

## Invitrogen Scientist Publishes Book on Stem Cell Assays

Mohan Vemuri, Research Area Manager, Stem Cells & Regenerative Medicine, recently published a book, *Stem Cell Assays*, that will serve as a desktop reference for stem cell researchers worldwide.

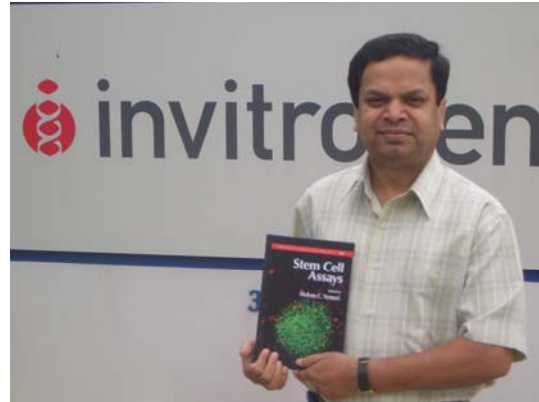
The book, part of the Methods in Molecular Biology series published by Humana Press, presents the scientific advances in stem cell methods and is intended for both novice and expert scientists.

Mohan explains that while the number of recent advances in embryonic stem cell biology and the vast potential of stem cell applications continue to generate excitement, there was a need to consolidate this information.

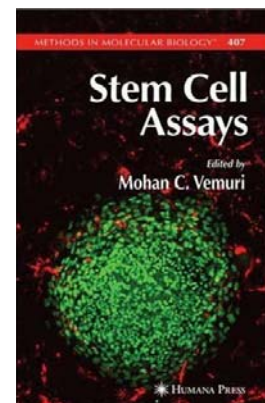
“The scientific progress that makes stem cell biology so exciting also threatens to suffocate researchers with an avalanche of information. So, bringing these developments to the forefront in a timely manner is crucial to continuing to move the field forward,” Mohan said.

“And, while the scope for improving healthcare using stem cell therapies is thrilling, considerable technical challenges and methodological constraints need to be addressed,” he added.

*Stem Cell Assays* references over 200 of Invitrogen’s catalog products and includes three chapters by Invitrogen scientists, showcasing multiple products related to miRNA, transfection, hESCs and HSCs. The work of Invitrogen’s Jon Chesnut, Director R&D, and Uma Lakshmiathy, Senior Scientist, has also been extensively reviewed.



*Mohan Vemuri holding a copy of his new book, Stem Cell Assays*



### About Mohan Vemuri

Mohan joined Invitrogen in 2006 with over 20 years experience as a research scientist and eight years in the field of stem cells. He has extensive experience in:

- Stem cell based product development for human embryonic and adult stem cell expansion, differentiation in cGMP settings for cell therapy applications.
- Engineering embryonic and adult stem cells for enhanced self renewal, competitive engraftment and immune reconstitution utilizing novel gene transfer technology.
- Designing stem cell based assays and lead drug discovery using cell culture systems to treat Parkinson’s disease and human cancers in GLP settings.

Mohan has over 40 publications in peer reviewed journals, and is currently working on another book for Humana Press, *Regulatory Networks in Stem Cells* scheduled for release in spring of 2008.

## Contents

- Derivation of Human Embryonic Stem Cells in Xeno-free conditions
- Feeder Layer Free Culture System For Human Embryonic Stem Cells
- Digital Imaging of Stem Cells by Electron Microscopy
- A Controlled Cooling Protocol For Cryopreservation of Human And Non-Human Primate Embryonic Stem Cells.
- Cell Surface Markers In Human Embryonic Stem Cells
- Generation Of Monoclonal Antibody Library Against Human Embryonic Stem Cells
- Analytical Methods for Cancer Stem Cells
- Micro RNA Profiling: An Easy and Rapid Method to Screen and Characterize Stem Cell Populations
- Gene Transfer Via Nucleofection into Adult and Embryonic Stem Cells
- RNAi-Knockdown Of Transcription Factor Pu.1 In The Differentiation Of Mouse Embryonic Stem Cells
- StemBase - A Resource for the Analysis of Stem Cell Gene Expression Data
- Isolation Of Stem Cells From Human Umbilical Cord Blood
- Ex Vivo Expansion Of Hematopoietic Stem Cells From Human Cord Blood In Serum-Free Conditions
- Hematopoietic Colony Forming Cell Assays
- Assays For Alloreactive Responses By PCR
- Immune Properties of Mesenchymal Stem Cells
- Clinical Grade Expansion of Human Bone Marrow Mesenchymal Stem Cells
- Adenoviral Transduction of Mesenchymal Stem Cells
- Directed Differentiation of Human Embryonic Stem Cells to Dendritic Cells
- Insulin Producing Cells From Embryonic Stem Cells: Experimental Considerations
- Efficient Generation of Dopamine Neurons from Human Embryonic Stem (hES)
- Cells Isolation Of Oligodendroglial Cells From Cultured Neural Stem/Progenitors  
Differentiation of Human Embryonic Stem Cells towards the Chondrogenic Lineage
- Cartilage Tissue Engineering: Directed differentiation of embryonic stem cells in Three-Dimensional Hydrogel Culture