



SCIENTIFIC PROGRAMME

v.2

Monday, September 24th

08:45-09:00 **OPENING CEREMONY**

9:00-18:30 **BASIC RESEARCH**

MORNING

09:00-09:45 **Inaugural lecture:**

B. Peault (*Pittsburg - USA*)

⇒ The blood vessel wall as a source of multi-lineage progenitor cells : implications for the origin and identity of mesenchymal stem cells.

9:45-10:00 **Coffee Break**

10.00-12.30 **Plenary session: Adult Stem Cells**

Chair: **B. Péault - E. Lagasse**

10:00-10:30 **O. Kollet** (*Rehovot - Israël*)

⇒ Regulation of stem cell homing, retention and mobilization.

10:30-11:00 **R. Poulosom** (*London - UK*)

⇒ Stem Cells : basic attributes and clinical applications.

11:00-11:30 **M. Ratajczak** (*Louisville - USA*)

⇒ Adult bone marrow - and cord blood-derived very small embryonic like stem cells.

11:30-12:00 **F. Prosper** (*Pamplona - Spain*)

⇒ Multipotent Adult Progenitor Cells (MAPC) for vascular repair.

12:00-12:30 **A. Caplan** (*Cleveland - USA*)

⇒ Adult mesenchymal stem cells as drugstores for regenerative medicine.



Monday, September 24th

AFTERNOON

14.00-16.00 Joint plenary session:

Chair: *c. Van Blitterswijk - D. Letourneur*

Vascular

14:00-14:30 **H. Mertsching** (*Stuttgart - Germany*)
⇒ Angiogenesis, vitally important for Tissue Engineering

14:30-15:00 **R. Rieu** (*Marseille - France*)
⇒ Engineering advances of coronary stents.

Bone/Cartilage

15:00-15:30 **P. Marie** (*Paris - France*)
⇒ Osteogenesis/Chondrogenesis : potential targets for regenerative medicine.

15:30-16:00 **P. Ducheyne** (*Philadelphia - USA*)
⇒ Principles of ceramic bioactivity - In vitro and in vivo evidence, and applications in tissue engineering.

16:00-16:30 Coffee Break

16:30-17:30 Session I: Heart/Vascular

Chair: *M. Ratajczak - P. Hénon*

16:30-16:45 **S. Pasquet-Vallejo**, C. Tancredi, P. Hénon (*Mulhouse - France*)
⇒ G-CSF mobilized peripheral blood CD34+ cells isolated from patients with acute myocardial infarct can in vitro differentiate into endothelial and cardiac muscle cells.

16:45-17:00 T.Montemurro, G.Andriolo, G.Weissmann, M.Colnaghi, R. Giordano, P. Rebulli, B. Peault, F. Mosca, **L. Lazzari** (*Milan - Italie / Pittsburg - USA*)
⇒ Human perivascular umbilical cord cells are capable of long term culture and respond to chemotactic gradient in an in vitro-model of alveolar damage.

17:00-17:15 **S. François**, N. Chakfe, B. Durand, G. Laroche (*Laval - Canada / Mulhouse - France*)
⇒ PLA pulverisation as scaffold for vascular applications.

17:15-17:30 **C.M. Murea** (*Mulhouse - France*)
⇒ Numerical simulation of blood-artery interaction

17:30-18:30 Session II: Bone/Cartilage

Chair: *P. Ducheyne - J. Amédée*

17:30-17:45 **E. Bergeron**, M.-E. Marquis, E. Lord and N. Fauchoux (*Sherbrooke -Canada*)
⇒ Short-term effects of RGD and DGEA peptides on preosteoblast responses to a short aminoacid sequence derived from BMP-9.

17:45-18:00 **S. Ghosh**, D.L. Kaplan (*Boston - USA*)
⇒ Novel silk scaffolds for tissue engineering.

18:00-18:15 **M. Gumusderekioglu** (*Ankara - Turkey*)
⇒ Biomimetic apatite coated scaffolds for bone tissue engineering.

18:15-18:30 S. Giljean, M. Bigerelle, **K. Anselme** (*Mulhouse - France*)
⇒ Influence of surface roughness of titanium substrates on wettability and human bone cell adhesion.



Tuesday, September 25th

MORNING

BASIC RESEARCH (Continued)

08:30-9:45 **Session III: Cell sources: Mesenchymal, Adipocytes**

Chair: **A. Caplan - K. Anselme**

8:30-8:45 **G. Bilic**, S.M. Zeisberger, A.S. Mallik, R. Zimmermann, A.H. Zisch (*Zurich - Switzerland*)
⇒ Comparative Characterization of cultured human term amnion epithelial and mesenchymal stromal cells for prospective application in cell therapy.

8:45-9:00 J. W. Lee, **D. S. Yoon**, W. J. Choi, Y. H. Kim (*Seoul - South Korea*)
⇒ Alkaline phosphatase activity as a predictive marker of osteogenesis in human bone marrow-derived mesenchymal stem cells.

9:00-9:15 **H. S. Jung**, J.W. Lee, W. J. Choi, J. W. Kim (*Seoul - South Korea*)
⇒ The regulation of signal transducers and activators of transcription 5 by C/EBP α in adipogenesis of human bone marrow derived stromal cells.

9:15-9:30 **E. Lord**, H. Park, V. Normand, E. Bergeron and N. Faucheux (*Sherbrooke - Canada*)
⇒ Short-term effects of a small-peptide derived from BMP-9 on preadipocytes differentiation to osteoblasts

9:30-9:45 **C. Merceron**, C. Vinatier, M. Masson, L. Guigand, J. Amiaud, Y. Cherel, P. Weiss, J. Guicheux (*Nantes - France*)
⇒ Hypoxia exerts differential effects on the chondrogenic and osteogenic differentiation of human adipose-derived mesenchymal stem cells.

09:45-10:15 **Coffee Break**

10:15-17:00 **APPLIED RESEARCH**

10:15-12:15 **Plenary session: Cell/Biomaterial interfaces**

Chair: **G. Laroche - N. Chakfe**

Vascular

10:30-11:00 K. Vallières, **G. Laroche** (*Laval - Canada*)
⇒ Importance of selecting appropriate conjugation strategy to preserve the endothelialization capabilities of fibronectin.

11:00-11:30 M. Chaouat, C. Le Visage, A. Autissier, F. Chaubet, **Letourneur D.** (*Paris - France*)
⇒ Vascular tissue engineering for small-diameter arterial grafts.

11:30-12:00 **G. Uzan** (*Villejuif - France*)
⇒ Therapeutic potential of endothelial cells

Cartilage

12:00-12:30 **J. Ringe**, M. Sittinger (*Berlin - Germany*)
⇒ Tissue engineering and cartilage - state of the art and future challenges.



Tuesday, September 25th

AFTERNOON

14:00-16:00 Session IV: Tissue Engineering

Chair: J. Ringe - M. Nardin

- 14:00-14:30 **C. Van Blitterswijk** (*Enschede - Netherlands*)
⇒ Engineering musculoskeletal tissue : nutrition and vascularization.
- 14:30-14:45 J. W. Lee, **M. S. Park**, W. J. Choi, D.S. Yoon, Y. Jung, S. H. Kim (Seoul - South Korea)
⇒ Regeneration of the articular cartilage using a BMSC/elastic biodegradable PLCL scaffold composite.
- 14:45-15:00 **F. Jégoux**, E. Aguado, E. Goyenvalle, R. Cognet, O. Malard, F. Moreau, G. Daculsi (*Nantes / Bordeaux / Angers - France*)
⇒ Post radiation bone marrow autograft combined with MBCP and collagen membrane as a new approach to bone engineering in maxillofacial oncological related defect.
- 15:00-15:15 C. Chollet, R. Bareille, C. Chanseau, Ch. Bourget, M.C. Durrieu, **L. Bordenave**, V. Rérat, J. Marchand-Brynaert (*Bordeaux - France / Louvain - Belgique*)
⇒ Evaluation of 2 sets of functionalization in order to confer to pet biomaterial a proadhesive ability towards human endothelial cells.
- 15:15-15:30 **L. Barandon**, L. Leroux, P. Dufourcq, D. Daret, T. Couffinhal, C. Duplâa (*Bordeaux - France*)
⇒ Comparison of unpurified bone marrow cells, endothelial progenitor cells or mesenchymatous cells in a coated scaffold muscle patch after myocardial infarction for cardiac regeneration.
- 15:30-15:45 **O. Meredith**, K. Seunarine, M.A.Khan, N. Gadegaard C.D.W. Wilkinson, M.O. Riehle (*Glasgow - UK*)
⇒ Fabrication of micro and nanopatterned perforated polymeric scaffolds for tissue engineering.
- 15:45-16:00 **B. Rüger**, J. Breuss, D. Hollemann, G. Yanagida, M. B. Fischer, P. Höcker, M. Dettke (*Vienna - Austria*)
⇒ Vascular morphogenesis by adult bone marrow (BM) progenitor cells in three dimensional (3D) fibrin matrices.

16:00-16:30 Coffee Break

Ophthalmology

- 16:30-17:00 J.A. Sahel**, S. Mohand-Said, Y. Yang, S. Picaud, M.N. Delyfer, A. Galy, T. Lèveillard (*Paris - France*)
⇒ Neuroprotection of cone photoreceptors : cell therapy and pharmacological approaches.

17:00-18:00 Session V: Presentation of the best posters.

Chair: S. Neunlist

19:30 - Gala Dinner



Wednesday, September 26th

CLINICAL APPLICATIONS

MORNING

9:00-10:00 Educational lectures

09:00-09:30 **J. W. Costerton** (*Los Angeles - USA*)
⇒ Role of bacterial biofilms in regenerative medicine.

9:30-10:00 **E. Robinet** (*Besançon - France*)
⇒ Control of alloreactivity by suicide gene transfer : from bench to bedside...and vice versa.

10:00-10:45 Main lecture

L. Douay (*Paris - France*)
⇒ Ex-vivo production of human red blood cells from hematopoietic stem cells : from bench to transfusion medicine.

10:45-11:15 Coffee Break

11:15-12:30 Session VI: Heart

Chair: **G. Uzan - L. Douay**

11:15-11:45 **A. Kaminski**
⇒ Titel to be determined (Rostock - Germany)

11:45-12:10 **P. Hénon**, H. Sovalat, S. Pasquet, N. Bischoff, Y. Arkam, JP. Monassier
(*Mulhouse - France*)
⇒ CD34+ cell intra-cardiac transplantation regenerates viability, perfusion and contractility of the ischemic zone following severe acute myocardial infarct (AMI).

12:10-12:30 **B. Pignon**, M.A. Sevestre, F. Vitry, J.C. Capiod, C. Clement, C. Tournois,
E. Toulmonde, P. Nguyen, J.J. Lefrère (*Reims - France*)
⇒ Autologous transplantation of bone marrow or peripheral blood mononuclear cells in critical limb ischemia.



Wednesday, September 26th

AFTERNOON

14.00-17.00 **Session VII: Other pre-clinical/clinical applications**

Chair: **Y. Barrandon - B. Drenou**

Diabetes Mellitus

14.00-14.30 **L. Kessler** (*Strasbourg - France*)

⇒ Pancreatic islet allotransplantation in type 1 diabetes.

14:30-15:00 **D. Bosco** (*Geneva - Switzerland*)

⇒ Islet vascularization and role of extracellular matrix in beta-cell function.

15:00-15:15 **E. Maillard**, M. Sanchez, C. Kleiss; A Langlois, M.P. Krafft, M. Pinget, S. Sigrist,
A. Belcourt (*Strasbourg - France*)

⇒ Perfluorocarbons, new tool for the preservation of pancreatic islets in vitro.

15:15-15:30 **A. Langlois**, W.Bietiger, K.Mandes, E.Maillard, M.Pinget, L.Kessler, S.Sigrist
(*Strasbourg - France*)

⇒ Overexpression of VEGT in vitro using deferoxamine: new drug to increase islet vascularisation during transplantation.

Liver/Skin/Neurology

15:30-16:00 **E. Lagasse** (*Pittsburgh - USA*)

⇒ Stem cells, regenerative medicine and cancer in the liver.

16:00-16:30 **Y. Barrandon** (*Lausanne - Switzerland*)

⇒ Reconstructing epidermal appendages: a developmental challenge.

16:30-17:00 **P. Hantraye** (*Paris - France*)

⇒ Cell therapies for neurodegenerative disorders : the case of Huntington's disease.

17:00-17:30 **Meeting synthesis and closure**