

Final Programme

Thursday 25 March 2004

08:00	Registration		
08:30	Opening session		
09:00	Invited Lecture		
	Tissue engineering musculoskeletal tissues J.T. TRIFFITT The Botnar Research Centre, Univ. Oxford, Great Britain		
	Session 1. Orthopaedic Tissue Engineering		
09:40	Elaboration et caractérisation de bioverres poreux M. ARIOUA, R. ZENATI, J. CHEVALIER, G. FANTOZZI GEMPPM, UMR CNRS 5510, INSA de Lyon, France		
10:00	Biphasic calcium phosphate: a comparative study of interconnected porosity in two ceramics A. LECOMTE ^{1,2} , H. GAUTIER ^{1,2} , J.M. BOULER ¹ , A. GOUYETTE ^{1,2} , Y. PEGON ³ , G. DACULSI ¹ , C. MERLE ^{1,2} ¹ INSERM, Faculté de Chirurgie Dentaire, Nantes, France ² Laboratoire de Pharmacie Galénique, Faculté de Pharmacie, Nantes, France ³ Laboratoire de Chimie Analytique, Faculté de Pharmacie, Nantes, France		
10:20	A new in-vivo model for bone studies C. DELFOSSE ¹ , G. PENEL ¹ , M. DESCAMPS ² , G. LEROY ² ¹ LBM Raman, Faculté d'Odontologie, Université de Lille 2, France ² LAMAC, Université de Valenciennes et du Hainaut-Cambrésis, Maubeuge, France		
10:40	Coffee Break		
11:10	Reinforcement of the proximal femur with bone cement J. MASON, C. LI Aerospace and Mechanical Engineering, University of Notre Dame, IN, USA		
11:30	Cement augmented screw fixation of olecranon fractures in osteoporotic bone DJ. REDFERN, P. ATRI, SM. BELKOFF Johns Hopkins Bayview Medical Center, Baltimore, MD, USA		
11:50	Lordoplasty – alternative method for restoration of lordosis in osteoporotic compression fractures P. F. HEINI, R. ORLER Dept. of Orthopedic Surgery, University of Berne, Switzerland		
12:10	An experimental study on rhBMP-2-CPC composite for the repair of segmental bone defect L. CHANGSHENG ¹ , C. ZHANQIANG ² ¹ East China University of Science and Technology, Shanghai, China ² 301 Hospital, Beijing, China		
12:30	Lunch		
		Session 2. Surface characterization, Surface modification	
14:00	Activation of the biological behaviour of YAG-LASER irradiated polyethylene N. BLANCHÉMAIN ¹ , G. MAYER ¹ , M. TRAINSEL ² , Y. SETTI ³ , H.F. HILDEBRAND ¹ ¹ Laboratoire Biophysique, Faculté de Médecine, Lille, France ² LGPIFRM, ENSCL, Villeneuve d'Ascq, France ³ Transysteme Technologie, Nîmes, France		
14:20	Modification de surface du titane pour applications prothétiques. Caractérisation de surface. F. NOIRCLERE ^{1,2} , F. TETARD ¹ , G. PAVON ² , G. HELARY ² , V. MIGONNEY ² , B. BACROIX ¹ ¹ LPMTM, UPR CNRS 9001, Université Paris 13, France ² LBPS, UMR CNRS 7052, Université Paris 13, France		
14:40	Effect of silane coupling agent on bonding strength of polymer film to 316L stainless steel Y. SHILAN, Y. YUAN, L. CHANGSHENG East China Univ. of Science and Technology, Shanghai, China		
15:00	New hydroxylapatite coatings on metal substrates obtained at low temperatures C. DAMIA, S. SARDA, V. MIDY, P. SHARROCK Labo. Chim. Bioinorg. Méd., Univ. P. Sabatier, Castres, France		
15:20	Coffee break & Session 3. Posters		
		Session 4. Injectable Biomaterials	
16:30	Analysis of the cement injection process in vertebroplasty G. BAROUD ¹ , M. BOHNER ² , P. HEINI ³ , T. STEFFEN ⁴ ¹ Dépt. de génie mécanique, Université de Sherbrooke, Canada ² R. Mathys Stiftung, Bettlach, Switzerland ³ Dept. of Orthopedic Surgery, University of Bern, Switzerland ⁴ Orthopaedic Research Laboratory, McGill University, Canada		
16:50	In vivo cement injection pressure during vertebroplasty S.J. FERGUSON ¹ , J. KREBS ¹ , M. BOHNER ² , G. BAROUD ³ , T. STEFFEN ³ , P.F. HEINI ⁴ ¹ ME Müller Institute for Surgical Technology and Biomechanics, University of Bern, Switzerland ² R. Mathys Stiftung, Bettlach, Switzerland ³ Orthopaedic Research Laboratory, McGill University, Canada ⁴ Dept. of Orthopedic Surgery, Inselspital Bern, Switzerland		
17:10	Injectability of a calcium-strontium phosphate bone cement S. MUNIER ¹ , M. VERT ¹ , P. BOUDEVILLE ² ¹ CRB Artificielles, UMR CNRS 5473, Montpellier, France ² LCGM, Faculté de Pharmacie, Montpellier, France		
17:30	Calcium phosphate cements containing α -tricalcium phosphate G. GEORGESCU, JL. LACOUT, M. FRECHE CIRIMAT, UMR CNRS 5085, INPT, Toulouse, France		
17:50	Propriétés ostéogéniques des composites fibrine-biocéramiques moulabes/injectables pour la reconstruction osseuse G. DACULSI ¹ , E. GOYENVALLE ^{1,2} , E. AGUADO ^{1,2} , M. BILBAN ³ , K. BITTNER ³ , C. GOBIN ⁴ , R. SPAETHE ³ ¹ INSERM, Faculté de Chirurgie Dentaire, Nantes, France ² Ecole Nationale Vétérinaire, Nantes, France ³ Baxter Biosciences, BioSurgery R&D, Vienne, Austria ⁴ Biomatlante, Vigneux de Bretagne, France		
20:00	Conference Dinner		

Friday 26 March 2004

08:30	Assemblée Générale du GRIBOI	Session 6. Cell Therapy, Clinical Aspects
	Invited Lectures	
09:00	<p>Bioceramic custom made implants by stereolithography process T. CHARTIER¹, C. CHAPUT², J. BRIE³, M. LOISEAU² ¹SPCTS, UMR CNRS 6638, ENSCI, Limoges, France ²Centre Transfert Technologie Céramique, Limoges, France ³Centre Hospitalier Universitaire, Limoges, France</p>	10:40
09:30	<p>Potentialities of ink-jet prototyping process for biomedical devices R. NOGUERA, M. LEJEUNE, T. CHARTIER SPCTS, UMR CNRS 6638, ENSCI, Limoges, France</p>	11:00
	Session 5. New Processing, New methods	11:20
09:40	<p>Multi-nozzle biopolymer deposition and freeform fabrication of tissue scaffolds W. SUN, S. KHALIL, J. NAM, A. DARLING Lab. Computer-Aided Tissue Engng., Drexel University, USA</p>	11:40
10:00	<p>Performance of a new cancellous bone explant tissue culture-loading system V. DAVID¹, M. MARINO¹, A. GUIGNANDON¹, D. JONES², P. RUEGSEGER³, E. SMITH⁴, L. VICO¹ ¹LBTO, INSERM, Faculté de Médecine, Saint-Etienne, France ²Dept. Experimental Orthopaedics & Biomechanics, Philipps-University Marburg, Germany ³Inst. for Biomedical Engineering, Univ. of Zurich, Switzerland ⁴Biogerontology Lab., University of Wisconsin, Medical School, Madison, USA</p>	11:40
10:20	Coffee break	12:00
		12:30
		Lunch
		14:00
		Visit of "Porcelaine Bernardaud" Manufactory

Session 3. Posters (provisional - Last minute posters will be accepted)

The system of the cultured cartilage combined with porous β -tricalcium phosphate (β -TCP) adsorbing bone morphogenetic protein-6 (BMP-6) as a new artificial articular cartilage model

S. AOKI, S. YAMAGUSHI, K. SUGANUMA

Institute of Scientific and Industrial Research, University of Osaka, Japan

Oscillatory mixing improves the injectability of cements in vertebroplasty

G. BAROUD¹, M. SAMARA¹, T. STEFFEN²

¹Dept. de genie mécanique, Université de Sherbrooke, Québec, Canada

²Orthopaedic Research Laboratory, McGill University, Montreal, Canada

Influence of porosity and surface characteristics of biphasic calcium phosphate bone substitutes on cellular response

A. BENADJAOUD¹, E. BARRIER¹, M. MELIN², L. HEINRICH², J. CHEVALIER¹, J. CHEVALIER¹, G. FANTOZZI¹, D.J. HARTMANN²

¹National Institute of Applied Sciences, GEMPPM, UMR CNRS 5510, Villeurbanne, France

²Biomaterials and matrix remodeling laboratory, EA 3090, Faculté de Pharmacie, Lyon, France

Processing of organic-inorganic composite biomaterials - an EELS-TEM microstructural study

E. BRES¹, N. BUNJES², T. DUHOO¹, M.W. HOSSEINI³, J.M. PLANEIX³

¹Laboratoire de Structures et des Propriétés de l'Etat Solide, Université de Sciences et Technologies, Lille, France

²Max Planck Institut für Metallforschung, Germany

³Laboratoire de Chimie de Coordination Organique, Université Louis Pasteur, Strasbourg, France

Propriétés de pièces macroporeuses en phosphate tricalcique

A. DESTAINVILLE¹, E. CHAMPION¹, C. FLUTEAUX², D. BERNACHE-ASSOLLANT¹

¹SPCTS, Université de Limoges, UMR CNRS 6638, France

²Ceraver, Roissy, France

Elaboration and characterization of fluoridated calcium phosphate coatings.

N. DUMELIE¹, A. PERCHET¹, G. BALOSSIER¹, C. ROUSSE-BERTRAND², H. BENHAYOUNE¹

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Fabrication of cross-linked recombinant human bone morphogenetic protein-2/chitino microcapsules

C. FANGPING, L. CHANGSHENG

East China University of Science and Technology, Shanghai, China

Self assembled Monolayers for Biological Applications

S. FLEITH¹, H. HAIDARA¹, R. BAREILLE², J. AMEDEC², M. NARDIN¹

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Physico-chemical investigation of bovine bone with magnetic resonance imaging

D. GENSANNE, S. SARDA, P. SHARROCK

Medical Bioinorganic Chemistry Laboratory, Université Paul Sabatier, Toulouse, France

Radiation exposure of the surgeon during percutaneous cement injection.

P. F. HEINI¹, R. HARSTALL¹, R. ORLER¹, R.L. MINI²

¹Dpt. of Orthopedic Surgery, University of Bern, Switzerland

²Division for Medical Radiation Physics, University of Bern, Switzerland

The cartilage collagens and hyaluronic acid and their impact for tissue engineering

F. HILDEBRAND, N. BLANCHEMAIN

Laboratoire de Recherche sur les Biomateriaux, UPRES EA 1049, Faculté de Médecine, Lille, France

Influence of low-molecular weight polylactic acid on the properties and structure of polylactic acid membrane

H. HUA, Q. YIN, X. YONG, L. CHANGSHENG

East China University of Science and Technology, Shanghai, China

Synthèses et propriétés de céramiques macroporeuses à base de phosphate de calcium

J.C. HORNEZ¹, G. MOREAU¹, E. RADZISZEWSKI², G. LEROY³, A. LERICHE¹, M. DESCAMPS¹

¹LAMAC, Université de Valenciennes et du Hainaut-Cambrésis, France

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³LBM, Faculté d'Odontologie, Lille, France

Influence of polyethylene glycol on the viscosity and the injectability of calcium phosphate cement

J. JING, L. CHANGSHENG

East China University of Science and Technology, Shanghai, China

Improvement of porosity of a calcium phosphate cement by incorporation of biodegradable glass fibres

I. KHAIROUM, P. WEISS, G. DACULSI, J.M. BOULER

EM INSERM 99-03, Faculté de Chirurgie Dentaire, Nantes, France

Synthèse et frittage d'hydroxyapatites carbonatées de type B

JP. LAFON, E. CHAMPION, E. LABORDE, D. BERNACHE-ASSOLLANT

SPCTS, Université de Limoges, UMR CNRS 6638, Faculté des Sciences et Techniques, France

Correlation between sintering temperature of hydroxyapatite particles and the production of inflammatory cytokines and metalloproteinases by human monocytes

P. LAQUERRIERE¹, A. GRANDJEAN-LAQUERRIERE², M. GUENOUNOU², P. FRAYSSINET³, E. JALLOT⁴, M. NARDIN⁵, G. BALOSSIER¹

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The influence of implant alloys composition on osteoblast morphology and adhesion

P. LINEZ-BATAILLON¹, E. EISENBARTH², M. TRAISNEL³, J. BREME², H.F. HILDEBRAND¹

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The dualism of nacre

E. LOPEZ, C. MILET, M. LAMGHARI, L. PEREIRA MOURIES, S. BORZEIX, S. BERLAND

Museum National d'Histoire Naturelle, USM 0401, UMR 5178, CNRS, Paris, France

Biological improvements of PET by excimer LASER irradiation

G. MAYER¹, N. BLANCHEMAIN¹, C. DUPAS-BRUZEK², M. TRAISNEL³, D. DEROZIER⁴, L.D. LAUDE², H.F. HILDEBRAND¹

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Dissolution des apatites amélaire en présence de primaires automordants

K. NASR¹, G. GREGOIRE¹, S. THIBEAULT², P. SHARROCK²

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Synthesis and mechanical property of dicalcium phosphate dihydrate, tetracalcium phosphate, and mechanically-treated b-tricalcium phosphate composite cement in physiological solution and its cell response

T. NOMOTO¹, S. YAMAGUSHI¹, K. SAKAMOTO², T. SEKINO¹, K. NIIHARA¹

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²Osaka Sangyo University, Japan

Fibronectin adsorption and cell adhesion on three porous calcium phosphate ceramics:

Effect of a chelating surface treatment.

D. PELLEN¹, S. GIRAUDIER¹, E. CHAMPION², K. ANSELME³, V. LARRET GARDE¹, O. GALLET¹

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Effects of Chitosan addition in Cementek®, a phosphocalcium cement

K. PORET¹, M. FRECHE², S. GONCALVES³, J.L. LACOUT², F. RODRIGUEZ¹

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Effects of hydroxyapatite surface characteristics on osteoblastic cell attachment

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Calcium phosphate as sustained release biomaterials for bone defect filling mini tablets

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An injectable self setting hydrogel for biomaterial and tissue engineering

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Preparation and drug release behavior of PCL coatings on 316L stainless steel

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