Place: Hotel 525. C/ del Río Borines, 58. Los Alcázares.Murcia.
Spain.
Duration: 25 hours.
Max enrollment: 100 students.
Price: 160 €. (Lunch included)

## **REGISTRATION RULES**

Please complete the Registration Form at the official website: http://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: SABADELLCAM, BANCO MARE NOSTRUM, 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.

### **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 requeriments for transfer of credit toward their degree program at their home university (certificate, diploma, program...)

The Course is pending approval by the Murcian Public Health System for being declared of Scientific and Medical Interest.

### SUMMARY

Stem cells (embryonic, induced pluripotent and adult) are a potentially unlimited source of cells for research or for clinical use in transplantation. The ability of these cells to improve function or repair damaged tissue in animal models of disease has contributed to high expectations in the development of new therapies for human diseases that currently have no cure such as diabetes, Parkinson's and ischemic or degenerative diseases.

It seems appropriate to organize a forum for knowledge expansion of this type of cells, their biological characteristics, techniques of collection and handling in the laboratory and, particularly, its current and future therapeutic options, with scientists in basic science and clinic. This will get an objective, critical and useful information for the assistants.

## **Target Group**

Students, graduates and others interested in the subject.



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UNIVERSIDAD DE MURCIA VICERRECTORADO DE DESARROLLO ESTRATÉGICO Y FORMACIÓN





CAMPUS MARE NOSTRUM







## Monday 14

#### BONE MARROW STEM CELLS: HEMATOPOIETIC STEM CELLS (HSC). HEMATOPOIETIC STEM CELL TRANSPLANTATION (HSCT)

09:00 Open session.

Hon. Ms. Catalina Lorenzo Gabarrón. Health Council of the Region of Murcia. Spain.

Hon. Mr. José Orihuela Calatayud. Rector of the University of Murcia, Spain.

Dr. Mr. Javier Arias Díaz. Sub-director General of research on Cell Therapy and Regenerative Medicine. National Institute of Health Carlos III. Madrid. Spain.

- 09:30 The Biology of the Hematopoietic Stem Cell. Prof. Carmen L. García de Insausti. Hematology Department. HCUVA - IMIB. University of Murcia. Spain.
- 10:00 Obtaining Hematopoietic Progenitors: Cellular Selection. Prof. Miguel Blanguer Blanguer. Hematology Department. HCUVA - IMIB. University of Murcia. Spain.
- 10:30 COFFEE BREAK.
- 11:00 HSCT: Technique and Complications. Prof. José M. Moraleda Jiménez. Professor of Medicine. University of Murcia. Chief Department of Hematology and HSCT Program. HCUVA - IMIB. Murcia. Spain.
- Umbilical Cord Blood Transplantation. The Spanish Model. Last 11:30 Innovations.

Prof. Guillermo Sanz Santillana. Head of clinical hematology. Department of Hematology. Bone Marrow Transplant Unit. La Fe University Hospital. Valencia. Spain.

- 12:15 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 LUNCH.
- 14:30 Debate session: Histocompatibility Antigen (HLA) Typing, HSC Donation And Registry Issues. Chair: Prof. José M. Moraleda Jiménez • HSC Donation. The Spanish Model.

Prof. Gregorio Garrido Cantarero. Head of Service. Spanish National Transplant Organization (ONT). Madrid. Spain.

 The Importance of HLA in BMT. Basic and Clinical Aspects. Prof. José Alejandro Madrigal Fernández. European Bone Marrow Transplant Association President. Scientific Director of The Anthony Nolan Trust. Chair of Hematology. The Royal Free and University College Medical School. London. UK.

Short lecture: Hematopoietic Cell Transplantation. The Stanford 15:30 Experience.

Prof. Robert Negrin.

## **Tuesday 15**

## **NEW HSCT APPROACHES: HSCT IMMUNOTHERAPY**

- 09:00 New Insights in Cell Therapy. The Haematologist Point of View. Prof. José Alejandro Madrigal Fernández.
- 09:45 Immunobiology of Allogeneic Transplantation. Prof. Robert Negrin.
- 10:30 COFFEE BREAK.
- Haploidentical Transplants and NK Immunotherapy. 11:00 Prof. Franco Locatelli. President of the Italian association for Pediatric Hematology and Oncology. Research Center. Bambino Gesù Children Hospital. Rome. Italy.

11:45 New Strategies for Pre & Post-Transplant Immunomodulation. Prof. José Antonio Pérez Simón. Professor of Hematology. University of Sevilla. Department of Hematology. Virgen del Rocio University Hospital, Institute of Biomedicine, Sevilla, Spain.

## 13:00 LUNCH.

- 14:30 Debate session: Harnessing GVL Effect While Avoiding GVHD. What is the Best Transplant Strategy? Chair: Prof. Robert Sackstein • URD Unmanipulated SCT.
  - Prof. José Alejandro Madrigal Fernández.
  - Haploidentical Post-Transplant Cyclophosphamide Model. Prof. Robert Nearin.
  - T-Depleted Haploidentical Transplant vs Cord Blood Transplants. Prof. Franco Locatelli.

# Wednesday 16

MESENCHYMAL STEM CELLS (MSC) AND INDUCED PLURIPOTENT STEM CELLS (IPSC). SCIENTIFIC BASIS FOR ITS THERAPEUTIC USE

- 09:00 MSC: A New Paradigm for Cell Immunomodulation. **Prof.** Antonio Uccelli. Professor of Neurology. Neuroimmunology Unit, Department of Neurosicences, University of Genova, Italy,
- 09:45 The Stem Cell Niche. Prof. Agustín Zapata González. Professor of Cellular Biology. Complutense University of Madrid. Spain. The Regulation of the Stem Cell Microenvironment. 10:15
- Prof. Simón Méndez Ferrer. National Center for Cardiovascular Research (CNIC). Madrid. Spain.
- 10:45 COFFEE BREAK.
- 11:15 iPSC as a Therapeutic Tool. Prof. Ángel Rava Chamorro. ICREA Research Professor. Institute for Bioengineering of Catalonia. Barcelona. Spain.
- 12:00 iPSC and Gene Therapy for Genetic Diseases. Prof. Juan Bueren Roncero. Head of the Division of Hematopoiesis and Gene Therapy Division CIEMAT. University of Madrid. Spain.
- 13:00 LUNCH.
- 15:00 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

09:00 SCT in Cardiac Diseases.

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

- 09:30 SCT in Diabetes Mellitus. Prof. Bernat Soria Escoms. 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 SCT to Improve Healing in Surgery. Prof. Damián García Olmo. Professor of Surgery. Autonomous University of Madrid. Chief of Department of Surgery. Fundation Jiménez Díaz University Hospital. Madrid. Spain.
- 10:30 COFFFF BREAK
- 11:00 SCT for Osteoarticular Repair. Prof. Javier García-Sancho Martín. Professor of Physiology. University of Valladolid, Institute of Biology and Molecular Genetics (IBGM). Valladolid. Spain.

- 11:30 SCT for Cartilage Repair.
  - Prof. Pedro Guillen García. Clinical Research Unit. CEMTRO Hospital, Madrid, Spain.
- SCT for Treatment of Transplant Rejection and GVHD. 12:00 Prof. Fermín M. Sánchez Guijo. Hematology Department. University Hospital of Salamanca. University of Salamanca. Spain. 13:00 LUNCH.
- 15:00 SCT in Odontology. Prof. Fco. Javier Rodríguez Lozano. Professor of Dentistry. University of Murcia, HCUVA – IMIB, Murcia, Spain,
- 15:30 Tissue Decellularization. Stem Cell Based Organ Engineering. Prof. Mª Eugenia Fernández Santos. Technical Director of the Cell Production Unit. Gregorio Marañón University Hospital. Research Institute Gregorio Marañón. Madrid. Spain.

# Friday 18

STEM CELL THERAPY (SCT). CLINICAL TRIALS IN NEUROLOGIC DISEASES

- The Neural Stem Cell Niche. 09:00 Prof. Isabel Fariñas Gómez. Professor of Cellular Biology. Department of Cellular Biology. University of Valencia CIPF. Valencia. Spain.
- 09:30 SCT in Parkinson's Disease.

Prof. Juan José Toledo Aral. Professor of Physiology. Director of the Department of Medical Physiology and Biophysics. IBiS. Virgen del Rocío Hospital/CSIC/University of Sevilla. Spain. SCT in ALS.

- 10:00 Prof. Letizia Mazzini. Head of tertiary ALS Center. Department of Neurology. Eastern Piedmont University. Maggiore della Carità Hospital. Novara. Italy.
- 10:30 COFFEE BREAK.
- 11:00 SCT in Neurodegenerative Diseases (ND). Results in Animal Models. Prof. Salvador Martínez Pérez. Professor of Human Anatomy and Embryology. Experimental Embryology Lab. Institute of Neurosciences-CSIC (Alicante). Department of Human Anatomy and Psychobiology. University of Murcia. Spain. 11:30 SCT for Other ND-Neuromuscular Diseases.
- Prof. Antonio Uccelli.
- 12:00 Stem Cell Differentiation for Cell Replacement Strategies in HD. Prof. Josep M. Canals Coll. Professor of Cellular Biology. Department of Cell Biology, Immunology and Neuroscience. University of Barcelona. Spain.
- 13:00 LUNCH.
- 15:00 Debate session: MSC Therapy Pros and Cons. Where to Go and Regulatory Aspects. Chairs: Prof. Robert Sackstein and Prof. Aqustín Zapata González
  - Prof. Natividad Calvente Cestafe. Head of Area of Department of Pharmacoeconomics and Analysis of Drugs. National School of Health-National Institute of Healt Carlos III. Madrid. Spain.

• Prof. Sonia Moreno López. Unit of Biotechnology and Advanced Therapies. Spanish Agency for Medicines and Health Products. Madrid, Spain.

• Prof. Andrés G. Fernández. Director of Ferrer Advanced Biotherapeutics. Ferrer International. Barcelona. Spain. • Prof. Eva M. Martínez Cáceres. Head of the Immunology Division. German Trias i Pujol Hospital. Univerity of Barcelona. Spain.

16:00 Closing Ceremony and Awarding of Certificates.