

General Information

Lisbon - Portugal



25th to 27th of June
ICTE . 2015

International Conference on Tissue Engineering

Welcome Message

We are pleased to welcome you to Lisbon for the 4th ECCOMAS Thematic Conference on Tissue Engineering, **ICTE 2015**. This conference was designed to be a major international forum for the discussion of the current state-of-the-art in the field of Tissue Engineering, providing opportunities for the participants to meet and discuss current research, new ideas and concepts and establish future collaboration on all aspects of Tissue Engineering. We want to express our appreciation to all participants, all keynote speakers, all members of the International Scientific Committee, session chairs, student helpers and administrative assistants, for contributing to the success of this Conference. We hope that all of you feel rewarded for your participation and contribution.

Yours Sincerely,

Paulo Fernandes and Paulo Bárto

(Conference Chairs)

How to get **ICTE 2015**

Local: Hotel Holiday Inn, Lisbon, Portugal
Address: Av. António José de Almeida, 28A

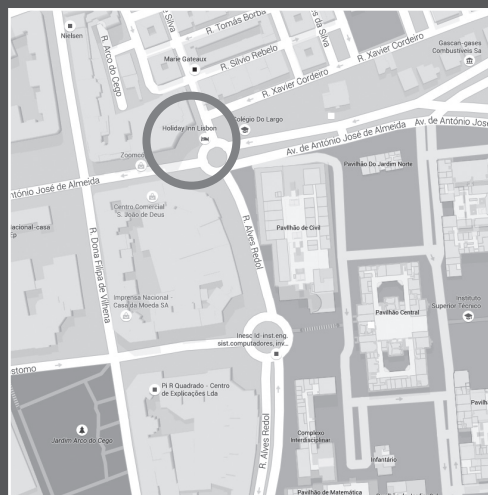
Metro station: Saldanha

Carris bus (Saldanha): 36, 44, 83, 726, 727,
732, 738, 742, 745

Carris bus (Arco do Cego): 713, 797, 716

www.metrolisboa.pt

www.carris.pt



Conference Secretariat

Paula Jorge

IDMEC - Instituto Superior Técnico (IDMEC-IST)

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Conference Dinner Information:

The ICTE 2015 Dinner will be held at the "A Commenda" Restaurant at 20h00. The organization provides transportation to and from the dinner venue.

Bus departure from the Conference venue at 19:30.

The restaurant is located at Centro Cultural de Belém (CCB - <https://www.ccb.pt/>). CCB is the largest building with cultural facilities in Portugal and is located in the tourist neighborhood of Bélem, near Tagus River and Jerónimos Monastery.

A moment of Fado will happen at the dinner. Fado is the Portuguese most traditional music genre and it was inscribed in the UNESCO's list of Intangible Cultural Heritage of Humanity, in 2011. (<http://www.unesco.org/culture/ich/RL/00563>).

Address: Centro Cultural de Belém, Praça do Império, 1449-003 Lisbon



Other Information:

Internet: If you need internet connection please contact the secretariat.

Lunches: Will be held at the hotel restaurant

Program - Overview

Lisbon, Portugal



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	Thursday June, 25	Friday June, 26	Saturday June, 27
08h00-08h45	Registration		
08h45-09h00	Opening Session		
09h00-09h45	Keynote Speaker	Keynote Speaker	Keynote Speaker
09h45-10h30	Keynote Speaker	Keynote Speaker	Keynote Speaker
10h30-11h00	<i>Coffee Break</i>	<i>Coffee Break</i>	<i>Coffee Break</i>
11h00-11h40	Sessions 1.1, 1.2	Keynote Speaker	Sessions 5.1, 5.2
11h40-13:00		Sessions 3.1, 3.2	
13h00-14h00	<i>Lunch</i>	<i>Lunch</i>	<i>Lunch</i>
14h00-14h45	Keynote Speaker	Keynote Speaker	
14h45-15h30	Keynote Speaker	Keynote Speaker	
15h30-16h00	Coffee Break	Coffee Break	
16h00-18h00	Sessions 2.1, 2.2	Sessions 4.1, 4.2	
19h30		ICTE 2015 Dinner	

Instructions for Presenters:

Each lecture will take 20 minutes including discussion.

The files required for the presentation (PowerPoint or PDF) must be uploaded and tested on conference computers at least at the break before the session.

Conference computers are Window7 machines with Office 2013 and Acrobat PDF Reader 10.

Program - June, 25th

Lisbon - Portugal



25th to 27th of June
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Keynote Speakers

Room 1

09h00 - 09h45	MECHANOTRANSDUCTION IN ADIPOSE TISSUES: IMPLICATIONS FOR TISSUE ENGINEERING OF FAT Amit Gefen , Tel Aviv University, Israel
09h45 - 10h30	IMPROVING BONE HEALING AND BONE INGROWTH BY CHARACTERIZING BONE Hanna Isaksson , Lund University, Sweden

	Session 1.1	Room 1	Session 1.2	Room 2
Time	<i>Chair: Amit Gefen</i>		<i>Chair: Marco Frade</i>	
11h00 - 11h20	ID 21 QUANTIFICATION OF FLUID SHEAR STRESS IN IDEALISED TISSUE ENGINEERING SCAFFOLDS <i>Feihu Zhao, Ted Vaughan and Laoise McNamara</i> Presenting Author: Feihu Zhao		ID 2 SYNTHETIC OR XENOGENEIC GRAFTS FOR BONE REGENERATION: "IN VIVO" STUDY <i>Lilian Souza Campos, Raul Garcia Carrodéguas and Fabiana Paim Rosa</i> Presenting Author: Lilian Souza Campos	
11h20 - 11h40	ID 50 IN VITRO AND IN VIVO EVALUATIONS OF A BIOACTIVE GLASS SCAFFOLD (BIO-SCA) FOR BONE REGENERATION <i>Emanuela Ferraz, Adriana Luiza Almeida, Gileade Freitas, Murilo Crovace, Oscar Peitl-Filho, Paulo de Oliveira, Mareio Beloti and Adalberto Rosa</i> Presenting Author: Adalberto Rosa		ID 17 DIRECTING NEURONAL GROWTH IN 3-DIMENSIONAL MODIFIED COLLAGEN GELS <i>Merav Antman-Passig, Sharon Cohen, Hadas Schori and Orit Shefi</i> Presenting Author: Orit Shefi	
11h40 - 12h00	ID 65 COMBINED ELASTIC AND SHEAR STRESS SOLICITATIONS FOR TOPOLOGICAL OPTIMISATION OF MICRO-CT BASED SCAFFOLDS <i>Henrique Almeida and Paulo Bártole</i> Presenting Author: Henrique Almeida		ID 47 LONG-TERM IN VIVO EVALUATION OF THE BONE RESPONSE TO THREE APATITIC CALCIUM PHOSPHATE CEMENTS <i>Jie An, Hongbin Liao, Ralf-Peter Herber, Joop Wolke, Sander Leeuwenburgh and John Jansen</i> Presenting Author: Jie An	
12h00 - 12h20	ID 72 DEVELOPMENT OF A SPINAL FUSION CAGE BY MULTISCALE MODELLING: APPLICATION TO THE HUMAN CERVICAL SPINE <i>Pedro Coelho, Paula Fernandes, João Folgado and Paulo Fernandes</i> Presenting Author: Pedro Coelho		ID 63 INVESTIGATION OF CHITOSAN-GLYCOU GLYOXAL AS AN INJECTABLE BIOMATERIAL FOR VOCAL FOLD TISSUE ENGINEERING <i>Hossein K. Heris, Neda Latifi, Hojattollah Vali, Nicole Li and Luc Mongeau</i> Presenting Author: Hossein Khadivi Heris	
12h20 - 12h40	ID 44 INVESTIGATING THE MECHANICAL RESPONSE OF SCAFFOLD ARCHITECTURES USING 3D PRINTED MODELS: AN EXPERIMENTAL AND NUMERICAL APPROACH <i>Antreas Kantaros, Nikoleta Chatzidai and Dimitris Karalekas</i> Presenting Author: Antreas Kantaros		ID 71 PROCESSING AND CHARACTERIZATION OF 3D DENSE CHITOSAN PIECES, FOR ORTHOPEDIC APPLICATIONS, BYADDING PLASTICIZERS <i>Lígia Figueiredo, Frederico Ferreira, Luís Pinto, Carla Moura and Alexandra Rodrigues</i> Presenting Author: Lígia Figueiredo	
12h40 - 13h00	ID 27 WHOLE ORGAN ENGINEERING BASED ON DECELLULARIZED MATRIX SCAFFOLDS <i>Inna Trusova, Elena Petersen, Anna Guller, Alexander Melerzanov, Anna Dukh, Svetlana Gureva and Petr Datskevich</i> Presenting Author: Inna Trusova			

Program - June, 25th

Lisbon - Portugal



25th to 27th of June
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International Conference on Tissue Engineering

Keynote Speakers		Room 1
16h00-16h20	COMPUTATIONAL MODELLING OF WOUND HEALING: INSIGHTS TO DEVELOP NEW SKIN SUBSTITUTES Maria José Gomez-Benito , University of Zaragoza, Spain	
14h45-15h30	BIOMATERIALS SUPPORTS FOR EX-VIVO CULTIVATION OF STEM CELLS Frederico Ferreira , University of Lisbon, Portugal	

	Session 2.1	Room 1	Session 2.2	Room 2
Time	Chair: Frederico Ferreira		Chair: Che Connon	
16h00-16h20	ID 1 FIBRE REINFORCEMENT IN LIVING CELLS: A PRELIMINARY COMPUTATIONAL STUDY OF THE F-ACTIN FILAMENTS <i>João P. Ferreira, Marco Parente and Renato N. Jorge</i> Presenting Author: João P. Ferreira		ID 30 OPEN SOURCE PIEZOELECTRIC INKJET PRINT-HEAD FOR BIOFABRICATION <i>Carmelo De Maria, Laura Ferrari, Ilenia Guerrazzi, Francesca Montemurro, Federico Vozzi, Thomas Boland and Giovanni Vozzi</i> Presenting Author: Carmelo De Maria	
16h20-16h40	ID 9 EXPLORING 2D CURVED SURFACES FOR ORIENTED MIGRATION, PROLIFERATION, AND DIFFERENTIATION OF HUMAN CORNEAL CELLS <i>Ricardo Gouveia and Che Connon</i> Presenting Author: Ricardo Gouveia		ID 60 HYBRID FABRICATION OF A 3D PRINTED SCAFFOLD EMBEDDED WITH PCL FIBERS FOR TISSUE ENGINEERING APPLICATIONS <i>Christian Mendoza-Buenrostro and Ciro Rodriguez</i> Presenting Author: Ciro Rodriguez	
16h40-17h00	ID 22 OSTEOGENIC DIFFERENTIATION OF ADIPOSE-DERIVED MESENCHYMAL STEM CELLS INTO POLYCAPROLACTONE (PCL) SCAFFOLD <i>Guilherme Caetano, Paulo Bártole, Marco Domingos, Mareei Leite and Marco Andrey Frade</i> Presenting Author: Guilherme Caetano		ID 61 ASSESSMENT OF THE BIOCOMPATIBILITY OF BIORESORBABLE PLLA-PLCL SCAFFOLD OBTAINED BY ELECTROSPINNING <i>Helena T T Oyama, Lucas R.X. Cortella, Isabela N.S. Rosa, Leonardo Rodrigues Filho, Wang S. Hui, Ismar N. Cestari and Idágene A. Cestari</i> Presenting Author: Helena T T Oyama	
17h00-17h20	ID 15 THE MESHLESS METHODS IN THE BONE TISSUE REMODELLING ANALYSIS <i>Jorge Belinha, Lúcia Dinis and Renato Natal Jorge</i> Presenting Author: Jorge Belinha		ID 64 ORGAN PRINTING AS AN INFORMATION TECHNOLOGY <i>Rodrigo Alvarenga Rezende, Vladimir Mironov and Jorge Vicente Lopes Da Silva</i> Presenting Author: Rodrigo Rezende	
17h20-17h40	ID 28 MESENCHYMAL STEM CELLS AND BIOMATERIALS SYSTEMS - PERSPECTIVES FOR SKELETAL MUSCLE TISSUE REPAIR AND REGENERATION <i>Ana Rita Caseiro, Tiago Pereira, Paulo Jorge Bártole, José Domingos Santos, Ana Lúcia Luís and Ana Colette Maurício</i> Presenting Author: Ana Rita Caseiro		ID 48 LASER BASED FABRICATED MICRO/NANO SUBSTRATES AS NEW MODEL SCAFFOLDS TO CONTROL THE DIFFERENTIATION AND/OR THE DIRECTIONALITY OF NEURONAL NETWORK OUTGROWTH <i>Anthi Ranella, Hara Simitzi, Alexandros Selimis, Emmanuel Stratakis, Maria Farsari and Costas Fotakis</i> Presenting Author: Anthi Ranella	
17h40-18h00	ID 12 STIFFNESS OF EXTRACELLULAR MATRIX COMPONENTS MODULATES THE PHENOTYPE OF HUMAN SMOOTH MUSCLE CELLS IN VITRO AND ALLOWS FOR THE CONTROL OF PROPERTIES OF ENGINEERED TISSUES <i>Sara B.H. Timraz, Rachid Rezgui, Selwa M. Boularaoui and Jeremy C.M. Teo</i> Presenting Author: Sara Timraz			

Program - June, 26th

Lisbon - Portugal



25th to 27th of June
ICTE . 2015
 International Conference on Tissue Engineering

Keynote Speakers		Room 1
09h00-09h45	DESIGN CONTROL AND 3D PRINTING FOR TISSUE ENGINEERING Scott Hollister , University of Michigan, USA	
09h45-10h30	DESIGN AND ANALYSIS OF BONE POROUS MICRO-STRUCTURES FOR ADDITIVE-MANUFACTURING Anath Fischer , Israel Institute of Technology, Israel	
11h00-11h40	CLINICAL COMPLICATIONS OF MATERIALS IN ORTHOPAEDIC SURGERY: CURRENT ISSUES AND FUTURE SOLUTIONS Chris Peach , University Hospital of South Manchester, UK	

	Session 3.1	Room 1	Session 3.2	Room 2
Time	<i>Chair: Maria-José Gomez-Bénito</i>		<i>Chair: Marco Domingos</i>	
11h40-12h00	ID 10 MECHANO-CHEMICAL MODEL TO PREDICT THE EFFECT OF BMP-2 ON LARGE BONE DEFECT HEALING <i>Frederico O. Ribeiro, Maria José Gómez Benito, João Folgado, Paulo R. Fernandes and José Manuel García Aznar</i> Presenting Author: Frederico Ribeiro		ID 23 EX VIVO MODEL OF HUMAN SKIN (HOSEC) AS ALTERNATIVE TO ANIMAL USE FOR COSMETIC TESTS <i>Thiago Andrade, Andreia Aguiar, Flávia Guedes, Marcel Leite, Guilherme Caetano, Eduardo Coelho, Pranab Das and Marco Andrey Frade</i> Presenting Author: Marco Frade	
12h00-12h20	ID 11 ANGIOGENESIS IN TISSUE REGENERATION: QUANTIFICATION OF IN VITRO SPROUTING INDUCED BY GROWTH FACTORS <i>Cristina Del Amo Mateos, Carlos Borau Zamora, Raquel Gutiérrez Arnal and José Manuel García Aznar</i> Presenting Author: Cristina Del Amo Mateos		ID 24 METHODOLOGY FOR MECHANICAL CHARACTERIZATION OF SOFT BIOLOGICAL TISSUES: ARTERIES. <i>Ana Isabel Arroyave Guzmán, Raul Gonzalez Lima, Pedro Alexandre Sousa Martins, Renato Natal Jorge and Nilza Ramiao</i> Presenting Author: Ana Guzmán	
12h20-12h40	ID 53 MODELLING OF BONE HEALING AFTER BIODEGRADABLE AND BIODEGRADABLE GRAFT APPLICATION <i>Yanfei Lu and Tomasz Lekszycki</i> Presenting Author: Yanfei Lu		ID 46 NANOFIBROUS MEMBRANES WITH FIBRIN AND COLLAGEN STRUCTURES AS CARRIERS FOR SKIN CELLS <i>Marketa Bacakova, Jana Musilkova Musilkova, Tomas Riedel, Denisa Stranska, Eduard Brynda and Lucie Bacakova</i> Presenting Author: Marketa Bacakova	
12h40-13h00	ID 13 THE ELASTO-PLASTIC RESPONSE OF THE BONE TISSUE DUE TO THE INSERTION OF DENTAL IMPLANTS <i>Cristina Tavares, Jorge Belinha, Lúcia Dinis and Renato Natal</i> Presenting Author: Cristina Tavares		ID 31 COMPUTATIONAL ASSESSMENT OF CLINICALLY RELEVANT ENGINEERED TISSUES VASCULARIZATION EFFECTIVENESS <i>Sergei Simakov, Nina Gorodnova, Inna Trusova, Andrei Kolobov, Ospan Mynbaev, Alexander Melerzanov and Elena Petersen</i> Presenting Author: Elena Petersen	

Program - June, 26th

Lisbon - Portugal



25th to 27th of June
ICTE . 2015

International Conference on Tissue Engineering

Keynote Speakers	Room 1
14h00-14h45	3D BIO-PRINTING WITH LIVE CELLS Bahattin Koc , Sabanci University, Turkey
14h45-15h30	OF MODELS AND MEN: RECENT ADVANCES IN COMPUTATIONAL BONE TISSUE ENGINEERING Liesbet Geris , University of Liege, Belgium

	Session 4.1	Room 1	Session 4.2	Room 2
Time	<i>Chair: Bahattin Koc</i>		<i>Chair: Scott Hollister</i>	
16h00-16h20	ID 5 LEAVING CELLS IN THE COLD: HYDROGEL ENCAPSULATION FOR THE IMPROVED HYPOTHERMIC PRESERVATION OF STEM CELLS <i>Stephen Swioklo and Che Connon</i> Presenting Author: Stephen Swioklo		ID 4 APPROACHES TO CORNEAL TISSUE ENGINEERING: TOP-DOWN OR BOTTOM-UP? <i>Che Connon</i> Presenting Author: Che Connon	
16h20-16h40	ID 19 INFLUENCE OF METALLIC AND CERAMIC WEAR PARTICLES ON DIFFERENTIATION AND FUNCTIONALITY OF HUMAN OSTEOCLASTS <i>Jana Markhoff, Juliane Pasold, Jenny Tillmann and Rainer Bader</i> Presenting Author: Juliane Pasold		ID 6 APPLICATION OF RETINOIC ACID IMPROVES FORMAND FUNCTION OF TISSUE ENGINEERED CORNEAL CONSTRUCT <i>Fadhilah Zainal Abidin, Ricardo M Gouveia and Che J Connon</i> Presenting Author: Fadhilah Abidin	
16h40-17h00	ID 3 ASSESSMENT OF TRABECULAR BONES MICROARCHITECTURES AND CRYSTAL STRUCTURE OF HYDROXYAPATITE IN OSTEOPENIA OSTEOPOROSIS WITH APPLICATION OF THE RIETVELD METHOD <i>João Manuel Domingos De Almeida Rollo, Ricardo Simonato Boffa, Reinaldo Cesar and Danilo Schwab</i> Presenting Author: João Rollo		ID 58 COMBINATION OF 3D EXTRUDED-BASED POLY(ε-CAPROLACTONE) SCAFFOLDS WITH MESENCHYMAL STEM CELLS TOWARDS <i>Carla Sofia Moura, Cláudia Lobato Da Silva, Paulo Jorge Bartolo and Frederico Castelo Ferreira</i> Presenting Author: Carla Moura	
17h00-17h20	ID 32 NEURO-MUSCULAR REGENERATION USING SCAFFOLDS WITH MESENCHYMAL STEM CELLS (MSCS) ISOLATED FROM HUMAN UMBILICAL CORD WHARTON'S JELLY: FUNCTIONAL AND MORPHOLOGICAL <i>Ana Rita Caseiro, Tiago Pereira, Jorge Ribeiro, Paulo Jorge Bártole, Ana Lúcia Luís, Ana Colette Maurício, Irina Amorim and Paulo Armada-Da-Silva</i> Presenting Author: Ana Maurício		ID 66 TENSILEAND SHEAR STRESS EVALUATION OF SCHWARTZ SURFACES FOR SCAFFOLD DESIGN <i>Henrique Almeida and Paulo Bártole</i> Presenting Author: Henrique Almeida	
17h20-17h40	ID 25 CELL MECHANICS, MORPHOLOGY, AND FORCE GENERATION DURING ADIPOGENESIS <i>Shada Abuhattoum, Amit Gefen and Daphne Weihs</i> Presenting Author: Shada Abuhattoum		ID 73 BIOACTIVE AVITAUAVITAL COMPOSITE SCAFFOLDS FOR BONE TISSUE REPAIR <i>Marco Domingos, Antônio Gloria and Paulo Bártole</i> Presenting Author: Marco Domingos	
17h40-18h00	ID 45 NANOFIBER BIOREACTOR SYSTEM FOR NEURAL STEM CELL CULTURE APPLICATIONS <i>Miriam Sousa, Luca Bronzato, Carlos Rodrigues, Joaquim Cabral, Ermelinda Maçôas, Vitor Gerales and Frederico Ferreira</i> Presenting Author: Miriam de Sousa		ID 14 INCIDENCE OF TEMPERATURE AND INDENTER DIAMETER ON THE MECHANICAL RESPONSE OF SKIN DURING INDENTATION TEST <i>Jesica Isaza and Juan Ramirez</i> Presenting Author: Jesica Isaza	

Program - June, 27th

Lisbon - Portugal



25th to 27th of June
ICTE 2015
 International Conference on Tissue Engineering

Keynote Speakers		Room 1
09h00-9h45	HEALTHY AGING: THE ROLE OF BIOMANUFACTURING Paulo Bártolo , University of Manchester, UK	
09h45-10h30	LOW TEMPERATURE 3D PRINTING OF DRUG LOADED BIOCERAMIC SCAFFOLDS Uwe Gbureck , University of Wurzburg, Germany	

Session 5.1		Room 1
Time	<i>Chain Uwe Gbureck</i>	
11h00-11h20	ID 7 ON DIFFERENT APPROACHES TO SIMULATE THE MECHANICAL BEHAVIOR OF SCAFFOLDS DURING DEGRADATION <i>André Vieira, Rui Guedes and Volnei Titã</i> Presenting Author: <i>André Vieira</i>	
11h20-11h40	ID 20 ENZYMATIC DEGRADATION OF PCL ELECTROSPUN MESHES <i>Juliana Rosa Dias, Pedro Lopes Granja and Paulo Bártolo</i> Presenting Author: <i>Juliana Dias</i>	
11h40-12h00	ID 56 INTEGRATED DESIGN AND FABRICATION OF MACROPOROUS SCAFFOLDS FOR BONE TISSUE ENGINEERING: A TIBIAL TUBEROSITYAPPLICATION <i>Miguel Castilho, Jorge Rodrigues, João Folgado, Elke Vorndran and Paulo Fernandes</i> Presenting Author: <i>Miguel Castilho</i>	
12h00-12h20	ID 59 HUMAN OSTEOBLAST-LIKE CELLS ON POROUS AND FIBROUS SCAFFOLDS FOR BONE TISSUE ENGINEERING <i>Lucie Bacakova, Katarina Novotna, Milos Beran, Denisa Stranska and Daniel Hadraba</i> Presenting Author: <i>Lucie Bacakova</i>	
12h20-12h40	ID 62 NUMERICAL AND EXPERIMENTAL ANALYSIS OF A TROCHANTERIC PLATE OF CONTENTION IN STANDARD AND OSTEOPOROTIC BONE <i>Vítor Maranhã, José Martins, Luís Roseiro, Ana Amaro and Maria Neto</i> Presenting Author: <i>Maria Neto</i>	
12h40-13h00	ID 26 A BIOMECHANICAL APPROACH FOR BONE REGENERATION INSIDE SCAFFOLDS <i>Carolina Gorriz, Frederico Ribeiro, José M. Guedes and Paulo R. Fernandes</i> Presenting Author: <i>Paulo R. Fernandes</i>	