

# TERMS

EU 2014 / CHAPTER MEETING

10/13 JUNE / 2014  
GENOVA / ITALY



termis



# WELCOME LETTER

It is our great pleasure and honor to welcome you to Genova, for the **Termis 2014 EU Chapter Meeting**.

Genova is a dynamic and multicultural city, framed by the coastal mountain range and the Ligurian Sea, one of the most spectacular natural environments. Genova the Superb, as defined in 1358 by the poet Petrarca: *"Vedrai una città regale, addossata ad una collina alpestre, superba per uomini e per mura, il cui solo aspetto la indica Signora del Mare: Genova"* - *"You'll see a royal city, set against a hill alpine, superb for his men and walls, whose only appearance indicates the lady of the sea: Genoa"*.

Delegates will flavor through Genova the incredible amazing patchwork of traditions, cultures, music and cuisine that characterize the Italian peninsula. A dynamic and multicultural location for this dynamic, multidisciplinary and rapidly changing scientific field that will be presented and debated in the coming four days.

The dense scientific program allocates 295 oral and 507 poster presentations. It is enriched by some of the very best scientists working in different cutting-edge areas that are relevant to Termis, who have been invited for plenary and key lectures, and debates. The difficult task of selecting thematic symposia and presentations for a well-rounded and high quality program was accomplished thanks to the valuable work of a team of reviewers, recognized scientists in Tissue Engineering and Regenerative Medicine.

The organization of the meeting has required an incredible effort by a huge number of people: speakers, scientific and organizing committee's members, exhibitors, sponsors, reviewers, and co-workers whose names do not even officially appear in the conference program booklet.

On behalf of all those who have helped to organize the conference and in particular of the Termis governing bodies, we welcome you as our esteemed guests in Genova.



**Ranieri Cancedda**  
University of Genova, Department of  
Experimental Medicine & IRCCS  
A.O.U. S. Martino - IST Istituto  
Nazionale per la Ricerca sul Cancro  
Genova, Italy



**Claudio Migliaresi**  
University of Trento, Department of  
Industrial Engineering  
Trento, Italy



# COMMITTEES AND BOARD

## CHAIRMEN

### Ranieri Cancedda

*University of Genova, Department of Experimental Medicine & IRCCS A.O.U. S. Martino  
IST Istituto Nazionale per la Ricerca sul Cancro, Genova, Italy*

### Claudio Migliaresi

*University of Trento, Department of Industrial Engineering, Trento, Italy*

## LOCAL ORGANIZING COMMITTEE

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Milena Mastrogiacomo  
Antonella Motta  
Rodolfo Quarto  
Roberta Tasso

Daniela Garbarino

*University of Genova, Department of Experimental Medicine - DIMES, Genova, Italy  
University of Trento, Department of Industrial Engineering, Trento, Italy*

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Jerome Guicheux - *France*  
Jons Hilborn - *Sweden*  
Anthony Hollander - *UK*  
Dietmar Hutmacher - *Australia*  
Peter Johnson - *USA*  
David Kaplan - *USA*  
Gilson Khang - *Republic of Korea*  
James C. Kirkpatrick - *Germany*  
Vladimir Komlev - *Russian Federation*  
Frank Luyten - *Belgium*  
Ivan Martin - *Switzerland*  
Anthony Mikos - *USA*  
Ralph Müller - *Switzerland*  
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Maurizio Pacifici - *USA*  
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Wolfram Zimmermann - *Germany*

## UNDER THE PATRONAGE



UNIVERSITÀ DEGLI STUDI  
DI TRENTO



# GENERAL INFORMATION

## LANGUAGE

The official language of the congress is English.  
No simultaneous translation is available.

## TECHNICAL EXHIBITION

An exhibition of scientific and technical equipments is organized in the Congress Venue.

## CERTIFICATE OF ATTENDANCE

The certificate of attendance will be given to all registered participants upon presentation of their badges at the Secretariat Desk.

## SECRETARIAT ON SITE

Secretariat and Registration Desk will be on duty from June 10 to June 13, 2014

### Opening Hours:

June 10: 10.00 am - 07.00 pm  
June 11: 08.00 am - 07.00 pm  
June 12: 08.00 am - 07.00 pm  
June 13: 08.00 am - 06.30 pm

## REGISTRATION FEE on site (VAT 22% included)

Delegate: € 705,00  
Student: € 455,00  
Young Investigator: € 455,00  
Emerging Country: € 555,00  
Industry Professional: € 705,00  
Exhibitor: € 505,00

### Registration fee includes:

Admission to the scientific sessions  
Coffee breaks and lunches  
Congress kit  
Welcome cocktail on June 10  
Social dinner on June 13

Only registered participants are allowed to attend the Scientific Sessions. Congress participants are requested to wear their badges for all the events.

### Accompanying person fees:

Welcome Cocktail on June 10: €35,00  
Social Dinner on June 13: €75,00

## CANCELLATIONS AND REFUND

In case of cancellation both of the registration and of accommodation participants are kindly requested to contact Symposia O.C. Srl. No refund can be made.

## TOURISM OFFICES

All TERMIS-EU delegates will have a tourist information desk at the Congress Venue.  
Other touristic information points in Genova are located in strategic places for your convenience, including the one in the area of the old port (Porto Antico).

## PUBLIC TRANSPORT

### Genova Airport

Via Pionieri e Aviatori d'Italia, 44, Genova  
Ph. +39 010 60151  
www.airport.genova.it

### Central Train Stations

Genova Piazza Principe and Genova Brignole  
www.trenitalia.com

**Metro, Bus:** www.amt.genova.it

**Taxi:** Ph. +39 010 5966

## OTHER INFORMATION OF INTEREST

### Emergencies

Ambulance: 118  
Police: 112 or 113  
Fire Brigade: 115

## MONEY

As in the other EU nations, the euro is Italy's currency. The euro is divided into 100 cents. Coin denominations are one, two, five, 10, 20 and 50 cents, €1 and €2. The notes are €5, €10, €20, €50, €100, €200 and €500.

Banks and building societies tend to offer the best exchange rates, and are plentiful: even small villages often have at least one. They mostly open from about 8.30 am to 3.30 pm Monday to Friday. Ask about commissions before changing (especially in exchange bureaux).

### Tipping

The law requires menu prices to include a service charge; tipping is a matter of choice. Most people leave some small change if they're satisfied: 5% is normally fine and 10% generous. Porters will generally be happy with ! Taxi drivers don't have to be tipped,

### Taxes & refunds

In Italy, value-added tax (VAT) is known as IVA. On accommodation and restaurant prices, it is usually 10% and is often included in quoted prices. On retail goods and car hire, IVA is higher, normally 22%.

Visitors are entitled to a refund of the 22% IVA on purchases from any shops if they are taking them.

## ORGANIZING SECRETARIAT

**SYMPOSIA**  
ORGANIZZAZIONE CONGRESSI

### Symposia Organizzazione Congressi Srl

Palazzo del Melograno - Campetto, 2/8  
16123 Genova - Italy  
Tel: +39 010 255146  
email: symposia@symposiacongressi.com  
web: www.symposiacongressi.com



# CONGRESS VENUE

## MAGAZZINI DEL COTONE CONFERENCE CENTER

### Operating office

**Magazzini del Cotone Modulo 9,**  
1st floor  
16128 Genova  
Italy

Tel. +39 010 2485611  
+39 010 2758929

## HOW TO REACH THE CONFERENCE CENTER

### Airport

**Genova "Cristoforo Colombo", 7 Km**  
By taxi: about 15 min.  
Volabus: Piazza De Ferrari and then via  
San Lorenzo on foot.

### Motorways

**Genova Ovest, 2 km**  
**(A7-A10-A12-A26)**  
After the toll station take the elevated  
road and leave at the first exit.  
Continue past the pedestrian entrance to

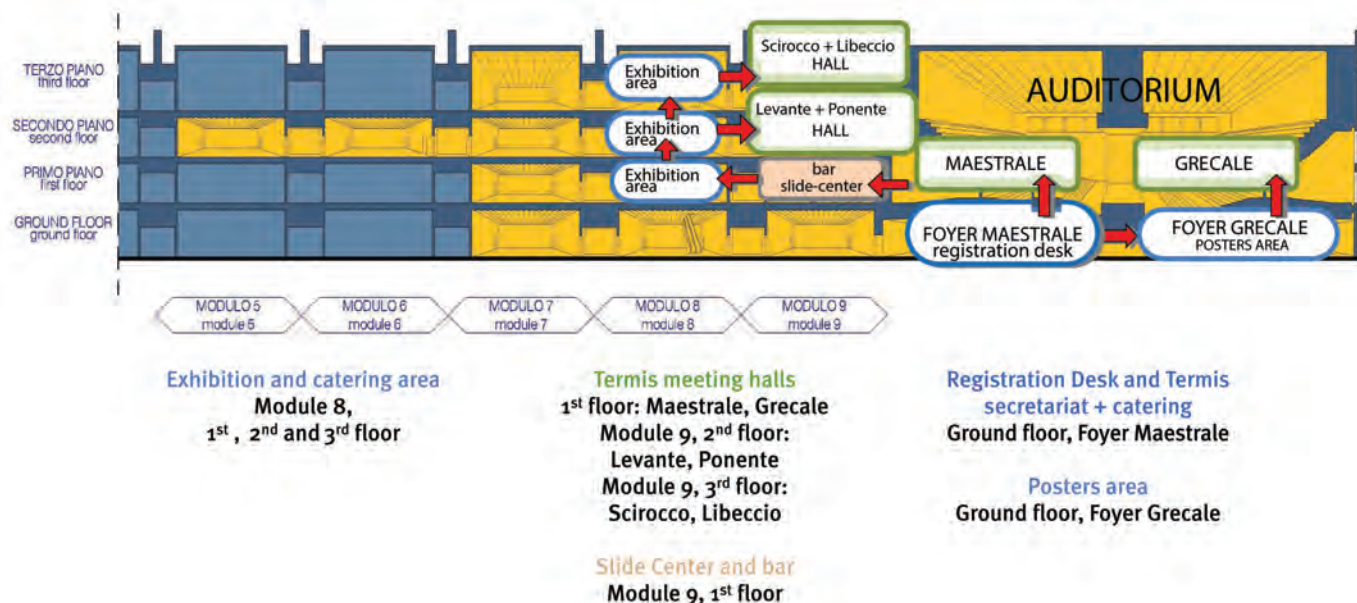
the Porto Antico Area and turn right into  
the access road between the fish market  
and the Guardia di Finanza building.

### Railway Stations

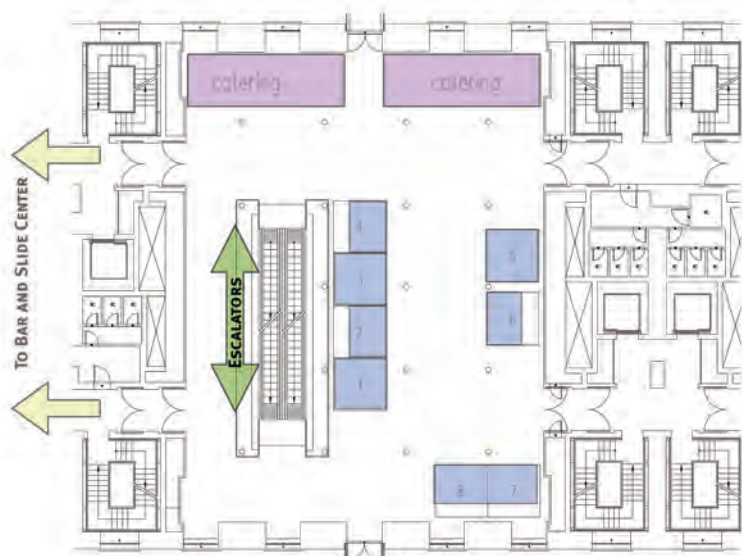
**Genova P. Principe, 1 Km**  
Bus no. 1 to Piazza Caricamento or 10-  
15 min. on foot.  
Metro: trains Genova Brignole direction,  
San Giorgio station stop.

**Genova Brignole, 2 km**  
Bus no. 12-13 to Piazza Caricamento  
Metro: trains Brin direction, San Giorgio  
station stop.

## MAGAZZINI DEL COTONE CONGRESS CENTER BUILDING CROSS SECTION







## Module 8, 1<sup>st</sup> floor

Exhibition and catering area



- 1 - Macopharma
- 2 - Scanco
- 3 - Comecor
- 4 - PreSens
- 5 - regenHU
- 6 - PeproTech
- 7 - Instron
- 8 - Ebers

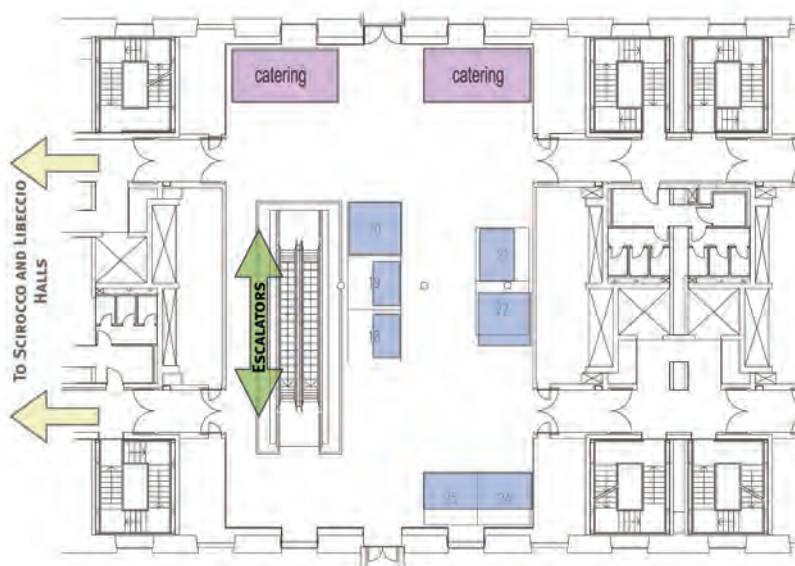


## Module 8, 2<sup>nd</sup> floor

Exhibition and catering area



- 9 - Cellec Biotek
- 10 - Bose
- 11 - Viscofan Biotechnology
- 12 - Bruker
- 13 - Scavo
- 14 - Evonik
- 15 - Miltenyi Biotec
- 16 - EnvisionTEC



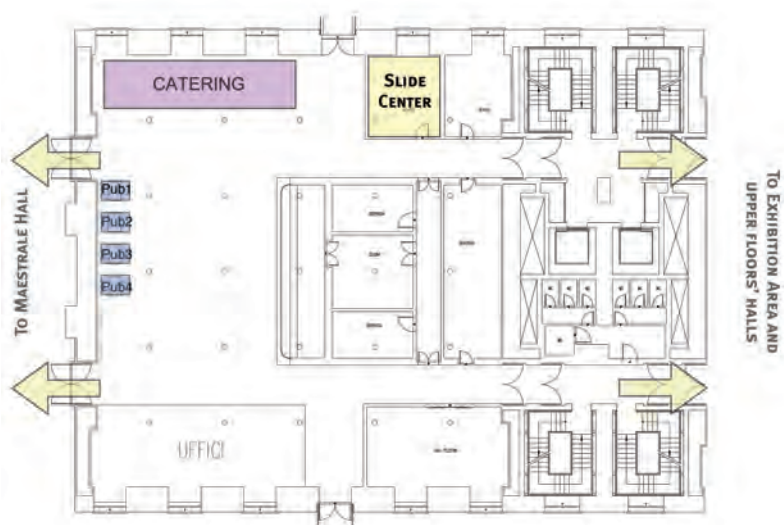
## Module 8, 3<sup>rd</sup> floor

Exhibition and catering area



- 18 - CellSupports
- 19 - Cytomate
- 20 - Profecto Life Sciences
- 21 - Abiel
- 22 - Thermo Fisher
- 24 - GSRAC
- 25 - TERMIS AP 2014



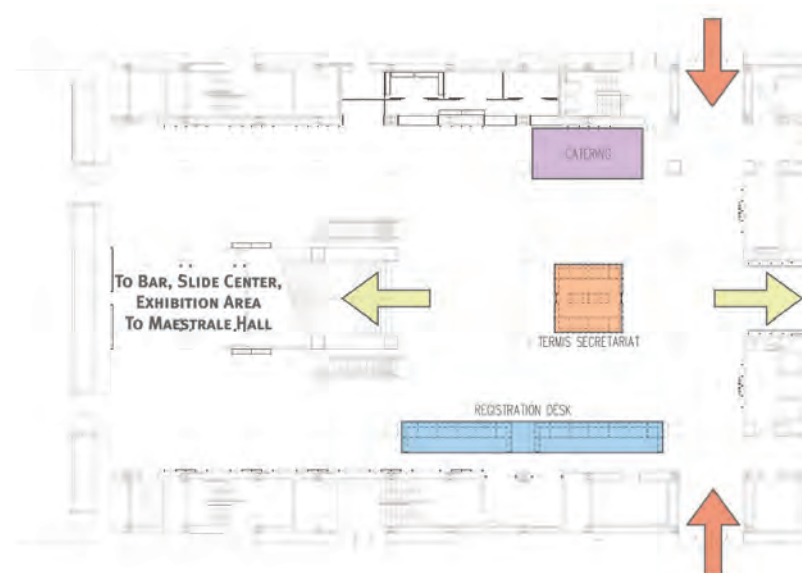


## Module 9, 1<sup>st</sup> floor

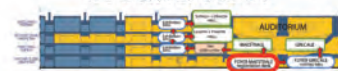
Bar and slide center



- Pub1 - IOP Publishing
- Pub2 - Springer
- Pub3 - Wiley
- Pub4 - Journal of Tissue Engineering and Regenerative Medicine



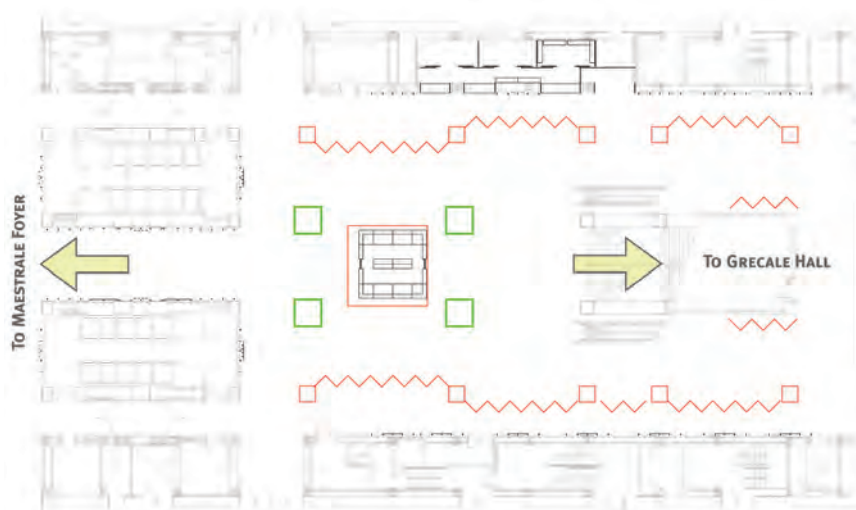
## Foyer Maestrale Ground floor



MAIN ENTRANCE

Registration Desk

Terms Secretariat & SYIS info point



## Foyer Grecale Ground floor



Posters Area  
ARtermis Gallery

— Poster Panels  
— ARtermis Gallery





# CONFERENCE HIGHLIGHTS

## TERMIS-EU 2014 MEETINGS AND ASSEMBLIES

### TERMIS-EU Council Meeting:

June 11 at the end of afternoon sessions - Austro room at 7.30 pm

### TERMIS-EU General Assembly Meeting:

June 13 - Maestrale hall - 2.30 pm

*Everyone is invited to attend the meeting!*

## TERMIS-EU 2014 SYIS ACTIVITIES

### SYIS Reception

A special evening will be organized at Les Rouges (Piazza Campetto 8 - Genova) for SYIS participants on June 12.

### Student-Mentor Meet

During the student-mentor meet on June 12 at 1.00-2.30 pm, students and young investigators will get a chance to interact with world-renowned academic and industrial investigators in the field of Tissue Engineering & Regenerative Medicine. Students and young investigators will be organized in small groups with each mentor and have their questions answered in a relaxed and open discussion.

### SYIS Awards

SYIS will award the three best oral presentations and three best poster presentations by SYIS members with prizes.

A panel of experts, each having taken different but sometimes overlapping directions in their careers, will discuss, debate and offer insight into topics of interest in the field today and provide insights into starting a career in this field.

During the student-mentor meet, students and young investigators will get a chance to interact with world-renowned academic and industrial investigators in the field of Tissue Engineering & Regenerative Medicine. This will be an opportunity for students and young investigators to have their questions answered by established research leaders in a relaxed and open discussion.



Scientific figures have often had a remarkable artistic value, unsuspectedly high at times.

Art and scientific research share in fact the same path aiming to discovery, unveil and immortalize the moment when the sum of the parts suddenly gains a fresh new meaning.

TERMIS EU 2014 Organizing Committee selected the best

scientific and artistic images among those received from the participants.

Images will be displayed in the poster area. All delegates have the chance to vote their favourite images using the special form inserted in the congress bag and put it in the box placed nearby. Opening days for voting from June 11 at 9.00 am through June 13 at 3.00 pm. Artermis winner will be awarded on June 13 during the Closing Ceremony.

## SOCIAL EVENTS: SOCIAL PROGRAM

### June 10 - Welcome Cocktail at Acquario di Genova Sea and the City



Acquario di Genova, the heart of the AcquarioVillage system and the main attraction of the Porto Antico, is the biggest display of aquatic biodiversity in Europe. A thrilling dive into the fascinating waters of the world through 70 tanks hosting 15.000 animals of over 400 species including sea cows, the sirens of the sea, antarctic animals - the only European facility hosting them - penguins, sharks, seals, jelly fish and very colorful fish of the coral barrier. And since July 2013, the new Cetacean Pavilion designed by Renzo Piano: four open-air pools which can host up to 10 bottlenose dolphins.

The Acquario is located just a few minutes' walk from Magazzini del Cotone Congress Center.

Meet us at the Acquario's main entrance at 7.30 pm, you can have a free tour of the structure then a cocktail-buffet will be served to celebrate the Meeting opening.

### June 12 - SYIS Reception at Les Rouges

**A tasteful blend of food, wine and cocktails in the old town center**

Les Rouges is far off an ordinary bar: jazz music warms the rooms, the frescoes on the high ceilings remind us, in case we'd forgotten, that we are on the premises of the Palazzo Imperiale, a building opened in 1560 and designed by architect Giovanni Battista Castello, a prestigious location in the very heart of old town center, just a few minutes' walk from the Congress Center.





## EXCURSIONS: TOUR DESCRIPTION

**June 11 - 2.30 pm**

**Genova Walking City Tour**



Before being a new restaurant, Les Rouges is a project with a personal vision of how a bar should be according to three brothers Benny, Jonatan and Yoel Abarbanel who, after their national and international training in the field of high quality food, decided to combine their experiences to create a new kind of venue, a place of encounter for different types of people. The amazing ice-breaking evening starts at 8.00 pm.

**June 13 - Social Dinner at Palazzo della Meridiana**  
**One night in the superb magnificence of Genova**



Genova welcomes all TERMIS participants in the beautiful scenario of "Palazzi dei Rolli", a system of 42 Genoese buildings that in 2006 became a Unesco World Heritage Site, including all the magnificent Via Garibaldi, originally called "Strada Nuova", or New Street.

**Visiting time from 7.00 to 8.15 pm**

**Do not forget to wear your congress badge!**

Palazzo della Meridiana is located on the corner of Via Garibaldi with Piazza della Meridiana - the sundial drawn on the façade gave the name to both the palace and the square below it - a surprisingly elegant building in which different architectures and styles co-exist, with frescoes and pictorial decorations of great value, as well as a delightful outdoor area. It used to be a 16th Century historic residence, which was reopened to the public in the fall of 2010 after a long and thorough conservative restoration work including the famous covered atrium with the Liberty skylight designed by Gino Coppedè, and the great hall with its large frescoes by Luca Cambiaso.

**Let's meet at the entrance on Salita San Francesco at 8.30 pm**

A journey that will introduce you to one of the most beautiful and unusual cities of Italy, an important commercial port and the largest medieval centre of Europe (in part Unesco site). Since it was founded in the 6th century BC, the city's history has always been closely linked to the Mediterranean Sea. A walking tour of the picturesque narrow streets of the old town, full of life, antique shops and craft shops, sumptuous churches like the Cathedral of San Lorenzo, little squares and frescoed Renaissance building: A full immersion in the Italian lifestyle!

**Meeting Point: Magazzini del Cotone Conference Center**

**Duration: 3 hours**

**Language: English**

### OPTIONAL

At the end of the tour, there is the possibility to participate to a "Pesto class", to learn how to make the famous sauce, cornerstone of the local cuisine. The lesson takes place in the frescoed halls of a noble palace of the XVI century. You will learn to prepare pesto sauce the old way, with marble mortar and wooden pestle. After preparation, a tasting accompanied by typical focaccia bread and a glass of wine will follow.

**June 12 - 9.00 am**

**A day in the Italian Riviera\***



Discover the enchanting villages of Portofino, San Fruttuoso, Santa Margherita and Rapallo, set in the Gulf of Tigullio, with their distinctively brightly-colored houses, typically Mediterranean. They are called The Three Pearls for their beauty and their ancient history. After a drive of about 30 minutes, we reach Rapallo where we will take the boat to San Fruttuoso and then to Portofino. Visit of the famous little bay of Portofino and free time for lunch. In the afternoon, we will take the boat to Santa Margherita, an elegant sea resort, in the past a fishing village. After the visit and free time, the coach will drive us back to Genova.



**Meeting Point: Magazzini del Cotone Conference Center**  
**Duration: 7 hours**  
**Language: English**

*\* In case of bad weather the boat trips will be cancelled and Portofino stop will be replaced by Sestri Levante and its enchanting Baia del Silenzio (by coach).*

**June 12 - 3.00 pm**  
**Genova, taste and traditions**



A tour of historic food stores, traditional shops and emporiums: the atmosphere of the past.

"Forno, drogheria, friggitoria, sciamadda" are words that evoke the flavours and aromas of the past. For centuries these stores have been the focus of life in the neighbourhoods of the old town. They were, and still are, places where people would meet and talk while doing their shopping or just enjoy a meal and a glass of wine.

At the end of the tour, you will participate to a "pesto class", to learn how to make the famous sauce, cornerstone of the local cuisine.

The lesson takes place in the frescoed halls of a noble palace of the XVI century. You will learn to prepare pesto sauce the old way, with marble mortar and wooden pestle. After preparation, a tasting accompanied by typical focaccia bread and a glass of wine will follow.

**Meeting Point: Magazzini del Cotone Conference Center**  
**Duration: 3 hours**  
**Language: English**

**June 13 - 9.00 am**  
**Urban trekking (something unusual...)**



Genoa is a city long and narrow, but also vertical, built up in the hills.

With this "urban trekking", we walk up to the viewpoint of Castelletto, where there is a splendid view of the ancient city and its port.

We continue walking to a very peaceful and unexpected corner of the city, where there is an atmosphere of times gone by: the pharmacy of a convent of XVII century, of the Dominican Friars, who still prepare their own products in the old pharmacy. After the visit of the convent, possibility to have a refreshing granita and return to the center along a downhill, a narrow and ancient mule track.

**Meeting Point: Magazzini del Cotone Conference Center**  
**Duration: 3 hours**  
**Language: English**  
**We recommend to wear sneakers.**

The tours will be guaranteed if the minimum number of 15 participants will be reached. Cancellations are not admitted.

#### **OPTIONAL**

During the cooking classes it is possible to:

- 1) reserve an individual cooking class (you'll have the mortar only for you instead of sharing it with the group) – extra charge 15 euros p.p.
- 2) arrange a professional wine tasting (3 wines) with snacks – extra charge from 20 euros p.p.

#### **For reservations:**

##### **Volver Viaggi**

Via della Libertà 62R - 16129 Genova - Italy

Ph. +39 0100980269

[volverviaggi@incoming-liguria.it](mailto:volverviaggi@incoming-liguria.it)

[www.incoming-liguria.it](http://www.incoming-liguria.it)





# INFORMATION FOR SPEAKERS AND POSTER DISPLAY

## ORAL PRESENTATIONS

The speakers ready room is placed at the 1st floor. All speakers are requested to visit this room and check their oral presentations at least one hour before the beginning of the session or the previous afternoon if the speech is scheduled in a morning session.

In order to ensure the proper development of all symposia and sessions, speakers are advised as follows:

Speakers are requested to be in their session hall at least 10 minutes before the start of the session; and we request to introduce yourself to the chairs of the session.

Each time slot for oral presentation (except for Plenary sessions and some Keynote presentations) consists on a total of 12 min for presentation + 3 min Q&A.

Each chairperson will monitor all presentations timekeeping.

Please be aware that the program of the meeting is very tight, and it will be very important to use only the time that is established for each presentation. For that reason, control of the time used for each oral presentation will be essential for the smooth development of all sessions, and no exceptions will be allowed by the symposia chairs.

Each session room will have a computer. No personal computers will be allowed.

Mac users must check if their presentations are compatible with our Windows based system.

Please check all your videos

properly run with our support team before your presentation.

No one will be allowed to present from their own laptops.

Speakers are requested to bring their presentations to the Speaker room on USB support for ease of transfer.

Speakers will be provided with wireless microphone and a laser pointer during the time of their presentations.

Speakers are requested to familiarise themselves with the room prior to the presentation.

## POSTERS DISPLAY AND PRESENTATIONS

A staff member on-site will help you locate the panel assigned to your poster

**Posting time:** same day of presentation, from 8.00 am until 11.15 am

**Removal time:** same day of presentation, from 5.00 pm until 7.00 pm.

Any posters displayed at the wrong time will be removed and are not the responsibility of the conference.

**Format of posters:** We recommend a 70x100 cm, portrait format. Landscape format is not allowed.

Adhesive Velcro dots (provided by the organization of the meeting) should be used to mount the poster on the board. Push pins are not allowed. No multimedia facilities will be provided for poster display.



The Poster Area is located at the Foyer Grecale Floor, next to the Registration Area. Posters will be on display during one full day of conference.

Dedicated poster sessions are scheduled during mid-day break from 1.30 pm to 2.30 pm.

During the poster sessions, presenters are kindly requested to remain in the Poster Area.





## TERMIS EU AWARDS



**C. James Kirkpatrick** has a triple doctorate in science and medicine (MD, PhD, DSc) from the Queen's University of Belfast (N. Ireland) and since 1993 is Professor and Chairman of Pathology at the Johannes Gutenberg University (JGU) in Mainz, Germany. He has a special interest in human cell culture techniques to study cell-biomaterial interactions, and has pioneered complex three-dimensional co-culture systems. His "REPAIR-lab", is a member of the European Institute of Excellence on Tissue Engineering and Regenerative Medicine. He is a former President of both the German and the European Society for Biomaterials (George Winter Award 2008), and in 2010 he was awarded the Chapman Medal from the Institute of Materials, Minerals & Mining, London, UK for "distinguished research in the field of biomedical materials". Current work is on nanoparticle interactions with the air-blood and blood-brain barriers, as well as on adult stem cells in vascularization of tissue engineered constructs for hard and soft tissue, and in regeneration of the upper respiratory tract.

**Katja Schenke-Layland** received her master of science (M.Sc.) in biology, psychology and sociology in 2001, and her doctorate degree (Dr.rer.nat.) in biology with focus on cardiovascular tissue engineering in 2004 from the Friedrich Schiller University Jena, Germany. She worked at the Saban Research Institute Los Angeles, USA, and joined in 2005 the cardiovascular stem cell lab at the University of California in Los Angeles (UCLA). She currently holds a dual appointment as Professor of Biomaterials at the University Women's Hospital Tübingen, and as the Head of the Department of Cell and Tissue Engineering at the Fraunhofer Institute for Interfacial Engineering and Biotechnology (Fraunhofer IGB) in Stuttgart, both in Germany. She is also an Adjunct Associate Professor at UCLA and an Executive Editor for Advanced Drug Delivery Reviews. Her research focuses on the development of stem cell-based therapies, and the creation and monitoring of 3D tissues, particularly in the field of cardiovascular regenerative therapies. Katja Schenke-Layland has published 73 articles, 23 as first and 27 as senior author, with an h-index of 23 and over 1600 total citations.



TERMIS - EU 2014 CHAPTER MEETING - GENOVA/ITALY 10/13 JUNE 2014 - SCIENTIFIC PROGRAM						
Day	TUESDAY 10					
Hall	MAESTRALE	GRECALE	SCIROCCO	LIBECCIO	LEVANTE	PONENTE
11.00	REGISTRATION					
16.00 16.30	Opening Chairs: Cancedda R - Italy, Migliaresi C - Italy					
16.30 17.15	L1 Plenary Lecture: Giacca M, Italy Can we achieve cardiac regeneration in humans?					
17.15 17.45	L2 President Address: Williams DF, USA The global vision for regenerative medicine					
17.45 18.15	L3 Winner Termis EU Young Scientist Award Schenke-Layland K, Germany					
18.15 18.45	L4 Winner Termis EU Career achievement Award Kirkpatrick CJ, Germany					
19.30	WELCOME COCKTAIL					



TERMIS - EU 2014 CHAPTER MEETING - GENOVA/ITALY 10/13 JUNE 2014 - SCIENTIFIC PROGRAM

WEDNESDAY 11									
	MAESTRALE	GRECALE	SCIROCCO	LIBECCIO		LEVANTE	PONENTE		
Hall									
8.30 9.00	Plenary Lecture: Okano T - Japan 3D tissue reconstruction by cell sheet tissue engineering Chair: Reis R - Portugal								
9.15	Stem cell differentiation on 3D matrices	Injectable scaffolds	Translational medicine Insights from rare disease research		Strategies towards physiological dynamic cultivation and automatization	New magnetic based strategies for regenerative medicine	Executable cell biology for tissue engineering and regenerative medicine		
	Chair: Levenberg S - Israel	Chair: Wang W - Ireland	Chair: Pacifici M - USA		Chairs: Kasper C - Austria, Martin I - Switzerland	Chairs: Gomes M - Portugal, El Haj A - United Kingdom	Chairs: Post J - The Netherlands, Geris J - Belgium		
30'	K1	K2	K3	K4	K5	K6			
	Deciphering extrinsic regulation of stem cell differentiation in 3D	In-situ formed stem cell embedded bioactive hydrogel dressing for wound healing	Chemical biology of heparan sulfates: from insights to applications in therapeutics and tissue regeneration	Bioengineered microenvironments for mesenchymal stem cells	Magnetic technologies for therapeutic targeting and regenerative medicine	Modeling chondrocyte response using systems biology and biomechanics approach	Modeling chondrocyte response using systems biology and biomechanics approach		
	Lutolf M - Switzerland	Wang W - Ireland	Turnbull J - United Kingdom	Raimondi M - Italy	Polyak B - USA	Alexopoulos L - Greece	Alexopoulos L - Greece		
15'	OP1	OP6		OP16	OP21	OP26			
	Engineering of cell-free osteo-inductive bone graft substitutes in 3D perfusion bioreactors using a death-inducible hMSC line	Injectable and self-healing supramolecular hydrogels for tissue engineering applications		Engineering of a contractile cardiac patch with an intrinsic vasculogenic potential	Synthesis and characterization of gold/iron oxide hybrid nanoparticles for multiple biomedical applications	Morpheus: a user-friendly modeling environment for multiscale and multicellular systems biology	Morpheus: a user-friendly modeling environment for multiscale and multicellular systems biology		
	Bourguine P, Pippenier B, Scherberich A, Martin I - Switzerland	Dupin D, Casuso P, Pérez-San Vicente A, Diaz N, Odrizola I, Grande Hans J, Loïnaz I - Spain		Grussemeyer T, Grapow M, Martin I, Massai D, Eckstein F S, Banfi A, Scherberich A, Marsano A - Italy	Benetti E, Mangilio D, Speranza G, Migliarese C - Italy	Starruß J, de Back W, Brusch L, Deutsch A - Germany	Starruß J, de Back W, Brusch L, Deutsch A - Germany		
15'	OP2	OP7	K3bis	OP17	OP22	OP27			
	Neural differentiation of human bone marrow-derived mesenchymal stem cells in three-dimensional collagen matrix combined with pulsed electromagnetic field	Cell microencapsulation using electrohydrodynamic spraying for minimally invasive tissue repair	Insights into cartilage repair from the study of hereditary multiple exostoses	Microcarrier-based spinner flask bioreactor cultivation of human hamstring tenocytes	Magnetic cells with surface modified Fe3O4 spherical and rod-shaped nanoparticles for tissue engineering and regenerative medicine applications	The epigenetic changes of the stem cell epigenome during massive expansion - a computational model approach	The epigenetic changes of the stem cell epigenome during massive expansion - a computational model approach		
	Choi Y-K, Yoon H-H, Seo Y-K, Park J-K - Republic of Korea	Kelly L, Guillaume O, Naqvi Syeda M, Robinson A, Buckley C - Ireland	Pacifici M - USA	Dehne I, Stich S, Schulze-Tanzil G, Ibold Y, Müller C, Abbas A, Kohl B, Ullah M, John T, Sittlinger M, Ringe J - Germany	Gil S, Correia C R, Mano João F - Portugal	Salle J, Przybilla J, Loeffler M - Germany	Salle J, Przybilla J, Loeffler M - Germany		
15'	OP3	OP8	OP12	OP18	OP23	OP28			
	3-D in vitro neural circuits from pluripotent stem cells	Comparison of synthetic versus biologic hydrogel scaffolds in spinal cord injury treatment	Collagen-based multilayered scaffold shows potential for osteochondral defect repair	Skeletal tissue engineering bioreactors: challenges in design and utilization	Targeted magnetic nanoparticles - remotely controlled mechanotransduction for injectable cell therapy	Executable biology for rapid model prototyping in synthetic biology: implications for regenerative medicine and tissue engineering	Executable biology for rapid model prototyping in synthetic biology: implications for regenerative medicine and tissue engineering		
	Guyen S, Boyden E S, Demirci U - USA	Kubikova S, Tukmachiev D, Forostyak S, Hejcl A, Horak D, Plichta Z, Proks V, Medberry C, Sykova E - Czech Republic	Gentili C - Italy	Obradovic B - Serbia	Hendstock J, Rotherham M, El Haj A - United Kingdom	Sanassy D - United Kingdom	Sanassy D - United Kingdom		
15'	OP4	OP9	OP13	OP19	OP24	OP30			
	Development of fibrin hydrogels functionalized with covalently bound α6β1 ligands for neural stem cell (MSC)-based transplantation therapies	Injectable, biodegradable porous microspheres for cell delivery	Acetular skeletal muscle matrix ameliorates atrophic diaphragm	Novel successful cytokine-free culture of acute leukemic cells in a perfused hollow-fiber bioreactor	Structural and cell-matrix properties of magnetically aligned collagen-HA matrices	ANIMO: a tool for modeling biological pathway dynamics	ANIMO: a tool for modeling biological pathway dynamics		
	Silva J, Laundos T, Quelhas P, Pêgo A P, Amaral I F - Portugal	Quiachi O, Bray S, Gill D, Baki A, Chowdhury S, Quirk R, Shakesheff K, Rahman G - United Kingdom	E, Dedja A, Franzin C, De Coppi P, Pozzobon M - Italy	Rende M, Panoskalis N, Morilla R, Mantalaris A - United Kingdom	Nozak I, Voytik-Harbin S L, Neu C P - USA	Schivo S, Scholma J, Karperien M, Langerak R, van de Pol J, Post J N - The Netherlands	Schivo S, Scholma J, Karperien M, Langerak R, van de Pol J, Post J N - The Netherlands		
15'	OP5		OP14		OP25	OP29			
	Enhanced osteoblastic differentiation of mesenchymal stem cells by sandwich culture with bio-functional hydrogels	Cationized hyaluronan-based gene delivery platform for intervertebral disc regeneration	From a rare disease to an improved bone healing therapy	Perfusion bioreactor expansion and dynamic harvest preserve in vivo bone forming capacity of osteoprogenitor cells	Remote activation of Wnt signalling pathways in human mesenchymal stem cells using magnetic nanoparticle technology	ECHO: the executable chondrocyte	ECHO: the executable chondrocyte		
	Yamamoto M, Toda H, Tabata Y - Japan	Srivastava A, Cunningham C C, Grad S, Alimi M, Pandit A, Wall G J - Ireland	Degenkolbe E, Schwarz C, Ott C-E, Lienau J, Ploger F, Mundlos S, Duda G, Willie B, Seemann P - Germany	Sonnart M, Papantonou I, Luyten F P, Schrooten J - Belgium	Rotherham M, El Haj A - United Kingdom	Scholma J, Schivo S, Kerkhofs J, Langerak R, Karperien M, van de Pol J, Geris J, Post J N - The Netherlands	Scholma J, Schivo S, Kerkhofs J, Langerak R, Karperien M, van de Pol J, Geris J, Post J N - The Netherlands		
11.00	COFFEE BREAK								



**LUNCH AND POSTER SESSION**



WEDNESDAY 11						
	MAESTRALE	GRECALE	SCIROCCO	LIBECCIO	LEVANTE	PONENTE
Hall						
14.30 15.00	Debate - Traditional publishing versus online publishing Moderator: Kirkpatrick J - Germany    Discussants: Williams D - USA, Chap C - UK					
15.15	Bone regeneration and osteoinduction - 1	Synopsis: advanced biomaterials based on modified natural materials for tissue engineering - 1	Biomaterials for cell culture -1	Updates in the chondrogenesis from stem cells (Republic of Korea EU joint symposium) - 1	Gene therapy in tissue engineering	Veterinary regenerative medicine – Clinical patients as potential models for naturally occurring disease
	Chair: Daculsi G - France	Chair: Seliktar D - Israel	Chair: Ito Y - Japan	Chairs: Lee JH - Republic of Korea, Lim JOG - Republic of Korea	Chairs: Komlev V - Russian Federation, Wang W - Ireland	Chairs: Ribitsch I - Austria, Nobert K - USA
30'	Rh-bmp-7 In bone regeneration: which evidences? Caloni G M - Italy	K15 Evaluation of biomaterials derived from ECM components Hilborn J - Sweden	K16 Organs on a chip: the future of personalized medicine? Healy K - USA	K17 Chondrogenesis from stem cells: iPSC vs. MSCs Im GI - Republic of Korea	K18 Combinatorial development of biomaterials for tissue engineering and drug delivery Anderson D - USA	K19 (20 min) Horses as translational model for tendon regenerative medicine: state of the art Crovace A - Italy
15'	OP60 Bioactive ceramics for tissue engineering and regenerative medicine derived from marine sponges Bacros A, Aroso I M, Silva T H, Mano J F, Duarte A R C, Reis R L - Portugal	OP64 Engineering a conductive, tough and super-resilient hydrogel for cardiac regeneration Annabi N, Shin S-R, Miscuglio M, Aishar M, Mithieux S, Dokmeci M R., Tang X S, Weiss A S, Khademhosseini A - Australia	OP72 Control of cell culture microenvironment by a modular ECM-mimicking gelatin-based substrate Barthès J, Vrana N E, Ozcelik H O, Senger B, Schaaf P, Philippe L - France	OP76 Hypoxia stimulates PTHrP and Zfp521 to attenuate hypertrophy in mesenchymal stem cell derived cartilage Browe D, Eliman S, Coleman C, Barry F - Ireland	OP81 Development of gene activated matrices for tissue regeneration in osteoarthritis Anton M, Kostova Y, Schilling U, Eglin D, Sapet C, Borget P, Daculsi G, Alini M, Plank - Germany	OP81 Collagen-based multilayered scaffold shows potential for osteochondral defect repair Livingstone I J, Ramesh C A, Brady R T, Brama P, Gleeson J P, O'Brien F J - Ireland
15'	OP61 Tissue engineered hypertrophic cartilaginous constructs facilitate early bone formation in two orthotopic defect models Cunniffe G, Matsiko A, Thompson E, O'Brien F, Kelly D - Ireland	OP65 Microcapsules compatible for muscular injection, engineered to support mesenchymal stem cell (MSC) proliferation and long-term survival Blocki A, Beyer S, Dewavrin J-Y, Vuddagiri S, Peh P, Wang Y, Raghunath M, Bhakoo K - Singapore	OP73 Microenvironmental hypoxia modulates functional state and energy metabolism of mesenchymal stromal cells Buravkova L, Pogodina M, Rylova Y, Andreeva E - Russian Federation	OP77 Tissue-engineered tracheal reconstruction using three-dimensionally printed artificial tracheal graft: preliminary report Shin YS, Choi J W, Park J K, Kim WS, Hong H J, Park J H, Park S A - Republic of Korea	OP83 Novel oligochitosan-mediated gene delivery to mesenchymal stem cells loaded onto collagen scaffolds promotes bone regeneration Rattery B, Tierney E, Curtin C, Cryan S-A, O'Brien F - Ireland	OP83 Analyses of adult stem cells and platelet rich plasma applications on injured sheep tendons Patruno M, Perazzi A, Maccatrozzo L, Iacopetti I, Martinello T - Italy
15'	OP62 Osteogenicity, osteoinduction, what are the fundamental properties for a smart bone matrix in bone regeneration Daculsi G - France	OP66 Biomimetic fibrous mats for wound healing Carmagnola L, Chiono V, Gentile P, Nardo T, Palamia R, Hatton P, Ciardelli G - Italy	OP74 The effect of long-term 3D culture on cell morphology and behaviour Chhatwal A, Przyborski S - United Kingdom	OP78 Division-linked phenotypic changes of chondrocytes cultured in vitro Dühr R, Wendt D, Martin I - Switzerland	OP84 Novel iPSC-based strategy to correct the bleeding phenotype in haemophilia A Talmon M, Olqasi C, Merlin S, Rinaldo G, Lombardo A, Naldini L, Raya A, Schinco P, Messina M, Follenzi A - Italy	OP84 Adaption of a vascularized meniscus model as a potential model for equine meniscus regeneration – preliminary results Ribitsch I, Reboredo J, Kremer A, Ade N, Dürr J, Schramel J P, Peham C, Egerbacher M, Jenner F, Wallies H - Austria
15'	OP63 Growth factor-engineered fibrous scaffolds for therapeutic applications in bone tissue engineering Kim I-H, Kang M-S, Kim J-J, Kim M, Kim H-W - Republic of Korea	OP71 Intervertebral disc regeneration using slow BMP-2 release from a fibrin-hyaluronate hydrogel in a large animal model Kaplan KM, Hoogendoorn R W, van Royen BJ, Smit TH, Yayon A, Weber FE, Helder MN - The Netherlands	OP75 Bio-orthogonal and combinatorial approaches for the design of binding growth factors Ito Y - Japan	OP79 The control of osteochondral regeneration in rabbits using type I collagen/fibrin scaffold enriched with thrombocytes and chitosan/ poly-ε-caprolacton microparticles Filova E, Tonar Z, Lukasova V, Buzgo M, Litvinac A, Rampichova M, Benesova J, Plencner M, Mickova A, Benesova J, Soural M, Kralickova A, Kralickova M, Amler E - Czech Republic	OP82 Neuropeptide Y Y1 receptor antagonism: a novel anabolic tool for bone regeneration Sousa D M, Baldoock P A, Enriquez Ro E, Lamghari M, Herzog H - Portugal	OP82 Animal health: veterinary regenerative medicine Nobert K - USA
16.45	COFFEE BREAK					



## CLOSING



## THURSDAY 12

**COFFEE BREAK**







THURSDAY 12									
Day	Hall	MAESTRALE	GRECALE	SCIROCCO	LIBECCIO		LEVANTE	PONENTE	
14.30 15.00	L8	<b>Industry day lecture 2 - Clinical / commercial translation: sharing and learning from real cases</b> Pellegrini G - Italy <b>Hurdles in a Successful Example of Stem Cell-based Regenerative Medicine</b> Chair: Richards G - Switzerland							
15.15		Biologically derived materials from natural resources - 1	Joint TERM - 1	Clinical/Commercial translation - Sharing and learning from real cases - 1	Innovative approaches and technologies for tissue engineering and regenerative medicine	Diabetes and regenerative medicine	Fetal derived cells and their derivatives in regenerative medicine applications		
		Chairs: Neves N - Portugal, Silva TH - Portugal	Chairs: van Griensven M - Germany, Gentili C - Italy	Chair: Barry F - Ireland	Chair: Huttmacher D - Australia	Chair: Karaöz E - Turkey	Chair: Parolini D - Italy		
30'	K39	Enhancing soft matter mechanics via metal coordination: Lessons from the mussel byssus	Increased osteogenesis after delivering chemically modified messenger RNA encoding BMP-2 in mesenchymal stem cells	Platelet derivatives: new opportunities for the industry	Engineered hydrogel biomaterials for regenerative medicine applications	Signals that control differentiation of ES/iPS cells into pancreatic beta cells	An update on the immunomodulatory properties of human amniotic membrane: envisioning clinical use		
		Harrington M - Germany	Rosado Balmayor E - Germany	Mastrogiacomo M - Italy	Khademhosseini A - USA	Kume S - Japan	Parolini D - Italy		
15'	OP167	Myo- and osteo-conductive free-standing membranes	Can liposiprate be considered an autologous injectable active scaffold to repair cartilage defects?	Tissue dissociation and primary cell isolation using recombinant collagenases class I and II	Morphological modification of conducting polymers	Mesenchymal stromal cells efficiently differentiate into insulin-producing cells in pancreatic islet microenvironment both in-vitro and in-vivo	The regenerative potential of the amniotic fluid stem cells secretome		
		Cardade S, Monge C, Almadoar J, Guillot RL, Mano J, Picant C - Portugal	Bosetti M, Borroni A, Follenzi A, Tremolada C, Cannas M - Italy	Salamone M, Campora S, Saladino S, Pampalona M, Ghersi LG - Italy	Biggs MJ, Vallejo-Giraldo C, Pandit A - Ireland	Karaoz E, Okcu A, Unal Halbutogullari ZS, Subasi C, Saglam O, Aksoy Aa, Duruksu G - Turkey	Bollini S, Ulivi V, Tasso R, Bosco MC, Becherini P, Varesio L, Coviello D, Cancedda R, Gentili C - Italy		
15'	OP168	Isolation and characterization of acid and pepsin-solubilized collagen from squid mantle (Ioligo vulgaris)	Expanded versus not expanded mesenchymal stem cells for osteoarthritis treatment in an experimental sheep model	Supercritical CO2: the future for cleaner and safer tissues for regenerative medicine	Spectroscopic profiling of mesenchymal stem cells and their progeny	Polymetric composite dressings: an efficient strategy to improve diabetic wound healing	Systemic therapeutic effect of placental expanded (PLX) cells following local administration		
		Cozza N, Jankangram W, Bonani W, Motta A, Migliaresi A - Italy	Desando G, Cavallo C, Santoni F, Giavaresi G, Nicolai Aldini N, Parrilli A, Martini L, Borsari V, Fini M, Facchini A, Grigolo B - Italy	Link D, Siddappa R, Thio M, Babychan B, Valster H - The Netherlands	Brauchle E, Carvajal Berrio D, Schenke-Layland K - Germany	Perez-Amadio S, Rubio N, Vila OF, Castano O, Marti J, Planell JA, Blanco J, Engel E - Spain	Pinzur L, Zahavi E, Ofir R, Aberman Z, Volk HD, Reinke P, Akyluz L, Gaberman E, Gorodetsky R, Chatterjee P, Mitchell B - Israel		
15'	OP169	Marine origin collagen membranes for drug delivery	Effect of pore shape gradient on human mesenchymal stem cell differentiation in 3D scaffolds for osteochondral regeneration	Biological activity of a standardized freeze-dried platelet derivative to be used as cell culture medium supplement	Multi-layered and multi-cellular patterned vessels engineered using an automated tube fabrication device	Novel methodology using peripheral blood mononuclear cells for simple and effective vascular and tissue regenerative cell therapy for diabetic patients	Cross-talk between human amniotic derived cells and host tendon supports tissue regeneration		
		Marques ALP, Domingues A, Moreira-Silva J, Perez-Martin RI, Sotelo CG, Silva Tiago H, Reis RL - Portugal	DLuca A, Peschkov N, Van Blitterswijk C, Moroni L - The Netherlands	Muraqlia A, Ottonello C, Spanò R, Dorin B, Strada P, Grandizio M, Cancedda R, Mastrogiacomo M - Italy	Dixon JE, Ohman R, Shah DA, Morris GE, Bridge J, Rose F, Hall S, Hall G, Wells K, Shakesheff KM - United Kingdom	Tanaka B, Masuda H, Arita K, Jitsukawa S, Sukmawati Di, Hirano R, Fujimura S, Okada K, Asahara T, Mizuno H - Japan	Russo V, Berardinelli P, Gatta V, Muttini A, Stuppia L, Parolini O, Mattioli M, Barboni B - Italy		
15'	OP170	Mineralized salmon collagen - brushite versus hydroxyapatite	A co-culture of chondrons and infra-patellar fat pad derived stem cells isolated from osteoarthritic joints enhances chondrogenesis in both normoxic and hypoxic environments	Development of the first bio-artificial ambulatory lung	ELR-fibrin hybrid material for cardiovascular tissue engineering	Differentiation potential of mouse embryonic stem cells into insulin producing cells in pancreatic islet microenvironment	Transplanted umbilical cord mesenchymal stem cells modify the in vivo microenvironment enhancing angiogenesis and leading to tissue regeneration		
		Bernhardt A - Germany	Eswaramoorthy R, Almeida H V, Critchley S E, Downey R E, Mulhail KJ, Kelly DJ - Ireland	Borchers K, Schandar M, Schneider J, Matheis G - Germany	González de Torre J, Alonso RM, Rodríguez CJ, Weber M, Jockenhoevel S, Mala P - Germany	Yilmaz J, Eker SA, Okcu A, Subasi C, Karaoz E - Turkey	Todeschi MB, El Backy R, Capelli C, Introna M, Daga A, Cancedda R, Mastrogiacomo M - Italy		
16.45		COFFEE BREAK							



THURSDAY 12						
	MAESTRALE	GRECALE	SCIROCCO	LIBECCIO	LEVANTE	PONENTE
Hall						
17.00	Biologically derived materials from natural resources - 2	Joint TERM - 2	Clinical/Commercial translation - Sharing and learning from real cases - 2	Innovative approaches and technologies for tissue engineering and regenerative medicine	Injectable devices or scaffolds for bone tissue regeneration: calcium phosphates versus bioactive glass-ionomer cements	Skin and fat tissue engineering – clinical relevance and translation
	Chairs: Reis RL - Portugal, Motta A - Italy	Chairs: van Osch J - The Netherlands, Stoddart M - Switzerland	Chair: Papadimitropoulos A - Switzerland	Chair: Demirci U - USA	Chairs: Hattori P - United Kingdom, Tampieri A - Italy	Chair: Keck M - Austria
30'	Morphogenetically active bio-scaffolds for bone tissue engineering Müller WEG - Germany	OP304 <b>A one-step combined therapy for cartilage repair: development &amp; performance assessment</b> da Silva Morais A, Correia C, Vilela C, Gertrudes A, Santos TC, Oliveira JM, Sousa RA, Reis RL - Portugal	<b>Scaffold assisted cartilage repair: challenges and pathways towards commercialization</b> Endres M - Germany	OP203 <b>Multifaceted polymer matrix design to induce cell morphogenesis</b> Freudenberg U, Tsurkan M, Chwalek K, Prokoph S, Zieris A, Werner C - Germany	<b>Injectable bone graft substitutes &amp; cements based on bioactive glass-ionomer chemistry</b> Hattori P - United Kingdom	<b>Skin and fat tissue engineering – clinical relevance and translation</b> Kamolz L - Austria
		OP305 <b>Towards tissue engineered constructs mimicking osteochondral tissue: embedding of hMSC as single cells and small microaggregates into anisotropic alginate scaffolds</b> Schütz K, Milani F, Gelinsky M - Germany	K47	OP204 <b>Fibrin-hyaluronic acid interpenetrating double network with improved fibrin stability by simultaneous and orthogonal enzymatic and disulfide cross-linking</b> Hilborn J, Zhang Y, Heher P, Wolbank S, Redl H, Ossipov D - United Kingdom	K48	<b>Use of dermal templates for skin regeneration</b> Wieland M - Germany
15'	OP191 <b>A self-organising biomimetic collagen/nano-hydroxyapatite/GAG scaffold for spinal fusion</b> Sharma A, Scott H, Brand D, Ye H, Law C, Czernuszka J - United Kingdom	OP195 <b>Intra-articular injection of mesenchymal stem cells leads to reduced inflammation and cartilage damage in murine antigen-induced arthritis</b> Kebae D, Carthwright A, Askari A, El Haj A, Middleton J - United Kingdom	<b>Decellularised organs for the treatment of congenital malformations</b> Urban L, De Coppi P - United Kingdom	OP205 <b>Polymer/Hydrogel hybrid scaffold fabrication using 3D printing system</b> Lee J, Lee SH, Jang SH, Park SA, Kim WD - Republic of Korea	OP211	<b>Cryopreservation of adipose tissue derived adult stem cells</b> Deviredy R - USA
15'	OP192 <b>Marine inspired biomaterials: from sea up to tissue regeneration approaches</b> Silva J H, Reis RL - Portugal	OP196 <b>Correlating mesenchymal stem cell delivery with pain in an OA rat model</b> Markides H, Sagar DR, Kehoe O, Morris RH, Chapman V, El Haj AJ - United Kingdom	<b>Industrialization of tissue engineering bioreactor technologies: the OPB (Oscillating Perfusion Bioreactor) case study</b> Turrisi C, Weber D, Moretti M, Arrighi C, Talò G, Maniero S, Riboldi SA - Italy	K49 <b>Novel pNIPAM/clay based hydrogels to tackle degenerative disc disease</b> Sammon CS, Le Maitre C, Mader K - United Kingdom	OP212	<b>Extracorporeal shockwave treatment in vitro: adipose derived stem cells show increased stemness and multipotency</b> Schub.CMAP, Heher P, Weihs AM, Wolbank S, Mittermayr R, Redl H, Rünzler D, Teuschl AH - Austria
15'	OP193 <b>Bioactive, a multifunctional inorganic polymer: bioseed for the synthesis of calcium phosphate-based bone</b> Wang X, Müller WEG - Germany	OP197 <b>Synthetic platform for elucidating and recapitulating endochondral ossification</b> Sarem M, Arya N, Wiese S, Martin I, Shastri VP - Germany	<b>An improved cartilage digestion method for research and clinical applications</b> Centola M, Tonarelli B, Hendriks J, van den Doel M, de Jong W, Feliciano S, Papadimitropoulos A, Piccinini E, Geurts J, Martin I, Barbero A - Switzerland	OP207 <b>Cell encapsulated hydrogel microspheres as "building blocks" for producing 3D constructs</b> Sher P, Correia C, R, Mano JF - Portugal	OP213	<b>Differential response of human adipose tissue-derived mesenchymal stem cells, dermal fibroblasts and keratinocytes to burn wound exudates: potential role of skin specific chemokine CCL27 (1)</b> van den Broek LJ, Kroeze KL, Waaijman T, Breetveld M, Sampat-Sardjoeersad SC, Niessen FB, Middelkoop E, Scheper RJ, Gibbs S - The Netherlands
15'	OP194 <b>Ratio of synthetic to natural components in GelrinCO, a hydrogel for cartilage repair, is optimal for chondrogenic differentiation of bone marrow stem cells</b> Goldshmid R, Cohen S, Shachaf Y, Sarig-Nadiv O, Kupershmith I, Wechsler R, Seliktar D - Israel	OP198 <b>A novel in-vitro model correlates to in-vivo implant-tissue interactions of GelrinCO, a biosynthetic hydrogel for cartilage repair</b> Satzig-Nadiv O, Cohen S, Shachaf Y, Kupershmith I, Wechsler R - Israel	<b>N-glycosylation profile of human MSC during adipogenesis - towards a next generation of markers for tissue engineering</b> Ringe J, Hamouda H, Ullah M, Stittinger M, Tauber R, Blanchard V - Germany	OP208 <b>Tissue engineering scaled-up, anatomically accurate osteochondral constructs for joint resurfacing</b> Messallati J, Sheehy E, Buckley C, Kelly D - Ireland	OP214	<b>Engineering vascularized adipose tissue using the stromal vascular fraction and fibrin hydrogels</b> Wittmann K - Germany
18.45	<b>Plenary Lecture: Badyak SF - USA</b> <b>Mechanisms of biologic scaffold remodeling</b> Chair: Redl H - Austria					
19.15						
20.00						
SYSIS WELCOME RECEPTION						



TERMIS - EU 2014 CHAPTER MEETING - GENOVA/ITALY 10/13 JUNE 2014 - SCIENTIFIC PROGRAM

FRIDAY 13						
	MAESTRALE	GRECALE	SCIROCCO	LIBECCIO	LEVANTE	PONENTE
8.30 9.00	Plenary Lecture: Motta A - Italy Nature as a creative source of materials and strategies for TE applications Chairs: Cancedda R - Italy, Migliaresi C - Italy					
9.15	Whole Organ Engineering  Chair: Remuzzi A - Italy	Bioinsructive and biomimetic hydrogels for tissue engineering  Chair: Mano J - Portugal	Paracrine activity of stem cell  Chair: Murphy M - Ireland	Bone tissue engineering - New developments in surgery (TERMIS Group Musculoskeletal Tissue Engineering)  Chair: Schuckert KH - Germany	Vascularization of bone constructs  Chairs: Migliaresi C - Italy, Fuchs S - Germany	Regeneration and inflammation - Biocompatibility issues  Chairs: Khang G - Republic of Korea, Lee J-I - Republic of Korea
30'	Renal transplantation: where are we coming from and what we would like (possibly) to achieve Remuzzi G - Italy	Towards an injectable artificial ECM Cabello JCR - Spain	From cells to cell products: the fascinating journey of stem cell therapy for tissue repair Gnecchi M - Italy	Models of bone tissue engineering: comparison of different techniques in oral maxillofacial surgery Schuckert KH - Germany	Role of myeloid cells as accessory cells for neovascularization strategies Fuchs S - Germany	Regeneration and inflammation: biocompatibility issues Khang G - Republic of Korea
15'	Functional enhancement of multicellular spheroid by microchannel fabrication Kojima N - Japan	Human mesenchymal stromal cell differentiation toward disc phenotype in hyaluronan hydrogel without growth factor supplementation Peroglio M, D'Este M, Egin D, Grad S, Benneker L, Alini M - Switzerland	Can mesenchymal stem cells use the cholinergic system to carry out their immunomodulatory functions? Casazza S, Kusmic C, Massolo M, Di Prisco S, Merrega E, Pitaluga A, Sambucetti G, Tracey K, Kerlero de Rosbo N, Uccelli A - Italy	OP225	Vessel formation in biodegradable bone substitution material Weber D, Knaack S, Hanke Ts, Rohowsky J, Hettrich K, Gelinsky M, Schwartz-Albiez R - Germany	Electrospun fibre topographical guidance on skeletal muscle cell differentiation Guarino V, Varrone F, Cirillo V, Marrese M, Patriarca E, Ambrosio L - Italy
15'	A mechanobiology study of the pressure driven remodeling events in human saphenous veins bypass Piola M, Prandi F, Soncini M, Vincini C, Colussi C, Polvani G, Fiore GB, Pesce M - Italy	Human osteoblasts within soft peptide hydrogels promote mineralisation in vitro Castillo Diaz LA, Gough J, Saiami A, Miller A - United Kingdom	Mesenchymal stem cells or their secretome promote recovery and alter urethral elastin in an animal model of childbirth injuries Damaser M, Deng K, Lin D L, Hanzlicek B, Balog B, Penn M, Kiedrowski M, Zhu H - USA	OP226	The impact of culture microenvironment on the osteo/odontogenic vs. angiogenic differentiation potential of dental apical papilla mesenchymal stem cells Bakopoulou A, Tsiftoglou A, Leyhausen G, Koidis P, Geurtsen W - Greece	Tissue-repair (M2-) macrophages modulate the cartilage-forming capacity of human bone marrow stromal cells in 3D collagen sponges Sesia S, Duhr R, Medeiros da Cunha C, Wolf F, Padovan E, Spagnoli G, Martin I, Barbero A - Switzerland
15'	Embryonic stem cells preserve pluripotency when injected in a foetal niche Bertin E, Piccoli M, Franzin C, Spiro G, Braghetta P, Donà S, Dedja A, Bonaldo P, De Coppi P, Pozzobon M - Italy	Functional chitosan microcarriers for selective cell attachment and expansion Custodio C, Cerqueira M, Marques A, Reis R, Mano J - Portugal	Synergistic effects of dual release of stromal cell-derived factor-1 and a macrophages recruitment agent from gelatin hydrogel on wound healing Kim Y-H, Tabata Y - Japan	OP227	Angiogenic and osteogenic response in a bone construct under the presence of myeloid cells Shi Y, Schröder A, Schmidt H, Seekamp A, Fuchs S - Germany	Mechanisms of action and osteogenic activity of bone marrow mesenchymal stromal cells are donor dependent Léotot J, Lebovuer A, Coquelin L, Herigou P, Bierling P, Rouard H, Chevallier N - France
15'	QuickStick technology promotes chondrogenesis of mesenchymal stem cell (MSC) microtissues adherent to cartilage surfaces Zenobi-Wong M, Millan C, Maniura K - Switzerland	Rheological properties and biocompatibility of new collagen- or hydrogel-based bone fillers Giannodis P, Scarabelli L, Ferrero F, Quarto R, Fiorini M - Italy	Platelet Lysate induces reentry in the cell cycle and proliferation of quiescent osteoblasts in association with a transient increase of the inflammatory response Ruggieri A, Ulivi V, Sangunetti F, Cancedda R, Descalzi F - Italy	OP228	Calcium biomaterial-released ions effect on human mesenchymal stromal cells results in robust in vivo bone formation sustained by a consistent angiogenesis Pereira R, Benelli R, Scaranari M, Canciani B, Daculsi G, Cancedda R, Gentili C - Italy	TNF $\alpha$ 6 knockdown promotes keratinocytes and fibroblasts migration in an in vitro wound healing model Kshirsagar A, Kulkarni M, Carroll O, Pandit A - Ireland
15'	Standardizing the in vitro fabrication process of tissue engineered human heart valves Lueders C, Akra B, Hetzer R - Germany	Multi-layered alginate/chitosan-based biomaterials for hard tissue regeneration Kim S, Lee H, Kim Y, Kim GH - Republic of Korea	Characterization of human mesenchymal stem cells-derived microvesicles and their possible use in tissue regeneration Tasso R, Lo Sico C, Reverberi D, Ulivi V, Bosco M C, Becherini P, Varesio L, Cancedda R - Italy	OP229	Surface functionalization of electrospun Poly(L) Lactic Acid scaffolds with heparin to induce angiogenesis Sigillabianco G, Roman S, Osman N, Bullock A, Chong C, Macneil S - United Kingdom	CCN1 coating of decellularized equine carotid arteries stimulates pro- and anti inflammatory cytokine response in the monocytic cell line THP-1 Nalanov R, Klingenberg M, Wilhelm M, Haverich A, Böer U - Germany
11.00	COFFEE BREAK					



FRIDAY 13						
	MAESTRALE	GRECALE	SCIROCCO	LIBECCIO	LEVANTE	PONENTE
Day						
Hall						
11.15 13.00	Stem cells and bioactive scaffolds for nerve tissue regeneration	Engineering regenerative niches	Mechanobiology in TERM	Spatially patterned signal presentation for controlling cell behavior	Myocardial infarction treatment: from bench to bedside	Adipose derived stem cells
	Chairs: Gander B - Switzerland, Madduri S - Switzerland	Chair: Raimondi M - Italy	Chair: Pietrabissa R - Italy	Chair: Alsberg E - USA	Chair: Chiono V - Italy	Chairs: Guicheux J - France, Mastrogiacomo M - Italy
30'	Peripheral axonal growth and guidance: biologically functional nerve conduit scaffolds Madduri S - Switzerland	Engineered grafts to instruct regenerative processes Martin I - Switzerland	The effect of mechanical stimuli on cell adhesion Lacroix D - United Kingdom	Modular hydrogels for spatiotemporal control of cell function Alsberg E - USA	Biomimetic polyurethanes scaffolds for cardiac tissue engineering Ciardelli G - Italy	Adipose stem cells: standardization and application (The ABCs of ASCs) Bunnel B - USA
15'	Nerve guides from photocurable polymers for peripheral nerve repair Pateman CJ, Harding A, Plenderleith R, Boissonade F, Rimmer S, Haycock JW, Claeysens E - United Kingdom	Electrospun nanofiber based scaffold platform for neural stem cell alignment de Sousa MCA, Rodrigues CAV, Ferreira IF, Diogo MM, Cabral JMS, Ferreira EC - Portugal	Hippo pathway effectors YAP/TAZ control cardiac progenitor cell fate by acting as dynamic sensors of substrate mechanics and nanostructure Pagliari S, Mosqueira D, Escobedo-Lucea C, Goumans M J, Pinto-do-Ó P, Aoyagi T, Eorte G - Czech Republic	Rapid micromolding of endothelial cell-lined vascular-like structures in in situ crosslinkable hydrogels Kageyama T - Japan	Bio-resorbable coronary stents: current developments and future opportunities AL-Lamse KG, Coates PD, Caton-Rose P, Keil AL - United Kingdom	Characterization of fibrin microspheres obtained from total blood plasma as cell culture scaffolds for human adipose mesenchymal stem cells Acevedo LM, Restrepo LM, Martinez Molina JC - Colombia
15'	Different acetylation of chitosan conduits for peripheral nerve repair Geuna S, Haastert-Talimi K, Freier T, Grothe C - Germany	Microfabrication of artificial stem cell microenvironments for tissue regeneration Ortega AI, MacNeil S, Crawford A, Hutton P, Claeysens F - United Kingdom	The role of mechanotransduction in human pluripotent stem cell derived-cardiomyocytes Serena E, Martewicz S, Michielin F, Mazzega E, Prevedello L, Elvassore N - Italy	Paracrine signalling between adipose tissue stem and microvascular endothelial cells within multilayered capsules trigger osteoblastogenesis Correia CR, Pirraco RP, Cerqueira MT, Marques AP, Reis RL, Mano JF - Portugal	Engineering highly elastic microfabricated hydrogels for cardiac tissue engineering Anabali N, Tang K, Mithieux SM, Nikkham M, Ameri A, Khademhosseini A, Weiss AS - USA	Xeno-free cGMP isolation and cryopreservation of clinical grade stromal vascular fraction Frias AM, Correia CR, Moreira ES, Marques M, Marques AP, Sousa R, Reis RL - Portugal
15'	Functional gellan gum hydrogels and cell based therapies - A novel therapeutic approach for spinal cord injury regeneration Gomes ED, Silva R, Carvalho MM, Teixeira FG, Leite-Almeida H, Gimble JM, Sousa N, Silva NA, Salgado AJ - Portugal	Human mesenchymal stromal cell expansion in a 3D scaffold-based system under direct perfusion Papadimitropoulos A, Piccinini E, Brachet S, Braccini A, Wendt D, Barbero A, Jacobi C, Martin I - Switzerland	A combined experimental and computational approach to investigate in vivo angiogenesis and cell migration in a PCL scaffold Tasoglu S, Diller E, Guven S, Sitti M, Demirci U - USA	Robotic assembly of hydrogels for tissue engineering and regenerative medicine Williams C, Budina E, Emami S, Emami S, Black L - USA	Tunable, injectable fibrin-ECM hydrogels for cardiac tissue engineering and regenerative medicine Williams C, Budina E, Emami S, Emami S, Black L - USA	Role of the stromal vascular fraction from adipose tissue associated to a biomaterial to regenerate bone in irradiated area Thery A, Bleri P, Malard O, Guicheux J, Pilet P, Source S, Weiss P, Espitalier E - France
15'	Peripheral nerve repair: multimodal comparison of regenerative potential of adipose derived cells in a biodegradable conduit Kappos E, Engels P, Schwabedissen M, Tremp M, Stefanie F, Arnaud S, Dirk S, Kalbermaten D - Switzerland	Mesenchymal stem cells (MSCs) induce the homing of endogenous progenitor cells in an ectopic bone formation model Tasso R, Lo Sico C, Ulivi V, Reverberi D, Descalzi F, Cancedda R - Italy	Jet-sprayed 3D nanofibrillar environment decreases myofibroblastic activation Sohier J, Debret R, Sommer P, Sigaud-Roussel D, Sohier J - France	Generation of a miniaturized biologically vascularized scaffold for 3D tissue culture Kress S, Nickel J, Walles H - Germany	Cellularized polyurethane-based scaffolds to repair the infarcted myocardial tissue Boffito M, Minonzio G, Mariotta L, Mattu C, Sartori S, Soldati G, Ciardelli G - Italy	Adipose stromal cells-conditioned medium is less efficient in modulating osteoarthritic chondrocytes and synovocytes behavior Manfredini C, Maumus M, Gabusi E, Paolella F, Gambari L, Peyralitte J-A, Fleury-Cappellessio S, Jorgensen C, Noel D, Facchini A, Lisignoli G - Italy
15'	Nerve guide scaffold modified with intraluminal grooved structure support peripheral nerve repair Mobasser A, Faroni A, Downes S, Terenghi G, Reid A - United Kingdom	Mixed polymer surfaces with controlled microtopography influence mesenchymal stem cell condensation and differentiation Walsh S, Dalgarno K, McCaskie A, Birch M - United Kingdom	OP262	Synthesising epithelial morphology using 3D printed gel moulds Man YH, Dickinson A, Yang S, Thurner P, Oreffo R, Evans N - United Kingdom	Cell and matrix treatment potentiates myocardial repair and regulates neurotrophic factors Graud MN - Switzerland	Adipose tissue derived stem cell sheets to enhance wound repair Sukbo P, Kirpenstein J, Versijden F, Bastiaansen-Jenniskens Y M - The Netherlands
13.00 14.30	LUNCH AND POSTER SESSION					





# POSTERS LIST AND DISPLAY DATES

## POSTER SESSION – June 11

### Angiogenesis and Vasculogenesis

- PP1**  
**Stabilization of Microvascular Networks by Macromolecular Crowding**  
Beyer S, Blocki A, Koch M, Raghunath M, Kamm RD - USA
- PP2**  
**A novel in vitro pre-vascularisation approach based on three-dimensional warp knitted fabrics**  
Bolle T, Gesché VN, Weinandy S, Gries T, Jockenhoevel S - Germany
- PP3**  
**Collagen matrix improves angiogenesis and cardiac function following myocardial infarction: evidence for a miR-92a and integrin mediated mechanism**  
Chiarella-Redfern HH, McNeill B, Blackburn N, Ruel M, Rayner KJ, Suuronen EJ - Canada
- PP4**  
**From Stem Cells to Mature Vascular Network in Vitro**  
Huttala O, Vuorenperä H, Sarkanen JR, Ylikomi T, Heinonen T - Finland
- PP5**  
**Endothelial cell behavior inside myoblast sheets with different thickness**  
Ngo TX, Nagamori E, Kino-Oka M - Japan
- PP6**  
**Recellularized placental vascular matrix supports tube formation in a 3D co-culture system**  
Schneider KH - Austria
- PP7**  
**Pall Celeris™ Total Nucleated Cells for Critical Limb Ischemia: preclinical in vitro and in vivo experiments**  
Spaltro G, Straino S, Gambini E, Bassetti B, Quarti C, Capogrossi M, Pompilio G - Italy
- PP8**  
**Vascular network visualization in bone tissue engineered construct by Synchrotron X-ray microtomography**  
Spanò R, Bukreeva I, Campi G, Tromba G, Brun F, Cedola A, Cancedda R, Mastrogiacomo M - Italy
- PP9**  
**Interactions between dermal fibroblasts and endothelial cells in vascularization for tissue engineering applications**  
Almeida R, Lazaro M, Soares R, Guerreiro S, Granja P - Portugal
- Biomaterials: Bioactivation**
- PP10**  
**Identification of a Cryptic Peptide Derived from Solubilized Cardiac ECM that Promotes Neonatal Cardiomyocyte Proliferation**  
Edmunds K, Black L - USA

- PP11**  
**Osteoconductive drug delivery systems based on crosslinked hydrogels and calcium phosphate cement**  
Borget P, Stresing V, D T, Miramond T, Daculsi G - France
- PP12**  
**Bioactive Elastomers for Osteogenic Differentiation of Human Mesenchymal Stem Cells**  
Chen H - The Netherlands
- PP13**  
**Stimulating Differentiation of Stem Cells by Nanotubular Surface Structure**  
Choi SJ, Yoo SY, Won JE, Shin SH, Kim HW - Republic of Korea
- PP14**  
**Characterization of a novel composite scaffold consisting of acellular bladder submucosa matrix, polycaprolactone, and Pluronic F127 as a substance for bladder reconstruction**  
Chun SY, Oh SH, Lee JH, Kwon TG - Republic of Korea
- PP15**  
**Binding Epitope Decorated Dendrimers in Thermoreponsive Hyaluronic Acid Hydrogels Influence Stem Cells**  
Seelbach R, Peroglio M, Fransen P, Royo M, Albericio F, Alini M, Eglin D, Mata A - Switzerland
- PP16**  
**Effect of Mesenchymal Stem Cell Growth on Cancer Cell Characteristics**  
Eom JH, Kim BC, Bang SH, Kang SY, Lee B, Kim J, Ryu SR, Baek SY - Republic of Korea
- PP17**  
**Col I pre-adsorbed on poly(NaSS) grafted Ti6Al4V surfaces induces superior matrix mineralization in MC3T3-E1 osteoblasts-like cells**  
Felgueiras H, Migonney V - France
- PP18**  
**The Influence of Porosity and Pore Shape of PCL Electro-spun Nano-fibrous Meshes on Macrophage Activation**  
Fuller K, O'Dowd C, Pandit A, Zeugolis D - Ireland
- PP19**  
**Assessment of Perfusion Bioreactors System Using x-ray µCT Technology and 3D Modeling Methods**  
Lovecchio J, Jónsdóttir-Buch S, Einarsdóttir Guðrún K, Örlýgsson G, Sigurjónsson ÓE, Gargiulo P - Iceland
- PP20**  
**TESPSA Immobilized onto Titanium Surfaces Induces SaOS-2 Differentiation and Reduces Bacterial Adhesion and Biofilm Formation**  
Godoy-Gallardo M, Guillem-Martí J, Sevilla P, Manero JM, Gil J, Rodríguez D - Spain
- PP21**  
**Decellularized cartilage scaffold: specific matrix depletion to improve recellularization**  
Steffenhagen C, Schneider C, Hildner F, Wolbank S,

- Gabriel C, Redl H, van Osch G, Nürnberger S - Austria
- PP22**  
**Biphasic nanofiber-layered constructs for osteochondral tissue therapy**  
Jin GZ, Park JH, Seo SJ, Kim HW - Republic of Korea
- PP23**  
**Design of hybrid biomaterials using artificial material and biological molecule**  
Kanie K, Kurimoto RI, Ebara M, Idota N, Narita Y, Honda H, Kato R - Japan
- PP24**  
**Assessment of Novel Polyurethane foam dressings for Wound healing**  
Kim TJ, Oh EJ, Chung HY - Republic of Korea
- PP25**  
**Identification and characterization of neurotrophic factors in porcine small intestinal submucosa**  
Lee IW, Yang KJ, Park KC, Choi HS - Republic of Korea
- PP26**  
**Steps to the biofunctionalization of synthetic blood vessels**  
Liebler S, Grunert F, Thompson J, Schlosshauer B - Germany
- PP27**  
**Determination of drug permeability in Caco-2 monolayers using MICA technology**  
Lisella A, El Haj AJ - United Kingdom
- PP28**  
**Potentiality of Electrophoretic Deposition for Tissue Engineering scaffolds fabrication**  
Maniglio D, Bonani W, Carletti E, Motta A, Migliaresi C - Italy
- PP29**  
**In vitro study of the synergistic effect of hydroxyapatite nanoparticles and lactoferrin in bone homeostasis**  
Montesi M, Panseri S, Cepollaro S, Iafisco M, Adamiano A, Tampieri A - Italy
- PP30**  
**Validation of a stable bioactive Poly-(ether-ether)-ketone surface for improved cell attachment**  
Hayes J, Gaynard S, Devine D, Murphy M - Ireland
- PP31**  
**Extracellular Calcium: Potential Range of Concentrations to Improve Skin Wound Healing**  
Navarro C, Pérez-Amadio S, Planell JA, Engel E - Spain
- PP32**  
**Preparation and Characterization of Ion-complexed Doxycycline for the Treatment of Osteomyelitis**  
Oh SH, Nam BR, Lee IS, Lee JH - Republic of Korea
- PP33**  
**Layer-by-Layer Assembled Nanocoatings of Human Platelet's Lysate and Marine-Origin Polysaccharides Trigger Pro-Angiogenic**





## Behaviour

Oliveira S, Pirraco RP, Marques AP, Reis RL, Mano JF - Portugal

### PP34

#### Bioactive inorganic microcarrier with protein delivery designed for bone tissue engineering

Perez R, El-Fiqi A, Park JH, Kim TH, Kim JH, Kim HW - Republic of Korea

### PP35

#### Soluble factors secreted by amniotic mesenchymal cells modulate T helper and T regulatory cell polarization

Pianta S, Bonassi P, Muradore I, Parolini O - Italy

### PP36

#### Active Wound Dressings: controlled drug release by Photocured Hydrogel coating on Fibrous Substrates

Romano I, Ayadi F, Rizzello L, Bayer I, Pompa PP, Brandi F, Athanassiou A - Italy

### PP37

#### Layered nanoscaffolding matrices developed for activating osteochondral repair

Jin GZ, Park JH, Seo SJ, Kim HW - Republic of Korea

### PP38

#### Health young cardiac tissue modeling using polyurethane-based scaffolds

Siriani P, Boffito M, Sartori S, Mattu C, Logrand F, Brancaccio M, Tarone G, Ciardelli G - Italy

### PP39

#### Decellularized cartilage scaffold: specific matrix depletion to improve recellularization

Steffenhagen C, Schneider C, Hildner F, Wolbank S, Gabriel C, Redl H, van Osch G, Nürnberger S - Austria

### PP40

#### Fibronectin with Peptide Amphiphile Sequence for Therapeutic Surface Control of Tissue Engineering Scaffolds

Yun YR, Lee SJ, Won JE, Lee HY, Jang JH, Kim HW - Republic of Korea

## Biomaterials: Bioceramics

### PP42

#### Mesoporous Glass Coating on Bone Tissue Engineering Scaffolds to Improve Bioactivity

Baino F, Fiorilli S, Cauda V, Onida B, Vitale-Brovarone C - Italy

### PP43

#### Micromechanical Modelling of Tissue Engineering Scaffolds: a Bridge Between Process and Performance

Baino F, Chen Q, Pugno N, Vitale-Brovarone C - Italy

### PP44

#### Quantitative Intravoxel Analysis of $\mu$ CT-scanned Resorbing Ceramic Biomaterials

Czenek A, Blanchard R, Dejacó A, Sigurjónsson ÓE, Örtlygsson G, Gargiulo P, Hellmich C - Iceland

### PP45

#### HA- $\beta$ TCP Porous Scaffold filled with Pectin as antibiotic release system for treatments of dental/orthopedic pathologies

Iviglia G, Bollati D, Morra M, Cassinelli C, Baino F, Vitale-Brovarone C - Italy

### PP46

#### Development of a porcine collagen-hydroxyapatite scaffold as bone graft substitutes

Kang SS - Republic of Korea

### PP47

#### An Ex Vivo Comparative Study of Natural HA/Hardystonite Nanobiocomposites To use Medical Applications

Karamian E, Gheisari Dehsheikh H, Hosseini N, Monshi A - Iran

### PP48

#### SEM and XRD Studies of Na-Zeolite Powder Synthesized by Hydrothermal Method to Use Tissue Engineering for Medical Applications

Karamian E, Davarpanah R, Banitaba Seyed H, Gheisari Dehsheikh H - Iran

### PP49

#### Effects of a new highly porous scaffold synthesized from Biosilicate® on bone regeneration

Kido H, Tim C, Bossini P, Parizotto N, Castro C, Crovace M, Zanotto E, Peitl-Filho O, Anibal F Renno AC - Brazil

### PP50

#### Comparison of Osteogenic Capacity of Mesenchymal Stem Cells in Inorganic Composite Scaffolds

Kim Y, Rhew D, Lee SH, Kim WH, Yun HS, Kweon OK - Republic of Korea

### PP51

#### Comparative Study of GoHAP - Highly Biocompatible, Nanocrystalline Hydroxyapatite to Hydroxyapatite Powder with the Lowest commercially Available Particle Size (NanoXIM) for Bone Tissue Engineering

Kolodziejczyk M, Smolen D, Chudoba T, Malka I, Kedzierska A, Lojkowski W, Swieszkowski W, Kurzydowski KJ, Lewandowska Szumiel M - Poland

### PP52

#### Osteotransductive Octacalcium Phosphate Ceramics as Functional Bone Graft: From Materials Science to Clinical Applications

Komlev V, Barinov S, Bozo I, Deev R, Eremin I, Fedotov A, Gurin A, Khromova N, Kopnin P, Kuvshinova E, Mamonov V, Sergeeva N, Sviridova I, Teterina A, Zorin V - Russian Federation

### PP53

#### Shark teeth derived micro and nano crystalline bioapatites

López-Álvarez M, Balboa E, Rodríguez-Valencia C, Coladas P, Serra J, González P - Spain

### PP54

#### Composite Biomaterial Based on Fibrin Hydrogel and b-Threocalcium Phosphate Granules as the Carrier of Autologous Multipotent Mesenchymal Stromal Cells: in vivo study on the rabbit model

Mamonov V, Drize N, Chemis A, Berkovskiy A, Sats N, Proskurina N, Kargaltsev A, Komlev V - Russian Federation

### PP55

#### A novel bioactive and antibacterial composite bone cement containing a single inorganic phase

Miola M, Ferraris S, Bistolfi A, Massè A, Crova M, Maina G, Vernè E - Italy

### PP56

#### Biomaterials for bone regeneration: study of cell-material and tissue-material interactions by using protein analysis

Othman Z, Luider T, Fernandez H, Yuan H, van Blitterswijk C, Habibovic P - The Netherlands

### PP57

#### Oxidative Stress and Nanoparticles: Cerium Dioxide to Protect Cardiac Progenitor Cells

Pagliari F, Nardone G, Forte G, Pagliari S, Licocchia S, Minieri M, Di Nardo P, Traversa E - Italy, Czech Republic and Saudi Arabia

### PP58

#### Anti-bacterial glass formulations for bone tissue engineering Applications

Fernandes J, Martins M, Neves NM, Pires RA, Reis RL - Portugal

### PP59

#### Effect of a new bioactive fibrous glassy scaffold on bone repair

Renno AC, Gabbai-Armelin P, Kido H, Tim C, Parizotto N, Magri A, Bossini P - Brazil

### PP60

#### Bone Regeneration of Hydroxyapatite/Alumina Bilayered Scaffold with 3-mm Passage-Like Medullary Canal in Canine Tibia Model

Son SJ, Kim JM, Lee JY, Son JS, Kang SS, Kim G, Choi SH - Republic of Korea

### PP61

#### Comparable Bone Healing Capacity of Bone Graft Matrixes in Rabbit Large Segmental Defect Model

Son SJ, Lee JY, Kim JM, Son JS, Kang SS, Kim G, Choi SH - Republic of Korea

### PP62

#### Highly Porous Natural Bioceramic Particles Developed Using Duck Beak Bone

Son JS - Republic of Korea

### PP63

#### Application of mesenchymal stromal cell sheet on tracheal epithelium regeneration

Sun DJ, Nam IC, Kim CS, Kim SW, Park JH, Cho DW - Republic of Korea

### PP65

#### Bone tissue engineering utilizing mesenchymal stem cells from deciduous teeth and 3D printed ceramic scaffolds

Vakhrushev I, Vdovin A, Fedotov A, Mironov A, Komlev V, Popov V, Yarygin K - Russian Federation

### PP66

#### Use of Composite Scaffolds to Model Healthy and Osteoporotic Bone

Vitale-Brovarone C, Caddeo S, Ferreira AM, Baino F, Ciardelli G - Italy

### PP380

#### Bioactive Trabecular Coatings On Monoblock Acetabular Cups to Improve the Prosthesis Osteointegration

Vitale-Brovarone C, Minguella J, Baino F - Italy

### PP67

#### Antimicrobial Properties of Silver-doped Nanoscale Hydroxyapatite Bone Graft Substitutes



Wilcock CJ, Fatima M, Gentile P, Stafford GP, Miller CA, Ryabenkova Y, Möbus G, Hatton PV - United Kingdom

## Imaging

### PP68

#### Dynamic Behavior of Human Pluripotent Stem Cells Predict Cell Fate

Phandnis S, Dimov I, Pai S, Loewke N, Amwake C, Solgaard O, Baer T, Reijo Pera R, Chen B - USA

### PP69

#### Iodine-enhanced contrast a

#### PPlicable for microcomputed tomography

Hulsart-Billström G, Nouhi S, Larsson S, Öhman C - Sweden

### PP70

#### Three-dimensional Characterization of Growth Plate Cartilage as a Natural Scaffold for Bone Formation

Jaroszewicz J, Kosowska A, Swieszkowski W, Moskalewski S - Poland

### PP71

#### Cobalt zinc ferrite nanoparticles – a new magnetic cell label

Jendelova P - Czech Republic

### PP72

#### Morphogenic developmental programs in colon cancer metastasis

Palmieri V, Lucchetti D, Maiorana A, Chiarpotto M, Maulucci G, Papi M, Ciasca G, Sgambato A, De Sprito M - Italy

## Industry and commercialization of TE products

### PP73

#### Current Status of Standardization in Regenerative Medicine

Bischoff P, Leitner E - Germany

## Inflammation

### PP74

#### Inflammatory Response of RAW 264.7 cells to Ultraporous Interweaving PCL-PEO Electrospun Microfibers

Rubert M, Fang-Li Y, Aslan H, Yu Y, Howard KA, Dong M, Besenbacher F, Chen M - Denmark

### PP75

#### Glycosaminoglycan-hydrogels to modulate inflammation in chronic wounds

Schirmer L, Freudenberg U, Werner C - Germany

### PP76

#### Artificial antigen presenting cells for vaccination

Soe A, Sharma R, Ibrahim J - Singapore

### PP77

#### Substance P reduced neuronal cell death in spinal cord injury by immune modulation possibly through M2 polarization of macrophage

Son Y, Jiang MH, Lim JE, Chung E, Ahn W - Republic of Korea

### PP78

#### Proliferation and Differentiation of Stem Cells from Inflamed Pulp of Deciduous Teeth

Yu S, Fan Z, Diao S, Yang D - China

## Interface: Tissue engineering

### PP79

#### Chondrocyte re-differentiation on ethyl lysine diisocyanate cross-linked gelatin based 3-D scaffolds: Application in cartilage tissue engineering

Arya N, Gebauer TP, Neffe AT, Lendlein A, Shastri VP - Germany

### PP80

#### 3D in vitro hair follicle cultures in a dynamic chip based bioreactor

Ataç B, Giselbrecht S, Lindner G, Horland R, Magauer C, Marx U, Lauster R - Germany

### PP81

#### Biofabrication of chondrospheres and proteomic analysis from human cartilage progenitor cells: a promise for cartilage tissue engineering

Baptista LS, Stuart MP, Matsui RA, Santos EO, Vieira G, Silva KR, Rezende R, da Silva JVL, Borojovic R, Mironov V, Granjeiro JM - Brazil

### PP82

#### Layer-by-layer functionalisation of polymeric blends to favor stent endothelialisation

Carmagnola I, Chiono V, Cabodi S, Logrand F, Ciardelli G - Italy

### PP83

#### Realization of a soft-MI electrospun scaffold for Tissue engineering Applications

Criscenti G, Cerulli G, Saris D, van Blitterswijk C, Vozzi G, Fernandes H, Moroni L - Italy

### PP84

#### Electrospun Microyarns for Vascularization in Tissue Engineering

Rietzler K, Feher K, Weinandy S, Kruse M, Schneider P, Gries T, Jockenhoevel S - Germany

### PP85

#### Fabrication of a Functionally Layered Membrane Designed for Periodontal Tissue Regeneration

Gentile P, Atkinson JK, Miller CA, Hatton PV - United Kingdom

### PP86

#### Preparation of lotus-leaf-like structured blood compatible poly( $\epsilon$ -caprolactone)-block-poly(L-lactic acid) copolymer film surfaces

Kim SH - Republic of Korea

### PP87

#### Effect of mechanical stimulation on osteogenesis of self-assembled collagen-heMSC/MG63 microspheres

Shariatzadeh M, Perrault C, Lacroix D - United Kingdom

### PP88

#### Insights into the mechanism of lactate enhanced collagen production and differentiation of bone cells cultured on lactate releasing scaffolds

Wójtowicz J, Lewandowska-Szumiel M - Poland

### PP89

#### Inhomogeneity of local stiffness in the

#### extracellular matrix scaffold of aged and fibrotic mouse lungs

Melo E, Cardenes N, Garreta E, Rojas M, Navajas D, Farre R - Spain

### PP90

#### The design, fabrication and estimation of material properties of mechanically enhanced concentric arrow-headed interlockable microscaffolds or velospheres

Rezende R, Farsari M, Pereira F, Noritomi P, Kasyanov V, Wen X, Baptista L, da Silva K, Granjeiro J, Borojovic R, da Silva JV, Mironov V - Brazil

### PP91

#### Development of a novel molding technique for the engineering of bioartificial vascular grafts

Aper T, Wilhelmi M, Hoeffler K, Gebhardt C, Benecke N, Haverich A - Germany

### PP92

#### Bone Regeneration by PHEMA/Gelatin Cryogel Based Scaffolds, AdMSCs and Controlled Release of Steroid Hormones: In-vitro and In-vivo Studies

Perver D, Irmak G, Akbay E, Demirtas Tugrul T, Andac Ozdil AM, Gumusderelioglu M, Onur Mehmet A, Denizli A - Turkey

### PP94

#### No transfer of $\alpha$ Gal epitopes onto human endothelial cells during cell culture with FCS

Ramm R, Hartmann T, Haverich A, Hilfiker A - Germany

### PP95

#### The use of Si-HPMC hydrogel reinforced with nano-particles for tissue Engineering

Boyer C, Réthoré G, Sourice S, Lesoeur J, Rouillon T, Guicheux J, Weiss P - France

### PP96

#### A novel architectural and chemical gradient based scaffold for articular tissue regeneration

Marrella A, Coluccino L, Quarto R, Scaglione S - Italy

### PP97

#### Towards tissue engineered constructs mimicking osteochondral tissue: embedding of hMSC as single cells and small microaggregates into anisotropic alginate scaffolds

Schütz K, Milan F, Gelinsky M - Germany

### PP98

#### 3D microstructuring type I collagen to reconstitute in vitro models of small intestinal tissue

Verhulsel M - France

### PP99

#### Calcium Phosphate-Precipitating, Antimicrobial Composite Biomaterials

Walters NJ, Dakkouri LI, Ashley PF, Young AM - United Kingdom

## Microenvironment

### PP100

#### Hepato-mimetic microenvironments for cell delivery

Ramachandra SD, La Marca M, Tirella A, Aylott J, Braspenning J, Ahluwalia AD - Italy





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[Oh J](#), Lee K, You Y, Yoon D, Ha Y, Hwang DY - Republic of Korea

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[Hinderer S](#), Bindermann AH, Schenke-Layland K - Germany

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[Chun SY](#), Lim JO, Suh JS, Shon YH, Kwon TG - Republic of Korea

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[Danti S](#), Ricci C, Moscato S, Mota C, D'Alessandro D, Bronte V, Funel N, Moroni L - Italy

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S, Weinstein J, [Haycock J](#) - United Kingdom

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[Nešporová K](#), Šmejkalová D, Šafránková B, Šógorková J, Velebný V - Czech Republic

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[Kweon OK](#), Yoon D, Kang BJ, Kim Y, Lee SH, Rhew D, Kim WH - Republic of Korea

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[Martinello T](#), Sugni M, Di Benedetto C, Barbaglio A, Gomiero C, Ferro S, Vindigni V, Lancerotto L, Bassetto F, Candia Carnevali MD, Patruino M - Italy

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[Zubillaga V](#), Fernandes S, Palomares T, Garrido P, Salaberria A, Labidi J, [Alonso-Varona A](#) - Spain

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[Boer U](#), Klingenberg M, Buettner F, Haverich A, Wilhelmi M - Germany

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[Buffa R](#), Basarabová I, Ehlová T, Šmejkalová D, Velebný V - Czech Republic

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[Bukelskiene V](#), Balciunas E, Peciuikaityte M, Burinskij J, Jarasiene R, Malinauskas M, Baltriukiene D - Lithuania

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[Davis A](#), Mele E, Bayer I, Ciofani G, Ceseracci L, Genchi G, Athanassiou A - Italy

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[Firoozi N](#), Rezayan AH, Malekzadeh E, Tabatabae J, Nabil M - Iran

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[Gabbai-Armelin P](#), Souza M, Kido H, Tim C, Bossini P, Fernandes K, Magri A, Peitl-Filho O, Parizotto N, Fernandes K, Mesquita-Ferrari R, Ribeiro D, Renno A - Brazil

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[Girandon L](#), Dovgan B, Bartic A, Knežević M, Lin Fei, Zheng J, Becker M - Slovenia

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**Co-Cr stents for the delivery of late endothelial progenitor cells**

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**Late endothelial progenitor cell capture by anti-CD146 antibody immobilization on silicone nanofilament-structured Co-Cr metal stent**

Kang SN, Joung YK, Han DK - Republic of Korea

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**Morphological and Biomechanical Characterization of Tissue Engineered Atrioventricular Valve**

Iablonskii P, Cebotari S, Tudorache I, Granados M, Morticelli L, Korossis S, Hilfiker A, Haverich A - Russian Federation

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**Cardiac tissue engineering using menstrual blood stem cells seeded in biocompatible Bombyx mori silk fibroin scaffold**

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Moroni F, Mirabella T - USA

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Mugnai D, Mrowczynski W, Sologashvili T, Saat S, de Valence S, Tille JC, Moeller M, Walpoth B - Switzerland

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Koc B, Ozer SB, Kucukgul C, Altunbek M, Sen O, Cutha M - Turkey

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Pagliari S, Tirella A, Jelinek J, Goumans MJ, Ahluwalia A, Aoyagi T, Forte G - Czech Republic

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**Histochemical and biochemical evaluation of porcine decellularized heart valves and pericardium**

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Ryan A, O'Brien F - Ireland

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Tondreau M, Laterreur V, Bourget JM, Vali  res K, Tremblay C, Lacroix D, Ruel J, Germain L, Auger FA - Canada

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Alaminos M, Carriel V, Martin-Piedra MA, Fernandez-Valades R, Scionti G, Gonzales-Andrades M, Rivera-Izquierdo M, Sanchez-Quevedo MC, Campos A, Garzon I - Spain

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Garzon I, Vinuela JM, Martin-Piedra MA, Carriel V, Ximenes-Oliveira AC, Alfonso-Rodriguez C, Fernandez-Valades R, Alaminos M, Campos A, Sanchez-Quevedo MC - Spain

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**bFGF Promotes Fibroblast Migration in Wound Healing**

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Ogura T, Morimoto N, Kakudo N, Hara T, Kusumoto K - Japan

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**Engineering structural morphogenesis of progenitor glandular tissue by modifying the side-chain conformation of chitin**

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**Adhesion and axonal growth of primary neurons on chitosan based electrospun mats**

Marques A, Fernandes A, Brito A, Brites D, Ferreira J, Silva J, Henriques C - Portugal

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**Peripheral Nerve Regeneration through Nerve Guide Conduit with Nerve Growth Factor Gradient**

Kang JG, Kim TH, Oh SH, Namgung U, Song KS, Lee JH - Republic of Korea

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**Effect of denervation on tumor growth**

Kappos E, Engels P, Madduri S, Fischmann A, Von Felten S, Schaefer D, Kalbermatten D - Switzerland

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**Neural cell culture on decellularized brain prepared using high hydrostatic pressure method**

Kimura T, Honda S, Nakamura N, Soma T, Nam K, Fujisato T, Kishida A - Japan

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**Antagonize without compromise: Effect of Y1 receptor antagonism in bone re-innervation**

Neto E, Sousa D, Alencastre I, Alves J, Aguiar P, Lamghari M - Portugal

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**The regeneration potential after human and autologous stem cell transplantation in a rat sciatic nerve injury model can be monitored by MRI**

Trempp M, Sieber P, Meyer zu Schwabedissen M, Kappos EA, Engels PE, Fischmann A, Scherberich A, Schaefer DJ, Kalbermatten DF - Switzerland

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**Development of an Acellular Xenogeneic Nerve Graft**

Zilic L, Haycock J, Wilshaw SP - United Kingdom

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**Effect of collagen gel and mesenchymal stem cells on cartilage repair, the in vivo preliminary study**

Bajek A, Skopinska-Wisniewska J, Rynkiewicz A, Jundzill A, Bodnar M, Marszalek A, Drewa T - Poland

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**Mesenchymal Stem Cells in a Rabbit Model**  
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Hara T, Kakudo N, Morimoto N, Ogura T, Kusumoto K - Japan

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Kawase T, Okuda K, Masaki NA, Burns D, Nakata K, Yoshie H - Japan

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**Human Mesenchymal Stromal Cells combined with Artificial Bone Scaffold in Bone Defect Treatment in Preclinical and Clinical Studies**  
Koci Z, Školoudík L, Šponer P, Kryl J, Štulík J, Kubínová Š, Filip S, Syková E - Czech Republic

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**Injectable medicated graft substitute active on bone tissue regeneration**  
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Lee HY, Kim HW, Oh SH - Republic of Korea

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Ostrowska B, Bissenik I, Strzelczyk K, Ruminski S, Lewandowska-Szumiel M, Swieszkowski W - Poland

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Wu ATH, Sakoda M, Ito T, Ushida T, Furukawa KS - Japan

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**New cell-laden alginate scaffolds fabricated with in situ cross-linking process**

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**Epidermal lipids characterization of healthy and psoriatic skin substitutes produced by the self-assembly method**

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[Verma VM](#) - New Zealand

**PP529**  
**Topographically nanopatterned scaffolds enhanced myogenesis and muscle regeneration in vitro and in vivo**  
[Yang HS](#), Lee MS, Park E, La WG, Kim HN, Suh KY, Kim HW - Republic of Korea

## Non invasive methods for in vivo TE monitoring

**PP530**  
**Biodegradable photopolymer scaffolds does not induce immune rejection in vivo**  
[Beke S](#), Farkas B, Zsedenyi A, Romano I, Harmati





M, Sebestyen E, Minarovits J, Brandi F, Buzas K, Nagy K - Italy

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**FTIR-Attenuated Total Reflectance: a new tool in the assessment of IVD aging and degeneration**

Hamel O, Touré A, Yout S, Quillard S, Lesoeur J, Fusellier M, Abadie J, Fellah B, Gauthier O, Weiss P, Guicheux J, Clouet J - France

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**BMP-2 induced bone regeneration visualized by PET and SPECT**

Hulsart-Billström G, Estrada S, Lubberink M, Antoni G, Larsson S - Sweden

**PP533**

**Morphology-based early prediction of osteogenic potential of bone-marrow derived mesenchymal stem cells and its biological mechanism**

Kato R, Sasaki H, Matsuoka F, Takahashi A, Kanie K, Takeuchi I, Kiyota Y - Japan

**PP534**

**Visualizing metabolic activity of cells and tissue with micrometer resolution**

Liebsch G - Germany

**PP535**

**Integration of a Fluidic System with an Imaging Platform: image quality analysis and real time monitoring of cell morphology**

Magliaro C, Sbrana T, Spencer-Fry J, Toimela T, Ahluwalia A - Italy

**Quality controls and Tissue Banking**

**PP536**

**A study on proliferation and gene expression on normal human urothelial cells in culture**

Chamorro C, Zeiai S, Reinfeldt Engberg G, Brodin D, Nordenskjöld A Fossum M - Sweden

**PP538**

**Hypothermic preservation of stem cells and tissues in xenon clathrates**

Ponomarev A, Gurevich L, Makeev O, Zvereva A - Russian Federation

**PP539**

**Image-based profiling of Mesenchymal Stem Cells using non-label images**

Sasaki H, Okada N, Kanie K, Kiyota Y, Honda H, Sawada R, Kato R - Japan



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