

## ESF Research Conferences

A Programme of the European Science Foundation

Final  
Programme

### ESF-EMBO Symposium

#### Stem Cells in Tissue Engineering

#### Isolation, Culture, Characterisation and Applications

Sant Feliu de Guixols • Spain • 28 October - 2 November 2006

**Chair:** Rui L. Reis • University of Minho, Braga, PT

**Organising Committee:** Ranieri Cancedda • National Institute for Cancer Research, Genova, IT -  
Anthony Atala • Wake Forest University Health Sciences, NC, US - Alicia El Haj • Keele University Medical School,  
Staffordshire, UK - Nuno Sousa • ICVS, University of Minho, PT

[www.esf.org/conferences/lc06213](http://www.esf.org/conferences/lc06213)

With support from

<b>Saturday</b> <b>28</b> <b>October</b>	16.00 onwards	Registration at ESF-RC desk	
	20.00	Dinner	
	21.00	<b>Welcome Drink</b>	
<b>Sunday</b> <b>29</b> <b>October</b>	<b>SESSION 1 • Welcome and Opening Plenary Addresses</b>		
	<b>Chair: Catherine M. Verfaillie • University of Minnesota, US</b>		
	08.30-08.45	<b>Rui L. Reis • University of Minho, Braga, PT</b>	<i>Welcome and Conference Opening Remarks</i>
	08.45-09.45	<b>Ian Wilmut • Edinburgh Roslin Institute, UK</b>	<i>Plenary Lecture 01 – Cloning and Public Aspects of Stem Cells Research</i>
	09.45-10.05	Coffee break	
	<b>SESSION 2 • Stem Cells Sources and Embryonic Stem Cells</b>		
	<b>Chair: Ian Wilmut • Edinburgh Roslin Institute, UK</b>		
	10.05-10.55	<b>Catherine M. Verfaillie • University of Minnesota, US</b>	<i>Lecture 01 – Different Sources of Stem Cells and its Pluripotency</i>
	10.55-11.45	<b>Anna M. Wobus • IPK, Gatersleben, DE</b>	<i>Lecture 02 – Differentiation Mechanisms in Embryonic Stem Cells</i>
	11.45-12.35	<b>J. Itskovitz-Eldor • Technion, Haifa, IL</b>	<i>Lecture 03 – Scientific Promises in Embryonic Stem Cells</i>
	<b>Short Oral Presentations</b>		
	12.35-12.50	<b>Guido Stadler • Ludwig Boltzmann Institute for Experimental &amp; Clinical Traumatology, Linz, AT</b>	<i>Short Lecture 01 – In Vitro Characterisation of Immunomodulatory Properties of Human Stem Cells Derived from Amnion and Adipose Tissue</i>
	12.50-13.05	<b>Ornella Parolini • Poliambulanza Hospital Foundation, Brescia, IT</b>	<i>Short Lecture 02 – Fetal Membranes from Human Term Placenta: A Source of Mesenchymal Stem Cells</i>
	13.05-13.20	<b>Corrado Mandoli • University of Rome, IT</b>	<i>Short Lecture 03 – Tailoring the porosity of biocompatible polymeric scaffolds for cardiac tissue engineering</i>
	13.30	Lunch	
	<b>SESSION 3 • Embryonic and Umbilical Cord Stem Cells</b>		
	<b>Chair: Michael Sittinger • Humboldt-University of Berlin, DE</b>		
	15.00-15.50	<b>Stephen L. Minger • Wolfson Centre for Age-Related Disease, King's College London, UK</b>	<i>Lecture 04 – Embryonic Stem Cells and Organogenesis</i>
	15.50-16.40	<b>Hal E. Broxmeyer • Indiana University School of Medicine, US</b>	<i>Lecture 05 – Umbilical Cord Blood Stem Cells and Future Prospects for their Clinical Applications</i>
	16.40-17.00	Coffee break	
<b>Short Oral Presentations</b>			
17.00-17.15	<b>Maria Dattena • Istituto Zootecnico e Caseario per la Sardegna, Olmeda, IT</b>	<i>Short Lecture 04 – Transplantation of Sheep Embryonic Cell Lines in Cartilage Repair: Preliminary Study</i>	
17.15-17.30	<b>Yvan Torrente • University of Milan, IT</b>	<i>Short Lecture 05 – CD133+ stem cells to treat muscular dystrophy</i>	

	17.30-17.45	<b>Toshiaki Takezawa</b> • National Institute of Agrobiological Sciences, JP	<i>Short Lecture 06 – A Novel Culture System that Differentiates Embryonic Stem Cells into Hepatocyte-like Cells by Utilizing the Histological Section Substrata Prepared from Regenerative Livers</i>
	19.30	Dinner	
	21.00	Poster evening	
<b>Monday 30 October</b>	<b>SESSION 4 • Adult Stem Cells</b>		
	<b>Chair: Nicole Rotter</b> • University Hospital of Schleswig-Holstein, Lübeck, DE		
	09.00-09.50	<b>Michael Sittinger</b> • Humboldt-University of Berlin, DE	<i>Lecture 06 – Periosteal Multipotent Stem Cells, Trauma and Reconstructive Surgery</i>
	09.50-10.40	<b>Ranieri Cancedda</b> • National Institute for Cancer Research, Genova, IT	<i>Lecture 07 – Culturing and Applications of Mesenchymal Stem Cells</i>
	10.40-11.30	<b>Jeffrey M. Gimble</b> • Louisiana State University System, Baton Rouge, US	<i>Lecture 08 – Bone from Fat Cells</i>
	11.30-11.50	Coffee break	
	<b>Short Oral Presentations</b>		
	11.50-12.05	<b>Chang Jui-Chih</b> • National Chung Hsing University, Taichung City, TW	<i>Short Lecture 07 – The Delivery of Peptide-conjugated CdSe/ZnS Quantum Dots Affects the Differentiation of Adipose-derived Stem Cells</i>
	12.05-12.20	<b>Jin Jung</b> • Pusan National University, KR	<i>Short Lecture 08 – Role of Toll-like Receptors on Human Adipose-derived Stromal Cells</i>
	12.20-12.35	<b>João Oliveira</b> • 3B's Research Group, Braga, PT	<i>Short Lecture 09 – Gellan Gum Hydrogels as Supports for Human Articular Chondrocytes and Human Bone Marrow Cells for Cartilage Tissue Engineering Applications: A Comparative Study</i>
	13.00	Lunch	
	<b>SESSION 5 • Mesenchymal Stem Cells: Clinical Applications</b>		
	<b>Chair: Ranieri Cancedda</b> • National Institute for Cancer Research, Genova, IT		
	15.30-15.20	<b>Christian Jorgensen</b> • Hospital Lapeyronie, Montpellier, FR	<i>Lecture 09 – Mesenchymal Stem Cells in Arthritis: the Good or the Bad Guy?</i>
	15.20-16.10	<b>Nicole Rotter</b> • University Hospital of Schleswig-Holstein, Lübeck, DE	<i>Lecture 10 – Strategies for Reconstructive Surgery using Mesenchymal Stem Cells</i>
	16.10-16.30	Coffee break	
	<b>Session 6 • Mesenchymal Stem Cells: Clinical Applications &amp; Gene Therapy</b>		
	<b>Chair: A. Hari Reddi</b> • University of California, Sacramento, US		
	16.30-17.20	<b>Dan Gazit</b> • The Hebrew University of Jerusalem, IL	<i>Lecture 11 – Stem Cells as Vehicules for Gene Therapy</i>
	17.20-18.10	<b>Hajime Ohgushi</b> • National Institute of Advanced Industrial Science and Technology, Hyogo, JP	<i>Lecture 12 – Clinical Applications of Mesenchymal Stem Cells</i>
<b>Short Oral Presentations</b>			
18.10-18.25	<b>Caire Vinatier</b> • University of Nantes, FR	<i>Short Lecture 10 – Chondrogenic Differentiation of Human Adipose-derived Mesenchymal Stem Cells</i>	
18.25-18.40	<b>Gun-IL Im</b> • Dongguk University International Hospital, Goyang, KR	<i>Short Lecture 11 – Repair of Osteochondral Defect with a Composite of Mesenchymal Stem Cells and Polydioxanone/Polyvinyl Alcohol Scaffold</i>	
18.40-18.55	<b>Sedat Odabas</b> • Hacettepe University, Ankara, TR	<i>Short Lecture 12 – Production of Magnetically Loaded Nanosorbents for Isolation of Mesenchymal Stem Cell</i>	

	19.30	Dinner
	21.00	Poster evening

<b>Tuesday</b> <b>31</b> <b>October</b>	<b>Session 7 • Growth Factors &amp; Tissue Engineering</b> <b>Chair: James Kirkpatrick</b> • Johannes Gutenberg University, Mainz, DE	
	09.00-09.50	<b>A. Hari Reddi</b> • University of California, Sacramento, US <i>Lecture 13 – Role of Growth Factors in Stem Cell Differentiation</i>
	09.50-10.40	<b>Rui L. Reis</b> • University of Minho, Braga, PT <i>Lecture 14 – Tissue Engineering: Fundamentals, Scaffolds and Use of Bioreactors</i>
	10.40-11.00	Coffee break
	<b>Short Oral Presentations</b>	
	11.00-11.15	<b>Hanna Maria Taipaleenmäki</b> • University of Turku, FI <i>Short Lecture 13 – BMP -2, -6 and -7 in Chondrogenesis in Mouse Limb Cartilage and Bone Marrow Stem Cells</i>
	11.30-11.45	<b>Hervé Petite</b> • Université Denis Diderot Paris VII, FR <i>Short Lecture 14 – Long Bone Critical-Size Defects Treated with Tissue Engineered Grafos: A Study On Sheep</i>
	11.45-12.00	<b>David Lee</b> • Queen Mary University of London, UK <i>Short Lecture 15 – Dynamic Compressive Strain Influences Chondrogenic Gene Expression in Mesenchymal Stem Cells</i>
	12.00	Lunch
	13.30	<b>Free afternoon for Social Activities (half-day excursion to Dali Museum in Figueres)</b>
20.00	<b>Conference Dinner</b>	

<b>Wednesday</b> <b>1</b> <b>November</b>	<b>Session 8 • Ethical Aspects &amp; Brain Cells</b> <b>Chair: Dan Gazit</b> • The Hebrew University of Jerusalem, IL	
	09.00-09.50	<b>Göran Hermerén</b> • Lund University, SE <i>Lecture 15 – Ethical Issues in Stem Cell Research &amp; Technology</i>
	09.50-10.40	<b>Evan Y. Snyder</b> • Harvard Medical School/Children's Hospital Boston, US <i>Lecture 16 – Neural Stem Cells for Therapies</i>
	10.40-11.00	Coffee break
	<b>Short Oral Presentations</b>	
	11.00-11.15	<b>Caroline Auclair-Daigle</b> • Université Laval, Québec, CA <i>Short Lecture 16 – Adult Human Skin-Derived Stem Cells Differentiation into Mature Neurones</i>
	11.30-11.45	<b>Jenny Caddick</b> • University of Manchester, UK <i>Short Lecture 17 – Phenotypic and Functional Characterisation of Adult Mesenchymal Stromal Cells Differentiated to a Glial Lineage</i>
	11.45-12.00	<b>Julianna Kobolak</b> • Agricultural Biotechnology Center, Godollo, HU <i>Short Lecture 18 – Efficient Derivation of ES Cell Lines from Different Mouse Strains and NT Mouse Embryos</i>
	13.00	Lunch
	<b>Session 9 • Micro-Environments &amp; Dynamic Culturing</b> <b>Chair: Rui L. Reis</b> • University of Minho, Braga, PT	
14.30-15.20	<b>Teruo Okano</b> • Institute of Advanced Biomedical Engineering and Science, Tokyo, JP <i>Lecture 17 – Cell Sheets Technologies for Tissue Engineering</i>	
15.20-16.10	<b>Alicia El Haj</b> • Keele University Medical school, UK <i>Lecture 18 – Mechano-transduction Mechanisms and its Relevance for Bone Tissue Engineering</i>	

Thurs day 2 November	16.10-16.30	Coffee break	
	<b>Session 10 • Vascularisation In Tissue Engineering &amp; Short Talks</b>		
	<b>Chair: Hajime Ohgushi</b> • National Institute of Advanced Industrial Science and Technology, Hyogo, JP		
	16.30-17.20	<b>James Kirkpatrick</b> • Johannes Gutenberg University, Mainz, DE	<i>Lecture 19 – The Role of Vascularisation in Tissue Engineering</i>
	<b>Short Oral Presentations</b>		
	17.20-17.35	<b>Sang-Heon Kim</b> • Korea Institute of Science & Technology, Seoul, KR	<i>Short Lecture 19 – Development of a New Tubular Scaffold For Blood Vessel Tissue Engineering Using Bone Marrow-Derived Stem Cells</i>
	17.35-17.50	<b>Esther Potier</b> • Université Denis Diderot Paris VII, FR	<i>Short Lecture 20 – Survival, Osteogenic Differentiation and Angiogenic Factor Expression of Human Mesenchymal Stem Cells are Affected by Temporary Hypoxia</i>
	17.50-18.05	<b>Marina Inês Santos</b> • 3B's Research Group, Braga, P	<i>Short Lecture 21 – Nano- and Micro-fiber combined Scaffolds: An Architecture Tailored Toward Improving Endothelial Cell Migration in Bone Tissue Engineering Constructs</i>
	18.05-20.00	<b>Forward Looking Plenary Discussion: Future Research Directions, Needs &amp; Collaboration Opportunities</b>	
20.30	Dinner		

Thurs day 2 November	<b>Session 11 • Stem Cells In Tissue Engineering &amp; Short Talks</b>		
	<b>Chair: Evan Y. Snyder</b> • Harvard Medical School/Children's Hospital Boston, US		
	09.00-09.50	<b>Paolo Bianco</b> • University La Sapienza, Rome, IT	<i>Lecture 20 – Stem Cells in Tissue Engineering and Regeneration</i>
	<b>Short Oral Presentations</b>		
	09.50-10.05	<b>Nuno Neves</b> • University of Minho, Braga, PT	<i>Short Lecture 22 – Adult Human Mesenchymal Stem Cells Seeded in Natural-Polymer Based Scaffolds for Bone and Cartilage Tissue Engineering</i>
	10.05-10.20	<b>Paolo Di Nardo</b> • University of Rome "Tor Vergata", IT	<i>Short Lecture 23 – Interfacing stem cells and polymers to repair cardiac tissue</i>
	10.20-10.55	Coffee break	
	<b>Session 12 • Closing Plenary Address</b>		
	<b>Chair: Alicia El Haj</b> • Keele University Medical school, UK		
10.55-11.55	<b>Mark Furth</b> • Wake Forest University Health Sciences, NC, US	<i>Plenary Lecture 02 – Stem and Progenitor Cells in Clinical Applications</i>	
13.00	Lunch and departure		