

ISSN: 2161-6760

Vol. 3, No. 3, July 2013



Scientific  
Research

# Stem Cell Discovery

ISSN: 2161-6760



[www.scirp.org/journal/scd](http://www.scirp.org/journal/scd)

# Journal Editorial Board

ISSN: 2161-6760 (Print) ISSN: 2161-6787 (Online)

<http://www.scirp.org/journal/scd>

---

## Editor in Chief

**Dr. Ming Zhan**

Methodist Hospital Research Institute, USA

## Editorial Board (According to Alphabet)

<b>Dr. Fahd Al-Mulla</b>	Kuwait University, Kuwait
<b>Prof. Sayed Amin Mohamed Amer</b>	Cairo University, Egypt
<b>Dr. Anand Anbarasu</b>	VIT University, India
<b>Prof. Jean-François Beaulieu</b>	Université de Sherbrooke, Canada
<b>Dr. Kenneth Richard Boheler</b>	National Institutes of Health, USA
<b>Dr. Dean J. Burkin</b>	University of Nevada School of Medicine, USA
<b>Dr. Arvind Chhabra</b>	University of Connecticut Health Center, USA
<b>Dr. Robert Paul Coppes</b>	University of Groningen, The Netherlands
<b>Prof. Francesco Filippini</b>	University of Padua, Italy
<b>Dr. Nicholas R. Forsyth</b>	Keele University Medical School, UK
<b>Dr. Umberto Galderisi</b>	Second University of Napoli, Italy
<b>Dr. Jian-Xin Gao</b>	The Ohio State University, USA
<b>Dr. Pantelis Georgiades</b>	University of Cyprus, Cyprus
<b>Prof. Antonio Giordano</b>	University of Siena, Italy
<b>Dr. Jonathan R. Keller</b>	National Cancer Institute-NIH, USA
<b>Dr. Hitoshi Komuro</b>	Lerner Research Institute, USA
<b>Prof. Jong Eun Lee</b>	Yonsei University, South Korea
<b>Dr. Anskar Yu-Hung Leung</b>	The University of Hong Kong, China
<b>Dr. Yonghe Li</b>	Southern Research Institute, USA
<b>Prof. Guanghui Liu</b>	Chinese Academy of Sciences, China
<b>Dr. Didier Merlin</b>	Emory University, USA
<b>Dr. Eran Meshorer</b>	The Hebrew University of Jerusalem, Israel
<b>Dr. Chiara Mondello</b>	Institute of Molecular Genetics, Italy
<b>Prof. Tarik Möröy</b>	Université de Montréal, Canada
<b>Dr. Janet L. Paluh</b>	College of Nanoscale Science and Engineering, USA
<b>Dr. Cesare Patrone</b>	Karolinska Institute, Sweden
<b>Dr. Elias A. Said</b>	Montreal University, Canada
<b>Prof. Åke Sjöholm</b>	Karolinska Institute, Sweden
<b>Prof. Jin Tao</b>	Soochow University, China
<b>Dr. Stavros Taraviras</b>	University of Patras, Greece
<b>Dr. Christian Templin</b>	University Hospital Zürich, Switzerland
<b>Prof. Marta Tesone</b>	University of Buenos Aires, Argentina
<b>Dr. Kohichiro Tsuji</b>	University of Tokyo, Japan
<b>Dr. Yigang Wang</b>	University of Cincinnati, USA
<b>Prof. Guozhi Xiao</b>	University of Pittsburgh School of Medicine, USA
<b>Prof. Masayoshi Yamaguchi</b>	Emory University School of Medicine, USA



## TABLE OF CONTENTS

Volume 3, Number 3, July 2013

### **Human umbilical cord-derived mesenchymal stromal cells promote sensory recovery in a spinal cord injury rat model**

S. Takikawa, A. Yamamoto, K. Sakai, R. Shohara, A. Iwase, F. Kikkawa, M. Ueda.....155

### **Human adipose tissue-derived stem cells in breast reconstruction following surgery for cancer: A controversial issue**

M. G. Scioli, V. Cervelli, P. Gentile, A. Bielli, R. Bellini, A. Orlandi.....164

### **Matrigel modulates a stem cell phenotype and promotes tumor formation in a mantle cell lymphoma cell line**

A. Hielscher, T. McGuire, D. Weisenburger, J. G. Sharp.....167

### **The combination of epidermal growth factor and glycogen synthase kinase 3 inhibitor support long-term self-renewal of Sca-1 positive hepatic progenitor cells from normal adult mice**

C.-X. Jin, L. Samuelson, C.-B. Cui, Y.-Z. Sun, D. A. Gerber.....180

### **Differentiation of human osteosarcoma 3AB-OS stem-like cells in derivatives of the three primary germ layers as a useful *in vitro* model to develop several purposes**

R. Di Fiore, R. Drago-Ferrante, A. D'Anneo, A. De Blasio, A. Santulli, C. Messina, D. Carlisi, G. Tesoriere, R. Vent.....188

# **Stem Cell Discovery (SCD)**

## **Journal Information**

### **SUBSCRIPTIONS**

The *Stem Cell Discovery* (Online at Scientific Research Publishing, [www.SciRP.org](http://www.SciRP.org)) is published quarterly by Scientific Research Publishing, Inc., USA.

#### **Subscription rates:**

Print: \$59 per issue.

To subscribe, please contact Journals Subscriptions Department, E-mail: [sub@scirp.org](mailto:sub@scirp.org)

### **SERVICES**

#### **Advertisements**

Advertisement Sales Department, E-mail: [service@scirp.org](mailto:service@scirp.org)

#### **Reprints (minimum quantity 100 copies)**

Reprints Co-ordinator, Scientific Research Publishing, Inc., USA.

E-mail: [sub@scirp.org](mailto:sub@scirp.org)

### **COPYRIGHT**

Copyright©2013 Scientific Research Publishing, Inc.

All Rights Reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, scanning or otherwise, except as described below, without the permission in writing of the Publisher.

Copying of articles is not permitted except for personal and internal use, to the extent permitted by national copyright law, or under the terms of a license issued by the national Reproduction Rights Organization.

Requests for permission for other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works or for resale, and other enquiries should be addressed to the Publisher.

Statements and opinions expressed in the articles and communications are those of the individual contributors and not the statements and opinion of Scientific Research Publishing, Inc. We assume no responsibility or liability for any damage or injury to persons or property arising out of the use of any materials, instructions, methods or ideas contained herein. We expressly disclaim any implied warranties of merchantability or fitness for a particular purpose. If expert assistance is required, the services of a competent professional person should be sought.

### **PRODUCTION INFORMATION**

For manuscripts that have been accepted for publication, please contact:

E-mail: [scd@scirp.org](mailto:scd@scirp.org)

# Call for Papers

## Stem Cell Discovery

ISSN 2161-6760 (Print) ISSN 2161-6787 (Online)  
<http://www.scirp.org/journal/scd>



**Stem Cell Discovery (SCD)** is an international journal dedicated to the latest advancement of stem cell discovery. The goal of this journal is to provide a platform for scientists and academicians all over the world to promote, share, and discuss various new issues and developments in different areas of stem cell discovery. All manuscripts must be prepared in English, and are subject to a rigorous and fair peer-review process. Accepted papers will immediately appear online followed by printed hard copy.

### Editor in Chief

Dr. Ming Zhan

Methodist Hospital Research Institute, USA

### Editorial Board

Dr. Fahd Al-Mulla  
Prof. Sayed Amin Mohamed Amer  
Dr. Anand Anbarasu  
Prof. Jean-François Beaulieu  
Dr. Kenneth Richard Boheler  
Dr. Dean J. Burkin  
Dr. Arvind Chhabra  
Dr. Robert Paul Coppes  
Prof. Francesco Filippini  
Dr. Nicholas R. Forsyth  
Dr. Umberto Galderisi  
Dr. Jian-Xin Gao

Dr. Pantelis Georgiades  
Prof. Antonio Giordano  
Dr. Jonathan R. Keller  
Dr. Hitoshi Komuro  
Prof. Jong Eun Lee  
Dr. Anskar Yu-Hung Leung  
Dr. Yonghe Li  
Prof. Guanghui Liu  
Dr. Didier Merlin  
Dr. Eran Meshorer  
Dr. Chiara Mondello  
Prof. Tarik Mörry

Dr. Janet L. Paluh  
Dr. Cesare Patrone  
Dr. Elias A. Said  
Prof. Åke Sjöholm  
Prof. Jin Tao  
Dr. Stavros Taraviras  
Dr. Christian Templin  
Prof. Marta Tesone  
Dr. Kohichiro Tsuji  
Dr. Yigang Wang  
Prof. Guozhi Xiao  
Prof. Masayoshi Yamaguchi

Stem Cell Discovery, a peer reviewed journal, provides a forum for prompt publication of original investigative papers and concise reviews. It will include all the primary discoveries from stem cell basic and translational research, specifically including the fields but not limited as the follows:

#### a) Fields:

- Stem Cell and Diseases
- Stem Cell Development and Differentiation
- Stem Cell Therapy
- Tissue Regeneration

b) All types of stem cells: Adult Tissue Stem Cells (ATSC); Embryonic Stem Cells (ESC); Germline Stem Cells (GSC); Inducible Stem Cells (ISC).

c) Various organisms: from insects to mammalian

We are also interested in: 1) Short reports—2-5 page papers where an author can either present an idea with theoretical background but has not yet completed the research needed for a complete paper or preliminary data; 2) Book reviews—Comments and critiques.

### Notes for Intending Authors

Submitted papers should not be previously published nor be currently under consideration for publication elsewhere. Paper submission will be handled electronically through the website. For more details, please access the website.

### Website and E-Mail

<http://www.scirp.org/journal/scd>

E-mail: [scd@scirp.org](mailto:scd@scirp.org)