

PROGRAM



12 - 14 DECEMBER 2018
Nantes, France

DAY 1 - Wednesday 12 DECEMBER 2018

9 am - 12:30 pm **Networking session (ground floor, invited delegates only)**

11:30 am-1:30 pm **Bioregate Forum Registration (3rd floor)**

12:30 - 1:30 pm **One 2 One informal meeting for the networking morning participants (ground floor)**

1:30 - 2:00 pm **Welcome speech by Organizers & Officials**
*Organizers: Olivier Grasset or Olivier Laboux (University of Nantes),
Pierre Weiss (Bioregate), Franck Zal (Atlanpole Biotherapies)
Officials: Pays de la Loire Region and Nantes Metropole*

2:00 - 4:00 pm **SESSION 1**

Cells as therapy and tools

Chairmen: Ross Macdonald and Frank Yates

2:00 - 2:40 pm **Clinical Development of an iPSC-derived Therapeutic Product**
Ross Macdonald (Cynata Therapeutics, Australia)

2:40 - 3:00 pm **Human embryonic stem cells and regenerative medicine: the examples of the eye and the skin**
Cécile Martinat (I-Stem, France)

3:00 - 3:20 pm **CAR-Tregs for clinical use**
Nadia Lounnas-Mourey (TxCell, a Sagamo company, Valbonne, France)

3:20 - 4:00 pm **Short presentations**

- How could dental stem cells of the human papilla take up the challenge of spinal cord injury? *Anne des Rieux (Louvain Drug Research Institute, Advanced Drug Delivery and Biomaterials, Université catholique de Louvain, Belgique)*
- High Yield Production Of Liver Spheroids For Bio-Artificial Liver Devices. *Noushin Dianat (Cyprio, Paris, France)*
- Generation of nucleus pulposus progenitor cells from human induced pluripotent stem cells. *Anne Camus (RMeS, Nantes, France)*
- Development of in vitro assays to evaluate unwanted immunogenicity and other interactions between stem cells and the immune system. *Severine Giltaire (Immunxperts, Belgium)*

4:00 - 4:30 pm **Coffee break in Exhibition & Poster hall**

3D Bioprinting

Chairmen: Kimberly Homan and Frank Halary

4:30 - 5:10 pm

Bioprinting Vascularized Living Tissue

Kimberly Homan (Wyss Institute for Biologically Inspired Engineering, Harvard University, USA)

5:10 - 5:30 pm

Tissue Manufacturing by Bioprinting: Challenges and Opportunities

Fabien Guillemot (Poietis, France)

5:30 - 5:50 pm

Engineering complex bioarchitectures to biomimic nature: A step closer to the development of artificial organs

Marc Thurner (RegenHU, Switzerland)

5:50 - 6:30 pm

Short presentations

- "Routine checking for cells viability in deposition 3D bioprinting", Chloé Devillard (3d.FAB platform, ICBMS, Claude Bernard University Lyon 1, France)
- In vivo evaluation of 3D printed BCP scaffolds for maxillofacial bone reconstruction in a critical-size bone defect model of rabbit. *Dr Boris Feng Hildebrand (Université de Lille, France)*
- 3D bioprinting of cartilage and bone. *Joris van Aken (I&L Biosystem / Cellink, Sweden)*
- Laser-assisted bioprinting: an advanced tool for cell model creation and for bone tissue repair. *Hugo De Oliveira (University of Bordeaux, Tissue Bioengineering, U1026, ART BioPrint, Bordeaux, France)*

DAY 2 - Thursday 13 DECEMBER 2018

9:00 - 11:00 am **SESSION 3**

Smart Biomaterials

Chairmen: Estelle Collin & Catherine Le Visage

9:00 - 9:40 am **Redefining Identity of Disease, Tissues and Cells – a Biomaterials Paradigm**

Abhay Pandit (Curam, Ireland)

9:40 - 10:00 am **Chitosan-based nanofiber mats for tissue engineering**

Christine Jérôme (Ulg, Belgium)

10:00 - 10:20 am **Gecko Biomedical: a versatile polymer platform for tissue engineering**
Estelle Collin (Gecko Biomedical, France)

10:20 - 11:00 am **Short presentations**

- The impact of polymeric microcarriers on the behavior of stem cells in tissue engineering. *Rmaidi Assia (INSERM CRCINA U1232 Centre de Recherche en Cancérologie et Immunologie Nantes-Angers Equipe GLIAD, Université d'Angers, France)*
- Designing a Bioadhesive Chitosan-Based Thermosensitive Hydrogel for Cell Therapy with Mussel-Inspired Catechol Grafting. *Capucine Guyot (Ecole de Technologie Supérieure, Montréal, Québec, Canada)*
- Self-setting and Injectable Hyaluronic Acid Hydrogel with Bioinspired Properties for Tissue Engineering. *Killian Flegeau (INSERM UMRS 1229, Regenerative Medicine and Skeleton-RMeS, Team REGOS, Nantes, France)*
- Nucleic acid based supramolecular systems as novel smart biomaterials. *Philippe Barthélémy (University of Bordeaux, ARNA laboratory, France)*

11:00 - 11:30 am Coffee break in Exhibition & Poster hall

11:30 am - 12:20 pm **Hot topic**

Development of reporter systems to study DNA repair mechanisms and optimize genome editing approaches in vitro. *Knut Stieger (Justus-Liebig-University Giessen, Germany)*

12:20 - 12:30 pm **Product compliance**

Cell therapy and associated quality controls: Which tests should be performed? *André Silvestro (Clean Cells, France)*

12:30 - 2:00 pm Lunch in Exhibition & Poster hall

2:00 - 2:30 pm **Poster session**

2:30 - 6:00 pm		PARALLEL SLOTS
2:30 - 4:30 pm	SESSION 4	2:00 - 6:00 pm OneToOne meeting (4th floor)
2:30 - 3:00 pm	Young researchers pitch competition Building integrated human intestinal tissue from pluripotent stem cells Maxime Mahé (TENS, France), 9 mini talks by young researchers (10 min each) : 3:00 - 4:00 pm	
4:30 - 5:00 pm	Organizers private meeting (poster and pitch awards attribution decision)	
3:00 - 4:00 pm	Mini talks by young researchers <ul style="list-style-type: none">- Mini Talk 1: Heparan sulfate mimetics are neuroprotective and neuroregenerative agents for ischemic stroke. <i>Khelif Yacine, Normandie Univ, UNICAEN, CNRS, CEA, ISTCT/CERVOxy group, GIP CYCERON, Caen, France</i>- Mini Talk 2: Design of an optimal oxygenation strategy for macro-encapsulated pancreatic islets in the bioartificial pancreas. <i>Anne Mouré, IECM, Oniris, INRA, Université Bretagne Loire, Nantes, France</i>- Mini Talk 3: Towards a better understanding of the mechanical properties recovering of regenerating rat calvaria bones via synchrotron diffraction characterization. <i>Ameni Zaouali, Institut de Recherche en Génie Civil et Mécanique, GeM (UMR CNRS 6183), Université de Nantes, Saint-Nazaire, France</i>- Mini Talk 4: Controlled release of biological factors for progenitor cell-mediated endogenous repair of intervertebral discs. <i>Leslie Frapin, INSERM, UMR1229, RMeS, Regenerative Medicine and Skeleton, Université de Nantes, ONIRIS, Nantes, France</i>- Mini Talk 5: Recapitulation of amyotrophic lateral sclerosis with a 3D tissue-engineered spinal cord model. <i>Aurélié Louit, Laval University, Quebec, Canada</i>- Mini Talk 6: Improvement of bone regeneration by tissue engineering strategies with a new synthetic Calcium Phosphate scaffold. <i>Cyril d'Arros, INSERM, UMR 1229, RMeS, Regenerative Medicine and Skeleton, Université de Nantes, ONIRIS, Nantes, France & Biomatlante SA, Vigneux-de-Bretagne, France</i>- Mini Talk 7: Regulatory B cell generation from human Induced Pluripotent Stem Cells with a repressible granzyme B expression. <i>Florian Dubois, CRTI UMR 1064 team 4, Nantes, France</i>- Mini Talk 8: Myocardial infarct repair with human adult muscle stem cells MuStem. <i>Alice Rannou, INRA/Oniris UMR 703, Oniris, Nantes, France</i>- Mini Talk 9: Development of collagen/hyaluronic acid-tyramine (coll/tha) composite hydrogels with tunable gelling kinetic for the treatment of nucleus pulposus. <i>Antoine Frayssinet, Sorbonne Université, CNRS UMR 7574, Condensed Matter Chemistry Laboratory (LCMCP), Paris, France</i>	
5:00 - 6:30 pm	Cocktail and Poster and pitch prizes award	
7:00 - 10:00 pm	Gala dinner at the Nantilus restaurant	

DAY 3 - Friday 14 DECEMBER 2018

8:45 - 10:45 am SESSION 5

Gene Therapy and Nano medicine

Chairmen: Gloria Gonzalez Aseguinolaza and Frank Boury

8:45 - 9:25 am **Don't forget about the delivery system in regenerative medicines**

Kevin Shakesheff (University of Nottingham, UK)

9:25 - 9:45 am **Gene therapy for Oculopharyngeal muscular dystrophy**

Alberto Malerba (Royal Holloway, University of London, UK)

9:45 - 10:05 am **Therapeutic efficacy and safety of VTX-801, an optimized AAV vector for the treatment of Wilson's disease**

Gloria González Aseguinolaza (ViVet Therapeutics)

10:05 - 10:45 am **Short presentations**

- Lipid nanoparticles for the sustained released of miRNA: new insight into intervertebral disc degenerative medicine. *Brian Le Moal (INSERM, UMR 1229, RMeS, Regenerative Medicine and Skeleton, Université de Nantes, ONIRIS, Nantes, France & MINT, Université d'Angers, INSERM 1066, CNRS 6021, Angers, France)*
- Demonstration of immunomodulatory properties for human MuStem cell population, a promising candidate for cell therapy of muscular dystrophies. *Marine Charrier (PAnTher, INRA, École nationale vétérinaire, agro-alimentaire et de l'alimentation Nantes-Atlantique (Oniris), Université Bretagne Loire (UBL), Nantes, France)*
- Generation of CD8+ and CD4+ regulatory T cells from human pluripotent stem cells. *Léa Flippe (INSERM UMR1064, Center for Research in Transplantation and Immunology ITUN, Université de Nantes, Nantes, France)*
- Gene therapy and tissue engineering: a strategy to treat recessive dystrophic epidermolysis bullosa or RDEB. *Martin Barbier (Centre de Recherche en organogénèse expérimentale de l'Université Laval/LOEX, Québec, Canada)*

10:45 - 11:05 am Coffee break in Exhibition & Poster hall

Lessons from preclinical and clinical trials

Chairmen: Oumeya Adjali and Tuan N Guyen

11:05 - 11:45 am **The Era of Organoid Medicine from screen to therapeutics**
Takanori Takebe (Cincinnati Children's Hospital Medical Center, USA)

11:45 am-12:05 pm **3D-Printed Patient Specific Implants and their Preclinical Evaluation**
David Eglin (AO foundation, Davos, Switzerland)

12:05 - 12:25 pm **Clinical Production of an Autologous Ex vivo Gene Therapy**
Azadeh Golipour (Avrobio, USA)

12:25 - 1:05 pm **Short presentations**

- Therapeutic effect of mesenchymal stem cell-derived extracellular vesicles in rheumatic diseases. *Marie Maumus (INSERM U1183, Montpellier, France & Université Montpellier, France)*
- Bioactivity of a Tissue-Engineered Product: Bridging the Gap Between Academic and Clinical Studies", Gaetan Thirion (Novadip Biosciences, Mont-Saint-Guibert, Belgium)
- Safety and clinical efficacy of a single intra-articular injection of allogeneic neonatal mesenchymal stem cells (MSC) for the treatment of osteoarthritis in dogs. *Nathalie Saulnier (Vetbiobank, Marcy L'Etoile, France)*
- ISOCell PRO workstation for cell therapy product and clinical applications. *Severina Franco (Euroclone Spa, Pero (MI), Italy)*

1:05 - 1:30 pm **Conclusion remarks and Closing ceremony**