

6<sup>th</sup> Annual September 14-15, 2018

Midwest Conference on Cell Therapy  
& Regenerative Medicine

Sheraton Overland Park Hotel, Overland Park, KS

Friday, September 14<sup>th</sup> (Day 1)

7:00 – 7:50 *Registration and Breakfast*

7:50 – 8:00 *Welcome Remarks*

*Douglas Girod*

Session I: Cell-based Approaches for Neurological Diseases

*Moderator: Richard Barohn and Evan Snyder*

8:00 – 8:05 *Introduction to session*

*Richard Barohn*

8:05 – 8:25 *The State of the science: A realistic look at stem cells & their potential – The End of the Beginning*

*Evan Snyder*

8:25 – 8:45 *Adult Stem Cells to ameliorate Amyotrophic Lateral Sclerosis*

*Hiroshi Nishimune*

8:45 – 9:05 *Priming neural stem cells to functionally regenerate the spinal cord after injury via a biomaterial-based subcutaneous maturation approach*

*Nic Leipzig*

9:05 – 9:25 *Stem Cell therapies for human spinal cord injury*

*Maureen Condic*

9:25 – 9:40 *Panel Discussion*

*Barohn, Snyder, Nishimune, Leipzig, Condic*

Coffee Break: 9:40 – 10:00

Session II: The Boundless Potential for Discarded Materials

*Moderator: Khalid Shah and Joseph McGuirk*

10:00 – 10:20 *Novel Cellular Therapeutics in the Management of Graft versus Host Disease*

*Joseph McGuirk*

10:20 – 10:40 *Development and Clinical Manufacturing of MSCTC-0010*

*Rupal Soder*

10:40 – 11:00 *Wharton's jelly mesenchymal stromal cell-derived extracellular vesicles and immune regulation*

*Neil Dunavin*

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11:00 – 11:20	<i>A review of cellular markers in the neural differentiation of Wharton's Jelly mesenchymal stem cells</i>	<i>Tyler Bullis</i>
11:20 – 11:40	<i>Mesenchymal Stem Cells in Acetaminophen-induced liver injury</i>	<i>Anup Ramachandran</i>
11:40 – 12:00	<i>Next Generation of Cell based Receptor Targeted Therapies for Cancer</i>	<i>Khalid Shah</i>
12:00 – 12:15	<b>Panel Discussion</b> McGuirk, Soder, Dunavin, Bullis, Ramachandran, Shah	

Lunch Break 12:15 – 1:00

Session III: Bioengineering

**Moderators: Cory Berkland and Omar Aljitawi**

1:00 – 1:20	<i>Mimicking properties of natural biomaterials as a stem cell niche</i>	<i>Cory Berkland</i>
1:20 – 1:40	<i>3D printing approaches to creating precise cell microenvironments</i>	<i>Mei He</i>
1:40 – 2:00	<i>YESCARTA (Axicabtagene Ciloleuce)l): Overcoming Challenges in Clinical Trials and CMC</i>	<i>Wayne Godfrey</i>
2:00 – 2:20	<i>An extracellular matrix-based model for ex vivo expansion of umbilical cord blood stem cells</i>	<i>Omar Aljitawi</i>
2:20 – 2:40	<i>Role of Nanocomposite Hydrogels in Stem Cells and Tissue Repair</i>	<i>Arghya Paul</i>
2:40 – 3:00	<b>Panel Discussion</b> <i>Berkland, He, Godfrey Aljitawi, Paul</i>	

Coffee Break: 3:00 – 3:20

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**Session IV: Adult Stem Cells for Veterinary Applications**

**Moderators: Frank Blecha and Dori Borjesson**

3:20 – 3:40	<i>MSC therapies to augment Healing in equine orthopedics: What is the evidence?</i>	<i>Laurie Goodrich</i>
3:40 – 4:00	<i>Activated cellular therapy to eradicate drug-resistant infections and stimulate healing</i>	<i>Valerie Johnson</i>
4:00 – 4:20	<i>Developing stem cell treatments for spina bifida in a naturally occurring disease model</i>	<i>Aijun Wang</i>
4:20 – 4:40	<i>The journey from curing oral inflammation in cats to initiating a human clinical trial</i>	<i>Dori Borjesson</i>
4:40 – 4:55	<b>Panel Discussion</b> <i>Blecha, Goodrich, Johnson, Wang, Borjesson</i>	

**Poster Session**

5:00 – 6:30      *Poster Session*      **Wine and Cheese**

**Speakers' Dinner 7:00pm**

**Sheraton**

**Saturday, September 15<sup>th</sup> (Day 2)**

7:00 – 7:55      *Registration and Breakfast*

7:55 – 8:00      *Welcome Remarks*      **Robert Simari**

**Session V: New Concepts in Cardiovascular Regenerative Therapy**

**Moderator: Keith Jones**

8:00 – 8:20	<i>Stem Cell derived Extracellular Vesicles as Therapeutics</i>	<i>W. Keith Jones</i>
8:20 – 8:40	<b>Title</b>	<i>Hina Chaudhry</i>
8:40 – 9:00	<i>Novel Approaches for Endogenous Heart Repair</i>	<i>Tamar Mohammed</i>

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9:00 – 9:20	<i>Therapeutic potential of exosomes on cardiovascular diseases</i>	<i>Yaoliang Tang</i>
9:20 – 9:40	<b>Title</b>	<i>Tarun Chakravarty</i>
9:40 – 10:00	<i>Review of Cell Therapy for Critical Limb Ischemia</i>	<i>Clay Quint</i>
10:00 – 10:15	<i>Panel Discussion</i> <i>Jones, Chaudhry, Mohammed, Tang, Chakravarty, Quint</i>	

Coffee Break: 10:15 – 10:30

10:30 – 11:20	<i>Keynote Lecture: Stem Cells, Patients and Medical Responsibility</i>	<i>Kevin Donovan</i>
11:20 – 11:35	<i>Q&amp;A for K. Donovan</i>	
11:35 – 11:40	<i>Introduction of Special Guest Speaker</i>	<i>Douglas Girod</i>
11:40 – 12:10	<i>Special Guest Speaker</i>	<i>Kansas Governor, Dr. Jeff Colyer</i>
12:10 – 12:20	<i>Q&amp;A for Gov. Colyer</i>	

Lunch Break 12:20 – 1:20

Session VI: Translation and Therapeutic Perspectives

**Moderator:** *Kurt Gunter and Alan Moy*

1:20 – 1:40	<i>How Stem Cell Patients Are Getting Up From The Children's Table</i>	<i>Doug Oliver</i>
1:40 – 2:00	<i>Developing CRISPR-based gene editing medicines: Addressing questions for the preclinical candidate EDIT-101 to treat Leber's Congenital Amaurosis Type 10</i>	<i>Katrine Bosley</i>
2:00 – 2:20	<b>Title</b>	<b>Marc Hedrick</b>
2:20 – 2:40	<i>Addressing unmet needs in cellular immune oncology: An approach using NKT</i>	<i>Kurt Gunter</i>

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*lymphocytes and allogeneic therapy*

2:40 – 3:00	<i>A safer pluripotent stem cell - virus-free and oncogene-free induced pluripotent stem cell</i>	<i>Alan Moy</i>
3:00 – 3:20	<i>Stem Cells for Degenerative Disc Disease - Pipedream or Possibilities?</i>	<i>Talal Khan and Dawood Sayed</i>
3:20 – 3:35	<i>Panel Discussion</i> <i>Oliver, Bosley, Hedrick, Gunter, Moy, Khan, Sayed</i>	

Coffee Break: 3:35 – 3:50

Session VII: **TBD**

*Moderator: David Prentice and Buddhadeb Dawn*

3:50 – 4:10	<i>Regenerative medicine – challenges and opportunities</i>	<i>Dan Gincel</i>
4:10 – 4:30	<i>Cell therapy: the encouraging present and promising future</i>	<i>Buddhadeb Dawn</i>
4:30 – 4:50	<i>Regenerative medicine and the yellow brick road</i>	<i>David Prentice</i>
4:50 – 5:05	<i>Panel Discussion</i> <i>Gincel, Dawn, Prentice</i>	

Adjournment

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## Midwest Conference on Cell Therapy & Regenerative Medicine

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### Course Director

**Buddhadeb Dawn, MD**, Professor and Chairman, Department of Internal Medicine, Chief, Division of Cardiovascular Medicine, University of Nevada, Las Vegas School of Medicine, Las Vegas, NV

### Course Faculty

**Omar S. Aljitawi, M.B.B.S.**

Associate Professor, Department of Medicine,  
Hematology/Oncology  
Wilmot Cancer Center  
Rochester, NY

**Richard Barohn, MD**

Gertrude & Dewey Ziegler Professor  
University Distinguished Professor  
Vice Chancellor for Research  
University of Kansas Medical Center  
Kansas City, KS

**Cory Berkland, PhD**

Solon E. Summerfield Distinguished Professor,  
Pharmaceutical Chemistry, Chemical and  
Petroleum Engineering  
University of Kansas  
Lawrence, KS

**Frank Blecha, PhD**

Associate Dean for Research  
University Distinguished Professor  
College of Veterinary Medicine  
Kansas State University  
Manhattan, KS

**Dori Borjeeson, BA, DVM, MPVM, PhD**

Professor  
Department of Pathology, Microbiology &  
Immunology  
University of California, Davis  
Davis, CA

**Katrine Bosley**

CEO  
Editas Medicine  
Cambridge, MA

**Tyler Bullis**

MD Candidate, School of Medicine  
University of Kansas Medical Center  
Kansas City, KS

**Tarun Chakravarty, MD**

Cedars Sinai Heart Institute  
Los Angeles, CA

**Hina Chaudhry, MD**

Director of Cardiovascular Regenerative  
Medicine  
Mount Sinai Medical Center  
New York, NY

**Maureen Condic, PhD**

Associate Professor  
Department of Neurobiology and Anatomy  
University of Utah School of Medicine  
Salt Lake City, Utah

**Jeff Coyler, MD**

Kansas Governor  
Topeka, KS

**G. Kevin Donovan, MD, MA**

Director, Pellegrino Center for Clinical  
Bioethics  
Professor of Pediatrics  
Georgetown University Medical Center  
Washington, DC

**Neil Dunavin, MD, MHS**

Assistant Professor, Division of  
Hematologic Malignancies and Cellular  
Therapeutics  
University of Kansas Medical Center  
Kansas City, KS

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**Douglas Girod, MD**

Chancellor, University of Kansas  
Lawrence, KS

**Dan Gincel, PhD**

Vice President for University Partnerships  
Executive Director  
Maryland Stem Cell Research Fund  
Baltimore, MA

**Wayne Godfrey, MD**

Senior Director, Clinical Development  
Kite Pharma  
Santa Monica, CA

**Laurie Goodrich, DVM, PhD**

Associate Professor of Orthopedics  
Department of Clinical Sciences  
College of Veterinary Medicine and Biological  
Sciences  
Colorado State University  
Fort Collins, CO.

**Kurt Gunter, MD**

Chief Medical Officer  
Cell Medica Inc.  
Houston, TX

**Mei He, PhD**

Assistant Professor, School of Engineering -  
Chemical & Petroleum Engineering, Chemistry  
University of Kansas  
Lawrence KS

**Marc Hedrick, MD**

President and CEO  
Cytori Therapeutics  
San Diego, CA

**Valerie Johnson, DVM, MS**

Fellow, Department of Microbiology,  
Immunology, and Pathology  
College of Veterinary Medicine and Biological  
Sciences  
Colorado State University

Fort Collins, CO.

**W. Keith Jones, PhD**

Professor and Chair, Department of Molecular  
Pharmacology and Therapeutics  
Loyola University Chicago  
Stritch School of Medicine  
Chicago, IL

**Talal Khan, MD**

Professor, Chairman, Department of  
Anesthesiology, Director, Chronic and  
Interventional Pain Clinic  
University of Kansas Medical Center  
Kansas City, KS

**Nic Leipzig, PhD**

Associate Professor and Robert Iredell Chair  
Dept/Program: Chemical and Biomolecular  
Engineering  
The University of Akron  
Akron, OH

**Joseph McGuirk, DO**

Professor of Medicine  
Schutte-Speas Professor of Hematology-  
Oncology  
Division Director, Hematologic Malignancies  
and Cellular Therapeutics  
Medical Director, Blood and Marrow Transplant  
Department of Internal Medicine  
The University of Kansas Health System  
Westwood, KS 66205

**Tamer M A Mohamed, PhD**

Assistant Professor of Medicine  
Institute of Molecular Cardiology  
University of Louisville  
Louisville, KY

**Alan Moy, MD**

Scientific Director and Founder  
John Paul II Medical Research Institute  
CEO, Cellular Engineering Technologies, Inc  
Iowa City, IA

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### **Hiroshi Nishimune, PhD**

Associate Professor  
Department of Anatomy and Cell Biology  
University of Kansas Medical Center  
Kansas City, KS

### **Doug Oliver, MSW**

Chairman and Executive Director  
The Regenerative Outcomes Foundation  
Nashville, TN

### **Arghya Paul, PhD**

Assistant Professor  
School of Engineering - Chemical & Petroleum  
Engineering  
University of Kansas  
Lawrence, KS

### **David Prentice, PhD**

Vice President, Director of Research  
Charlotte Lozier Institute  
Adjunct Professor of Molecular Genetics  
at John Paul II Institute, Catholic University of  
America  
Washington, D.C

### **Clay Quint, MD, PhD**

Assistant Professor of  
Surgery  
Vascular Surgery Division  
University of Kansas Medical Center  
Kansas City, KS

### **Anup Ramachandran, PhD**

Research Associate Professor  
Pharmacology, Toxicology & Therapeutics  
University of Kansas Medical Center  
Kansas City, KS

### **Dawood Sayed, MD**

Associate Professor, Medical Director of Spine  
Center Interventional Pain Management  
University of Kansas Medical Center  
Kansas City, KS

### **Khalid Shah, MS, PhD**

Associate Professor, Harvard Medical School  
Vice Chair of Research, Department of  
Neurology  
Director, Center for Stem Cell Therapeutics and  
Imaging  
Director, Center for Excellence in Biomedicine  
Principal Faculty, Harvard Stem Cell Institute  
Cambridge, MS

### **Robert Simari, MD**

Executive Vice Chancellor  
University of Kansas School of Medicine  
Chair, Cardiovascular Cell Therapy Research  
Network  
Kansas City, KS

### **Evan Snyder, MD, PhD**

Professor, Sanford-Burnham Medical Research  
Institute  
Program Director, Stem Cell and Regenerative  
Biology Program  
Sanford-Burnham Medical Research Institute.  
University of California – San Diego  
San Diego, CA

### **Rupal Soder, PhD**

Quality Assurance Supervisor  
Midwest Stem Cell Therapy Center  
University of Kansas Medical Center  
Kansas City, KS

### **Yaoliang Tang MD, PhD, FAHA**

Professor of Medicine, Cardiology  
Vascular Biology Center  
Medical College of Georgia  
Augusta, GA

### **Aijun Wang, BS, MS, PhD**

Assistant Professor and Co-Director, Surgical  
Bioengineering Laboratory  
Department of Surgery  
School of Medicine  
University of California, Davis



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Davis, CA