Book Reviews

Platelets. 4th Edition.

Edited by A. Michelson, M. Cattaneo, A. Frelinger, P. Newman.
2019, pp 1268, EUR 216.24, ISBN: 9780128134566.
Academic Press, Elsevier, Cambridge, MA, USA.

Platelets, Fourth Edition, integrates the entire field of platelet biology, pathophysiology, and clinical medicine with contributions from 142 world experts from 18 countries. This award-winning reference provides clear presentations by basic scientists on the cellular, molecular, and genetic mechanisms of platelets and the role of platelets in thrombosis, hemorrhage, inflammation, antimicrobial host defense, wound healing, angiogenesis and cancer. It also provides start-of-the-art presentations by hematologists, cardiologists, stroke physicians, blood bankers, pathologists and other clinicians on platelet function testing, disorders of platelet numbers and function, antiplatelet therapy and therapy to increase platelet numbers and/or function.

Since the publication of the Third Edition of *Platelets*, there has been a rapid expansion of knowledge in both basic biology of platelets and the clinical approach to platelet-related diseases. This Fourth Edition of *Platelets* draws all this information into a single, comprehensive and authoritative resource.

Key Features: Comprehensive and definitive source of state-of-the-art knowledge about platelets; Integrates the entire field of platelet biology, pathophysiology, and clinical medicine; Written for clinicians, pathologists and scientists by 142 world-renowned experts from 18 countries; Completely revised and updated, with 11 new chapters on topics such as platelet glycobiology, the platelet transcriptome, platelet inhibitory receptors, platelet function testing in clinical research trials, therapeutic platelet-rich plasma in wound healing, and new antiplatelet drugs; Full color textbook with over 250 illustrations and 15,000 references.

Practical Guide for Biomedical Signals Analysis Using Machine Learning Techniques. 1st Edition. A MATLAB Based Approach.

Edited by A. Subasi.
2019, pp 456 EUR 118.03, ISBN: 9780128176733.
Academic Press, Elsevier, Cambridge, MA, USA.

Practical Guide for Biomedical Signals Analysis Using Machine Learning Techniques: A MATLAB Based Approach presents how machine learning and biomedical signal processing methods can be used in biomedical signal analysis. Different machine learning applications in biomedical signal analysis, including those for electrocardiogram, electroencephalogram and electromyogram are described in a practical and comprehensive way, helping readers with limited knowledge. Sections cover biomedical signals and machine learning techniques, biomedical signals, such as electroencephalogram (EEG), electromyogram (EMG) and electrocardiogram (ECG), different signal-processing techniques, signal de-noising, feature extraction and dimension reduction techniques, such as PCA, ICA, KPCA, MSPCA, entropy measures, and other statistical measures, and more.

This book is a valuable source for bioinformaticians, medical doctors and other members of the biomedical field who need a cogent resource on the most recent and promising machine learning techniques for biomedical signals analysis.

Key Features: Provides comprehensive knowledge in the application of machine learning tools in biomedical signal analysis for medical diagnostics, brain computer interface and man/machine interaction; Explains how to apply machine learning techniques to EEG, ECG and EMG signals; Gives basic knowledge on predictive modeling in biomedical time series and advanced knowledge in machine learning for biomedical time series.

Malignant Pleural Mesothelioma. 1st Edition. A Guide for Clinicians

Edited by A. Giordano, R. Franco.
2019, pp 186, EUR 118.03, ISBN: 9780128127254.
Academic Press, Elsevier, Cambridge, MA, USA.

Malignant Pleural Mesothelioma: A Guide for Clinicians is a practical book developed to assist clinicians, pathologist and molecular biologist in the management of malignant pleural mesothelioma (MPM). MPM represents a challenge in terms of diagnosis, staging and treatment, and to date, the optimal management of MPM patients has not yet been clearly defined – and this book is intended to be an efficient tool for these cases.

Key Features: Offers operative procedure sections in each chapter; Brings updated information on epidemiology, molecular mechanism, diagnosis and treatment of MPM from experts of the field; Provides innovative and prospective approaches for the management of mesotheliomas.

Reproducibility in Biomedical Research. 1st Edition. Epistemological and Statistical Problems.

Edited by E. Montgomery.
2019, pp 356, EUR 98.21, ISBN: 9780128176726.
Academic Press, Elsevier, Cambridge, MA, USA.

Reproducibility in Biomedical Research: Epistemological and Statistical Problems explores the ideas and conundrums inherent in scientific research. It explores factors of reproducibility, including logic, distinguishing productive from unproductive irreproducibility, the scientific method, and the use of statistics. In multiple examples and six detailed case studies, the book

demonstrates the misuse of logic resulting in unproductive irreproducibility, allowing researchers to develop their own logic and planning abilities. Biomedical researchers, clinicians, administrators of scientific institutions and funding agencies, journal editors, philosophers of science and medicine will find the arguments and explorations a valuable addition to their libraries.

Key Features: Considers the meaning and purpose of reproducibility to help design research; Reviews famous case studies of alleged irreproducibility to determine if these could be reproducible; Provides a theoretical aspect to practical issues surrounding research design and conduct.

Oxford Textbook of Cancer Biology.

Edited by F. Pezzella, M. Tavassoli, D.J. Kerr.
2019, pp 504, GBP 125, ISBN: 9780198779452.
Oxford University Press, Oxford, UK.

The study of the biology of tumours has grown to become markedly interdisciplinary, involving chemists, statisticians, epidemiologists, mathematicians, bioinformaticians, and computer scientists alongside biologists, geneticists, and clinicians. *The Oxford Textbook of Cancer Biology* brings together the most up-to-date developments from different branches of research into one coherent volume, providing a comprehensive and current account of this rapidly evolving field.

Structured in eight sections, the book starts with a review of the development and biology of multi-cellular organisms, how they maintain a healthy homeostasis in an individual, and a description of the molecular basis of cancer development. The book then illustrates, as once cells become neoplastic, their signalling network is altered and pathological behaviour follows. It explores the changes that cancer cells can induce in nearby normal tissue, the new relationship established between them and the stroma, and the interaction between the immune system and tumour growth. The authors illustrate the contribution provided by high throughput techniques to map cancer at different levels, from genomic sequencing to cellular metabolic functions, and how information technology, with its vast amounts of data, is integrated with traditional cell biology to provide a global view of the disease. The effect of the different types of treatments on the biology of the neoplastic cells are explored to understand on the one side, why some treatments succeed, and on the other, how they can affect the biology of resistant and recurrent disease. The book concludes by summarizing what we know to date about cancer, and in what direction our understanding of cancer is moving.

Edited by leading authorities in the field with an international team of contributors, this book is an essential resource for scholars and professionals working in the wide variety of sub-disciplines that make up today's cancer research and treatment community. It is written not only for consultation, but also for easy cover-to-cover reading.