

SYMPOSIUM A

Advanced Biomaterials and Regenerative Medicine

Symposium A: Advanced Biomaterials and Regenerative Medicine

Level 3, Room 303

Mon, 29-Jun-09	Tue, 30-Jun-09	Wed, 1-Jul-09	Thu, 2-Jul-09	Fri, 3-Jul-09
	(08:30 - 09:15) Plenary Lecture 2 Peter Doherty	(08:30 - 09:15) Plenary Lecture 4 John Pendry	(08:30 - 09:15) Plenary Lecture 6 Hartmut Michel	
(09:00 - 09:45) Opening Ceremony	(09:15 - 10:00) Plenary Lecture 3 Andrew Wee	(09:15 - 10:00) Plenary Lecture 5 Chad Mirkin	(09:15 - 10:00) Plenary Lecture 7 Akihisa Inoue	(09:00 - 09:45) Plenary Lecture 8 Jean-Marie Basset
(09:45 - 10:30) Plenary Lecture 1 Peter Gruenberg	(10:00 - 10:30) Coffee Break			(09:45 - 10:30) Plenary Lecture 9 Frederick Lange
(10:30 - 11:00) Coffee Break				(10:30 - 11:00) Coffee Break
(11:00 - 12:30) Session A-S1 Advanced Biomaterials and Regenerative Medicine I	(10:30 - 12:30) Session A-S4 Advanced Biomaterials for Cancer Treatment I	(10:30 - 12:30) Session A-S6 Advanced Biomaterials for Cancer Treatment I	(10:30 - 12:30) Session A-S9 Understanding Origins of Fracture and Composite Biomaterials	(11:00 - 13:00) Session A-S12 New Development in Biomaterials Engineering
(12:30 - 14:00) Lunch (13:00 - 13:45) Theme Lecture James L. Hedrick	(12:30 - 14:00) Lunch (13:00 - 13:45) Theme Lecture Martyn Poliakoff	(12:30 - 14:00) Lunch (13:00 - 13:45) Theme Lecture Karl U. Kainer	(12:30 - 14:00) Lunch (13:00 - 14:30) Panel Discussion	(13:00 - 14:30) Closing & Poster Award Ceremony Lunch
(14:00 - 16:15) Session A-S2 Advanced Biomaterials and Regenerative Medicine I	(14:00 - 17:00) Session A-S5 Biofunctionalization of Metals I	(14:00 - 16:00) Session A-S7 New Developments in Scaffolds for Tissue Regeneration	(14:30 - 16:00) Session A-S10 Engineering the Cell- Biomaterial Interface	
(16:15 - 16:30) Break		(15:30 - 17:30) Session A-S8 POSTER SESSION	(16:00 - 18:00) Session A-S11 Engineering the Cell- Biomaterial Interface	
(16:30 - 18:30) Session A-S3 Advanced Biomaterials and Regenerative Medicine I				
(18:00 - 20:00) Public Lectures @ UCC Peter Doherty Peter Gruenberg		(19:00 - 20:00) Public Lecture @ UCC Hartmut Michel	(19:00 - 22:00) Conference Banquet @ Suntec	

A-S1: Advanced Biomaterials and Regenerative Medicine I

Monday, 29 June 2009

11:00 - 12:30

Level 3, Room 303

Chairs: SH Teoh, Hildebrand HF

11:00 A-S1.1-2(KN) A00847-01641 pg A38
History and Use of Biomaterials, Implants and Prostheses in Ancient Cultures
Hartmut F. HILDEBRAND

11:30 A-S1.3-4(KN) A02823-05077 pg A89
Advanced Biomaterials Technology and Regenerative Therapy
Yasuhiko TABATA

12:00 A-S1.5-6(KN) A02949-05041 pg A91
Fetal Stem Cells and Opportunities for Regenerative Medicine
Jerry CHAN, Zhi-Yong ZHANG, Mark CHONG, Eddy LEE, Yi-Ping FAN, Citra MATTAR, Swee-Hin TEOH, Arijit BISWAS, Mahesh CHOOLANI

A-S2: Advanced Biomaterials and Regenerative Medicine I

Monday, 29 June 2009

14:00 - 16:15

Level 3, Room 303

Chairs: Thian ES, Kikuchi M

14:00 A-S2.1-2(IN) A01575-02742 pg A68
Influence of Hydroxyapatite/Collagen Bone-Like Nanocomposite on Osteoclastic Differentiation of Mouse Bone Marrow Cells Cocultured with Osteoblasts
Masanori KIKUCHI, Atsushi IRIE

14:30 A-S2.3(O) A03011-05140 pg A93
The Use of a Bioresorbable Three-dimensional Polycaprolactone (PCL) Scaffold for Ridge Preservation – Preliminary Findings
Bee Tin GOH, Luan Yook TEH, Raymond PECK, Danny TAN, Ho Kok SEN, Zhiyong ZHANG, Dietmar W. HUTMACHER, Swee Hin TEOH

14:45 A-S2.4(O) A02131-03671 pg A77
Biaxial-rotating Bioreactor Promoted Cellular Proliferation, Viability, Osteogenesis In Vitro and Enhanced Ectopic Bone Formation In Vivo
Zhiyong ZHANG, Jerry CHAN, Toon Tien FOO, Woon Shin CHONG, Yhee Cheng CHNG, Swee Hin TEOH

15:00 A-S2.5(O) A01355-03090 pg A58
Bone and Vascular Cells in Cultures on Oxidized Cellulose-Based Scaffolds
Lucie BACAKOVA, Martin PARIZEK, Pavel HAVELKA, Tomas SOPUCH, Vera LISA

15:15 A-S2.6(O) A01368-02387 pg A59
Tissue Engineering Bone: Phenotypical and Functional Characterisation of Ovine MPC and Osteoblasts In Vitro and In Vivo
Johannes C. REICHERT, Thor FRIIS, Verena M. C. QUENT, Stan GRONTHOS, Dietmar W. HUTMACHER

15:30 A-S2.7(O) A01803-03332 pg A71
Nanostructured Apatites Deposited by Electrohydrodynamic Atomisation for Bone Tissue Engineering
Eng San THIAN, Zeeshan AHAMD, Jie HUANG, Mohan EDIRISINGHE, Suwan JAYASINGHE, Deborah IRELAND, Roger BROOKS, Neil RUSHTON, William BONFIELD, Serena BEST

15:45 A-S2.8(O) A01286-02241 pg A56
Self-assembly of Co-polymeric Membranes on 3-D Porous Biodegradable Polymers to Promote Tissue-engineered Bone
Muwan CHEN, Dang Quang Svend LE, Jens Vinge NYGAARD, Xuenong ZOU, Cody BÜNGER

16:00 A-S2.9(O) A00794-01390 pg A36
In Vivo Osteoinduction of rhBMP-2 Contained Demineralized Bone Matrix Gel Type
Hyang KIM, Jee-Yeon JEONG, You-Lim BANG, Seung-Hyuk KIM, Nam-Ho PARK, Joo-Hong PARK, Joo-Woong JANG

A-S3: Advanced Biomaterials and Regenerative Medicine I

Monday, 29 June 2009

16:30 - 18:30

Level 3, Room 303

Chairs: Thian ES, Feinberg S

16:30 A-S3.1-2(IN) A02515-04309 pg A86
Pharmacological Manipulation of an Oral Mucosa Progenitor/stem Cell Population
Kenji IZUMI, Ken INOKI, Cynthia MARCELO, Stephen FEINBERG

17:00 A-S3.3(O) A00646-01160 pg A31
Novel Glycosurfaces by Surface-Initiated ATRP
Anca MATEESCU, Jianding YE, Ravin NARAIN, Maria VAMVAKAKI

- 17:15 A-S3.4(O) A00504-00924 pg A26**
Chitosan Hydrogels and Nanosized Structures Formed with Anionic Polysaccharides
Yury SHCHIPUNOV, Nadya IVANOVA, Sergey SARIN
- 17:30 A-S3.5(O) A01843-03197 pg A73**
Fabrication and Alignment of Porous Scaffold for Vessel Tissue Engineering Using Electrospinning Technology
Yabin ZHU, Yuxin LIU, Weigang YIN, Mary B CHAN-PARK
- 17:45 A-S3.6(O) A00936-01638 pg A40**
Cell-selective Films for Layered Vascular Tissue Engineering
Mark CHONG, Swee Hin TEOH, Chuen Neng LEE, Mahesh CHOLANI, Jerry CHAN
- 18:00 A-S3.7(O) A01315-02762 pg A57**
Engineered PEG-RGD Hydrogels for Controlling Cell Migration
Daniela GUARNIERI, Antonia DE CAPUA, Maurizio VENTRE, Assunta BORZACCHIELLO, Carlo PEDONE, Daniela MARASCO, Menotti RUVO, Paolo Antonio NETTI
- 18:15 A-S3.8(O) A02531-04332 pg A86**
***In vivo* Implant of a New Generation of Neural Collagen-based Guides**
Alessandro SANNINO, Angelo QUATTRINI, Amleto PICCINNO, Luca SALVATORE
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- A-S4: Advanced Biomaterials for Cancer Treatment I**
 Tuesday, 30 June 2009
 10:30 - 12:30
 Level 3, Room 303
 Chairs: SH Teoh, Feng SS
- 10:30 A-S4.1-2(KN) A02920-04991 pg A90**
Nanomedicine: Nanoparticles of Biodegradable Polymers for Oral Chemotherapy
Si-Shen FENG
- 11:00 A-S4.3(O) A03009-05136 pg A92**
The LETS Biodevice Implant: Development of a Novel Concept and Biodevice to Guide Cancer Treatment
Terence A. TAN, Lilli BRANDTNER, Soi-Khoon YEW, John DANGERFIELD, Brian SALMONS, Bin-Tea TEH, Khee-Chee SOO, Walter GÜNZBERG, Swee-Hin TEOH
- 11:15 A-S4.4(O) A02461-04199 pg A83**
Influence of Platinum Nanotopographies on Protein Adsorption and Cellular Behavior
Morten FOSS, Alireza DOLATSHAHI-PIROUZ, Christian P. PENNISI, Christian SEVCENCU, John Lundsgaard HANSEN, Arne Nylandsted LARSEN, Vladimir ZACHAR, Ken YOSHIDA, Flemming BESENBACHER
- 11:30 A-S4.5(O) A00855-01486 pg A39**
Encapsulation of Paclitaxel by Self-Emulsifying O/W Formulations Prepared from Mixed Nonionic Surfactants
Jen-Ting LO, Bing-Hung CHEN
- 11:45 A-S4.6(O) A02919-04989 pg A89**
Supramolecular Polymeric Biomaterials for Drug and Gene Delivery
Jun LI
- 12:00 A-S4.7(O) A01239-02124 pg A52**
Synthesis, Processing and Property Testing of Electrospun Biodegradable Polyesters for Use as Nerve Guides
Boontharika THAPSUKHON, Winita PUNYODOM, Robert MOLLOY, Puttinan MEEPOWPAN, Pitt SUPAPHOL
- 12:15 A-S4.8(O) A00098-00832 pg A14**
Photothermal and Photocatalytic Cell-killing Effect of Au Colloidal Nanoparticles and Au-capped TiO_2 Nanocomposite Photocatalysts on HeLa Cell
Md. Abdulla- AL-MAMUN, Yoshihumi KUSUMOTO, Aki MIHATA, Bashir AHMMAD, Manickavachagam MURUGANANDHAM
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- A-S5: Biofunctionalization of Metals I**
 Tuesday, 30 June 2009
 14:00 - 17:00
 Level 3, Room 303
 Chairs: Hanawa T, Nebe JB
- 14:00 A-S5.1-2(IN) A00590-01077 pg A28**
Biofunctionalization of Metals with Biofunctional Molecules and Biomolecules
Takao HANAWA
- 14:30 A-S5.3-4(IN) A00942-01658 pg A41**
Mechanical Biofunctionalization of Titanium Alloys by Lowering Young's Modulus
Mitsuo NIINOMI, Hattori TOMOKAZU
- 15:00 A-S5.5-6(IN) A00632-01196 pg A30**
Fabrication and Evaluation of Calcium Phosphate Films Coated on Blast-treated Ti-6Al-4V Substrate
Takayuki NARUSHIMA

15:30 A-S5.7-8(IN) A01260-02180 pg A55
Biocompatibility Evaluation of Biodegradable Magnesium Alloys
Akiko YAMAMOTO

16:00 A-S5.9-10(IN) A01466-02544 pg A65
Understanding Bone Texture as a Bone Quality Index for Design of Biofunctional Metal Implants
Takayoshi NAKANO

16:30 A-S5.11-12(IN) A01528-02670 pg A67
Sensitivity of Osteoblasts to Topographical and Chemical Features of Metal Implants
J. Barbara NEBE, Henrike JESSWEIN,
Arne WEIDMANN, Birgit FINKE,
Claudia MATSCHEGEWSKI, Regina LANGE,
Ulrich BECK, Karsten SCHROEDER

A-S6: Advanced Biomaterials for Cancer Treatment I

Wednesday, 1 July 2009

10:30 - 12:30

Level 3, Room 303

Chairs: Griesser H, Blanchemain N

10:30 A-S6.1-2(KN) A02608-04455 pg A87
Prevention of Bacterial Colonization of Biomaterials Surfaces and Implants by Ultrathin Antibacterial Coatings
Hans GRIESSER, Hardi YS, Chi NDI, Susan SEMPLÉ,
Sameer AL-BATAINEH, Krasimir VASILEV,
Marek JASINIENIAK, Stefani GRIESSER

11:00 A-S6.3-4(IN) A01250-02153 pg A54
Biomaterials Functionalised with Cyclodextrins for Prolonged Release of Antibiotics
Nicolas BLANCHEMAIN, Nicolas TABARY,
Guillaume VERMET, Thomas LAURENT,
Stephane LEPRETRE, Feng CHAI, Christel NEUT,
Michel MORCELLET, Bernard MARTEL,
Hartmut F. HILDEBRAND

11:30 A-S6.5-6(IN) A01242-02189 pg A53
Cell Selectivity and Antithrombotic Effect of Polyester Vascular Prosthetic Material Grafted with Acrylic Acid
Feng CHAI, Nicolas BLANCHEMAIN,
Maria Rosa AGUILAR, Maude JIMENEZ,
Imen KACEM, Elixene JEAN-BAPTISTE,
Bernard MARTEL, Julio SAN ROMAN,
Hartmut F. HILDEBRAND

12:00 A-S6.7(O) A02283-03897 pg A81
Addressable Nanoarrays of Tethered Lipid Bilayer Rafts for Advanced Nanomedicine
HeaYeon LEE, BongKuk LEE, Tomoji KAWAI

12:15 A-S6.8(O) A00174-00697 pg A16
Hybrid Plasmachemical Reactor for Biomaterials Processing
Tatiana VASILIEVA

A-S7: New Developments in Scaffolds for Tissue Regeneration

Wednesday, 1 July 2009

14:00 - 16:00

Level 3, Room 303

Chairs: Calvert P, Chai F

14:00 A-S7.1(O) A00859-01494 pg A39
Freeform Fabrication of Fiber Reinforced Hydrogels
Paul CALVERT, Swati MISHRA, Animesh AGRAWAL

14:15 A-S7.2(O) A02487-04250 pg A85
Electrospun Bioactive Nanofibers as Biomimic ECMs from Structure Properties to Functions for Tissue Engineering
Xiumei MO

14:30 A-S7.3(O) A00020-00587 pg A13
Fabrication of Three-dimensional Scaffolds Using Two-photon Polymerization
Maria FARSARI, Anthi RANELLA,
Vasilia MELISSINAKI, Carsten REINHARDT,
Arune GAIDUKEVICIUTE, Frederik CLAEYSSENS,
Maria VAMVAKAKI, Costas FOTAKIS,
Boris N. CHICHKOV

14:45 A-S7.4(O) A00972-01690 pg A42
Biodegradable Poly[(R)-3-hydroxybutyrate] (PHB) – Based Thermogelling Polymers for Drug Delivery and Tissue Engineering Applications
Xian Jun LOH, Jun LI

15:00 A-S7.5(O) A01214-02069 pg A51
Micro/nano-grooved 3D Polymeric Scaffolds Fabricated by a Piezoelectric Transducer (PZT)-assisted Bioplotter
SeungHyun AHN, Kim GEUNHYUNG

15:15 A-S7.6(O) A00238-00437 pg A18
Distinct Tissue Responses to Porous Silk Fibroin Scaffolds (PSFSs) and Polyvinyl Alcohol (PVA) Sponges in vivo
Guoping GUAN, Lun BAI, Baoqi ZUO,
Mingzhong LI, Zhengyu WU, Yonglin LI

15:30 A-S7.7(O) A01010-01766 pg A44
A New Method of Producing Homogeneous PLGA Microspheres with High Encapsulation Efficiency
Xigeng MIAO

15:45 A-S7.8(O) A01906-03942 pg A73
Effects of Rigidity Sensing on Fibrotic Cellular Activity
 Nur Aida ABDUL RAHIM, Roger KAMM, Hanry YU

A-S8.008(P) A00181-01875 pg A16
Heparin-immobilized Gold Nanoparticles for Targeted Cancer Cell Death
 Kyuri LEE, Hyukjin LEE, Ki Hyun BAE, Tae Gwan PARK

A-S8: Poster Session

Wednesday, 1 July 2009

15:30 - 17:30

Level 3, Gallery

A-S8.001(P) A00008-00438 pg A12
Surface Bioactivation of Cobalt-base Alloy During Investment Casting Process
 Hossein MINOUEI, Mohammad Hossein FATHI, Mahmood MERATIAN, Ahmad KERMANPUR, Hossein GHAZVINIZADE

A-S8.009(P) A00187-01058 pg A17
Physical, Chemical and Thermal Properties of 8 MeV Electron Beam Irradiated C108 (*Bombyx Mori*) Silk Fibers
 Sangappa SYHALABHAVI, Ganesh Sanjeev, Subramanya, Somashekar RUDRAPPA

A-S8.010(P) A00197-00376 pg A17
The Degradation Behavior of PLGA Blend and Gradient Coatings
 Min QI

A-S8.002(P) A00011-00458 pg A12
Effect of Casting Parameters on Wear Behavior of ASTM F-75 Cobalt-base Alloy
 Hossein GHAZVINIZADEH, Mahmood MERATIAN, Ahmad KERMANPUR, Mohammad Hossein FATHI, Hossein MINOUEI

A-S8.011(P) A00229-00429 pg A18
Nixtric Oxide Detection Using Wavelength Modulation Spectroscopy and its Applications in Breath and Cell Death Diagnostics
 MITRAYANA, FJM HARREN, Wasilah ROHMAH

A-S8.003(P) A00018-00104 pg A12
Effects of freeze-drying on bovine pericardium tis
 Virgilio TATTINI JUNIOR, Marina MAIZATO, Adolfo A. LEIRNER, Marisa M. BEPPU, Olga Z. HIGA, Bronislaw POLAKIEWICZ, Ronaldo N. M. PITOMBO

A-S8.012(P) A00239-01807 pg A18
Preparation, Morphological Characterization and in vitro Biocompatibility of a Collagen-liposomes-entrapped Chondroitin Sulphate Composite
 Otilia ZARNESCU, Lucia MOLDOVAN, Oana CRACIUNESCU, Mihaela TRIF, Magdalena MOISEI

A-S8.004(P) A00057-00069 pg A14
Carbon Nanotube-Reinforced Hydroxyapatite Composite Layers for Biomedical Applications
 Cengiz KAYA, Figen KAYA, Cem B USTUNDAG

A-S8.013(P) A00310-00574 pg A19
The Influence of Galactosylated PDMS on Hepatocytic Function
 Ko-Liang KUO, Hau-min LIOU, Fu-Yin HSU

A-S8.005(P) A00104-02117 pg A14
Electrochemical Behaviour of Titanium and Niobium in Fluoride Containing Artificial Saliva
 Bavya Devi KARUPPASAMY

A-S8.014(P) A00318-03057 pg A19
Influence of Molecular-scale Topography of Collagen and Gelatin Electrospun Fibrous on the Phenotype and Proliferation of MG63 Osteoblast-like Cells
 Cheng-Jie LIN, Shiao-Wen TSAI, Fu-Yin HSU

A-S8.006(P) A00105-02167 pg A15
Surface Modification of Titanium and its Alloys Using Hydrogen Peroxide Solution for Biomedical Application
 Karthega MANI, Rajendran NALLAIYAN

A-S8.015(P) A00347-00648 pg A20
SLS of Porous Scaffolds from Titanium and Nitinol, as Carrier Matrix for Stem Cells
 Igor SHISHKOVSKY, Yuri MOROZOV, Larisa VOLOVA

A-S8.007(P) A02610-04458 pg A88
In vitro Differentiation of Bone Marrow-derived Mesenchymal Stem Cells into 3D Epidermis-like Cells in Organotypic Coculture
 Kun MA, Filip LACO, Seeram RAMAKRISHNA, Susan LIAO, Casey K. CHAN

A-S8.016(P) A00361-00703 pg A20
Narrowly Distributed Nano Hydroxyapatite Powders Prepared by Sol-gel Precipitation Method
 Sanosh KUNJALUKKAL, Min-Cheol CHU, Avinash BALAKRISHNAN, Yong-Jin LEE, Taik-Nam KIM, Seong-Jai CHO

- A-S8.017(P) A00383-01820** pg A21
Effects of a Highly Bioactive Glass-ceramic (Biosilicate®) on the Bone Wound Healing Response in Rats: A Biomechanical Study
Ana RENNO, Renata GRANITO, Christian RAVAGNANI, Paulo BOSSINIA, Oscar PEITL-FILHOC, Edgar ZANOTTO, Nivaldo PARIZOTO, Jorge OISHI
- A-S8.018(P) A00383-01822** pg A21
The Effects of Biosilicate® and Low Level Laser Therapy on Tibial Bone Consolidation in Osteopenic Rats: A Histological Study
Ana RENNO, Paulo BOSSINI, Renata GRANITO, Renan FANGEL, Nivaldo PARIZOTO, Jorge OISHI
- A-S8.019(P) A00417-02304** pg A22
Synthesis and Characterization of Hybrid Biodegradable Films from Collagenous Wastes and Cellulose Derivatives for Biomedical Applications
 Anu Mary A, Thanikaivelan PALANISAMY, Ashokkumar M, Chandrasekaran BANGARU
- A-S8.020(P) A00420-00863** pg A23
In Vitro Evaluation of Osteoblasts Response to Various Shaped Hydroxyapatite Powders
Jinling XU, Khiam Aik KHOR, Jianjun SUI, Jianhua ZHANG, Wei Ning CHEN
- A-S8.021(P) A00429-00812** pg A24
Nanoparticles as Biochemical Sensors
Afaf EL-ANSARY
- A-S8.022(P) A00454-02778** pg A24
Apatite Forming Ability of α , $\alpha+\beta$ and β Titanium Alloys After Chemical and Thermal Treatment
 Tamil Selvi SENGODAN, Raman VEDARAJAN, Rajendran NALLAIYAN
- A-S8.023(P) A00454-02780** pg A24
Surface Characterization and Corrosion Behavior of Chemically Modified Orthopaedic Ti-6Al-4v ELI Alloy in Simulated Body Fluid Solution
 Tamil Selvi SENGODAN, Rajendran NALLAIYAN
- A-S8.024(P) A00473-00872** pg A24
Electrospun Nanofibers of Composite Biomaterials as a Surgical Patch
 Hai LU, Bo JIANG, Weijun CHEN, Dajun YING
- A-S8.025(P) A00494-00905** pg A25
Experimental Study on Angiogenesis Model within the Porous Silk Material Implanted in the Rat
Dongping WU, Guoping GUAN, Huifeng LIU, Min XIE, Lun BAI
- A-S8.026(P) A00500-00917** pg A25
Study on the Structure and Property of Tissue Inducing Regenerated Samia *Cynthia Ricini* Silk Fibroin Nanofibers Scaffold Materials
Baoqi ZUO, Mei XU, Feng ZHANG
- A-S8.027(P) A00518-01399** pg A26
Fabrication of OCP-polymer Composite Materials through Aqueous Solution Process
Toshiki MIYAZAKI, Hironobu IKEDA, Eiichi ISHIDA
- A-S8.028(P) A00539-00988** pg A27
Preparation and Properties of Regenerated *Antheraea yamamai*/*Bombyx mori* Silk Fibroin Blend Film
 Yanqiong WEI, Shuqing YAN, Jiannan WANG, Mingzhong LI
- A-S8.029(P) A00545-01002** pg A27
Silk Fibroin/ Hyaluronic Acid Porous Scaffold for Dermal Wound Healing
Shuqin YAN, Jiannan WANG, Mingzhong LI
- A-S8.030(P) A00596-01091** pg A29
Up-regulation of Endogenous HO-1 Gene by Customized Artificial Transcription Factor
Hongfeng GUO, Yong WEI, Dajun YING
- A-S8.031(P) A01370-03551** pg A61
Magnet-induced Gel by Core-shell Iron Oxide Nanoparticles and Its Application of Cell Attachment
Yi-Chang CHUNG, Wen-Hsuan WANG
- A-S8.032(P) A00608-01108** pg A30
Improved Bone Implants by Allylamine Plasma Polymer Coated Titanium Surfaces
Birgit FINKE, Karsten SCHRODER, Henrike JESSWEIN, Barbara NEBE, Joachim RYCHLY, Andreas FRITSCHKE, Rainer BADER, Uwe WALSCHUS, Michael SCHLOSSER, Andreas OHL
- A-S8.033(P) A00657-01183** pg A32
B-Tricalcium Phosphate and Bovine Hydroxyapatite in Sinus Lift of Rabbits: Histomorphometric and Immunohistochemical Analysis
Mariza MATSUMOTO, Leandro NUNES, Renato OLIVEIRA, Hugo NARY FILHO, Leandro HOLGADO, Marco BRESAOLA, Daniel RIBEIRO
- A-S8.034(P) A00657-01185** pg A32
High Density Porous Polyethylene in Alveolar Ridge of Rabbits: Histological and Immunohistochemical Analysis
Mariza MATSUMOTO, Renato OLIVEIRA, Leandro NUNES, Leandro HOLGADO, Hugo NARY FILHO, Daniel RIBEIRO

- A-S8.035(P) A00660-01189** pg A33
Preparation and Characterization of Hydroxyapatite Nanoparticles by Wet-chemical Process
 Pat SOOKSAEN, Phidchayakan SUTTIPHAN, Ek-U-Ma KIMCHAIYONG, Nuttatape JUMPANOI
- A-S8.036(P) A00660-01192** pg A33
Crystallization of Fine Grained Leucite-based Glass-ceramics as Materials for Restorative Dentistry
 Pat SOOKSAEN, Janjira BOONMEE, Chaipayorn WITPATHOMWONG, Somthida LIKHITLERT
- A-S8.037(P) A00679-01225** pg A34
Enhancement of Cell Adhesion onto Electrospun PCL Scaffolds via Simple Protein Absorption, Air Plasma Treatment, and Protein Immobilization Methods
 Sineenat SIRI, Vittaya AMORNKITBAMRUNG, Santi MAENSIRI
- A-S8.038(P) A00688-01243** pg A34
The Growth Morphous and the Mechanism of the Arteriole Angiogenesis in the Porous Silk Fibroin Films
 Xiaoyan TAN, Guoping GUAN, Huifeng LIU, Ming XIE, Dongping WU, Jianmei XU, Lun BAI
- A-S8.039(P) A00772-01356** pg A35
Comparison of Electrospun PCL Fibrous Mats Containing Copper and Silver Ions in Inhibiting Bacterial Growth
 Worawoot RACHAREE, Sineenat SIRI
- A-S8.040(P) A00789-01383** pg A35
Preparation and Characterization of Alpha-lipoic Acid and ReoPro® Eluting Dual Drug Coated Stent by Plasma Polymerization Followed by Grafting of Drugs
 Sun-Jung SONG, Hui Jie LI, Kyoung Seok KIM, Kyung Hwan KIM, Jun PARK, Yu Jeong PARK, Dong Lyun CHO, In Kyu PARK, Myung Ho JEONG
- A-S8.041(P) A00809-01543** pg A36
Synthesis of Aryl Sulfides via Decarboxylative C-S Cross-Couplings
 Zhongyu DUAN, Sadananda RANJIT, Xiaogang LIU
- A-S8.042(P) A00837-01459** pg A37
Synthesis of Temperature Sensitive Hydrogel Containing Glycyrhretinic Acid and In Vitro Cell Compatibility Study
 Xiao-Ling HE, Li CHEN, You-Yu DONG, Shen YU, Fan-Yong YAN
- A-S8.043(P) A00850-01893** pg A38
Effect of ZnO Addition on Characterization of Bioactive Glass-ceramics in Simulated Body Fluid
 Sang-Hyeok IM, Nam-Jin KIM, Young-Hoon LA, Bong-Ki RYU
- A-S8.044(P) A00864-01965** pg A39
Doped Lanthanum Manganite with Designable Curie temperature for Application in Hyperthermia Cancer Treatments
 Xiao-Lin WANG, Xing-min WANG, Shixue DOU, Zhenxiang CHENG, Yi DU
- A-S8.046(P) A00898-01571** pg A40
Surface Nano-Patterning to Regulate Platelet Response on Polymeric Surfaces
 Li Buay KOH, Isabel RODRIGUEZ, Subbu S. VENKATRAMAN
- A-S8.047(P) A00939-02783** pg A41
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- A-S8.048(P) A00959-01715** pg A42
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- A-S8.049(P) A00972-01694** pg A42
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- A-S8.050(P) A00985-01713** pg A43
Synthesis, Spectroscopic, Crystallographic and In-Vitro Antimicrobial Investigation of Fe(III) Complexes Derived from Tetradentate Schiff Base Pyrazolone
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- A-S8.054(P) A01073-01855** pg A45
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- A-S8.094(P) A02208-03781** pg A78
**Semi-solid Decalcification System: A Novel Method to
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- A-S8.095(P) A02216-04210** pg A79
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**Bioceramic Composite Coatings Fabricated by Nd-
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- A-S8.098(P) A02246-03831** pg A80
**Finite Element Analysis of Artery Buckling under
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**Degradable Thermoplastic Polyurethane Elastomer
(TPU): The Effect of Soft Segment Structure on
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- A-S8.100(P) A02327-03981** pg A81
**Stress and Damage Induced in Dental Ceramics
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- A-S8.101(P) A02404-04338** pg A82
**Laser Microstructuring of Poly(ϵ -caprolactone) Thin
Films: Study of Surface Chemistry, Degradability and
Potential Applications in Tissue Engineering**
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- A-S8.102(P) A02477-04237** pg A83
**3-D Perfusion Culture of Osteogenic hMSC-TERT
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- A-S8.103(P) A02488-04255** pg A85
**The Use of Carboxymethylcellulose-derived Hydrogel
to Control Hepatocyte Aggregation Behavior and
Maintain Liver-specific Function *in vitro***
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Hiroyuki IJIMA, Koei KAWAKAMI
- A-S8.104(P) A02709-04656** pg A88
Fracture Behaviour of Composite Dental Resins
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- A-S8.105(P) A03000-05123** pg A91
**Identification of Virulent Isolates and Proteome
Analysis of Bioinsecticidal Fungus, *Paecilomyces
Fumosoroseus* (Wize) Brown and Smith for
the Management of *Eurema Blanda* (Pieridae:
Lepidoptera) and *Pericalia Ricini* (Lymandridae:
Lepidoptera)**
A. NAJITHA BANU, C. BALASUBRAMANIAN,
P. VINAYAGA MOORTHY, T. KUBENDRAN
- A-S8.106(P) A03022-05152** pg A94
**Assessing the Susceptibility to Local Buckling at the
Femoral Neck Cortex to Age-Related Bone Loss**
He XI, Revanth Reddy GARLAPATI, B. W. SCHAFER,
W. P. SEGARS, F. ECKSTEIN, V. KUHN, T. J. BECK,
Taeyong LEE

A-S8.107(P) A03025-05155 pg A94
Reduced Basis Methods for Fast Evaluation of Iliac Crest Trabecular Bone Elastic Properties
Kathy LAM, Revanth Reddy GARLAPATI,
 Yoon-Sok CHUNG, Taeyong LEE

A-S9: Understanding Origins of Fracture and Composite Biomaterials

Thursday, 2 July 2009

10:30 - 12:30

Level 3, Room 303

Chairs: Ambrosio L, Rosei F

10:30 A-S9.1-2(KN) A00421-00804 pg A23
On the Origins of Fracture Resistance and its Biological Degradation in Human Bone
Robert RITCHIE

11:00 A-S9.3-4(IN) A02479-04233 pg A84
Composite Biomaterials for Tissue Repair and Regeneration
Luigi AMBROSIO, Roberto DE SANTIS,
 Vincenzo GUARINO, Antonio GLORIA,
 Raucci MARIA GRAZIA

11:30 A-S9.5-6(IN) A00499-01826 pg A25
Surface Nanopatterning to Control Cell Growth
Federico ROSEI

12:00 A-S9.7(O) A00829-01442 pg A37
Human Osteoblast-like Cells on Composites of Carbon Nanotubes and Non-degradable Polymers
Lubica GRAUSOVA, Elena FILOVA,
 Lucie BACAKOVA, Aneta FRACZEK,
 Blazewicz STANISLAW

12:15 A-S9.8(O) A02459-04198 pg A82
Properties and Structure of Bioactive Glasses Containing Titanium
Richard MARTIN, Robert MOSS, Robert NEWPORT

A-S10: Engineering the Cell-Biomaterial Interface

Thursday, 2 July 2009

14:30 - 16:00

Level 3, Room 303

Chairs: Dai JW, Wang CH

14:30 A-S10.1-2(IN) A02765-04730 pg A88
Activation of Collagen Based Biomaterials using Collagen Binding Growth Factors
Jianwu DAI

15:00 A-S10.3-4(IN) A02555-04599 pg A87
BMP-2 Plasmid Loaded PLGA/HAp Composite Scaffolds for Treatment of Bone Defects in Nude Mice
 Hemin NIE, Mei-Ling HO, Chih-Kuang WANG,
Chi-Hwa WANG, Yin-Chih FU

15:30 A-S10.5(O) A00128-00592 pg A15
Experimental Studies on Engineering of Liposomal Preparations
Aditya MITTAL, Rahul GROVER

15:45 A-S10.6(O) A00597-01892 pg A29
The Control of Anchorage-dependent Cell behavior within a Hydrogel / Microcarrier System in an Osteogenic Model
Chunming WANG, Dong-an WANG

A-S11: Engineering the Cell-Biomaterial Interface

Thursday, 2 July 2009

16:00 - 18:00

Level 3, Room 303

Chairs: Dai JW, Wang CH

16:00 A-S11.1(O) A01150-02193 pg A48
An Improved Injectable Polysaccharide Hydrogel: Modified Gellan Gum for Long-term Cartilage Regeneration in vitro
Yihong GONG, Feng ZHANG, Dong-an WANG

16:15 A-S11.2(O) A01821-03170 pg A72
Evaluation of In vivo Antimicrobial Properties of 3D Bioactive Polycaprolactone Honeycomb Scaffold
Yiling, Erin TEO, Swee Hin TEOH, Shin Yeu ONG,
 Jia LU, Shabbir MOOCHHALA

16:30 A-S11.3(O) A01299-02268 pg A56
Development of Neurons on the Regenerated Silk Fibroin Materials
 Lian XIN, Jing QU, Feng ZHANG, Mingzhong LI,
 Baoqi ZUO, Huanxiang ZHANG

16:45 A-S11.4(O) A01429-02471 pg A63
Safety and Pharmacokinetics of Triamcinolone Acetonide-loaded Poly(ϵ -caprolactone) Intraocular Implants in Rabbit Eyes
Nan KAIHUI, Chen HAO, Li GUOXING, Li YULI,
 Shun SUNMAO, Hou JIANGPING, Cheng LINGYUN

17:00 A-S11.5(O) A01589-03829 pg A69
Structure-Function Relationships in Spider Silk
Cameron P BROWN, Catalin HARNAGEA,
 Silvia LICOC CIA, Federico ROSEI

17:15 **A-S11.6(O) A01762-03086** **pg A70**
Poly(ethyleneimine) Based Biodegradable Cationic Polymer as Non-viral Gene Delivery Vector
 Weiwei WANG, Wenzhong LI, Eva FLICK, Xu LI, Karola LÜTZOW, Andreas LENDLEIN, Hans-Heinrich GATZEN, Gustav STEINHOFF, Nan MA

17:30 **A-S11.7(O) A01811-03187** **pg A72**
3D Fibrous Matrices Having Different Porosities and their CHO Cell Culture Performance
 Yanwei TANG, Alessandra SUTTI, Tong LIN

17:45 **A-S11.8(O) A02026-03486** **pg A95**
Development of Functional Nanofibers for Controlled Release of Basic Fibroblast Growth Factor
 Min sup KIM, Heungsoo SHIN

A-S12: New Development in Biomaterials

Engineering

Friday, 3 July 2009

11:00 - 13:00

Level 3, Room 303

Chairs: Teoh SH, Yu H

11:00 **A-S12.1-2(KN) A02979-05094** **pg A91**
Engineering *in vitro* Drug Testing Platforms
Henry YU

11:30 **A-S12.3-4(IN) A03021-05151** **pg A93**
Efficacy of Anti-Resorptive and Chemotherapeutic Treatment on Bone Metastatic Disease
 X. CHEN, L. S. FONG, X. YANG, P. MARUTHAPPAN, Y. S. CHUNG, H. J. OH, Taeyong LEE

12:00 **A-S12.5(O) A02937-05020** **pg A90**
Design Considerations for the Development of Artificial Liver Device
Hwa Liang LEO, L. XIA, S. F. ZHANG, X. Y. TUO, T. M. CHENG, G. F. XIAO, Henry YU

12:15 **A-S12.6(O) A01007-02056** **pg A43**
Phase Transfer Cell Culture for Self-Forming Cartilage Regeneration
Kai SU, Yihong GONG, Dong-an WANG

12:30 **A-S12.7(O) A00762-01344** **pg A34**
Improvement in Mechanical Properties of Dental Cast Ti-29Nb-13Ta-4.6Zr Alloy by Microstructural Control
Harumi TSUTSUMI, Mitsuo NIINOMI, Toshikazu AKAHORI, Masaaki NAKAI, Hisao FUKUI, Michiharu OGAWA

12:45 **A-S12.8(O) A01494-02599** **pg A67**
Synthesis, Characterization and Biomedical Application of Poly(ester-urethane) Adhesive
Manawwer ALAM, Alok RAY