a bearing on practicing child and adolescent psychodynamic psychotherapy in the present day. Throughout this book and where it was deemed necessary, the inclusion of informative (yet appropriately disguised) clinical material, originating from the authors’ broad clinical experience, significantly enriches its content. The book’s chapters are written with clarity, whilst its topics are informed by state-of-the-art theorization and supported by selected both recent and seminal references.

The content of this book will be invaluable to the readers who need a careful description of the fundamentals of contemporary psychodynamic approaches to the comprehension and therapeutic treatment of children and adolescents’ psychopathology, including the specificities, challenges and questions raised accordingly. Notwithstanding any omissions, it is its authors’ belief that the book in question deserves a place in the library of anyone with a genuine interest in child and adolescent psychodynamic psychotherapy.

PUBLIC HEALTH

Coronavirus Disease: From Molecular to Clinical Perspectives

Yildiz Dincer, PhD (Istanbul University - Cerrahpasa, Cerrahpasa Medical Faculty, Department of Medical Biochemistry, Istanbul, Turkey)

In series: Public Health in the 21st Century
Publication Date: 03/09/2021
310 pp.
Hardcover: 978-1-53619-296-4. $230.00
e-book: 978-1-53619-311-4. $230.00

The world is experiencing an unprecedented challenge due to coronavirus disease (COVID-19) pandemic. In December 2019, a novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) was identified as the cause of a cluster of pneumonia cases in Wuhan, a city in the Hubei province of China. It rapidly spread, resulting in an outbreak of COVID-19. Although the majority of the infected individuals exhibit mild to moderate respiratory illness and recover without requiring special treatment, older people and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer may rapidly progress to acute respiratory distress syndrome, septic shock, coagulation disorders, multi-organ failure, and death. The course of COVID-19 is usually mild in children. However, in rare cases, children can be severely affected, and clinical manifestations may differ from adults. Some children present the multisystem inflammatory syndrome that is similar to incomplete Kawasaki disease or toxic shock syndrome. There is no specific treatment and vaccine for COVID-19. Due to the high infectivity rate of COVID-19, the unexpected and rapid influx of large numbers of patients, especially patients who need intensive care, have caused great pressure on the health care systems worldwide. The worldwide spread of COVID-19 caused fear, anxiety, depression, panic attacks, and a general decrease in overall wellbeing in the population. Healthcare professionals who occupy the front line during pandemics are
at increased risk concerning their physical and mental health. The outbreak of COVID-19 negatively affected all aspects of life including education, trade, and tourism. Our knowledge of this novel virus is limited. However, many ongoing clinical trials are evaluating potential treatments and vaccines. A better understanding of the pathogenesis of COVID-19 will provide important insight into its management and reduce the mortality rate. Based on the latest global scientific data and clinical experiences of the authors, this book gives the readers an overview of COVID-19 pathogenesis and transmission routes, current diagnostic and treatment strategies, the clinical course of the disease in children and elderly patients, the genetic background of differences in the incidence of new SARS-CoV-2 infection, the impact of the COVID-19 pandemic on patients with chronic diseases such as diabetes, cancer, cardiovascular diseases, chronic respiratory diseases, antioxidant therapy to limit tissue damage, molecular approaches in COVID-19 treatment, and vaccine studies.

COVID-19: From Health, Education, Economic, to Science and Technology in South East Asia and India
Asep Bayu Dani Nandiyanto (Universitas Pendidikan Indonesia, Bandung, Indonesia), Tryastuti Irawati Belliny Manullang (Universitas Pendidikan Indonesia, Bandung, Indonesia), Rina Maryanti (Universitas Pendidikan Indonesia, Bandung, Indonesia), Amir Machmud (Universitas Pendidikan Indonesia, Bandung, Indonesia), A. Ana (Universitas Pendidikan Indonesia, Bandung, Indonesia) and Asnul Dahar bin Minghat (Razak Faculty of Technology and Informatics, Universiti Teknologi Malaysia; University College of Islam Melaka, Malaysia)

E-Cigarettes: Perspectives, Regulation and Health Effects
René Ebersbach

E-Cigarettes are battery-operated devices, vape pens, e-hookah, e-cigars, e-pipes, or other electronic nicotine delivery systems. They are designed to heat a liquid solution that emulates smoking using a smoke-free technique. Ongoing studies of nicotine salts and by-products such as N-nitrosornornicotine and nicotyrine and their physiological effects are also reviewed.
Epidemics: Detecting, Predicting and Preventing
Edward Paige
In series: Public Health in the 21st Century
Publication Date: 12/11/2020
148 pp.
Softcover: 978-1-53618-976-6. $82.00
e-book: 978-1-53619-025-0. $82.00
This compilation first describes several methods for glycoengineering the COVID-19 virus to present multiple a-gal epitopes for the amplification of a-gal vaccine efficacy against SARS-CoV-2 infections. Following this, the authors discuss myopia, the most common ocular disorder worldwide. It is the leading cause of visual impairment in children, and its prevalence is increasing rapidly. In closing, the authors analyze the importance of the detection and prevention of wheat stripe rust epidemics in Argentina within the context of an integrated management of the disease.

More Prescription for Change: Case Studies for Applications of Strategy and Strategic Intervention in National and International Health Systems in Response to a COVID Pandemic
Laure Paquette, PhD (Professor Emerita of Political Science at Lakehead University, Thunder Bay, Ontario, Canada)
In series: Public Health in the 21st Century
Publication Date: 02/10/2021
194 pp.
Hardcover: 978-1-53619-097-7. $160.00
This book illustrates the use of strategy by national and international groups using fictional case studies. The cases are fictional in the sense that the information provided was not collected using the methodology used for previous case studies about states or groups of states. Instead, the author combined characteristics and information as she saw necessary in order to make the example clear to the reader. The case studies include: an infra-national group strategizing to cope with a phenomenon, an individual, another infra-national group, a supranational group, a government or state, and a group of government or states. It also includes the study of a phenomenon, here COVID-19. The present book also differs from previous case studies to the extent that the various components of the strategy are not clearly identified. This will allow the self-taught strategist to use them to test their own skills at strategic analysis.

Handbook of Pulmonary Rehabilitation
Paraschiva A. Postolache, M.D., Ph.D. (Associate Professor, “Grigore T. Popa” University of Medicine and Pharmacy, Faculty of Medicine, Medical Specialties Department and Head of the Respiratory Rehabilitation Clinic, Rehabilitation Clinical Hospital, Iasi, Romania) and Darcy D. Marciniuk, MD (Associate Vice-President Research University of Saskatchewan, Professor of Medicine, Division of Respirology, Critical Care, and Sleep Medicine, Royal University Hospital, Saskatoon, SK, Canada)
In series: Pulmonary and Respiratory Diseases and Disorders
Publication Date: 12/10/2020
409 pp.
Hardcover: 978-1-53618-812-7. $230.00
e-book: 978-1-53618-905-6. $230.00
In the last three decades, Pulmonary Rehabilitation (PR) has become a cornerstone in the comprehensive management of Chronic Obstructive Pulmonary Disease (COPD) and other chronic respiratory diseases in adults and children, supported by solid physiological bases and wide scientific evidence, with randomized controlled trials, meta-analysis and several
guidelines. PR programs are customized to the needs of each patient and carried out by a multidisciplinary team of healthcare specialists (medical specialists in medical rehabilitation and pulmonology, functional explorations, geriatric physicians, nurses, physiotherapists, nutritionists, psychologists, respiratory therapists, occupational therapists, bioengineers, pharmacologists, in collaboration with a family doctor and pharmacists). As a comprehensive intervention, PR involves good collaboration and communication between team members, thus ensuring maximum comfort and benefit to the patient. PR programs improve the quality of life of patients by increasing their degree of independence and reducing the number of exacerbations, the days of hospitalization due to them, and costs. PR has the ability to reduce symptomatic burden, in particular dyspnea, and muscle deconditioning. In turn, it can increase exercise capacity, reduce anxiety and depression, and improve patients' psycho-emotional status and social reintegration. PR is the standard of care for patients with chronic lung diseases motivated to participate in the rehabilitation program to become more physically active and more independent, being an integral part of clinical management and maintaining health.

**Practical Guide for Pulmonary Rehabilitation: The Essential Source for Pulmonary Rehabilitation Programs**

_Liana Pradan, MD (Department of Respiratory Medicine, Lister Hospital, Stevenage, UK), Florin Mihaltan, MD, PhD (Department of Pneumology, “Carol Davila” University of Medicine and Pharmacy, Bucharest, Romania) and Vishal Bansal, MD, PhD (Department of Physiology, Vallabhbhai Patel Chest Institute, University of Delhi, Delhi, India)_

In series: *Pulmonary and Respiratory Diseases and Disorders*  
Publication Date: 01/27/2021  
386 pp.  
Hardcover: 978-1-53619-045-8. $230.00  
e-book: 978-1-53619-125-7. $230.00

This book provides up-to-date knowledge on almost all aspects of the multidisciplinary approach to pulmonary rehabilitation. The book advises on how to open a pulmonary rehabilitation program, how to evaluate the chronic lung patients for their fitness level, to prescribe exercises, how to tackle aspects like end-of-life care and provides information about telemedicine rehabilitation in the COVID-19 era. The book also covers subjects of interest like the history and future of pulmonary rehabilitation, smoking cessation, physiology of the skeletal muscle, airways clearing, medication, oxygenotherapy and special consideration for elderly patients with comorbidities. There are evidence-based explanations regarding all these aspects that will benefit respirologists who have an interest in pulmonary rehabilitation, physiotherapists, occupational therapists, doctors in training, respiratory nurses, and family medicine physicians. Furthermore, the contributors are professionals with experience in pulmonary rehabilitation in major rehabilitation centers around the world who are known for their research, teaching and publishing on the international arena.

**SPECIAL TOPICS**

**Advances in Health and Disease. Volume 25**

_Lowell T. Duncan_

In series: *Advances in Health and Disease*  
Publication Date: 09/11/2020  
247 pp.  
Hardcover: 978-1-53618-444-0. $250.00  
e-book: 978-1-53618-484-6. $250.00

Advances in Health and Disease. Volume 25 first offers nurses, emergency-care doctors, psychiatrists, and other personnel involved in the multidisciplinary assessment, management and treatment of intoxicated patients in the emergency department setting an overview of the literature on psychomotor agitation associated with alcohol or drug abuse. Next, this compilation explores the commonly neglected aspects of oral health in school children, such as dental caries, pain, dental trauma, developmental anomalies and malocclusion. The authors discuss hemolysis in blood samples, a problem that is commonly found in laboratories. This has a potential impact on the quality of blood tests, completion time or turn around time, and creates discomfort for patients due to repeated sampling.
The available research on the effect of yoga in managing the “ominous octet” of type 2 diabetes is summarized in an effort to ensure the evidence-based practice of therapeutic yoga in a clinical setting. The effects of age and gender on cystatin C levels are investigated, challenging the glomerular filtration rate equations for healthy cases. The closing study explores how deficiencies such as zinc, folic acid and vitamin B12, as well as immune deficiency syndromes, may cause a sprue-like enteropathy.

**Advances in Health and Disease. Volume 26**

*Lowell T. Duncan*

In series: *Advances in Health and Disease*

Publication Date: 10/16/2020

267 pp.

Hardcover: 978-1-53618-605-5, $250.00

e-book: 978-1-53618-801-1, $250.00

Advances in Health and Disease. Volume 26 opens with a deep insight into the effects of probiotics on humans, animals and plants, the proposed mechanism of action and their applications. Following this, the authors focus on the pathophysiology of iron metabolism and hepcidin, their regulation with ferroportin, matripatase-2, as well as the factors involved in causing iron-refractory iron deficiency anemia. A review is provided on interleukin 6, a small glycoprotein and pleiotropic cytokine produced during chronic inflammation by monocytes, fibroblasts, endothelial cells, lymphocytes, keratinocytes, astrocytes and several malignant cells. The authors examine the protection of people and the environment from radiation in the event of nuclear accidents, maintaining that in disasters with widespread contamination, the protection system must rely on experts’ ethical values. To achieve global commitments on the prevention of mother-to-child transmission of HIV, the concluding study necessitates enhancing different intervention measures, including strengthening laboratory facilities in different health institutes for early detection.

**Advances in Health and Disease. Volume 27**

*Lowell T. Duncan*

In series: *Advances in Health and Disease*

Publication Date: 10/09/2020

257 pp.

Hardcover: 978-1-53618-684-0, $250.00

e-book: 978-1-53618-697-0, $250.00

Advances in Health and Disease. Volume 27 first discusses how the nanotechnology field has received considerable attention in medical sciences because of the unique characteristic features of nanoscale materials. The authors go on to discuss biofilm, a structured community of bacterial cells enclosed in a self-produced polymeric matrix adherent to an inert or living surface. Work-related musculoskeletal disorders are discussed, as they are an important occupational health problem in industrialized countries and industrially developing countries. More specifically, the high prevalence of work-related musculoskeletal complaints in dentists is discussed, as the past two decades have witnessed a sharp rise in the incidence. The authors briefly review the research on how healthy aging is being studied by researchers, providing a community-based participatory research framework for defining healthy aging from their own work utilizing concept mapping methodology. The closing study focuses on obstructive sleep apnea syndrome, a sleep breathing disorder in which the airway is blocked by intermittent relaxation of the throat muscles.
Advances in Health and Disease. Volume 28
Lowell T. Duncan
In series: Advances in Health and Disease
Publication Date: 10/28/2020
272 pp.
Hardcover: 978-1-53618-737-3, $250.00
e-book: 978-1-53618-766-3, $250.00
Advances in Health and Disease. Volume 28 opens with a focus on meningoencephalitis, a broad term encompassing inflammation of the brain as well as the overlying meninges, and the authors review its different causes, diagnostic methods and treatment.
A general overview of the COVID-19 virus among the human population is provided, after which the underlying clinical manifestations and effects on those living with HIV are addressed.
An overview is also provided on Cushing’s syndrome, a rare disorder caused by pathologic cortisol overproduction with a wide spectrum of clinical signs and symptoms such as weight gain, irregular periods, depression, and anxiety.
The authors describe propofol use and administration during drug-induced sleep endoscopy, a technique that plays an important role in detecting dynamic anatomical variations in obstructive sleep apnea patients.
Following this, musculoskeletal changes due to prolonged usage of screen touch devices are defined, described, and classified, along with validated diagnostic assessment tools.
The results of genetic association studies of multifactorial oral and dental conditions such as dental caries, periodontal diseases, developmental enamel defects, and apical periodontitis are discussed.
The procedure for performing a safe and reproducible standard cholecystectomy is carefully defined, considering all tips and tricks.
The closing study focuses on miscarriage, the most frequent obstetric complication affecting about 15% of all pregnancies.

Advances in Health and Disease. Volume 29
Lowell T. Duncan
In series: Advances in Health and Disease
Publication Date: 11/20/2020
266 pp.
Hardcover: 978-1-53618-777-9, $250.00
e-book: 978-1-53618-867-7, $250.00
Advances in Health and Disease. Volume 29 begins with a focus on Aeromonas species, Gram-negative rods belonging to the family Aeromonadaceae.
Next, the authors discuss the implications of gut microbiota in children with autism spectrum disorders, assessing the hypothesis that there is a relationship between emotional state and gut microbe abundance through the microbiota–gut–brain axis.
The many ways mitochondrial functions are compromised in the diseased state of the kidney are explored, targeting mitochondrial quality control as a promising therapeutic option for treating kidney dysfunctions.
Continuing, this compilation aims to set a new path for vaping through electronic cigarette or vaping associated lung injury analysis in terms of use, regulation and research.
One study attempts to explore parents’ perceptions of cerebral palsy, particularly the implications of cerebral palsy on the family in Italy.
Following this, the authors report on the role of the registered nurse advanced practitioner and registered nurses in the initiation, development and structuring of a child/family-centered pediatric neurosurgery healthcare system.
The concluding review focuses on tumor lysis syndrome, a high mortality complication accompanied by metabolic disorders seen after massive cell destruction as a result of spontaneous or cytotoxic treatment.
Advances in Health and Disease. Volume 30
Lowell T. Duncan
In series: Advances in Health and Disease
Publication Date: 11/20/2020
272 pp.
Hardcover: 978-1-53618-856-1. $250.00
e-book: 978-1-53618-914-8. $250.00
This compilation discusses Aspergillus species, important infectious agents in transplant recipients with high morbidity and mortality rates. Aspergillus fumigatus is the most frequently isolated species and inhalation of the spores is the most common transmission path. The authors explore the effects of different vitamin B therapies (with a special focus on the complex of vitamins B1, B2, B3, B5, B6, and B12) on peripheral nerve regeneration after injury and immediate surgical repair. Following this, the experimental models of nerve injury are described, including pre-existing injury, early-onset nerve injury and neurological symptoms, and the increasing risk for neurological diseases.

One study focuses on celiac disease, an autoimmune disorder of the gastrointestinal tract triggered by exposure to dietary gluten in genetically susceptible individuals with human leukocyte antigen DQ2/DQ8 molecules on antigen presenting cells. Non-invasive wireless body sensor networks that image the human brain during mobile activities are studied in the context of the treatment of neurological disabilities and brain-controlled prosthetic limbs. The current literature on the potential effects of nutrition for modifying gut microbiota and incidents of both early and late onset non-communicable diseases is discussed in closing.

Advances in Health and Disease. Volume 31
Lowell T. Duncan
In series: Advances in Health and Disease
Publication Date: 01/13/2021
261 pp.
Hardcover: 978-1-53619-099-0. $250.00
e-book: 978-1-53619-094-6. $250.00
This compilation reviews the current knowledge on tick-borne diseases in Southeast Asia and identifies the gaps in information that will direct future investigations. Following this, the effects of moderate hypothermia for different durations on the intensity of blood free radical processes and erythrocyte osmotic fragility are studied in rats. The authors summarize the different molecular methods for the detection and genotyping of Noroviruses and Sapoviruses, two genera in the Caliciviridae family that cause acute intestinal gastroenteritis, a disease usually associated with diarrhoea and/or vomiting. Information about infant and parental factors with respect to paternal involvement in infant sleep is provided, particularly focusing on parental psychosocial functioning, the sleep behaviors of parents and the quality of relationship with their infant at bedtime. Information related to the health benefits of physical activity during pregnancy and lactation is also provided, as evidence is currently inconsistent. The closing study focuses on scleroderma renal crisis, a complication of systemic sclerosis with high morbidity and mortality characterized by a sudden and marked increase in systemic blood pressure and rapidly progressive oliguric renal failure.

Advances in Health and Disease. Volume 32
Lowell T. Duncan
In series: Advances in Health and Disease
Publication Date: 02/24/2021
206 pp.
Hardcover: 978-1-53619-212-4. $250.00
This compilation begins by exploring some socio-anthropological aspects of hypertension, namely the disparity between medical and patients’ understanding of the disease and how this difference affects medical management, self-care and prevention of disease, the process of coping with suffering and other factors. Chapter 2 reviews the current status of various techniques applied in nano-encapsulation of vitamin E in the food, pharmaceutical and cosmetic industries and the versatile advantages nano-
encapsulation of vitamin E provides for site-specific targeted delivery and effective absorption along cells. Chapter 3 discusses the medical imperative of ensuring pain relief for children facing the end of life, provides information about palliative pain management and summarizes the current literature on the subject. Following chapters present data on the impact of education and reading habits on linguistic processing abilities and other cognitive constructs relating to healthy aging, discussions of ethical dilemmas associated with pediatric palliative care including parents’ decision making and medical futility, and a review of the recommended treatment for multidrug resistant tuberculosis (MDR-TB) with strategies to prevent transmission and treatment failure. Also, the compilation includes a chapter exploring the oral and dental manifestations of Paget’s disease, a bone remodeling disease in which increased bone resorption occurs followed by excessive deposition of structurally inorganized and weaker bone, and a quantitative analysis of the mortality rates due to Parkinson’s disease in the USA from 1976 to 2017.
Advances in Medicine and Biology. Volume 169
Leon V. Berhardt
In series: Advances in Medicine and Biology
Publication Date: 10/09/2020
240 pp.
Hardcover: 978-1-53618-607-9, $250.00
e-book: 978-1-53618-669-7, $250.00
Advances in Medicine and Biology. Volume 169 begins with a focus on psoriasis, a chronic inflammatory skin disease that displays autoimmune traits with strong genetic predispositions. Often, psoriasis is associated with significant physical or psychosocial burden, poor quality of life and significant long-lasting impairments. Following this, the authors discuss matrix metalloproteinases, multi-domain proteins with activities regulated by tissue inhibitors of metalloproteinases.
Cryptorchidism, a congenital pathological condition characterized by the failure of testes to descend to the scrotum, is also discussed. Exposure to environmental toxicants, pesticides, pharmaceuticals and drugs of abuse can lead to altered reproductive parameters like histopathology of reproductive organs, sperm morphology, altered hormone level, oxidative stress and inflammation. As such, the subsequent study deals with different toxicants and their routes of exposure.
The role that endometriosis, polycystic ovary syndrome, endometrial polyps and uterine fibroids may play in female infertility is examined. The authors present three cases of twin pregnancy with complete hydatidiform mole and a coexisting normal fetus. The course of pregnancy, ultrasound findings, and histological and immunohistochemical characteristics are described along with the p57 status.
In the closing study, the mode of action, indications, contraindications, side effects, drug-drug interactions and pharmacokinetic parameters of secnidazole are discussed in detail.

Advances in Medicine and Biology. Volume 170
Leon V. Berhardt
In series: Advances in Medicine and Biology
Publication Date: 11/04/2020
274 pp.
Hardcover: 978-1-53618-712-0, $250.00
e-book: 978-1-53618-748-9, $250.00
Advances in Medicine and Biology. Volume 170 begins by presenting the latest evidence that Alzheimer’s disease-related proteins and their genes play a role in post-ischemic brain damage, and that an ischemic episode is an essential and leading provider of Alzheimer’s disease development. The authors go on to review the pathophysiology, symptoms, epidemiology, analysis, and treatment of Alzheimer’s disease. Important issues when appraising and interpreting studies on fertility awareness methods used for avoiding pregnancy are described, and correct clinical applications of fertility awareness methods for contraception are also discussed. The basic molecular pathology of human cancers is discussed, as well as rising technologies for tumour characterization and the role of molecular profiling in identifying potential targets for individualised treatment.
Additionally, an overview of the various modalities for assessing the liver functional reserve in patients undergoing hepatic resection is provided.
Lastly, data on the linearization of somatic growth plots in humans and rats is discussed, showing the existence of at least two ontogenetic transitions: juvenile and pubertal.

Advances in Medicine and Biology. Volume 171
Leon V. Berhardt
In series: Advances in Medicine and Biology
Publication Date: 11/04/2020
261 pp.
Hardcover: 978-1-53618-736-6, $250.00
e-book: 978-1-53618-850-9, $250.00
This compilation begins by examining the use of propofol for end of life sedation. As the use of this medication in end-of-life care is uncommon, providers may lack practical experience and resources that are specific to this specialized application.
Following this, the authors describe the role of sperm DNA integrity in miscarriage, including a review of the available DNA fragmentation assays and treatment options for high levels of DNA fragmentation.

Mental health literacy is reviewed, particularly focusing on possible reasons for the current illiteracy and aiming to determine how literacy be achieved in the mental health field.

The evidence demonstrating that seasonal influenza infection is an additional risk factor for acute vascular events, including both acute myocardial infarction and ischemic stroke, is explored.

Some challenging cases of total hip arthroplasty are reviewed in light of recent literature, including: multiple failed hip arthroplasties in a young noncompliant patient, dysplastic hips with insufficient bone stock, acetabular wall defect in an elderly patient, unavoidable intra-operative complications and septic hip complication in childhood.

The transversus abdominis plane block, a block in which a local anaesthetic drug is deposited in the plane between two abdominal wall muscles, is surveyed as a promising modality for analgesia.

The authors discuss molecular epidemiology in the field of infectious diseases, which points to the detection of genetic polymorphisms based on measures of genetic heterogeneity among strains of microorganisms of clinical importance.

In the closing review, a comprehensive look at the current state of knowledge with regard to molecular networks of polymorphisms based on measures

Advances in Medicine and Biology. Volume 172
Leon V. Berhardt
In series: Advances in Medicine and Biology
Publication Date: 11/04/2020
252 pp.
Hardcover: 978-1-53618-772-4. $250.00
e-book: 978-1-53618-784-7. $250.00
Advances in Medicine and Biology. Volume 172 first discusses the advances in formulations for dermal delivery of alpha-tocopherol. Alpha-tocopherol is the major biologically active homolog of vitamin E in human skin, especially the epidermis, and acts as an important antioxidant.

Next, the three components that collaboratively engage in the blood epididymal barrier are reviewed, and their individual contribution to protection of the spermatozoa from the immune system is discussed.

This compilation includes information regarding the logistics and personal experiences of two separate National Aeronautics and Space Administration (NASA) space missions, Rodent Research-IV and Cell Science-02, as well as for preliminary experiment verification tests and launch simulation testing.

Additionally, the authors delve into an International Space Station National Lab Principal investigator’s experiences while working with NASA on the aforementioned space biology research projects.

The influence of ancestry in pharmacogenomics is discussed from the past to the present, focusing on ethnic distinct populations and how specific mutations observed in these populations may play an important role.

The authors explore the way Aeromonas hydrophila has demonstrated involvement in the nutrient cycles of the aquatic environment and may be considered a potential biotechnological tool in biofactory of nanoparticles, biolocking or bioremediation.

The concluding study focuses on rotavirus A, a major pathogen associated with gastroenteritis of children aged under five which contributes to childhood morbidity and mortality in developing countries.

Advances in Medicine and Biology. Volume 173
Leon V. Berhardt
In series: Advances in Medicine and Biology
Publication Date: 11/04/2020
240 pp.
Hardcover: 978-1-53618-788-5. $250.00
e-book: 978-1-53618-803-5. $250.00
Stress conditions stimulate the accumulation of antioxidants in photosynthetic organisms, but can also restrict their normal growth rate. As such, this compilation opens with a two-stage technique for microalgae cultivation that may resolve this problem by separating biomass accumulation and stimulation biosynthesis of α-tocopherol.

Following this, the authors describe the structural and enzymatic properties of plant PM-H⁺-ATPases, their regulation and physiological roles.

A selective review of the experimental literature concerning the effects of early life stress in brain development is provided, with emphasis on the role of inflammatory responses, the gut microbiome mediating brain and behavioral changes relevant to mental health disorders.
The impact of urgency on the temporal organization of prehospital interventions is assessed, analyzing the impact of the characteristics of the patient, the paramedic and the working environment on the sequence and duration of prehospital interventions.

The authors shed light on prehospital work by examining how paramedics experience encounters with persons in crisis through a qualitative research approach.

Additionally, they aim to assess the association between estimated pulse wave velocity and metabolic biomarkers in patients with albuminuria through a subsequent study.

The concluding study focuses on thoroughly revealing the various hallmarks of apoptosis and the overall mechanism which connects these hallmarks.

**Advances in Medicine and Biology. Volume 174**
*Leon V. Berhardt*

**In series:** *Advances in Medicine and Biology*

Publication Date: 12/22/2020

297 pp.

Hardcover: 978-1-53618-921-6, $250.00
e-book: 978-1-53619-021-2, $250.00

Advances in Medicine and Biology. Volume 174 first provides a systematic review of the synthetic route and biological activities associated with 1,2,4-oxadiazole, 1,2,5-oxadiazole and 1,3,4-oxadiazole derivatives.

The authors discuss recent advances in understanding the enantioselective separation and biological activities of the naturally occurring chiral compounds of essential oils.

Subsequently, orthobiologics are discussed in the context of their potential in the management of early osteoarthritis, particularly focusing on the treatment of cartilage injuries.

Another study aims to improve our understanding of the pathological mechanisms of choroidal neovascularization and approaches how to address the issue in central serous chorioretinopathy.

An overview of the lignocellulolytic enzymes secreted by *A. fumigatus* during biomass conversion is provided, focusing on the quantitative expression of cellulolytic, hemicellulolytic, and ligninolytic enzymes and their synergetic mechanism during biomass degradation.

The closing report reviews the current literature on metabolic syndrome, exploring the mechanisms proposed to better understand the role of environmental, genetic, and epigenetic aspects in the pathogenesis of this condition.

**Advances in Medicine and Biology. Volume 175**
*Leon V. Berhardt*

**In series:** *Advances in Medicine and Biology*

Publication Date: 02/10/2021

218 pp.

Hardcover: 978-1-53619-083-0, $250.00
e-book: 978-1-53619-229-2, $250.00

In the first chapter, the authors intend to carry on a critical review of the different methods and approaches to determine the biomechanical output of joint stiffness, designated as dynamic joint stiffness by the authors. The second chapter summarizes several preceding articles on invasive procedures applied with questionable clinical indications in the former Soviet Union. The aim of the third chapter is to give information about how to use tacrolimus, in which type of glomerulonephritis and what are the treatment results, especially remission and relapse rates. In the fourth chapter, a ten-week experiment was conducted to assess the effect of supplementing *Synechococcus* sp. and *Synechocystis* sp. on the growth performance, haematology, serology and disease resistance in *Oreochromis mossambicus*. In the final chapter, discussions of the special properties of endothelial cells and their ability to generate the thrombotic microangiopathic syndrome and ARDS are undertaken based upon current knowledge of the capillary endothelial cells. Attempts are made to address the current pathophysiology of non-idiopathic thrombotic microangiopathy.
An Introduction to Assistive Technology

Suraj Singh Senjam, MD (Professor, Community Ophthalmology, Dr. Rajendra Prasad Centre for Ophthalmic Sciences, All India Institute of Medical Sciences New Delhi, India)

In series: Medical Procedures, Testing and Technology

Publication Date: 12/10/2020

246 pp.

Hardcover: 978-1-53618-935-3, $160.00
e-book: 978-1-53618-970-4, $160.00

Globally, more than one billion people suffer some form of disability and may require assistive devices for their functioning. Only 5 to 10% of them can access some level of rehabilitation services. Assistive technology is essential while providing rehabilitation services to people with disabilities or health impairment.

The first edition of this book will help professionals working in habilitation and rehabilitation services, and the chapters cover various aspects of assistive technologies. The first chapter shares existing evidence on assistive technologies (ATs) that aid in rehabilitation intervention among children and adolescents with neurodevelopmental disorders. It provides the reader with a selective overview of the newest empirical contributions available in the literature on the use of AT-based interventions for enabling adaptive skills and reducing challenging behaviors in children with neurodevelopmental disabilities.

The second chapter highlights the ViEW, a computer-based assistive technology for visual impairment. ViEW (Vision Enhancement for the World) is a portable device that uses a computer vision technique to extract textual information. The product can notify the nearest objects surrounding an individual with vision loss and read aloud with audio. The product will aid in teaching students at schools for the blind.

The third and fourth chapters explain the existing classification for ATs for visual impairment and various devices that can be used to perform daily living tasks. This chapter is designed for people working in eye care services, teachers, trainers in schools for the blind, community-based visual rehabilitation workers, or other interested persons.

Chapter five presents advanced information and communication technologies (ICT) that may be used in bathroom safety without compromising personal privacy. Bathroom safety is extremely important, especially for older persons living independently at home. The chapter reviews trends in ICT development and presents state-of-the-art solutions for safe bathing, bath accident detection and prevention.

Chapter six describes the applications of assistive software products in children with autism spectrum disorders, where researchers deal with multiple factors to get closer to creating a model for children with autism for use in creating interactive apps.

Chapter seven sheds light on the newest contributions in virtual-reality (VR) based intervention in neurodegenerative diseases (Alzheimer’s and/or Parkinson’s diseases, amyotrophic lateral sclerosis or multiple sclerosis). The outcomes in the majority of VR based interventions were positive. The final chapter critically reviews the use of ATs and other relevant literature on the patient-centered design of ATs, which will ultimately help adoption pathways.

Building Children and Youth for the Future: Some International Aspects

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In series: Pediatrics, Child and Adolescent Health

Publication Date: 01/13/2021

216 pp.

Hardcover: 978-1-53618-806-6, $160.00
e-book: 978-1-53619-017-5, $160.00

In this book we have brought together research from international clinicians, practitioners and researchers from various backgrounds and communities. Some of the papers were presented at the annual Stop Youth Suicide conference in
Clinical Training in Undergraduate Medical Education
Sabri Kemahli (Professor of Pediatrics, Faculty of Medicine, Yeditepe University, Istanbul, Turkey; College of Medicine, Alfaisal University, Riyadh, Saudi Arabia)

In series: Education in a Competitive and Globalizing World
Publication Date: 11/04/2020
403 pp.
Hardcover: 978-1-53618-616-1. $230.00
e-book: 978-1-53618-687-1. $230.00

This book is intended to serve the needs of clinical educators in medical schools, especially in clinical clerkships. The bulk of the literature written about undergraduate medical education is on the pre-clerkship phase. Clinical clerkship phase is as important as the previous phase and it is intended to be mostly a hands-on experience and training for the students. Most of this training is by exposure to the clinical activities where the students are required to take part in, contribute to and learn during the continuing clinical activities. It is an exciting but a difficult time for the students. They have to learn the basics and sometimes the details of clinical skills, procedures and in many cases they are expected to perform as a young doctor. They are expected to make good differential diagnosis in the busy clinical environment. Considering all these, clinical education should be organized in a systematic way to allow the students grasp the necessary clinical knowledge, skills and attitudes as they experience the complexities and uncertainties of clinical environment.

The book provides information about basic concepts of clerkship organization and assessment with various models. Equally important is the clinical skills training which starts in the early phases of medical schools. Three chapters have been devoted to this topic.

The organization of clerkships employing various approaches and methods are discussed extensively. Community-based education, use of university and affiliated hospitals, learner-centred clinical education, use of flipped classrooms and integrating basic sciences in clinical clerkships are discussed in separate chapters.

As assessment drives learning, the basic principles and the organization of assessment and evaluation including continuous assessment have been covered in three chapters.

Believing that more emphasis should be given to interprofessional education, evidence-based medicine, mentoring and providing feedback in the context of organizing clerkships they have been discussed extensively in separate chapters.

We hope it will be of help to clinician teachers as well as medical educators involved in clinical training.

COVID-19 and the Rise of Telemedicine: Benefits and Challenges
Christina B. Willis

In series: Public Health in the 21st Century
Publication Date: 01/29/2021
118 pp.
Softcover: 978-1-53619-081-6. $82.00
e-book: 978-1-53619-201-8. $82.00

This book focuses on the benefits and challenges of telemedicine in the age of and when treating COVID-19. Telemedicine can be considered to play a major part in COVID-19 patients’ management, because it provides a quick and precise diagnosis that is obtained without unnecessary exposure of the medical personnel. The first chapter focuses on arrhythmias in COVID-19 patients. It is mandatory to assess whether arrhythmias in COVID-19 patients are preventable, treatable or permanent, or if they have long-term effects on the patient’s cardiovascular status. The second chapter examines the future of Internet healthcare on the foundation of a traditional model in the age of COVID-19.

Next, the pros and cons of telemedicine, including the ways in which virtual telemedicine platforms rationalize and address the costs, accessibility, and quality of care that affect healthcare management are explored. The authors of the fourth chapter look at the legal ethical dilemmas related to the care of COVID-19 patients through telemedicine. And finally, the role of telemedicine in COVID times for neurologists and neurosurgeons in particular are explored in detail.

Lexington, Kentucky in November 2019 and some at the Fifth International Conference on Child Health, Development and Welfare in Jerusalem, Israel during December 2019. The topics in this international potpourri of presentations are from a college experience program for people with intellectual disabilities in New York, migration from South Korea, which has emerged as one of the world's largest diaspora nations, discussions on abuse head trauma and adolescent suicide to risk factors for impaired early childhood development in rural India. We hope this collection of papers will be of interest to our international audience and hope you will find useful information from this research.
Extracorporeal Membrane Oxygenation: Types, Medical Uses and Complications
Michael S. Firstenberg, MD (Director of Research and Special Projects, William Novick Global Cardiac Alliance, Cardiothoracic and Vascular Surgery, The Medical Center of Aurora, CO, USA)
In series: Medical Procedures, Testing and Technology
Publication Date: 01/20/2021
377 pp.
Hardcover: 978-1-53618-915-5, $230.00
e-book: 978-1-53619-064-9, $230.00

Extracorporeal membrane oxygenation (ECMO) is an innovative therapy that is used to support the physiologic needs of a patient during illnesses associated with acute severe respiratory and/or cardiac failure. ECMO is used in those life-threatening situations in which the oxygenation, ventilation, and circulatory support needs of the patient cannot be adequately maintained with a maximal conventional ventilator or pharmaceutical support. Essentially, ECMO is a simple pump circuit that can be used to support the role of failing lungs or hearts while therapies are aimed at organ recovery. While simple in concept and theory, this text illustrates the complexities associated with clinical use. The use of ECMO has evolved substantially over the years—in part due to broader and growing applications, a better understanding of the technologies and how they can be used (especially in the context of long-term human-ECMO circuit interactions), objective tools for patient selection, management protocols, and, most importantly, a growing body of evidence-based science and literature that demonstrates the effectiveness of this highly invasive, resource-intensive, and complex tool.

The goal of this text is to draw from established thought leaders and experts around the world and present a comprehensive review of the rapidly-evolving and expanding literature regarding the spectrum of applications for ECMO. While by no means is this implied to be the final and exhaustive text on this topic, it does aim to be as comprehensive and up-to-date as possible which is, in itself, a challenge given how quickly this field is evolving.

This text is aimed at students and providers, at all levels, who might have interest or be involved in the care of these critically ill patients. Chapters focus on how programs can be structured, the specific details of patient selection, management, and expanding roles of ECMO. Both basic and sophisticated concepts are presented with the goal that all may learn. We also present an objective assessment of some of the evolving challenges and limitations to ECMO in the context of the increased utilization and expansion of this therapy, combined with “sicker” patients, and the ongoing journey towards improved outcomes while offering a salvage therapy to patients who might otherwise die.

Immunizing the Human Body: The Role of Non-Descript and Traditional Edible Green Leaves
Dr. A.B. Sharangi (Professor and Former HOD, Plantation, Spices, Medicinal & Aromatic Crops, Faculty of Horticulture, BCKV-Agricultural University, Mohanpur, Nadia, WB, India), Dr. S. K. Acharya (Professor and Former HOD, Department of Agricultural Extension, BCKV-Agricultural University, Mohanpur, Nadia, WB, India) and Dr. Suddhasuchi Das (Plantation, Spices, Medicinal & Aromatic Crops, Faculty of Horticulture, BCKV-Agricultural University, Mohanpur, Nadia, WB, India)
In series: Health Care in Transition
Publication Date: 02/05/2021
251 pp.
Hardcover: 978-1-53619-136-3, $195.00
e-book: 978-1-53619-161-5, $195.00

The entire human civilization is now facing the disastrous impact of the pandemic. It seems to pose an apocalyptic consequence unless there is a vaccine in existence. Out of so many options, one option is creating immunity in the absence of a real vaccine. So immunizing human health and life can be and would be the most important option in combating COVID-19. Now the question is how to build up this hard immunity.

The present book takes into account accumulated facts, information and technology to describe green vegetables as a fresh source and booster of human immunity free from application of pernicious chemicals in the form of pesticides, fertilizers etc. The food should be strong enough to contribute to one’s immunity.

The authors hope that this book will create a long-lasting impact, away from the classical way of building immunity.
The main varieties of scientific misconduct are fabrication, falsification, misquoting, and plagiarism. Considering the “improvement” of fraudulent skills, scientists, editors, and authorities must jointly combat the misconduct. Also, it is important that whistleblowers must be protected from revenge. The response to scientific misconduct requires national and international bodies to provide leadership and guidelines. Whistleblowers need a safe, confidential place to report misconduct. The quality of research and hidden conflicts of interest should be taken into account deciding which studies are to be included into reviews. Forged publications and speculative theories have been used for promotion of drugs, dietary supplements, and treatments without proven effectiveness. Marketing of placebos in the guise of evidence-based medications seems to be on the increase. Patients can be misinformed not only by the advertising but also by publications supposed to be scientific. Furthermore, it has become usual practice to disregard published criticism in spite of personal communications and debates at conferences. Some scientists seem to make use of critical comments without citing them, or just continue publications ignoring the criticism. The same scientists continue working sometimes in cooperation with renowned researchers; and it is possible that some later articles are more reliable than earlier ones. However, it is insufficient to hope that reliable publications would be shortly confirmed while forgeries would fall into oblivion. Fake papers are misleading for research and practice, cost time and money. Wrong concepts are persisting and reappearing, which may result in useless experimentation and application of invasive methods without sufficient indications. An international cooperation of bona fide scientists, editors, and authorities is needed to eradicate the scientific misconduct and fraud in medicine. The book contains an overview of misconduct in medical research and practice mainly from the former Soviet Union. Ample documentary evidence is provided as illustrations.

**Testing and Contract Tracing for COVID-19**

*Ernesto M. Batista*  
In series: Medical Procedures, Testing and Technology  
Publication Date: 11/20/2020  
412 pp.  
Hardcover: 978-1-53618-857-8, $230.00  
e-book: 978-1-53618-885-1, $230.00  

The United States is reporting some of the highest number of cases and deaths from the Coronavirus Disease 2019 (COVID-19) pandemic globally, and the disease is affecting communities nationwide. In response, federal, state, and local governments have undertaken containment and mitigation efforts to “flatten the curve”—that is, to slow widespread transmission that could overwhelm the nation’s health care system and to reduce spread of the disease while treatments and vaccines are being developed that will lessen the health impact of the virus. This book provides answers to numerous questions related to COVID-19 testing, including types of testing available and their reliability. It also discusses basic principles of contact tracing to stop COVID-19 transmission.

**The Essential Anatomy of the Doctor: Patient Relationship, with Narrative Illustrations**

*Herbert Keating MD* (Clinical Professor of Medicine, University of Connecticut School of Medicine, Farmington, CT, USA; Invited Lecturer in Geriatric Medicine, Frank Netter School of Medicine Quinnipiac University, Hamden, CT, USA; Partner Physician, ProHealth Physicians, Farmington, CT, USA)  
In series: Health Care in Transition  
Publication Date: 10/16/2020  
233 pp.  
Hardcover: 978-1-53618-609-3, $160.00  
e-book: 978-1-53618-732-8, $160.00  

To derive benefit from medical care, a patient must be able to trust the physician.
This trust exists only to the extent that the patient feels confident that he or she occupies the doctor’s central focus at every medical encounter, and that this focus is being used to derive a full measure of healthful benefit. This is the beginning and end of the doctor’s work and is best accomplished by every doctor understanding and maximizing each element of the doctor – patient relationship.

These elements of the doctor – patient relationship are carefully dissected in this book, and then illustrated with consequential and true case histories of patients. The science to these elements - for example, the methods of clinical reasoning – are succinctly described, but always the elements are artfully illustrated by descriptions of their real-life application to human beings. That these cases celebrate the grace and courage and resiliency of individual patients is no accident, as a doctor’s patients represent worthy brothers and sisters, fellow travelers walking the lonesome valley of an individual human life, affected by both illnesses and triumphs of all sorts. Their stories offer practical insights for all readers, not just for physicians or prospective physicians, and I hope some of them make you smile.

Because of the burgeoning complexities of medicine and the social contexts in which medicine is practiced, multiple physicians are often involved in the care of a patient, something which has become quite evident in the recent Covid 19 pandemic. However, each physician involved in the care of a patient at a particular moment in time has the responsibility to understand and respect the ideals of the doctor – patient relationship, to maintain and fortify it, even if the next visit is with yet another, different physician, thus enabling the doctor – patient relationship to be the vehicle that transports the patient some distance down a path towards feeling better, a path towards a medical outcome that is helpful, sometimes healing, and always hopeful.

We live in a time when there are powerful and complex forces undermining the doctor – patient relationship, the most important of which is the lack of available medical care for poor people, preventing them from having the benefit of the doctor – patient relationship in the first place. We have seen this vividly in the aftermath of Covid 19; none of the patients who ended up dying alone in the Old Soldier’s Home in Massachusetts or piled up and hidden in nursing homes in New Jersey or New York City had a good doctor. There are other forces undermining the doctor – patient relationship that are not so brutally apparent but threaten both patients and their doctors; we would do well to identify and combat these, together.

**The History of Extra-Corporeal Membrane Oxygenation (ECMO): From Start to COVID**

*Michael S. Firstenberg, MD (Director of Research and Special Projects, William Novick Global Cardiac Alliance, Cardiothoracic and Vascular Surgery, The Medical Center of Aurora, CO, USA)*

In series: *Medical Procedures, Testing and Technology*

Publication Date: 01/05/2021

226 pp.

Hardcover: 978-1-53618-961-2, $160.00

e-book: 978-1-53619-040-3, $160.00

The history of extra-corporeal membrane oxygenation (ECMO) reflects a true medical success story that has been the result of tremendous dedication, perseverance, teamwork, and years—if not decades—of hard work by countless providers, students, and advocates. This book, the final in a series of three on ECMO, traces the history of extra-corporeal support from the early years when therapy was offered as a last attempt at salvaging those patients who had lost almost all hope of survival, to the modern era and the role of ECMO in the contemporary management of critically ill patients, especially during the COVID-19 pandemic. The chapters illustrate how the technical aspects of ECMO have evolved, as well as the growing role of patient selection and team-based management. Although the role of ECMO for COVID-19 is still evolving, the chapters addressing this topic can serve as a foundation for the many complex systematic issues, beyond just the bedside care of ECMO patients, that must be acknowledged.

Jorge Agustín Nicolás Ruiz de Santayana y Borrás, also known as George Santayana, has been credited with the quote: “Those who cannot remember the past are condemned to repeat it,” [George Santayana (1905) Reason in Common Sense, p. 284, volume 1 of The Life of Reason] a concept that clearly resonates with those involved in ECMO program development, patient selection and management. As such, the primary goal of this text is to help scholars of all levels better understand where we have been and where we are going.

**The Practice and Principles of Extra-Corporeal Membrane Oxygenation (ECMO)**

*Michael S. Firstenberg, MD (Director of Research and Special Projects, William Novick Global Cardiac Alliance, Cardiothoracic and Vascular Surgery, The Medical Center of Aurora, CO, USA)*

In series: *Medical Procedures, Testing and Technology*

Publication Date: 01/27/2021

369 pp.

Hardcover: 978-1-53618-960-5, $230.00
As demonstrated in the first book, the management of patients with profound respiratory failure or cardiogenic shock has evolved significantly over the years with advances in diagnostic and therapeutic options. While the mortality for these often-overlapping problems remains high, progress in the multi-disciplinary approach to these complex clinical problems has improved survival substantially. The focus of this second book is to explore some of the advanced topics and current literature regarding the management of patients requiring extra-corpooreal membrane oxygenation (ECMO). As illustrated in the spectrum of topics discussed, ECMO is not only a complex therapy in itself, but the challenges, problems, and complications that arise in this unique area of medicine require engagement by many diverse disciplines. While there are many physiological issues such as organ protection, management of circuit complications, and optimal lung and cardiac protection for recovery, the use of ECMO also introduces a variety of legal and ethical challenges, particularly end-of-life issues (including brain death) in patients for whom recovery, despite extra-corpooreal support, is most likely futile. Each of the chapters, written by world-renowned experts in the field, highlights a different important aspect in understanding the complex dynamics of extra-corpooreal support and its impact on human pathophysiology. While many of the topics discussed involve sophisticated concepts, each chapter was written with the goal of providing a comprehensive review suitable for any level of training and experience. Many of the topics discussed highlight the state-of-the-art literature along with expert experiences and perspectives as we try to learn more about the overlapping art and science of a field of medicine that has only recently been accepted as a mainstream treatment option. Students of ECMO, ranging from early stage healthcare providers to master physicians, will benefit from the insights presented.

Use of Nursing Models and Theories from a Sexuality Perspective
Martha Ofelia Valle Solis (Universidad Autónoma de Nayarit, Mexico)
In series: Nursing - Issues, Problems and Challenges
Publication Date: 03/09/2021
371 pp.
Hardcover: 978-1-53619-180-6. $230.00
e-book: 978-1-53619-308-4. $230.00
The book presents research studies where models and theories of nursing from the perspective of sexuality were used. Theory is essential to explain and understand nursing practices. Likewise, it favours planning, predicting and evaluating the outcomes of care. Therefore, the theoretical approach is a useful tool for reasoning, critical thinking and, in addition, it helps nurses to be able to use and manage all the information about the patient and to manage the practice of care in an orderly and effective way.
The use of conceptual models of nursing in care ensures that all nurses share a common language and similar conceptions regarding the nursing, person, health, environment and care paradigms that characterize the professional role. Here, a reflection is posed about what still, and even though it is a very important topic, maintains the dichotomy between nursing practice and nursing theory.
The book is aimed at undergraduate and graduate students in the area of health, as well as at health professionals interested in using such models or theories related to human sexuality in different age groups.

Surgery and Surgical Specialties
A Comprehensive Guide to Esophagectomy
Wade Nolan
In series: Surgery - Procedures, Complications, and Results
Publication Date: 11/20/2020
117 pp.
Softcover: 978-1-53618-822-6. $82.00
e-book: 978-1-53618-852-3. $82.00
A Comprehensive Guide to Esophagectomy first discusses the benefits of different anastomotic techniques, procedures for improving healing, methods to assess gastric conduit perfusion, and methods for the detection and management of the cervical anastomotic leak after esophagectomy. The authors review previous literature on minimally invasive esophagectomy, particularly reports that have focused on thoracoscopic esophagectomy with mediastinal lymph node dissection, describing recent advances in robot-assisted minimally invasive esophagectomy for esophageal cancer.
The concluding study focuses on hybrid laparo-thoracoscopic esophagectomy, with the concept of widening the operation area of the laparoscopic transhiatal approach, reducing the operation area of the right thoracoscopic approach and eventually aiming for radical laparoscopic transhiatal esophagectomy without blunt dissection.
Regenerative Plastic Surgery
Pietro Gentile, MD, PhD (Researcher and Professor of Plastic and Reconstructive Surgery, University of “Tor Vergata”, Rome, Italy; Technical Consultant of the Ordinary Court of Rome, Rome, Italy)
In series: Plastic and Reconstructive Surgery
Publication Date: 12/22/2020
148 pp.
Softcover: 978-1-53618-988-9. $95.00
e-book: 978-1-53619-012-0. $95.00
Regenerating damaged organs and tissues, an act that once was considered magic, is currently entrusted to the surgeons who have allowed us to move from replacement and reconstructive plastic surgery to regenerative plastic surgery, through autologous and allogeneic cell-based therapies and growth factors.
The enthusiasm for regenerative plastic surgery and for the treatment of some pathologies addressed by it, such as breast reconstruction, hemifacial atrophy, burns, scars, and aesthetic improvements such as breast and buttock augmentation, face rejuvenation and hair regrowth, has led the author, Professor Pietro Gentile, to rigorously investigate the possible new minimally invasive strategies based on adipose-derived stem cells, human follicle stem cells and growth factors contained in platelet-rich plasma.
This book reports on the latest knowledge regarding the treatment of soft and bone tissue defects. Therefore, the goal of this text is to introduce and definitively establish this new and interesting field of plastic surgery, called regenerative plastic surgery.

Spine Surgery: Overview and Controversies
Vladimir Katuch, MD, Ph.D (Assistant Professor and Vice Chairman, Department of Neurosurgery, University Hospital and Medical Faculty of Safarik University, Kosice, Slovakia)
In series: Surgery - Procedures, Complications, and Results
Publication Date: 11/04/2020
220 pp.
Hardcover: 978-1-53618-753-3. $160.00
e-book: 978-1-53618-795-3. $160.00
The possibilities of surgical treatment of spinal disorders have expanded enormously in recent years. Movement conservation, reduction of access routes, and the use of microscope and endoscope have reduced risks and significantly improved the chances of success. However, only by knowing and mastering the various conservative and minimally invasive surgical techniques can one work on individual treatment for the patient.
This book reviews important literature about spinal disorders, describes surgical anatomy of the spine, etiology, pathology, clinical signs, imagine methods of the spinal diseases, and specific techniques of the spinal procedures. The chapter about cervical and lumbar degenerative disc disease will bring new knowledge in the possible therapy, including endoscopic and minimally invasive surgical procedures. The chapter about infections of the spine gives new information about conservative and surgical treatment as well as postoperative complications. The possibilities in surgical treatment in spine tumors will be written in a separate chapter. This chapter provides quite an extensive coverage of tumors related to the spine, and information on their management and treatment, including operative
techniques and approaches with spine stabilization. Spinal trauma chapter brings together information on state-of-the-art clinical imaging, including multidetector CT and high-field MRI techniques and the pathophysiology, neurologic evaluation, medical management, surgical treatment, and postoperative assessment of spine trauma and spinal cord injury. Techniques for spinal procedures include the most common types of instrumented procedures such as anterior cervical disectomy and fusion, cervical arthroplasty, occiput C1, and C2 instrumentation, lumbar microdisectomy, lumbar arthroplasty, posterior, transformaminal and anterior lumbar interbody fusion, and indications and techniques of revision spine surgery.

Transplantation

The Technology of Head Transplantation
Sergio Canavero and Xiaoping Ren (Heaven/Gemini Global Initiative Turin, Italy)

In series: New Developments in Medical Research
Publication Date: 10/30/2020
216 pp.
Softcover: 978-1-53618-458-7, $95.00
e-book: 978-1-53618-590-4, $95.00

In 1970 American neurosurgeon Robert White and his team carried out the first full head transplant in living monkeys. However, the resulting chimera was left tetraplegic and died a few days later.

Fifty years on, the technology to perform a human cephalosomatic anastomosis is finally available.

In this groundbreaking book, the pioneers of this new medical frontier bring together an international team of scientists to reveal for the first time the entire body of animal and human research and experimentation that made this breakthrough possible.

Readers—professionals, journalists, educated laypersons—will get unadulterated access to the published and unpublished body of evidence that has shocked the world since 2013. Only a deep appreciation of this technology can inform the ethical debate that has raged since 2013.

Above all, the possibility of extending life raises profound dilemmas.

This book brings clarity to the current debate and provides the instruments to make an informed decision on the most sensitive of subjects: overcoming death.

WOMEN’S HEALTH

Postpartum Depression: A Clinical and Research Update
Flávia de Lima Osório, PhD (Professor and Researcher, Department of Neurosciences and Behaviour, Medical School of Ribeirão Preto. São Paulo University, Ribeirão Preto, São Paulo, Brazil; National Institute for Science and Technology (INCT-TM, CNPq), Brasília, Distrito Federal, Brazil) and Rocio Martin-Santos, PhD (Senior Consultant in Psychiatry, Department of Psychiatry and Psychology, Hospital Clínic, University of Barcelona, The August Pi i Sunyer Biomedical Research Institut (IDIBAPS), CIBER en Salud Mental, Barcelona, Spain; National Institute for Science and Technology (INCT-TM, CNPq), Brasília, Brazil)

In series: Women’s Issues
Publication Date: 12/30/2020
335 pp.
Hardcover: 978-1-53618-768-7, $230.00
e-book: 978-1-53618-965-0, $230.00

Perinatal psychiatry is a new area of research developed in the last 15 years, focusing on the study of women’s psychopathology in this stage of life. This book is an update of recent clinical research in this field, including: epidemiology and risk factors, the role of genetics and epigenetics, personality factors and coping strategies, mother-infant bonding, and paternal perinatal depression, as well as current and novel treatments for perinatal depression and trajectories of postpartum depression.
The Thin Pink Line: Regulating Reproduction
Carol Lynn Curchoe Burton, PhD (Newport Beach, CA, USA)
In series: Obstetrics and Gynecology Advances
Publication Date: 02/15/2021
140 pp.
Softcover: 978-1-53619-150-9, $95.00
e-book: 978-1-53619-191-2, $95.00
The Thin Pink Line: Regulating Reproduction is a critical exploration of historical perspectives to modern controversial topics in gynecology; from birth control to sterilization, to episiotomies and the “husband stitch,” to “educational” pelvic exams, shackling laboring convicts, gender affirming surgery, human embryo research, assisted reproduction and much more. This book poses questions for us to consider about the current and future reproductive ethical decisions. Does reproductive health need more or less regulation? Who should be deciding? The Thin Pink Line: Regulating Reproduction is a brave and honest look at where we have been, so we can figure out where we want to go. The Thin Pink Line: Regulating Reproduction is intended to educate a wide audience of womynx, men, femmes, gender non-conforming folks, uterus owners, and everyone in between. It has a specific intersectional focus on the impact that the current reproductive regulatory framework has on disenfranchised groups, such as people of color, LQBTQ individuals, and the lower socioeconomic strata.

EXPECTED PUBLICATIONS

Neuroscience

Attention-Deficit Hyperactivity Disorder: Diagnosis, Prevalence and Treatment
Brian M. Kyser
In Series: Neurology - Laboratory and Clinical Research Developments
Expected Publication Date: 06/10/2021
112 pp.
Softcover: 978-1-53619-443-2 $ 82.00
e-book: 978-1-53619-469-2 $ 82.00
This monograph comprises three chapters, each focusing on a different aspect of Attention-Deficit/Hyperactivity Disorder (ADHD). Chapter One presents an overview of diverse pharmacological therapies and differences in the mechanisms of action of psychostimulants, non-psychostimulants, and other treatments for ADHD. Chapter Two evaluates the effects of practical interventions for students with ADHD pursuing higher education. Chapter Three describes how multimedia formats, which simultaneously provide visual and verbal information, can help students learn by taking advantage of “dual processing,” wherein information is processed through two channels instead of through a single channel. This approach to teaching is speculated to be particularly beneficial for students with ADHD.

Joint Imaging Applications in General Neurodegenerative Disease
Yongxia Zhou, PhD (Imaging Scientist, University of Southern California and Columbia University, USA)
In Series: Neuroscience Research Progress
Expected Publication Date: 05/15/2021
186 pp.
Softcover: 978-1-53619-435-7 $ 95.00
e-book: 978-1-53619-478-4 $ 95.00
Multiple advanced neuroimaging applications in various neurodegenerative diseases including Parkinson’s disease (PD), frontotemporal dementia (FTD), vascular dementia (VaD) and autism spectrum disorder (ASD) are covered in this book. Relatively novel techniques such as integrated PET/MRI and independent component analysis (ICA)-based dual regression (DR) methods were developed to capture multi-level molecular/functional and structural/microstructural as well as high-order inter-network coordination abnormalities. For instance, both PET dopamine transporter and striatal binding ratio reductions in the caudate and putamen were found in PD, consistent with the diffusion tensor imaging (DTI) fractional anisotropy (FA) reduction and fMRI voxel-mirrored homotopic correlation (VMHC) in the substantia nigra (swallow tail sign signature of PD). Furthermore, dopamine storage and pathway labeled with the vesicular monoamine transporter tracer identified decreased densities in the bilateral mesial temporal cortex, caudate, orbitofrontal cortex, left frontal and occipital cortices, consistent with the morphological atrophy, functional connectivity and conductivity deficits in PD. Similarly in FTD patients, the advanced MRI methods such as ICA-DR, VMHC, voxel-based morphometry (VBM) as well as PET tracer for amyloid accumulation and FDG glucose uptake identified typical brain atrophy, structural dis-connectivity, glucose hypometabolism, higher neuropathological burden, lower interhemispheric correlation as well as
digestive stimulant action, all of which are scientifically validated. Chapter 6 remarks on the difficulties associated with hypo.

promoting effects of onions (Allium cepa L.), including their insulin secretagogue effect, hypoglycemic influence, nutritional composition and health benefits among different varieties of the vegetable. Chapter 5 deals with the health epidemiological profile of this type of cancer. Chapter 4 is also about lettuce and provides another perspective on liver disease (NAFLD) to the emergence and progression of hepatocellular carcinoma, emphasizing the evolving

ting. With solid imaging evidence, thorough analysis and generalized applications, this book should capture the interests of readers in the broad fields of brain science, disease diagnosis and effective treatment.

Psychiatry

Innovations in Psychiatry

Souparno Mitra, MD (Resident Psychiatry, Bronxcare Health System, Icahn School of Medicine at Mount Sinai, NY, USA), Urmi Chaudhuri (PhD Student

Isenberg School of Management, University of Massachusetts, Amherst, MA USA) and

Panagiota Korenis, MD (Program Director and Vice Chair of Education, Icahn School of Medicine at Mount Sinai and Albert Einstein College of Medicine, NY, USA)

In Series: Psychiatry - Theory, Applications and Treatments

Expected Publication Date: 06/05/2021

186 pp.

Softcover: 978-1-53619-365-7 $ 95.00

e-book: 978-1-53619-438-8 $ 95.00

This book will present the most up to date and concise information related to psychiatric innovations and is especially written for those looking for a quick and easy reference guide. Conveniently formatted to present the most current and up to date concepts and ensure that you are prepared for your psychiatry shelf, PRITE™, psychiatry boards and recertification exams. It will quickly become your go to reference material for psychiatric technological innovations.

Special Topics

Advances in Health and Disease. Volume 33

Lowell T. Duncan

In Series: Advances in Health and Disease

Expected Publication Date: 05/15/2021

242 pp.

Hardcover: 978-1-53619-368-8 $ 250.00

e-book: 978-1-53619-483-8 $ 250.00

This volume comprises 9 chapters, each concerning a recent advancement in health and disease. Chapter 1 critically appraises the current literature related to pediatric obesity and asthma, summarizes the evidence on the impact of excess body fat on the pulmonary system in pediatric asthma patients, and discusses possible mechanisms as well as effective public health strategies for reducing the increasing obesity trend and mitigating asthma risk. Chapter 2 details the nutritional and bioactive composition of Lactuca sativa, commonly called lettuce, including its antioxidant, cholesterol-lowering, cardioprotective, neuroprotective, anti-diabetic, anti-inflammatory, anti-proliferative, and anti-cancer properties. Chapter 3 attempts to shed light into the pathogenetic mechanisms connecting metabolic syndrome and nonalcoholic fatty liver disease (NAFLD) to the emergence and progression of hepatocellular carcinoma, emphasizing the evolving epidemiological profile of this type of cancer. Chapter 4 is also about lettuce and provides another perspective on the nutritional composition and health benefits among different varieties of the vegetable. Chapter 5 deals with the health promoting effects of onions (Allium cepa L.), including their insulin secretagogue effect, hypoglycemic influence, hypolipidemic action, antioxidant effect, cardioprotective effect, gallstone prevention, cancer preventive potential, and digestive stimulant action, all of which are scientifically validated. Chapter 6 remarks on the difficulties associated with
diagnosing rare diseases and describes several systems-level interventions that can be expected to limit the diagnostic delays experienced by patients with rare diseases and the frustration associated with years or decades of untreated symptoms. Chapter 7 describes the prevalence and effects of iron deficiency and anemia as well as treatment options for these conditions. Chapter 8 once again focuses on lettuce, this time exploring the nutritional and anti-cancer effects of carotenoids from different varieties of lettuce. Finally, Chapter 9 describes an application for the diagnosis of hypothermia in forensic practice wherein the color difference between blood in the left cardiac chamber and blood in the right cardiac chamber can be examined using a CO-oximeter.

**Advances in Medicine and Biology. Volume 176**

**Leon V. Berhardt**

In Series: *Advances in Medicine and Biology*

Expected Publication Date: 06/15/2021

254 pp.

Hardcover: 978-1-53619-367-1 $ 250.00
e-book: 978-1-53619-481-4 $ 250.00

This compilation comprises 8 chapters, each of which details a recent advancement in medicine and biology. Chapter 1 describes innate immune responses and their role in controlling infections, including the relationship between innate and adaptive immune responses during infections. Chapter 2 focuses on the structural characteristics of transforming growth factor beta (TGF-β) and its diverse biological activities in cancer signaling pathways and presents current information about the role of TGF-β in cancer cell signaling. Chapter 3 summarizes several preceding articles on invasive procedures applied with questionable clinical indications in the former Soviet Union. Chapter 4 provides information about the physical properties, isomerism, synthesis and reactions of thiadiazole, with emphasis placed on the current studies of various syntheses of thiadiazole compounds and their important biological properties. Chapter 5 evaluates the antifungal activity of the leaf ethanolic extract of Persea americana, popularly known as avocado, and its modulatory potential in association with fluconazole to verify its action on Candida micromorphology as well as its chemical characterization. Chapter 6 explores the step-by-step role of TGF-β during the process of wound healing. Chapter 7 describes hypophosphatasemia, a rare pathophysiological condition that causes various diseases, and includes new information about hypophosphatasemia that has assisted with the diagnosis of Kikuchi Fujimoto disease and can help to predict the outcome of cardiac surgery and septic shock. Finally, Chapter 8 summarizes the evolution of digital holography, including the latest results on visualizing and distinguishing different types of blood cells.

**Advances in Medicine and Biology. Volume 177**

**Leon V. Berhardt**

In Series: *Advances in Medicine and Biology*

Expected Publication Date: 05/03/2021

248 pp.

Hardcover: 978-1-53619-491-3 $ 250.00
e-book: 978-1-53619-509-5 $ 250.00

This compilation comprises 6 chapters, each detailing a recent advancement in medicine and biology. Chapter 1 deals with tuberculosis (TB), describing current knowledge of disease pathogenesis, epidemiology of TB and drug-resistant TB, evolution and molecular mechanisms of drug resistance, fitness compensatory mechanisms and laboratory methods for the diagnosis of susceptible and drug-resistant TB. Chapter 2 details the use of B cell-targeted therapy for treatment of autoimmune and chronic inflammatory diseases. Chapter 3 concerns peptic ulcer disease and the various therapeutic approaches used to treat ulcers or lesions in the gastrointestinal tract. Chapter 4 discusses the efficacy of in vitro cultures of Astragalus for biomass and secondary metabolite production. Chapter 5 describes the B lymphocyte activation factor (BAFF), a potent cell-survival factor expressed in many hematopoietic cells. Finally, Chapter 6 presents a review of the literature to determine the relationship between non-alcoholic fatty liver disease, non-alcoholic steatohepatitis and hepatocellular carcinoma to establish a guideline for monitoring patients.

**Mobile Health: Advances in Research and Applications**

Dr Gaurav Gupta (Assistant Professor, Yogananda School of AI Computers and Data Science, Shoolini University, Solan, H.P. India), Dr Nagesh Kumar (Assistant Professor Yogananda School of AI Computers and Data Science, Shoolini University, Solan, H.P., India), Dr Yashwant Singh (Associate Professor Central University, Jammu. J&K, India) and Dr Varun Jaiswal (Assistant Professor, BioNano Technology, Department of Food & Nutrition Gachon University, Republic of Korea)

In Series: *Health Care in Transition*

Expected Publication Date: 06/10/2021

340 pp.
Smart health technologies continue to gain research interest across the globe in this digital era. Researchers are focusing on advancements in healthcare systems to make human life better. Also, such advancements help in early disease diagnosis and prevention of the worst diseases. Designing smart healthcare systems is possible only because of recent developments in artificial intelligence, machine learning and IoT technologies. Though mHealth refers to all mobile devices which can communicate data, mobile phones are presently the most popular platform for mHealth delivery. Ninety-four percent of the world population owns/uses a mobile phone, making mobile phones an optimal delivery platform for mHealth interventions. mHealth may catalyse the healthcare delivery model from a historical/episodic model into a tangible/patient-centric model. mHealth is being viewed progressively by many as an essential technology metaphor to achieve rich, vigorous patient engagement, ultimately achieving a patient-centric paradigm change.

This book will discuss diverse topics to explain the rapidly emerging and evolving mobile health and artificial perspective, the emergence of integrated platforms and hosted third-party tools, and the development of decentralized applications for various research domains. It presents various applications that are helpful for research scholars and scientists who are working toward identifying and pinpointing the potential of as well as the hindrances to mHealth. The wide variety in topics it presents offers readers multiple perspectives on a variety of disciplines.

The aim of this edited book is to publish the latest research advancements in the convergence of automation technology, artificial intelligence, biomedical engineering and health informatics. This will help readers to grasp the extensive point of view and the essence of recent advances in this field. This book solicits contributions which include theory, case studies and computing paradigms pertaining to healthcare applications. The prospective audience would be researchers, professionals, practitioners, and students from academia and industry who work in this field. We hope the chapters presented will inspire future research from both theoretical and practical viewpoints to spur further advances in the field. A brief introduction about each chapter follows.

Chapter 1 focuses on the role of Internet of Things (IoT) technologies in healthcare which provides an overview of the various types of IoT devices and data generating equipment for medical information. In Chapter 2, the objective is to provide a brief discussion about the advantages and disadvantages of using IoT based technologies in healthcare such as wearable devices.

Chapter 3 deals with important aspects of data science for healthcare systems, which includes various algorithms for decision support system algorithms.

Chapter 4 discusses various innovative technologies like digital twins for healthcare and medical diagnosis.

Chapter 5 discusses research investigating the long-term effects of pregnancy and lactation on the female body.

Chapter 6 summarizes recent advances in machine and deep learning techniques for smart healthcare applications.

Chapter 7 explores the research insights on using an artificial neural network with a wrapper-based feature selection to predict heart failure.

Chapter 8 presents a review on context-aware mobile healthcare for smart health services in nursing homes.

Chapter 9 focuses on certain machine learning methods that can help in early prediction of pandemics.

Chapter 10 explores techniques and methods based on machine learning for malaria diagnosis.

Chapter 11 is a complete discussion about mobile health technology to improve health-related quality of life of chronic disease patients in emerging economies.

We are grateful to the authors and reviewers for their excellent contributions for making this book possible.

**Surgery and Surgical Specialties**

**Surgeon’s Perspective on Dialysis Patient**

*Maria Frankovicova (University Pavol Jozef Safarik, Professor of Surgery; Chief of Department of Vascular Surgery, East Slovak Institute of Cardiovascular Diseases, Medical Faculty of Safarik University, Kosice, Slovakia)*

In Series: *Surgery - Procedures, Complications, and Results*

Expected Publication Date: 05/20/2021

375 pp.

Hardcover: 978-1-53619-262-9 $ 230.00

e-book: 978-1-53619-314-5 $ 230.00

Every year a large number of chronic patients undergo dialysis at dialysis departments in the Slovak Republic. Each one of them is connected to the artificial kidney 100 to 160 times. The most valuable property of these patients is a quality and long-term functioning arteriovenous fistula since it is one of the essential conditions for successful dialysis. The surgeon who creates arteriovenous access must thoroughly examine the patient before the operation, properly evaluate the vascular system and choose the most favorable way of the vascular access for long-term hemodialysis. Patients with chronic renal failure have impaired hemostasis, several of them have diabetes and their vascular system is affected by atherosclerosis. Determination of the operational plan and optimal vascular access is strictly individual and depends not only on the vascular system of the patient but also on the general condition, age and prognosis of the disease. A quality arteriovenous fistula should conform to the requirements of the simplest and the shortest operation as possible, using local anaesthesia.

Underestimation of any fact can result in the creation of many non-functional AV fistulas. AV fistulas operations for the purpose of long-term hemodialysis are an integral part and one of the most problematic issues of Vascular Surgery. There
are more and more patients who are in the long-term hemodialysis program. The average age of patients is increasing. All these factors have resulted in the need to create more and more AV fistulas because their usability is limited. The correct operational tactics, individual approach to the patient and precise surgical technique of the vascular surgeon contributes to the improvement of the quality of life of sick patients, of whom only a small percentage is so lucky that the disease is cured by successful kidney transplantation.
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