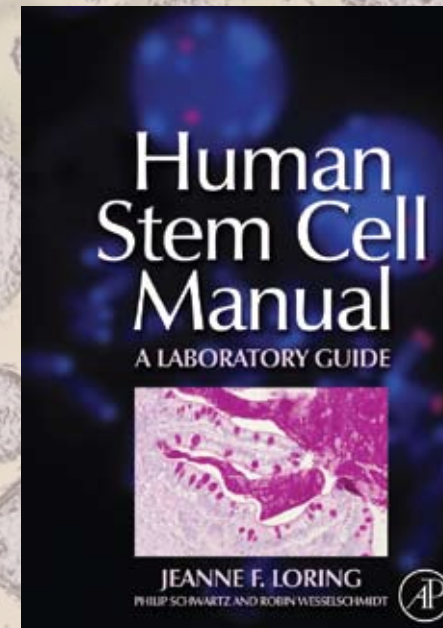
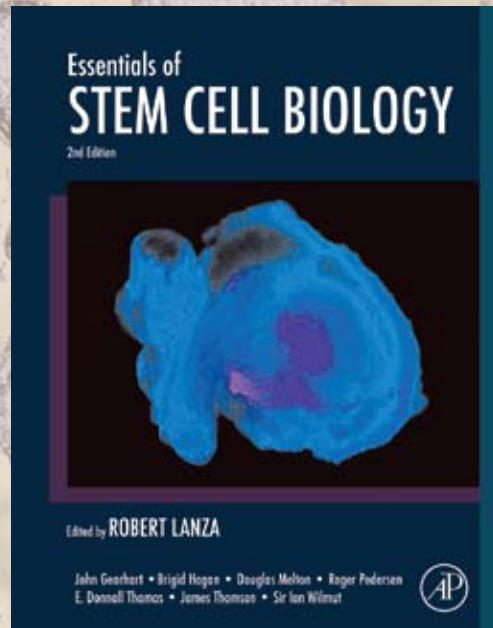
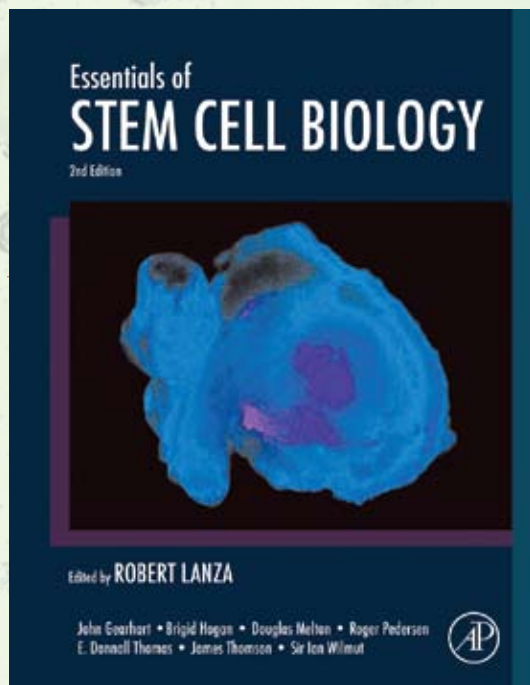


The World of Stem Cells



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Essentials of Stem Cell Biology, 2nd Edition

Robert Lanza

John Gearhart

Brigid Hogan

Douglas Melton

Roger Pedersen

E. Donnall Thomas

James Thomson

Sir Ian Wilmut

- Contributions by Nobel Laureates and leading international investigators
- Includes two entirely new chapters devoted to induced pluripotent stem (iPS) cells written by the scientists who made the breakthrough
- Edited by a world-renowned author and researcher to present a complete story of stem cells in research, in application, and as the subject of political debate
- Presented in full color with glossary, highlighted terms, and bibliographic entries replacing references

First developed as an accessible abridgement of the successful *Handbook of Stem Cells*, this book serves the needs of the evolving population of scientists, researchers, practitioners, and students that are embracing the latest advances in adult and embryonic stem cell research. Since the last edition was published, stem cell research has evolved into a critical research tool, and stem cells have come to represent potential salvation for many people suffering from incurable diseases. Dr. Lanza is a prominent figure not only in the world of life sciences but also recognized publicly through the broad media coverage of his research.

July 2009 | 600 pp. | Hardback | £145.00 | €170.95 | ISBN: 9780123747297

Living longer through science—an interview with Robert Lanza

<http://abcnews.go.com/Health/Longevity/story?id=4543291&page=1>

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Foundations of Regenerative Medicine

Clinical and Therapeutic Applications

Anthony Atala

- Highlights the fundamentals of regenerative medicine for a variety of related science and technology fields
- Introductory chapter directly addresses why regenerative medicine is important to a variety of researchers by providing practical examples and references to primary literature

- Includes new discoveries from leading researchers on restoration of diseased tissues and organs

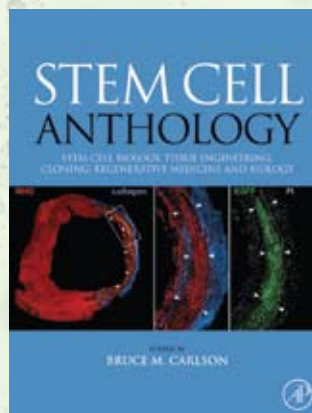
The interdisciplinary field of regenerative medicine holds the promise of repairing and replacing tissues and organs damaged by disease, and of developing therapies for previously untreatable conditions such as diabetes, heart disease, liver disease, and renal failure. Derived from the successful *Principles of Regenerative Medicine*, this book brings together the latest information on the advances in technology and medicine and the replacement of tissues and organs damaged by disease. Chapters focus on the fundamental principles of regenerative therapies which have cross-over with a broad range of disciplines.

See Dr. Atala at work in his tissue regeneration lab

<http://www.oprah.com/article/oprahshow/20090305-tows-oz-live-longer>

October 2009 | 750 pp. | Hardback | £60.99 | €71.95

ISBN: 9780123750853



Stem Cell Anthology

From Stem Cell Biology, Tissue Engineering, Regenerative Medicine, Cloning and Stem Cell Methods

Bruce M. Carlson

- Contents pulled from leading references and texts and cross-referenced for easy use
- Provides a one-stop source for topics related to methods, research, applications, and therapies in tissue engineering
- Contributors are leaders in biotechnology, cell and molecular biology, biomedical engineering, and medicine

The fields of stem cell research, regenerative medicine, tissue engineering, and cloning are very closely related. It is important for researchers in each of these disciplines to be aware of the methods and principles in the others. Elsevier publishes some of the highest individual references in these areas. Bringing together the principles, applications, and basic understanding in these related areas of science provides a new reference which serves the needs of a variety of researchers. This compilation will be valuable to researchers and students who need to save time and link concepts to principles, applications, and methods in order to work more effectively.

November 2009 | 450 pp. | Hardback | £90.99 | €106.95

ISBN: 9780123756824

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Tissue Engineering

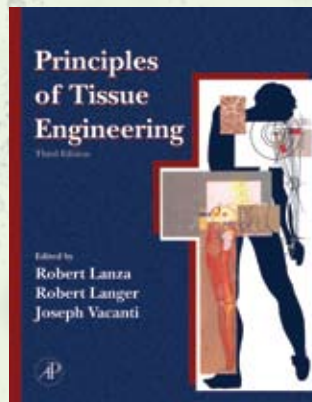
Clemens van Blitterswijk
Peter Thomsen
Jeffrey Hubbell
Ranieri Cancedda
Anders Lindahl Sahlgrenska
Jerome Sohler
David F. Williams

- Covers all the essentials from tissue homeostasis and biocompatibility to cardiovascular engineering and regulations
- Twenty-four chapters from internationally recognized authors, provide a comprehensive introduction for engineers and life scientists, including biomedical engineers, chemical and process engineers, materials scientists, biologists, and medical students
- Full color throughout, with clear development of understanding through frequent examples, experimental approaches, and the latest research and developments.

Tissue Engineering is a comprehensive introduction to the engineering and biological aspects of this critical subject. With contributions from internationally renowned authors, it provides a broad perspective on tissue engineering for students and professionals who are developing their knowledge of this important topic. Key topics covered include stem cells; morphogenesis and cellular signaling; the extracellular matrix; biocompatibility; scaffold design and fabrication; controlled release strategies; bioreactors; tissue engineering of skin, cartilage, bone, and organ systems; and ethical issues.

April 2008 | 760 pp. | Hardback | £49.99 | €58.95

ISBN: 9780123708694



Principles of Tissue Engineering, 3rd Edition

A Volume in the Tissue Engineering Intelligence Unit Series

Robert Lanza
Robert Langer
Joseph P. Vacanti

- Includes new chapters on biomaterial-protein interactions, nanocomposite, and three-dimensional scaffolds, skin substitutes, spinal cord, vision enhancement, and heart valves
- Expanded coverage of adult and embryonic stem cells of the cardiovascular, hematopoietic, musculoskeletal, nervous, and other organ systems

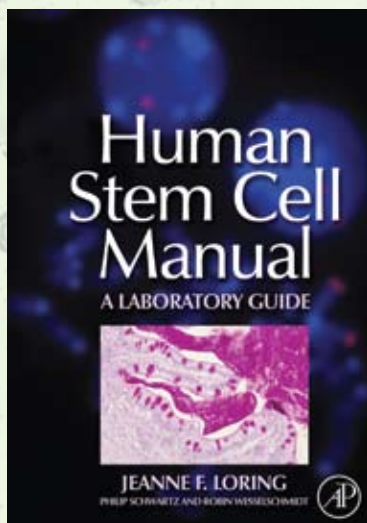
First published in 1997, *Principles of Tissue Engineering* is the widely recognized definitive resource in the field. This edition includes greatly expanded focus on stem cells, including adult and embryonic stem cells and progenitor populations that may soon lead to new tissue engineering therapies for heart disease, diabetes, and a wide variety of other diseases that afflict humanity. This up-to-date coverage of stem cell biology and other emerging technologies is complemented by a series of new chapters on recent clinical experience in applying tissue engineering. The result is a comprehensive textbook that we believe will be useful to students and experts alike.

September 2009 | 1,344 pp. | Hardback | £90.00 | €105.95

ISBN: 9780123706157

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Human Stem Cell Manual A Laboratory Guide

Jeanne F. Loring
Robin L. Wesselschmidt
Philip H. Schwartz

- Reader-friendly manual provides a practical “hands on” guide to the culture of human embryonic and somatic stem cells.
- An historical introduction, detailed method, discussion of alternative methods, and common pitfalls are presented with each experimental strategy

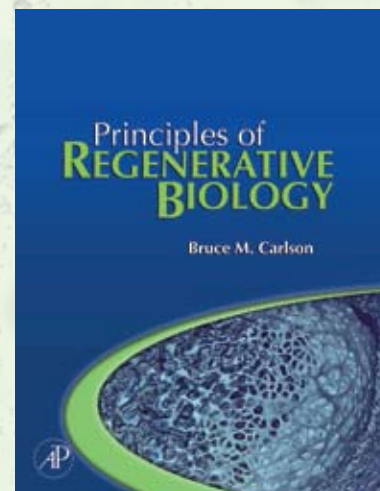
Stem cells are self-replicating and undifferentiated, meaning their function is not yet cell, tissue, or organ-specific. Due to the unique nature of these cells, research

into their biology and function holds great promise for therapeutic applications through replacement or repair of diseased and damaged cells. By presenting methods for embryonic and adult lines side-by-side, the authors lay out an elegant and unique path to understanding the science of stem cell practice. The authors begin with a broad-based introduction to the field, and also review legal and regulatory issues and patents. This lab guide for researchers also serves as a textbook for undergraduate and graduate students in laboratory courses.

November 2007 | 488 pp. | Spiral bound | £53.00 | €62.95

ISBN: 9780123704658

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Principles of Regenerative Biology

Bruce M. Carlson

- Creates a general understanding of one of the most fascinating and complex phenomena in biology
- Discusses the ability and diversity of regeneration in various organisms
- Explains the history and origin of cells in regenerating systems
- Includes information on stem cells and its important role in regeneration

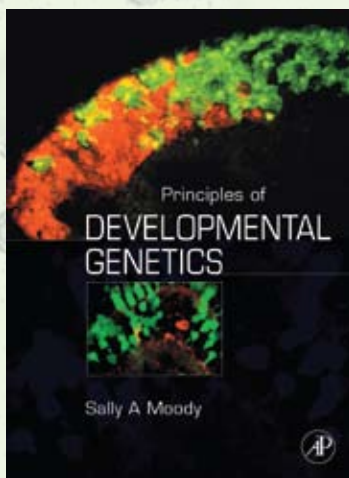
With the explosion of knowledge from molecular biology and the burgeoning interest in generating or regenerating tissues or organs through various bioengineering or stem cell approaches, many scientists and students have shown a renewed interest in the phenomenon of regeneration. Because relatively few have had the luxury of being able to approach the phenomenon of regeneration from a broad biological perspective. In order to manipulate regenerative processes, it is important to understand the underlying principles of regeneration and this book is the key introductory reference for all developmental biologists, geneticists, and tissue and stem cell researchers.

May 2007 | 400 pp. | Hardback | £36.99 | €41.95

ISBN: 9780123694393

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Principles of Developmental Genetics

Sally A. Moody

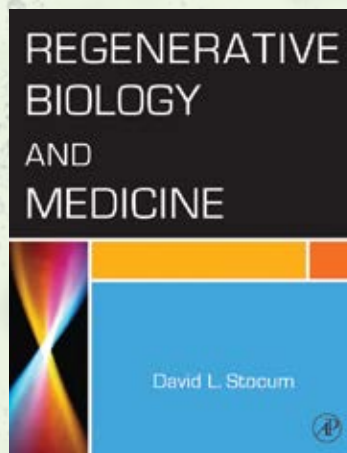
- Includes new research not previously published in any other book on the molecular genetic processes that regulates development
- Chapters present a broad understanding of the application of animal model systems, allowing researchers to better treat clinical disorders and comprehend human development
- Relates the application of new technologies to the manipulation of stem cells, causes of human birth defects, and several human disease conditions

- Each chapter includes a bulleted summary highlighting clinical aspects of animal models

Unlike anything currently available in the market, Dr. Sally A. Moody and a team of world-renowned experts provide a groundbreaking view of developmental genetics that will influence scientific approaches in embryology, comparative biology, as well as fields of stem cell biology, and regenerative medicine. This definitive resource provides researchers with the opportunity to gain important insights into the clinical applicability of emerging new technologies and animal model data. This book is a must-have for all researchers in genetics, developmental biology, regenerative medicine, and stem cell biology.

September 2007 | 1,080 pp. | Hardback | £90.00 | €105.95

ISBN: 9780123695482



Regenerative Biology and Medicine

David L. Stocum

- Tissues covered include skin, hair, teeth, cornea, and central neural types
- Systems presented are digestive, respiratory, urogenital, musculoskeletal, and cardiovascular
- Includes amphibians as powerful research models
- Discusses appendage regeneration in amphibians and mammals

The purpose of the book is to bring together in one place the different facets of regenerative biology and medicine while providing the reader with an overview of the basic and clinically-oriented research that is being done. Not only does the content cover a plethora of tissues and systems, it also includes information about the developmental plasticity of adult stem cells and the regeneration of appendages.

As part of its balanced presentation, *Regenerative Biology and Medicine* does address the biological/bioethical issues and challenges involved in the new and exciting field of regenerative biology and medicine.

October 2006 | 464 pp. | Paperback | £49.00 | €57.95

ISBN: 9780123693716

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Handbook of Stem Cells, 2-Volume Set with CD-ROM Vol. 1–2 Vol. 1 – Embryonic Stem Cells Vol. 2 – Adult & Fetal Stem Cells

Robert Lanza
Helen Blau
John Gearhart
Brigid Hogan
Douglas Melton
Malcolm Moore

Roger Pedersen
E. Donnall Thomas
James Thomson
Catherine Verfaillie
Irving Weissman
Michael West

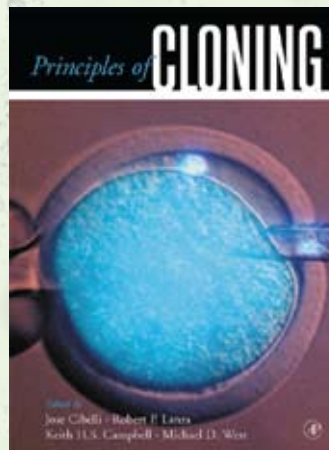
- Provides comprehensive coverage on this highly topical subject
- Contains contributions by the foremost authorities and premiere names in the field of stem cell research
- The accompanying CD-ROM includes over 250 color figures

This two-volume reference integrates this exciting area of biology, combining the prerequisites for a general understanding of adult and embryonic stem cells, the tools, methods, and experimental protocols needed to study and characterize stem cells and progenitor populations, as well as a presentation by the world's experts of what is currently known about each specific organ system.

October 2004 | 1,760 pp. | Hardback | £334.00 | €393.95

ISBN: 9780124366435

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Principles of Cloning

Jose Cibelli
Robert Lanza
Keith Campbell
Michael D. West


- First and most comprehensive book on animal cloning
- Chapters written by the world expert in each area
- From the early experiments in amphibians to the latest one in mammals, everything is included in this book and told by the researcher that did it and how they did it
- Basic biological mechanisms on how cloning works and all their current and potential applications

- Cloning applications on basic biology, agriculture, biotechnology, and medicine are included
- Editors are the pioneers in the field

Editors Cibelli, Lanza, and West garnered worldwide spotlight late in 2001 when their company, Advanced Cell Technology, announced the successful engineering of the world's first cloned human embryo. The trio was featured in the US News & World Report December 2001 cover story, "The First Human Clone." The book presents the basic biological mechanisms of how cloning works and progresses to discuss current and potential applications in basic biology, agriculture, biotechnology, and medicine.

September 2009 | 531 pp. | Hardback | £138.99 | €163.95

ISBN: 9780121745974

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Current Topics in Developmental Biology, Vol. 89

Tissue Remodeling and Epithelial Morphogenesis

Thomas Lecuit

- Reviews processes of remodeling and morphogenesis, which are critical to the development of drugs aimed at disrupting the early formation and proliferation of cancerous tumors
- Coverage of current research findings and thought on cell–cell and cell–extracellular matrix interactions
- Uses a variety of animal models, allowing researchers to compare and contrast the molecular mechanisms that underlie cell–cell and cell–extracellular matrix interactions

Includes chapters that discuss the most contemporary thought on cell polarity and tissue morphogenesis, providing researchers with a better understanding of the control of cellular organization and polarity (particularly important to researchers who are developing treatments for developmental abnormalities and those working in cancer drug development). Because defects in epithelial function and growth control play a major role in human disease—cancerous tumors, spina bifida, cardiac malformations, for example—this volume will be of particular interest to researchers working in cancer drug design and development, and those working in therapeutic areas to treat developmental abnormalities.

October 2009 | 390 pp. | Hardback | £111.99 | €131.95

ISBN: 9780123749024



Essential Stem Cell Methods

A Volume in the Reliable Lab Solutions Series

Robert Lanza
Irina Klimanskaya

- Provides powerful research opportunities for those interested in perusing work in pluripotent stem cells, disease modeling, and other aspects of basic stem cell research
- Refines, organizes, and updates popular methods from flagship series, *Methods in Enzymology*
- Highlights top downloads, enhanced with author tips and tricks and pitfalls to avoid

This is a fast-moving field, and these detailed methods will help drive advances in stem cell research. The editors have hand selected step-by-step methods from researchers with extensive reputations and expertise.

This volume, as part of the *Reliable Lab Solutions* series, delivers busy researchers a handy, time-saving source for the best methods and protocols in stem cells.

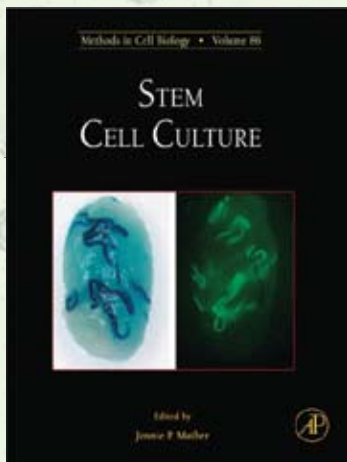
January 2009 | 628 pp. | Paperback | £45.99 | €53.95

ISBN: 9780123747419

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Methods in Cell Biology, Vol. 86 Stem Cell Culture

Jennie P. Mather

- Describes techniques in stem cell research
- Delineates critical steps and potential pitfalls for each method
- Covers specific procedures in dealing with Human Embryonic Stem Cells

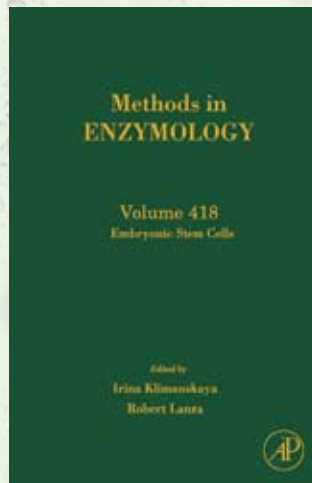
The purpose of this volume is to provide a comprehensive resource for researchers in the fields of embryonic, fetal and adult stem cell biology to find methods for the purification, culture, and differentiation of these cell types, with the main

emphasis on the maintenance of the stem cell phenotype in vitro. This volume will be the first to broadly cover multiple types of stem cell culture from different ages, organs, and species. Authors will focus on the practical do's and don'ts of isolating and culturing these cell types, and feel free to use illustrative data or diagrams wherever this improves the comprehension of the reader. This should allow the reader to compare and contrast techniques, and make this a standard reference for those in the field, or desiring to start stem cell culture.

July 2008 | 416 pp. | Hardback | £90.99 | €106.95

ISBN: 9780123738769

Available online only on ScienceDirect



Methods in Enzymology, Vol. 418 Embryonic Stem Cells

Irina Klimanskaya
Robert Lanza

- Provides complete coverage spanning from derivation/ isolation of stem cells, and including differentiation protocols, characterization, and maintenance of derivatives and tissue engineering
- Presents the latest most innovative technologies
- Addresses therapeutic relevance including FDA compliance and tissue engineering

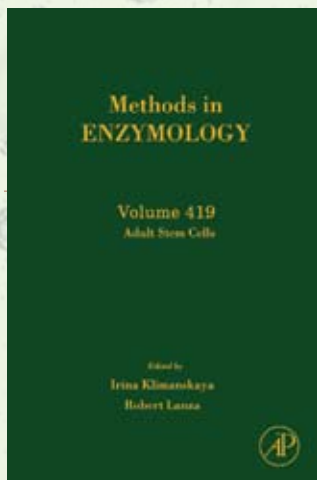
This is the first of three volumes in the *Methods in Enzymology* series on the topic of stem cells. This volume is a unique collection of stem cell techniques written by experts from the top laboratories in the world. The contributors not only have hands-on experience in the field but often have developed the original approaches that they share with great attention to detail. The collection of protocols includes the isolation and maintenance of stem cells from various species using "conventional" and novel methods, such as derivation of ES cells from single blastomeres, differentiation of stem cells into specific tissue types, isolation and maintenance of somatic stem cells, stem cell-specific techniques, and approaches to tissue engineering using stem cell derivatives.

December 2006 | 432 pp. | Hardback | £105.99 | €124.95

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Methods in Enzymology, Vol. 419 Adult Stem Cells

**Irina Klimanskaya
Robert Lanza**

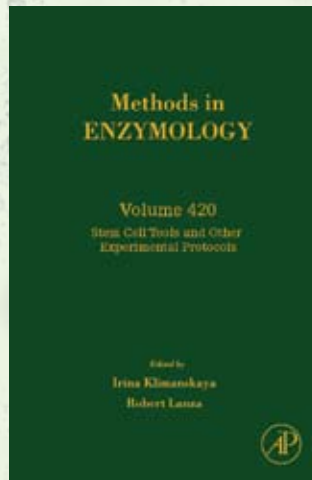
- Complete coverage spanning from derivation/isolation of stem cells, and including differentiation protocols, characterization and maintenance of derivatives, and tissue engineering
- Presents the latest most innovative technologies
- Addresses therapeutic relevance including FDA compliance and tissue engineering

This is the second of three volumes in the *Methods in Enzymology* series on the topic of stem cells. This volume focuses on adult stem cells and was written by experts from top laboratories. The reader will find that some of the topics are covered by more than one group of authors and complement each other. Comprehensive step-by-step protocols and informative illustrations can be easily followed by even the least experienced researchers in the field, and allow the setup and troubleshooting of these state-of-the-art technologies in other laboratories.

December 2006 | 576 pp. | Hardback | £105.99 | €124.95

ISBN: 9780123736505

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Methods in Enzymology, Vol. 420 Stem Cell Tools and Other Experimental Protocols


**Robert Lanza
Irina Klimanskaya**

- Complete coverage spanning from derivation/isolation of stem cells, and including differentiation protocols, characterization and maintenance of derivatives, and tissue engineering
- Presents the latest most innovative technologies
- Addresses therapeutic relevance including FDA compliance and tissue engineering

This is the third of three volumes in the *Methods in Enzymology* series on the topic of stem cells. This expertly written volume covers stem cell techniques and the contributors not only have hands-on experience in the field but often have developed the original approaches that they share with great attention to detail. The chapters provide a brief review of each field followed by a "cookbook" and handy illustrations.

January 2007 | 520 pp. | Hardback | £105.99 | €124.95

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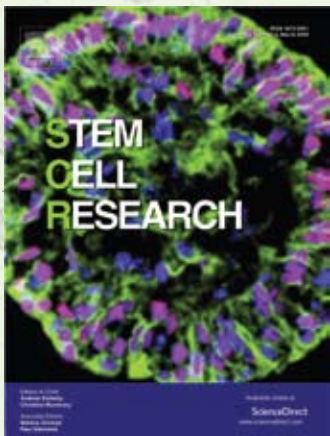
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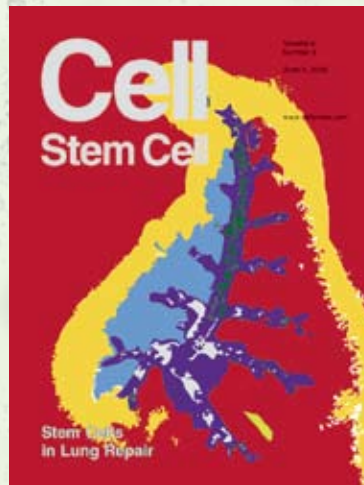
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Cell Stem Cell

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The field of stem cell research has grown rapidly over the past few years, and is of strong interest to the academic community, industry and the general public. Cell Stem Cell provides a forum for high-quality stem cell research and a focal point for discussion of developments in all areas of this exciting and expanding area.

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