



# CELL THERAPY: FROM THE BENCH TO THE BEDSIDE AND RETURN

## Directors:

JOSE MARIA MORALEDA JIMENEZ  
SALVADOR MARTINEZ PEREZ  
DAMIAN GARCIA OLMO  
ROBERT SACKSTEIN

**Los Alcázares (Murcia) 14-18 de Julio 2014**



- **Place:** Hotel 525. Calle del Río Borines 58.  
30710 Los Alcázares, Murcia  
902 32 55 25
- **Duration:** 25 hours
- **Price:** 160 €
- **Registration Deadline:** 11/07/2014

**More Information and Registration Form:**

[www.um.es/unimar](http://www.um.es/unimar)

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## **INTERNATIONAL SUMMER COURSE. MURCIA UNIVERSITY 2014**

### **CELL THERAPY: FROM THE BENCH TO THE BEDSIDE AND RETURN**

**Place: Los Alcázares. Murcia. Spain**

**Credits: 1 credit ECTS**

**Dates: July 14-18, 2014**

#### **Aims**

The aim of this course is the diffusion of knowledge about stem cells and their therapeutic possibilities, with a special emphasis on Adult Stem Cells such as Hematopoietic Stem Cells and Mesenchymal Stem Cells, and their current applications in the field of Regenerative Medicine.

The course is intended to provide a review of current clinical applications of stem cells, a forum for scientific discussion with basic and clinical researchers experts in cellular therapy, and to present the achievements and challenges in this exciting and growing area of medical therapy.

#### *Specific Course Objectives are:*

To analyze in depth the different types of stem cells, their biological properties, their laboratory manipulation and their clinical use.

To learn about the new types of hematopoietic cell transplantation, and new approaches of immune modulation.

To discuss the present status of preclinical studies and clinical trials of stem cell therapy for repair of damaged tissues and organs.



## Monday 14. Bone Marrow Stem Cells: Hematopoietic Stem Cells (HSC). Hematopoietic Stem Cell Transplantation (HSCT)

### Morning Session

#### 09:00-09:30 h. Open Session.

Hon. Ms. Maria Angeles Palacios Sanchez.

Health Council of the Autonomous Community of the Region of Murcia. Murcia, Spain.

Hon. Mr. Jose Antonio Cobacho Gomez.

Rector of the University of Murcia. Murcia, Spain.

Hon. Mr. Javier Arias Diaz.

Sub-director General of research on Cell Therapy and Regenerative Medicine. National Institute of Health Carlos III. Madrid, Spain.

#### 09:30-10:00 h. The Biology of the Hematopoietic Stem Cell.

Carmen L. García de Insausti, MD. PhD

Hematology Department. Institute of Biomedical Research of Murcia - IMIB, Virgen de la Arrixaca University Hospital. University of Murcia, Murcia, Spain.

#### 10:00-10:30 h. Obtaining Hematopoietic Progenitors: Cellular Selection.

Miguel Blanquer, MD. PhD

Hematology Department. Institute of Biomedical Research of Murcia - IMIB, Virgen de la Arrixaca University Hospital. University of Murcia. Murcia, Spain.

#### 10:30-11:00 h. Coffee break

#### 11:00-11:30 h. HSCT: Technique and Complications.

Prof. Jose M. Moraleda.

Professor of Medicine. University of Murcia. Chief, Department of Hematology and HSCT Program. Institute of Biomedical Research of Murcia - IMIB, Virgen de la Arrixaca University Hospital. Murcia, Spain.

#### 11:30-12:15 h. Umbilical Cord Blood Transplantation. The Spanish model. Last innovations.

Prof. Guillermo Sanz.

Head of clinical hematology at the Department of Hematology. Bone Marrow Transplant Unit. Hospital Universitario La Fe, Valencia. Spain.

#### 12:15-13:00 h. Principles and Practice of Non-myeloablative HSCT.

Prof. Robert Negrin.

Professor of Medicine. Chief, Blood and Marrow Transplant Program. Stanford University. Palo Alto. CA, USA.

#### 13:00-14:30 h. Lunch

### Afternoon Session

#### Debate session: Histocompatibility Antigen (HLA) Typing, HSC Donation, and Registry Issues.

Chair: Prof. Jose M. Moraleda.

Professor of Medicine. University of Murcia. Chief, Department of Hematology and HSCT Program. Institute of Biomedical Research of Murcia - IMIB, Virgen de la Arrixaca University Hospital. Murcia, Spain.

#### 14:30-15:00 h. HSC donation. The Spanish Model.

Prof. Gregorio Garrido.

Head of Service, Spanish National Transplant Organization (ONT). Madrid, Spain.

#### 15:00-15:30 h. The importance of HLA in BMT. Basic and clinical aspects.

Prof. Alejandro Madrigal.

European Bone Marrow Transplant Association President. London, U.K.  
Scientific Director of The Anthony Nolan Trust. Chair of Hematology, Department of Hematology. The Royal Free and University College Medical School. London, UK.

#### 15:30-16:00 h. Short Lecture: Hematopoietic Cell transplantation. The Stanford experience.

Prof. Robert Negrin.

Professor of Medicine. Chief, Blood and Marrow Transplant Program. Stanford University. Palo Alto. CA, USA.



## Tuesday 15. New HSCT Approaches: HSCT Immunotherapy

### Morning Session

**09:00-09:45 h. New insights in cell therapy. The hematologist point of view.**

[Prof. Alejandro Madrigal.](#)

*European Bone Marrow Transplant Association President. London, U.K.  
Scientific Director of The Anthony Nolan Trust. Chair of Hematology, Department of Hematology. The Royal Free and University College Medical School. London, UK.*

**09:45-10:30 h. Immunobiology of Allogeneic Transplantation.**

[Prof. Robert Negrin.](#)

*Professor of Medicine. Chief, Blood and Marrow Transplant Program. Stanford University. Palo Alto. CA, USA.*

**10:30-11:00 h. Coffee break**

**11:00-11:45 h. Haploidentical Transplants and NK Immunotherapy.**

[Prof. Franco Locatelli.](#)

*President of the Italian association for Pediatric Hematology and Oncology. Research Center, Bambino Gesù Children Hospital. Rome, Italy.*

**11:45-12:30 h. New Strategies for Pre and Post-transplant Immunomodulation.**

[Prof. Jose Antonio Perez Simón.](#)

*Professor of Hematology. Department of Hematology. Institute of Biomedicine, Virgen del Rocio University Hospital. University of Sevilla. Sevilla, Spain.*

**12:30-14:30 h. Lunch**

### Afternoon Session

**14:30-16:00 h. Debate session: Harnessing GVL Effect while Avoiding GVHD. What is the best transplant strategy?**

Chair: [Prof. Robert Sackstein.](#)

*Professor and Director of the Program of Excellence in Glycoscience, Harvard Medical School, Boston. MA, USA.*

**Discussants:**

**URD unmanipulated SCT.**

[Prof. Alejandro Madrigal.](#)

*European Bone Marrow Transplant Association President. London, U.K.  
Scientific Director of The Anthony Nolan Trust. Chair of Hematology, Department of Hematology. The Royal Free and University College Medical School. London, UK.*

**Haploidentical post-transplant Cyclophosphamide model.**

[Prof. Robert Negrin.](#)

*Professor of Medicine. Chief, Blood and Marrow Transplant Program. Stanford University. Palo Alto. CA, USA.*

**T-depleted Haploidentical transplant versus cord blood transplants.**

[Prof. Franco Locatelli.](#)

*President of the Italian association for Pediatric Hematology and Oncology. Research Center, Bambino Gesù Children Hospital. Rome, Italy.*



## Wednesday 16. Mesenchymal Stem Cells (MSC) and induced Pluripotent Stem cells (iPSC). Scientific basis for its therapeutic use

### Morning Session

**09:00-09:45 h. MSC: A New Paradigm for Cell Immunomodulation.**

[Prof. Antonio Uccelli.](#)

*Professor of Neurology. Neuroimmunology Unit. Department of Neurosciences, University of Genova. Genova, Italy.*

**09:45-10:15 h. The stem Cell Niche.**

[Prof. Agustín Zapata.](#)

*Professor of Cellular Biology. Complutense University of Madrid. Madrid, Spain.*

**10:15-10:45 h. The Regulation of the Stem Cell Microenvironment.**

[Simon Mendez-Ferrer, PhD.](#)

*National Center for Cardiovascular Research (CNIC). Madrid, Spain.*

**10:45-11:15 h. Coffee break**

**11:15-12:00 h. iPSC as a Therapeutic Tool.**

[Prof. Angel Raya.](#)

*ICREA Research Professor. Institute for Bioengineering of Catalonia. Barcelona, Spain.*

**12:00-12:45 h. iPSC and Gene Therapy for Genetic Diseases.**

[Prof. Juan Bueren.](#)

*Head of the Division of Hematopoiesis and Gene Therapy Division CIEMAT. University of Madrid. Madrid, Spain.*

**13:00-15:00 h. Lunch**

### Afternoon Session

**15:00-16:00 h. Stem cell trafficking. GPS guided MSC Migration.**

[Prof. Robert Sackstein.](#)

*Professor and Director of the Program of Excellence in Glycoscience, Harvard Medical School, Boston. MA, USA.*



## Thursday 17. Stem Cell Therapy (SCT) and tissue engineering. Clinical Trials in Non-neurologic Diseases

### Morning Session

**09:00-09:30 h. SCT in Cardiac Diseases.**

[Prof. Felipe Prósper.](#)

*Director of Cell Therapy Department. Co-director Hematology Department. University of Navarra. Navarra, Spain.*

**09:30-10:00 h. SCT in Diabetes Mellitus.**

[Prof. Bernat Soria.](#)

*Director of the Stem Cells Department of the Andalusian Center for Molecular Biology and Regenerative Medicine (CABIMER). University Pablo de Olavide. Sevilla, Spain.*

**10:00-10:30 h. SCT to improve Healing in Surgery.**

[Prof. Damián García-Olmo.](#)

*Professor of Surgery. Chief of Department of Surgery. Fundación Jimenez Diaz University Hospital. Autonomous University of Madrid. Madrid, Spain.*

**10:30-11:00 h. Coffee break**

**11:00-11:30 h. SCT for Osteoarticular Repair.**

[Prof. Javier García-Sancho.](#)

*Professor of Physiology. School of Medicine. Institute of Biology and Molecular Genetics (IBGM). University of Valladolid. Valladolid, Spain.*

**11:30-12:00 h. SCT for Cartilage Repair.**

[Prof. Pedro Guillén.](#)

*Clinical Research Unit, CEMTRO Hospital. Madrid, Spain.*

**12:00-12:30 h. SCT for Treatment of Transplant Rejection and GVHD.**

[Fermin Sanchez-Guijo, MD.](#)

*Hematology Department. University Hospital of Salamanca. University of Salamanca. Salamanca, Spain.*

**13:00-15:00 h. Lunch**

### Afternoon Session

**15:00-15:30 h. SCT in Odontology.**

[Prof. Francisco J. Rodriguez-Lozano.](#)

*Professor of Dentistry. Institute of Biomedical Research of Murcia - IMIB. Virgen de la Arrixaca University Hospital. University of Murcia. Murcia, Spain.*

**15:30-16:00 h. Tissue decellularization. Stem cell based organ engineering.**

[Prof. Maria Eugenia Fernandez-Santos.](#)

*Technical Director of the Cell Production Unit. Gregorio Marañon University Hospital. Research Institute Gregorio Marañon. Madrid, Spain.*



## Friday 18. Stem Cell Therapy (SCT). Clinical Trials in Neurologic Diseases

### Morning Session

#### 09:00-09:30 h. The Neural Stem Cell niche.

[Prof. Isabel Fariñas.](#)

*Professor of Cellular Biology. Department of Cellular Biology. University of Valencia CIPF. Valencia, Spain.*

#### 09:30-10:00 h. SCT in Parkinson's Disease.

[Prof. Juan José Toledo.](#)

*Professor of Physiology. Director of the Department of Medical Physiology and Biophysics. Institute of Biomedical Research of Seville. IBI, Virgen del Rocio Hospital/CSIC/University of Sevilla. Sevilla, Spain.*

#### 10:00-10:30 h. SCT in ALS.

[Letizia Mazzini, MD.](#)

*Head of the tertiary ALS Center. Department of Neurology, Eastern Piedmont University, Maggiore della Carità Hospital. Novara, Italy.*

#### 10:30-11:00 h. Coffee break

#### 11:00-11:30 h. SCT in Neurodegenerative Diseases (ND). Results in Animal Models.

[Prof. Salvador Martínez.](#)

*Professor of Human Anatomy and Embryology. Experimental Embryology Lab. Institute of Neurosciences-CSIC (Alicante). Department of Human Anatomy and Psychobiology. University of Murcia. Murcia, Spain.*

#### 11:30-12:00 h. SCT for other ND-Neuromuscular diseases.

[Prof. Antonio Uccelli.](#)

*Professor of Neurology. Neuroimmunology Unit. Department of Neurosciences, University of Genova. Genova, Italy.*

#### 12:00-12:30 h. Stem cell differentiation for cell replacement strategies in HD.

[Prof. Josep M. Canals.](#)

*Professor of Cellular Biology. Department of Cell Biology, Immunology and Neuroscience. University of Barcelona. Barcelona, Spain.*

#### 13:00-15:00 h. Lunch

### Afternoon Session

#### 15:00-16:00 h. Debate session: MSC therapy pros and cons. Where to go and regulatory aspects

Chair:

[Prof. Robert Sackstein.](#)

*Professor and Director of the Program of Excellence in Glycoscience, Harvard Medical School, Boston. MA, USA.*

[Prof. Agustin Zapata.](#)

*Professor of Cellular Biology. Complutense University of Madrid. Madrid, Spain.*

#### Discussants:

[Natividad Calvente, PhD.](#)

*Head of Area of Department of Pharmacoconomics and Analysis of Drugs. National School of Health-National Institute of Health Carlos III. Madrid. Spain.*

[Sol Ruiz, PhD.](#)

*Head of the Unit of Biotechnology and Advanced Therapies at the Spanish Agency for Medicines and Health Products. Madrid. Spain.*

[Andrés G. Fernández, PhD](#)

*Director of Ferrer Advanced Biotherapeutics. Ferrer Internacional. Barcelona, Spain.*

#### 16:00-16:30 h. Closing ceremony and awarding of certificates.