

[FINAL PROGRAM]

August 26-27, 2019 - Cité des Congrès de Nantes, France

TERMIS-EU WORKSHOP

3D BIOPRINTING IN CANCER RESEARCH



termis

CONFERENCE CHAIRS:

Pierre LAYROLLE, Nantes
Christophe MARQUETTE, Lyon
Luciano VIDAL, Nantes

SCIENTIFIC COMMITTEE:

Frank HALARY, Nantes
Jean-Yves HASCOET, Nantes
Pierre LAYROLLE, Nantes
Catherine LEVISAGE, Nantes
Maxime MAHE, Nantes
Christophe MARQUETTE, Lyon
Lisa OLIVER, Nantes
Françoise REDINI, Nantes
Cristina SCIELZO, Milan
Karim SI-TAYEB, Nantes
Luciano VIDAL, Nantes
Pierre WEISS, Nantes



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3D BIOPRINTING IN CANCER RESEARCH

FINAL PROGRAM

DAY I ■ MONDAY, AUGUST 26TH, 2019 ■

08:15 Welcoming of participants

08:30 OPENING

Pierre LAYROLLE,
Christophe MARQUETTE & Luciano VIDAL

08:40 START-UP PRESENTATIONS

08:45 SESSION I

3D BIOPRINTING & CANCER MICROENVIRONMENT

*Chairs: Laura BROUTIER,
Christophe MARQUETTE & Luciano VIDAL*

- 08:45 – 3D bioprinting
the cancer microenvironment
Keynote speaker: Ibrahim OZBOLAT
(Penn State University, USA)

09:15 SESSION II

FREE COMMUNICATIONS 3D bioprinting of tumor models

Chairs: Pierre LAYROLLE & Lisa OLIVER

- 09:15 – The development of a low-cost bioprinter
for the engineering of three-dimensional
human tumor models
Sidne FANUCCI (South Africa)
- 09:25 – Rational design of hydrogels
as bio-inks for 3D-printed tumor
models for personalized therapy
Lena NEUFELD (Israel)
- 09:35 – Gellan gum rheological
properties and bioprinting
Luca GASPERINI (Portugal)
- 09:45 – Tumor engineered scaffolds recapitulate
a human peritoneal tumor environment
at the cellular and biophysical level
Elly DEVLIEGHERE (Belgium)

- 09:55 – An *in vitro* model of bone metastases
Megan COOKE (Canada)

- 10:05 – Blood vessels 3D bioprinting
for tumor model vascular connections
Chloé DEVILLARD (France)

- 10:15 – Advancing bioprinting
to the level of individual cells
Gavin JEFFRIES (Sweden)

10:30 Coffee break

11:00 SESSION III

3D MODELS FOR CANCER

*Chairs: Françoise REDINI,
Cristina SCIELZO & Pierre WEISS*

Invited lectures:

- 11:00 – Organoids as a model system in oncology
Laura BROUTIER
(Centre Léon Bérard, Lyon, France)
- 11:30 – Engineering human pluripotent
stem cells for regenerative medicine
Núria MONTSERRAT
(Institute for Bioengineering of Catalonia, Spain)
- 12:00 – Cold atmospheric plasma: a novel
promising therapy for osteosarcoma
Cristina CANAL
(Polytechnic University of Catalonia, Spain)

12:30 Lunch break & poster session

13:30 SESSION IV

COMPANIES' PRESENTATIONS

- 13:30 – The age of applications
for bioprinting
Ricky SOLORZANO (USA)
- 13:40 – Microfluidic 3D bioprinting
technology for the fabrication
of functional human tissues
Elli KÄPYLÄ (Canada)

- 13:50 – Innovative solutions
to advance 3D bioprinting
Mauro PETRETTA (Italy)



14:00 SESSION V

FREE COMMUNICATIONS 3D bioprinting for tissue reconstruction

Chairs: Cristina CANAL & Franck HALARY

- 14:00 – New alginate-based composite
bioinks for enhanced 3D bioprinting
Susanne HEID (Germany)
- 14:10 – Development of advanced models
of wound healing and inflammation
using 3D bioprinting
Atiya SARMIN (United Kingdom)
- 14:20 – Towards a reliable personalized
glioblastoma therapy using
3D cancer stem cells model
Tamara LAHTURNSEK (Slovenia)
- 14:30 – A bioprinted multicellular
glioblastoma model
Nathalie DUSSERRE (France)
- 14:40 – Multiparametric analysis of tissue
spheroids fabricated from different cell
types for further application in drug
discovery and 3D bioprinting
Elena BULANOVA (Russian federation)
- 14:50 – Organotypic three-dimensional patient
derived metastatic colorectal cancer model
to mimic *in vitro* the metastases biology
Francesca SENSI (Italy)
- 15:00 – Engineering 3D human vascularized
bone models as antimetastatic
drug screening platforms
Maria Vittoria COLOMBO (Italy)

- 15:10 – The arteriovenous loop as 3D model
for studying the interaction of ADSC
and breast cancer cells
Annika KENGELBACH-WEIGAND (Germany)
- 15:20 – Heterotypic 3D breast cancer model
based on silk protein fibroin
Virginia BRANCATO (Portugal)

15:30 HANDS-ON SESSION

3D modelling & bioprinting

5 simultaneous 1-hour hands-on repeated 3 times

- ROOM 1 – Biomedical
application cases: 3D
modelling and printing with NX
Alexis CAPOEN (France)
- ROOM 2 – Allevi in action
Ricky SOLORZANO (USA)
- ROOM 3 – 3D bioprinting of vascular,
multicellular tissue models to mimic
the cancer microenvironment
Hector MARTINEZ (Sweden)
- ROOM 4 – Modelling simple and complex
3D constructs with digital assistance
Samuel GILLIÉRON (Switzerland)
- ROOM 5 – Microfluidic 3D bioprinting:
bringing creative control
to tissue engineering
Elli KÄPYLÄ & Erin BEDFORD (Canada)



18:30 END OF THE DAY

20:00 Gala dinner

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DAY 2 ■ TUESDAY, AUGUST 27TH, 2019 ■

08:15 Welcoming of participants

08:25 START-UP PRESENTATIONS

08:30 SESSION VI

3D BIOPRINTING & CANCER MICROENVIRONNEMENT ORGAN-ON-CHIP

*Chairs: Maxime MAHE
& Nathalie PICOLLET-D'HAHAN*

Invited lectures:

- 08:30 – 3D modelling of the chronic lymphocytic leukaemia microenvironment
Cristina SCIELZO
(San Raffaele Scientific Institute, Milan, Italy)
- 09:00 – Organoids-on-chip in oncology
Xavier GIDROL
(CEA, BIG, Grenoble, France)

09:30 SESSION VII

FREE COMMUNICATIONS

Organ-on-chip – 3D bioprinting for tissue reconstruction

Chairs: Nuria MONSERRAT & Karim SI-TAYEB

- 09:30 – From 3D organoids to organ-on-chip: new models for human
Nathalie PICOLLET-D'HAHAN (France)
- 09:40 – Development of perfusable microchannels for vascularised skin models via indirect 3D bioprinting
Albert GINJAUME (United Kingdom)
- 09:50 – Volume-by-volume bioprinting chondrocytes-alginate bioinks in high temperature thermoplastic scaffolds for cartilage regeneration
Zukhra BATTALOVA (Spain)

- 10:00 – 4D-bioprinted intervertebral disc and functional gradients
Perrine DEVILLEMAGNE (France)

- 10:10 – Exploration and 3D quantification by light sheet imaging and image processing
Jean-Michel LAGARDE (France)

- 10:20 – Building human trabecular meshwork tissue implants
Sibel CETINEL (Turkey)



10:30 Coffee break

11:00 SESSION VIII

3D BIOPRINTING FOR TISSUE RECONSTRUCTION

Chairs: Xavier GIDROL & Catherine LEVISAGE



Invited lectures:

- 11:00 – Biofabrication for joint regeneration
Jos MALDA
(Utrecht Medical Centrum, Netherlands)
- 11:30 – 3D bioprinting of skin and adipose tissue for breast reconstruction
Christophe MARQUETTE
(ICBMS - UMR 5246, Lyon, France)
- 12:00 – 3D bioprinted skin models: the role of extracellular matrix
Alexandra MARQUES
(University of Minho, Portugal)

12:30 Lunch break & poster session

13:30 SESSION IX

COMPANIES' PRESENTATIONS

- 13:30 – How can 3D softwares can improve the potential of bioprinting?
Alexis CAPOEN (France)  
- 13:40 – Advances in bioink development and 3D bioprinting
Hector MARTINEZ (Sweden) 
- 13:50 – JellaGel™: a next generation jellyfish collagen hydrogel from Jellagen® for 3D cell culture
Andrew MEARNES SPRAGG (United Kingdom) 

14:00 SESSION X

3D BIOPRINTING OF TUMOR MODELS







*Chairs: Alexandra MARQUES,
Christophe MARQUETTE & Luciano VIDAL*

- 14:00 – Bioengineered 3D tissue and tumor organoid models for drug and toxicity testing
Keynote speaker: John JACKSON
(Wake Forest University, USA)

15:00 HANDS-ON SESSION

3D modelling & bioprinting

5 simultaneous 1-hour hands-on repeated 3 times

- ROOM 1 – Biomedical application cases: 3D modelling and printing with NX
Alexis CAPOEN (France)  
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- ROOM 4 – Modelling simple and complex 3D constructs with digital assistance
Samuel GILLIÉRON (Switzerland) 
- ROOM 5 – Microfluidic 3D bioprinting: bringing creative control to tissue engineering
Elli KÄPYLÄ & Erin BEDFORD (Canada) 

18:00 END OF THE WORKSHOP & TAKE HOME MESSAGE

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GENERAL INFORMATION

CONGRESS VENUE



Cité des Congrès de Nantes

5, rue de Valmy - BP 24102 - 44041 Nantes Cedex 1

Tel.: +33 (0)2 51 88 20 56 - www.lacite-nantes.fr

GALA DINNER

Monday, August 26th – 20:00

Brasserie Félix

1, rue Lefèvre Utile - 44000 Nantes

Tel.: 02 40 34 15 93

INFORMATION & ORGANIZATION

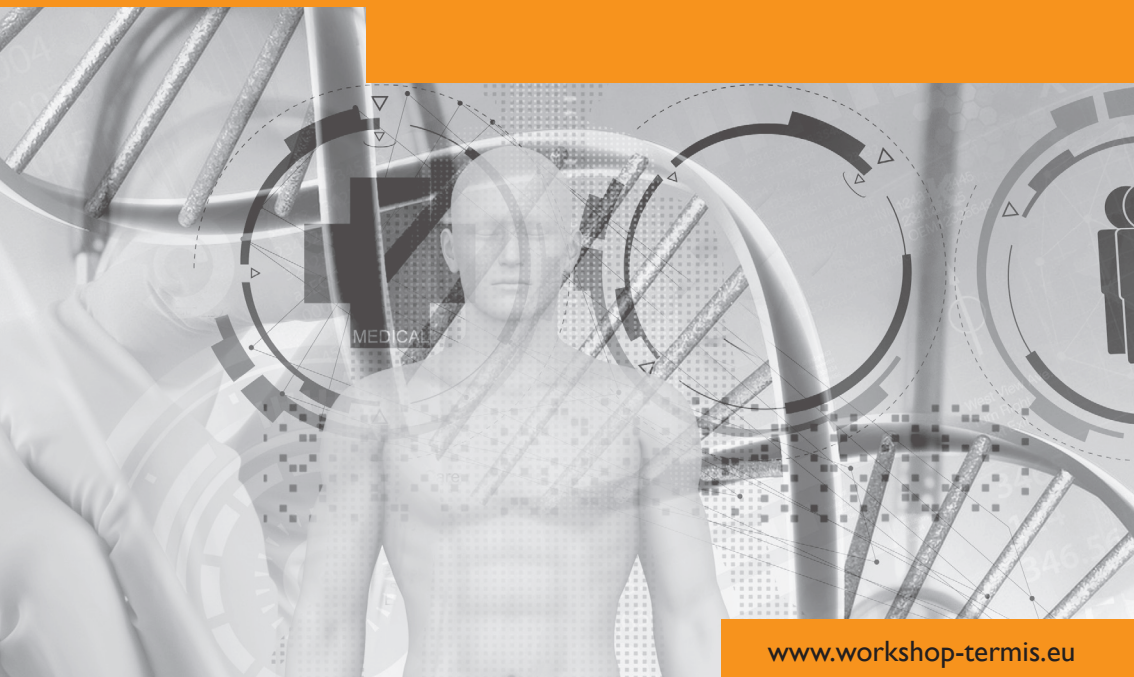
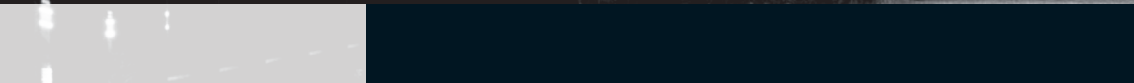


COM&CO, Etienne JARRY

15, Bd Grawitz - 13016 Marseille, France

Tel.: +33 (0)4 91 09 70 53 / +33 (0)6 21 01 73 18

Email: ejarry@comnco.com



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