

TITLES IN STEM CELLS RESEARCH 2009

HUMAN STEM CELLS AND THE LIVER

Basic Research and Clinical Applications

edited by **Mark A Zern & Christine Jung**
(University of California, Davis, USA)

Key Features

- All chapters are written by researchers with recognized expertise in their respective fields of liver and stem cell biology, thereby providing the most up-to-date research findings with relevant perspectives about the future direction
- The book demonstrates how the field of stem cells is developing from an emphasis on its basic underpinning to a renewed effort to drive it towards clinical relevancy

This book provides a comprehensive overview of the applicative potential of various types of stem cells, both embryonic and adult, in the treatment of liver diseases. It serves as a primer in the regenerative potential of stem cells by describing in-depth the recent advancement of science and technology in pursuit of methods for directing these cells into the differentiation pathways of hepatocyte-like cells for use in cell transplantation and for the creation of bioartificial liver assist devices.

Readership: Graduate students, post-doctoral fellows, and established researchers interested in stem cell research and its application in liver biology and regenerative medicine; ambitious undergraduates and other non-experts who are interested in a comprehensive overview of how research in stem cell biology is being explored for the treatment of liver-related diseases; hepatologists.

400pp (approx.) Winter 2009
978-981-283-571-0 US\$98 £74

Manuals in Biomedical Research – Vol. 6 A MANUAL FOR PRIMARY HUMAN CELL CULTURE (2nd Edition)

by **Kee Woei Ng** (Institute of Medical Biology, Singapore) & **Jan-Thorsten Schantz** (Technical University of Munich, Germany & National University of Singapore, Singapore)

Key Features

- Presents the basic steps necessary for culturing primary human cells
- Includes blank pages at the end of each chapter for readers to jot down important notes

This manual is designed to serve as a practical guide to primary human cell culture, which is integral in both academic and industrial biotechnology research. As in the first edition, the content of the manual is not exhaustive, but rather contains selected protocols for specific cell types from major tissue groupings in the body. This improved second edition also includes a new section on stem cells and additional material on transfection. It should serve as a foundation for individual researchers to experiment, explore, and establish niche protocols for their specific needs. With its compact physical format that makes it portable and flexible for usage in a laboratory setting, the manual will be a useful guide for all beginners in primary human cell culture work.

Readership: Graduate students and scientists embarking on cell culture; biologists; medical practitioners; laboratory technicians; junior college and polytechnic students.

250pp (approx.) Fall 2009
978-981-283-477-5 (pbk) US\$48 £36

HANDBOOK OF CARDIAC STEM CELL THERAPY

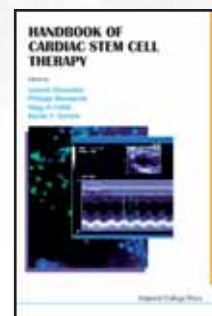
edited by **Ioannis Dimarakis** (Imperial College London, UK), **Philippe Menasché** (Hôpital Européen Georges Pompidou, France), **Nagy A Habib** & **Myrtle Y Gordon** (Imperial College London, UK)

This book is an impressive compilation of contributions on the hot topic of cardiac stem cell therapy from leading groups all over the world. In the assembly of chapters, a structured approach is adopted; starting from the clinician's perspective, all developments in both the experimental and clinical research areas are covered. This journey will take the reader from the bench-top to the bedside, with all chapters written by leading authorities in their respective fields, including data still in press with medical journals.

So, beyond being excellent as an overall update for scientists in the field of cardiac stem cell therapy, this book will likely prove an indispensable tool for every budding scientist considering a research project within this field.

Readership: Academics, stem cell researchers and cardiologists.

308pp Dec 2008
978-1-84816-256-3 US\$146 £86



ADVANCES IN TISSUE ENGINEERING

edited by **Julia Polak, Sakis Mantalaris & Sian E Harding** (Imperial College London, UK)

Key Features

- Discusses in-depth a topical subject, treated with the very latest information
- Written by leading contributors in the field, with the world-renowned Professor Dame Julia Polak as the lead editor
- Differs from competing titles in that its coverage ranges from the basic science of stem cells and biomaterials to clinical applications, policy issues, views from the commercial sector and many others



Advances in Tissue Engineering is a unique volume and the first of its kind to bring together leading names in the field of tissue engineering and stem cell research. A relatively young science, tissue engineering can be seen in both scientific and sociological contexts and successes in the field are now leading to clinical reality. This book attempts to define the path from basic science to practical application. A contribution from the UK Stem Cell Bank and opinions of venture capitalists offer a variety of viewpoints, and exciting new areas of stem cell biology are highlighted. With over fifty stellar contributors, this book presents the most up-to-date information in this very topical and exciting field.

Readership: Stem cell researchers, clinicians, surgeons and biotechnology companies.

948pp Aug 2008
978-1-84816-182-5 US\$210 £123

STEM CELLS AND REGENERATIVE MEDICINE

edited by **Walter C Low** (University of Minnesota, USA) & **Catherine M Verfaillie** (University of Minnesota, USA & Catholic University of Leuven, Belgium)

Stem cells have the ability to differentiate into cells that are found throughout the body. This fundamental property of stem cells suggests that they can potentially be used to replace degenerative cells within the body, and regenerate the functional capacity of organ systems that have deteriorated because of disease or aging. This authoritative textbook provides an overview of the latest advances in the field of stem cell biology, spanning topics that include nuclear reprogramming, somatic cell cloning, and determinants of cell fate; embryonic stem cells for hematopoietic and pancreatic repair; adult stem cells for cardiovascular, neural, renal, and hepatic repair; and manufacturing of stem cells for clinical use.



Readership: Graduate students and scientists in stem cell research; neurology; ophthalmology; cardiology; ear, nose & throat; pathology; oncology; hematology; renal medicine; animal physiology; biochemistry; cell/molecular biology; biotechnology; bioengineering/biomedical engineering.

572pp May 2008
978-981-277-576-4 US\$147 £86

Progress in Gene Therapy – Vol. 3

AUTOLOGOUS AND CANCER STEM CELL GENE THERAPY

edited by **Roger Bertolotti** (University of Nice–Sophia Antipolis, France) & **Keiya Ozawa** (Jichi Medical University, Japan)

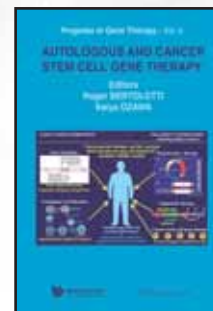
Key Features

- Unified presentation of the emerging autologous/cancer stem cell gene therapy breakthrough
- Comprehensive collection of chapters illustrating current approaches, together with problems and issues

Stem cell gene therapy is discussed in terms of 1) magnifying stem cell therapeutic homing through transient regenerative gene therapy and 2) of tackling most pathologies (including mitochondrial DNA diseases and ageing disorders) through stem cell repopulation dynamics into appropriate niches (long-term engraftment) and tissues (cell turn-over). Regarding cancer stem cell gene therapy, focus is on both the increasing number of identified tissue-specific cancer stem cells as the ultimate therapeutic targets and on the development of armed stem cells as tumor-homing vectors for targeted anticancer therapy.

Readership: Clinicians, scientists, physicians, veterinarians, dentists, pharmacists/chemists, interested in an ongoing medical/veterinarian breakthrough that is expected to revolutionize the practice of Medicine/Dentistry and that relies on cell biology, molecular biology/genetics, developmental biology, biochemistry, molecular pathology and animal science.

488pp Dec 2007
978-981-277-586-3 US\$172 £140



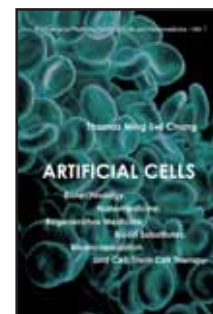
Regenerative Medicine, Artificial Cells and Nanomedicine – Vol. 1

ARTIFICIAL CELLS

Biotechnology, Nanomedicine, Regenerative Medicine, Blood Substitutes, Bioencapsulation, and Cell/Stem Cell Therapy

by **Thomas Ming Swi Chang** (McGill University, Canada)

“This volume is the most comprehensive review of the field of artificial cells and associated fields published to date. It refreshes the knowledge of the experts while informing the naïve of the history and promise of the future. Written in a conversational style and very well illustrated for fact and emphasis, it is an easy and informative read. Presented in easily accessible form are the underlying theories and concepts of artificial cells, blood substitutes, nanomedicine, regenerative medicine and stem cell therapy in the context of specific clinical situations ranging from general to very specific diseases. Basic science observations support the tested or proposed clinical applications in an exact manner. This volume contains a near encyclopedia quantity of information, carefully and logically assembled and presented. Future developments in the field will depend on the essential information presented here. An essential read for anyone interested in this field, the vision and foresight of this senior scientist and leading statesman of the field makes the topic accessible and understandable.”



A Gerson Greenburg, MD, PhD
Professor of Surgery, Emeritus, Brown University and
Vice President Medical Affairs, Biopure Corporation

Readership: Academic and industrial researchers and developers in biomedical engineering, bioengineering, biopharmaceuticals, blood substitutes, nanomedicine, regenerative medicine, transfusion medicine; decision makers in biopharmaceutical industries; physicians, surgeons, anesthesiologists, blood bank hematologists; students taking advance courses, graduate students, postdoctoral research fellows and research scientists entering this area of research and development.

484pp May 2007
978-981-270-576-1 US\$165 £85
978-981-270-778-9(pbk) US\$82 £45

STEM CELL REPAIR AND REGENERATION**Volume 3**

edited by **Nataša Levičar, Nagy A Habib, Myrtle Y Gordon & Ioannis Dimarakis** (*Imperial College London, UK*)

Key Features

- Comprehensive and up-to-date overview for clinicians and scientists
- Contains chapters by the field's leading scientists from some of the world's top research institutions and universities
- Chapters cover basic stem cell science and topics related to many areas of translational "from bench to bedside" stem cell research
- Information presented in a form accessible to all interested students, clinicians and scientists

This volume explores novel stem cell therapeutic strategies for myriad diseases, including renal failure, retinal disease and myocardial infarction.

Readership: Life science scientists; biomedical researchers; academics, postgraduate students and advanced undergraduate students in cell biology, biochemistry and genetics; surgeons; clinicians; biotechnology and pharmaceutical industry professionals.

320pp **May 2008**
978-1-86094-980-7 **US\$125** **£71**

**STEM CELL REPAIR AND REGENERATION****Volume 2**

edited by **Nagy Habib, Nataša Y Levičar, Myrtle Gordon, Long Jiao & Nicholas Fisk** (*Imperial College London, UK*)

Key Features

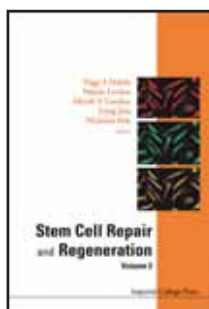
- Comprehensive and up-to-date overview for clinicians and scientists
- Contributed by leading authorities on stem cells

This second book in the *Stem Cell Repair and Regeneration* series provides a deeper exploration of the therapeutic potential of undifferentiated human stem cells.

The current volume contains papers by the field's leading scientists and explores the current knowledge on cell therapy for different diseases and injured organs, including diabetes, liver and heart disease.

Readership: Life science scientists, biomedical researchers, surgeons, clinicians, biotechnology and pharmaceutical industry professionals, postgraduate and undergraduate students.

304pp **Mar 2007**
978-1-86094-711-7 **US\$105** **£64**

**STEM CELL REPAIR AND REGENERATION**

edited by **Nagy A Habib, Myrtle Y Gordon, Nataša Levičar, Long Jiao & Gilbert Thomas-Black** (*Imperial College London, UK*)

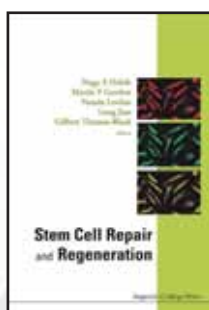
Key Features

- Comprehensive collection of many significant topics; from stem cell basics to stem cell therapy
- Definitive and up-to-date guide to where and how stem cells can be used in repair and regeneration

This authoritative book provides reviews by the field's leading scientists and covers many of the areas in which stem cells are becoming increasingly important, such as in organ repair and regeneration. Stem cells offer the possibility of cell therapy issues to treat a myriad of diseases, conditions, and disabilities including Parkinson's and Alzheimer's diseases, spinal cord injury, stroke, heart disease, and diabetes.

Readership: Life scientists, medical doctors and surgeons in academia and industry interested in stem cells and developing stem cell therapies. Scientists in biotechnology and pharmaceutical industries.

256pp **Sep 2005**
978-1-86094-558-8 **US\$114** **£67**



:: Bestseller

MULTIPLICITY YOURS
Cloning, Stem Cell Research, and Regenerative Medicine

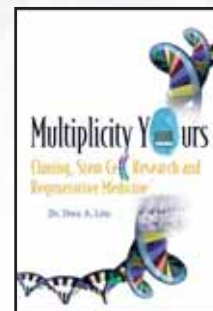
by **Hwa A Lim** (*Silicon Valley, California, USA*)

Key Features

- Treats the arcane science in an easy to grasp manner
- Provides clear illustrations, figures, graphics and photos to explain key points
- Explains the diverse topics from a scientific angle, a social perspective, and as a natural business development
- Details the politics of stem cell research and cloning
- Presents numerous thought-provoking scenarios for readers to ponder over

Readership: Biologists, biotechnologists, medical doctors, policy-makers; new comers to stem cell, reproductive and therapeutic cloning, and regenerative medicine; undergraduates in biology, biotechnology and medicine; students of ethics law; medical students in bioengineering.

440pp **Jul 2006**
978-981-256-865-6 **US\$104** **£63**
978-981-256-866-3(pbk) **US\$52** **£31**



:: New Edition

STEM CELLS
From Bench to Bedside
(2nd Edition)

edited by **Arif Bongso & Eng Hin Lee** (*National University of Singapore, Singapore*)

Key Features

- It is comprehensive and covers all types and aspects of stem cells
- It covers both basic research and clinical aspects
- It is a new up-to-date edition and each of the 33 chapters is written by eminent and internationally acclaimed stem cell scientists

This book is important as it is comprehensive and covers all aspects of stem cell biology, from basic research to clinical applications. It will be up-to-date and all the chapters include self-explanatory figures, color photographs, graphics and tables.

Readership: Graduate students, upper level undergraduate students and researchers in cell biology, biochemistry, genetics, developmental biology, and animal science; stem cell researchers, medical doctors, veterinarians and dentists

650pp (approx.) **Summer 2010**
978-981-4289-38-2 **US\$165** **£124**

FORTHCOMING TITLES TO LOOK OUT FOR

Series on Bioengineering & Biomedical Engineering – Vol. 5 **BIOMEDICAL ENGINEERING PRINCIPLES OF THE BIONIC MAN**

by **George K Hung** (*Rutgers University, USA*)

Key Features

- Brings together in one unique volume the principles, techniques, and innovative devices for the repair and replacement of organs associated with a “bionic man”
- Contributions from leading scientists in the areas of biomedical, electrical, mechanical, and rehabilitation engineering, cardiology, orthopaedic surgery, physics, optometry, ophthalmology, and sports medicine
- Serves as a textbook for students, a reference book for scientists, or as a ready source of useful information for the layman
- Review questions at the end of each chapter helps the reader better understand the chapter material

Readership: Textbook for undergraduates and graduates in biomedical engineering, mechanical engineering, physiology, and pre-medicine; an updated reference book for research scientists, and a general level book for the intelligent layman.

400pp (approx.)	Summer 2009	
978-981-277-977-9	US\$87	£46
978-981-277-978-6(pbk)	US\$65	£35

UMBILICAL CORD BLOOD **A Future for Regenerative Medicine**

edited by **Suzanne Kadereit** (*University of Konstanz, Germany*) & **Gerald Udolph** (*National University of Singapore, Singapore*)

Key Features

- Covers several paradigms of non-embryonic stem cell biology and the potential of stem cells for regenerative medicine
- One of the first book with the same in-depth focus on all the stem cells within the umbilical cord
- Presents an overview of an abundant scientific literature on stem cell research
- Serves as a primer and reference book for medical fellows and researchers, and as a teaching tool in graduate schools

This book provides a consolidated, up-to-date overview of basic research on hematopoietic and mesenchymal stem cells contained within umbilical cord tissue, as well as other more recently described stem and precursor cells of not yet fully elucidated potential. It also takes an in-depth look at basic and translational research efforts with stem cells from the umbilical cord in academic institutions and biotech companies.

Readership: Academics and researchers in non-embryonic stem cell research, undergraduate and graduate biology students, professionals in pharmaceutical and biotechnology sector, anyone interested in stem cells research.

200pp (approx.)	Winter 2009	
978-981-283-329-7	US\$75	£41

STEM CELL MICROENVIRONMENTS AND TISSUE ENGINEERING

edited by **Satya Prakash** & **Dominique Shum-Tim** (*McGill University, Canada*)

Key Features

- An update of the clinical application of these cutting-edge new therapies, as reported first-hand by the experts, is provided
- Various ongoing bioengineering works aimed at improving the current efficiency of cell therapy are described
- The combination of basic research, ongoing developing technologies and clinical applications is unified in one comprehensive book

This is a comprehensive review of the current state of stem cell bioengineering from authorities in the field. The first part of the book includes the basic research work on stem cells and bioengineering carried out by various laboratories. The second part consists of a review of the current development of various microcapsules in stem cell therapy. The last part will summarize the overall clinical trials on stem cell therapy and myocardial regeneration as well as the most updated personal experience recently completed by well-known experts in this field.

Readership: Graduate students, upper level undergraduate students, academics and researchers in medicine, cell biology, biochemistry, genetics, developmental biology, and animal science; life science scientists; medical doctors; surgeons; biotechnology and pharmaceutical industry professionals.

450pp (approx.)	Spring 2010	
978-981-283-788-2	US\$128	£96

BONE MARROW TRANSPLANTATION ACROSS MAJOR GENETIC BARRIERS

edited by **Yair Reisner** (*Weizmann Institute of Science, Israel*) & **Massimo F Martelli** (*Perugia University, Italy*)

Key Features

- Consists of cutting-edge studies written by the most prominent leaders in the various fields
- Edited by renowned experts who have been leading this field for more than two decades, and who organize a workshop every two years dedicated to the progress made in this field

This book presents updated accounts of the different aspects of this research. The scope of the book is very wide, including strategies to overcome graft vs. host (GVH) disease and graft rejection, cell therapy to prevent leukemia relapse, and a range of modalities to improve immune reconstitution after transplantation. In addition, new approaches to induce immune tolerance towards organ transplants by means of hematopoietic stem cell transplantation is extensively reviewed.

Readership: Immunologists, oncologists, hematologists, geneticists and stem cell researchers.

250pp (approx.)	Winter 2009	
978-981-4271-26-4	US\$85	£64

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