

**Place:** Hotel 525. C/ del Río Borines 58.  
Los Alcázares, Murcia. Spain.  
**Duration:** 30 hours.  
**Max enrollment:** 100 students.  
**Prize:** 160 € (Lunch included).

#### REGISTRATION RULES

Please complete the Registration Form at the official website: <https://www.um.es/unimar> **Payment Methods:** Credit Card (Website) Cash – only in person: Download the Payment form. Fill in the form and return it with your payment to Universidad Internacional del Mar. **Banks:** Banco Sabadell, Bankia, Cajamar and Banco Santander. Once payment is made you will be enrolled in the course. Students must be enrolled and have a regular attendance to obtain the diploma or its equivalent.

#### Summary

Stem cells whether at the embryonic or induced pluripotent adult, are a potentially unlimited source of cells for research or for clinical use in transplantation. The enormous impact of research on the use of stem cells in medicine have been in the media has contributed to high expectations in the immediate development of modern therapies for the improvement or repair of cell function.

In the last five years, few issues have generated biomedicine increased interest in the company, with unresolved debates on different aspects of both stem cell research and its clinical use. It therefore seems very appropriate to organize a forum for expanding knowledge of this cell type, biology, techniques for handling in the laboratory and, above all of its current and future therapeutic options, with scientific experts in basic science and clinical. This will lead to an objective and useful information for attendees

#### CREDIT RECOGNITION

This course enables you to obtain elective credits at the Universidad of Murcia, in accordance with the University's academic regulations. Students registered at other universities must provide the Credit Recognition requirements for transfer of credit toward their degree program at their home university (certificate, diploma, program...).

**The Course has been declared of Scientific and Medical Interest by the Public Health System of Murcia.**

#### Target Group

Hematologists and other medicine doctors, biomedical researchers, students, graduates and others interested in the subject.

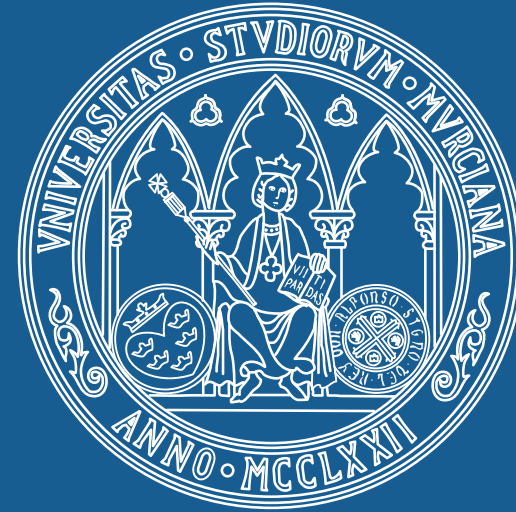
#### Directors

**Prof. José María Moraleda Jiménez.** Professor of Medicine. University of Murcia. Head Dpt of Hematology and HSCT Program. Institute of Biomedical Research of Murcia - IMIB, Virgen de la Arrixaca University Hospital. Murcia, Spain.

**Prof. Damián García Olmo.** Professor of Surgery. Chief of Department of Surgery. Fundación Jiménez Díaz University Hospital. Autonomous University of Madrid. Madrid, Spain.

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

**Prof. Salvador Martínez Pérez.** Director Institute of Neurosciences. UMH-CSIC. Professor of Human Anatomy and Embryology. University Miguel Hernández. Elche, Spain.



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Patrocina



Colabora



Actividades y Cursos de Verano

35ª edición 2018

# CELL THERAPY FROM THE BENCH TO THE BEDSIDE AND RETURN

Los Alcázares  
Del 2 al 6 de julio

Directors

Prof. José María Moraleda Jiménez  
Prof. Damián García Olmo  
Prof. Robert Sackstein  
Prof. Salvador Martínez Pérez

UNIVERSIDAD DE MURCIA





## Monday 2

### BONE MARROW STEM CELLS. HEMATOPOIETIC STEM CELL TRANSPLANTATION.

#### 09:00 h. Opening Session.

##### Morning Session

Chair: **Prof. José M. Moraleda**. Professor of Medicine. University of Murcia. Murcia, Spain.

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

**Prof. Carlos Solano Vercet**. Head Hematology Dpt. University Clinic Hospital of Valencia. INCLIVA. Professor of Medicine. University of Valencia. Valencia, Spain.

#### 10:00 h. Procurement of Hematopoietic Progenitors: Cellular Selection.

**Prof. Miguel Blanquer, MD**. Hematology Department. Institute of Biomedical Research of Murcia - IMIB, Virgen de la Arrixaca University Hospital. University of Murcia. Murcia, Spain.

#### 10:30 h. Coffee break.

#### 11:00 h. Hematopoietic cell transplantation: cell therapy to cure haematological diseases.

**Prof. José M. Moraleda**. Professor of Medicine. University of Murcia. Head Dpt of Hematology and HSCT Program. Institute of Biomedical Research of Murcia - IMIB, Virgen de la Arrixaca University Hospital. Murcia, Spain.

#### 11:30 h. Graft versus host disease. The Jekyll and Hyde of allotransplantation.

**Prof. José Antonio Pérez Simón**. Professor of Hematology. Head Hematology Department. Institute of Biomedicine of Sevilla (IBIS), Virgen del Rocío University Hospital. University of Sevilla. Sevilla, Spain.

#### 12:00 h. The immunobiology of Cell therapy and the umbilical cord unique cells.

**Prof. Alejandro Madrigal**. Scientific Director of The Anthony Nolan Trust. Chair of Hematology, Department of Hematology. The Royal Free and University College Medical School. London, UK.

#### 13:00 h. Lunch.

##### Afternoon Session

Chair: **Prof. Robert Sackstein**. Professor of Glycobiology. Harvard Medical School. Boston, USA.

#### 15:00 h. Haploidentical transplants. The new frontier. Up to date results and new insights.

**Prof. Rafael Duarte Palomino**. Department of Hematology. University Hospital Puerta de Hierro. Madrid, Spain.

#### 15:45 h. Debate session: What is the future of HSCT. Unsolved questions.

Discussants [10 min. each and discussion]:

■ **Is the transplant going to survive with the new immunotherapies?**

**Prof. José A Perez Simón**. Head Hematology Dpt. University Hospital Virgen del Rocío. IBIS. Sevilla. Sevilla, Spain.

#### ■ Do we need the umbilical cord banks?

**Prof. Rafael Duarte**. Head Clinical Hematology. University Hospital Puerta de Hierro. Madrid, Spain.

#### ■ Should I bank my baby's cord blood?

**Prof. Alejandro Madrigal**. Chair of Hematology. The Royal Free and University College Medical School. London, UK.

## Tuesday 3

### IMMUNOTHERAPY AND NEW IMMUNOTHERAPEUTIC APPROACHES

##### Morning Session

Chairs: **Prof. José M. Moraleda**. Professor of Medicine. University of Murcia. Murcia, Spain.

**Prof. Robert Sackstein**. Professor of Glycobiology. Harvard Medical School, Boston, MA, USA.

#### 09:00 h. Monoclonal Antibodies. The development of "magic bullets". Bispecific Mo Ab against leukemia.

**Prof. Joaquín Martínez López**. Head Hematology Dpt. University Hospital 12 de Octubre. Professor of Medicine. Autonomous University of Madrid. Madrid, Spain.

#### 09:30h. PD1. A target molecule to revive the immune system against Hodgkin's disease.

**Prof. Ramón García Sanz**. Professor of Medicine. University Hospital of Salamanca. Salamanca, Spain.

#### 09:30 h. CD38. A target molecule to fight against Myeloma.

**Prof. Paula Rodríguez Otero**. Hematology Department. University of Navarra. Pamplona, Spain.

#### 10:30 h. Coffee break.

#### Special session on CAR T – cells.

#### 11:00 h. CAR T- cells. Basic principles and clinical Pharmacology.

**Prof. Irene García Cadenas**. Hematology Dpt. Hospital Sant Pau. Institut José Carreras. University of Barcelona. Barcelona, Spain.

#### 11:30 h. CAR T- cells in Leukemia.

**Prof. Álvaro Urbano-Ispizua**. Director of Hematology and Oncology, Hospital Clinic of Barcelona. Institut José Carreras. University of Barcelona, Barcelona, Spain.

#### 12:00 h. CAR T- cells in Lymphoma.

**Prof. Javier Briones Mejide**. Hematology Dpt. Hospital Sant Pau. Institut José Carreras. University of Barcelona. Barcelona, Spain.

#### 13:00 h. Lunch.

##### Afternoon Session

#### 15:00 h. CAR T- cells in Mieloma.

**Prof. Estefanía García Guerrero**. Research Scientist. Virgen del Rocío University Hospital. IBIS. University of Sevilla. Sevilla, Spain..

#### 15:30h. Debate session: CAR T- cells and Immunotherapy. Affordability of the new drugs and its economic impact in the national health system.

Chair: **Prof. Jorge Sierra**. President of Spanish Hematology Society. Professor of Medicine University of Barcelona. Head Dpt Hematology. University Hospital Santa Creu I Sant Pau. Barcelona, Spain.

Discussants [10 minutes each and discussion]:

**Prof. Jorge Sierra**. Professor of Medicine University of Barcelona. Hospital Santa Creu I Sant Pau. Barcelona, Spain.

**Prof. Alejandro Madrigal**. Chair of Hematology. The Royal Free and University College Medical School. London, UK.

**Prof. Carlos Solano**. Head Hematology Dpt. University Clinic Hospital of Valencia. INCLIVA. University of Valencia. Valencia, Spain.

**Prof. José Antonio Pérez Simón**. (TerCel). Professor of Hematology. Virgen del Rocío University Hospital. University of Sevilla. Sevilla, Spain.

**Prof. Felipe Prósper**. Director of Cell Therapy Department. Co-director Hematology Department. University of Navarra. Pamplona, Spain.

**Dr. Jorge Gayoso**. Medical Associate. National Transplant Organization (ONT). Madrid, Spain.

**Sol Ruiz, PhD**. Head of the Unit of Biotechnology and Advanced Therapies at EMA. Madrid, Spain.

## Wednesday 4

### MESENCHYMAL STEM CELLS (MSC), INDUCED PLURIPOTENT STEM CELLS (iPSC), GENE THERAPY: SCIENTIFIC BASIS FOR ITS THERAPEUTIC USE.

##### Morning Session

Chairs: **Prof. José M. Moraleda**. Professor of Medicine. University of Murcia. Murcia, Spain.

**Prof. Robert Sackstein**. Professor of Glycobiology. Harvard Medical School, Boston, MA, USA.

#### 09:00 h. MSC properties: the biological basis to become a cell medicine.

**Prof. Agustín Zapata**. Professor of Cell Biology. Complutense University of Madrid. Madrid, Spain.

#### 09:30h. The extrinsic regulation of haematopoietic stem cells as a therapeutic target.

**Prof. Simón Méndez-Ferrer, PhD**. Department of Haematology, NHS-Blood and Transplant. Cambridge Biomedical Campus. University of Cambridge. Cambridge, UK.

#### 10:15 h. Stem cell trafficking. GPS to optimize MSC therapeutics.

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

#### 11:00 h. Coffee break.

#### 11:30 h. Gene editing: A New tool for the future.

**Prof. José Carlos Segovia PhD**. Differentiation and Cytometry Unit, Hematopoietic Innovative Therapies Division. CIEMAT. University of Madrid. Madrid, Spain.

#### 12:00 h. Genetical manipulation of MSC to improve function.

**Prof. Rosa María Yañez González**. Hematopoietic Innovative Therapies Division. CIEMAT. University of Madrid. Madrid, Spain.

#### 12:30 h. Genetically modified MSC to improve function. Animal models.

**Prof. Mariano García Arranz**. Fundación Jiménez Díaz University Hospital. Autonomous University of Madrid. Madrid, Spain.

#### 13:00 h. Lunch.

##### Afternoon Session

#### 15:00 h. iPSC as a Therapeutic Tool.

**Prof. Ángel Raya**. Director Center of Regenerative Medicine in Barcelona (CMRB). Barcelona, Spain.

#### 15:30 h. Fucosylated MSC in the treatment of Inflammation.

**Prof. David García Bernal**. Cell Therapy Unit and HSCT Program. Institute of Biomedical Research of Murcia - IMIB, Virgen de la Arrixaca University Hospital. University of Murcia. Murcia, Spain.

#### 16:00 h. Production of cells in GMP facilities: realities and challenges for the future.

**Prof. María Eugenia Fernández-Santos, PhD**. Technical Director of the Cell Production Unit. Gregorio Marañón University Hospital. Research Institute Gregorio Marañón. Madrid, Spain.

## Thursday 5

### CELL THERAPY AND TISSUE ENGINEERING. CLINICAL TRIALS

##### Morning Session

Chairs: **Prof. José M. Moraleda**. Professor of Medicine. University of Murcia. Murcia, Spain.

**Prof. Damián García-Olmo**. Professor of Surgery. Autonomous University of Madrid. Madrid, Spain.

#### 09:00 h. Cell Therapy in Cardiac Diseases.

**Prof. Felipe Prósper**. Director of Cell Therapy Department. Co-director Hematology Department. University of Navarra. Pamplona, Spain.

#### 09:30 h. Cell Therapy 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 h. Cell Therapy 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.

#### 10:30 h. Coffee break.

#### 11:00 h. Cell Therapy -Regenerative Medicine- in musculoskeletal system.

**Prof. Pedro Guillén**. Clinical Research Unit, CEMTRO Hospital. Madrid, Spain.

#### 11:30 h. Cell Therapy and Microvesicles for Treatment of Transplant Rejection and GVHD.

**Prof. Fermín Sánchez-Guijo**. Hematology Department. University Hospital of Salamanca. University of Salamanca. Salamanca, Spain.

#### 12:00 h. Cell Therapy in Odontology.

**Prof. Francisco J. Rodríguez-Lozano**. Professor of Dentistry. Institute of Biomedical Research of Murcia - IMIB. Virgen de la Arrixaca University Hospital. University of Murcia. Murcia, Spain.

#### 12:30 h. Lunch.

##### Afternoon Session

#### 14:30 h. Cell Therapy to improve Healing in Surgery. The road map to success.

**Prof. Damián García-Olmo**. Professor of Surgery. Chief of Department of Surgery. Fundación Jiménez Díaz University Hospital. Autonomous University of Madrid. Madrid, Spain.

#### 15:15 h. Cell therapy and bioengineering for skin diseases.

**Prof. Marcela del Río**. Professor of Biology. Bioengineering Dpt. Regenerative Medicine and tissue engineering group, CIEMAT, FJD, CIBERER. Carlos III University. Madrid, Spain.

#### 16:00 h. Key question conference: "Negotiate in difficult times".

**Dr Jesús Ángel Loza Aguirre**. Ex-Member of the Basque Parliament. Comisioned for coexistence in Euskadi. Hematologist.

## Friday 6

### CELL THERAPY IN NEUROLOGICAL DISEASES

##### Morning Session

Chair: **Prof. Salvador Martínez Pérez**. Director Institute of Neurosciences. UMH-CSIC. Professor of Human Anatomy and Embryology. University Miguel Hernández. Elche, Spain.

#### 09:00 h. Cell replacement therapy for Parkinson's disease.

**Prof. José Luis Labandeira**. Professor of Anatomy. Neuro-morphology and Experimental Neurology. University of Santiago de Compostela. Santiago de Compostela, Spain.

#### 09:30 h. Antiparkinsonian cell therapy using carotid body cells.

**Prof. Juan José Toledo**. Professor of Physiology. Director of the Dpt of Medical Physiology and Biophysics. Institute of Biomedical Research of Seville. IBiS, Virgen del Rocío Hospital/CSIC/University of Sevilla. Sevilla, Spain.

#### 10:00 h. Cell therapy in Friedrich Ataxia a new model of neural regeneration.

**Prof. Salvador Martínez**. Director Institute of Neurosciences. UMH-CSIC. Professor of Human Anatomy and Embryology. University Miguel Hernández. Elche, Spain.

#### 10:30 h. Coffee break.

#### 11:00 h. Cell Therapy for Amyotrophic Lateral Sclerosis. Where we stand and where we go.

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

#### 11:30 h. Gene Therapy: clinical developments.

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

#### 12:00 h. Gene Therapy for Alzheimer disease.

**Prof. Nathalie Cartier**. Research Director. Inserm. Paris, France.

#### 13:00 h. Lunch

##### Afternoon Session

#### 15:00 h. Debate session: the cell therapy tourism and fraud. Ethical and regulatory aspects.

Chairs: **Prof. Robert Sackstein**. Professor and Director of the Program of Excellence in Glycoscience, Harvard Medical School, Boston, MA, USA.

**Prof. Agustín Zapata**. Professor of Cellular Biology. Complutense University of Madrid. Madrid, Spain.

#### Discussants:

■ **The opinion of the AEMPS.**

**Sol Ruiz, PhD**. Head of the Unit of Biotechnology and Advanced Therapies at EMA. Madrid, Spain.

■ **The opinion of the scientists.**

**Prof. Salvador Martínez**.  
**Prof. Letizia Mazzini**.

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