

Antonietta MESSINA

Postdoc researcher / ER 3

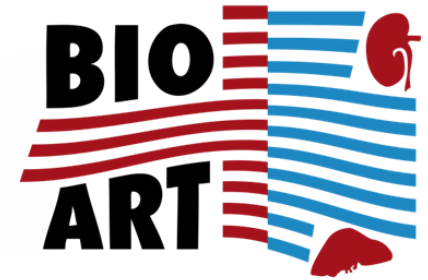
Microencapsulation and differentiation
of iPS
for extracorporeal liver supply

Aim & Things done
February 2016

Postdoc start date: December 2015

Laboratory of Biomechanics and Bioengineering
University of Technology of Compiègne, France
Senior Researcher: **Dr. Cécile Legallais**

iPS cells

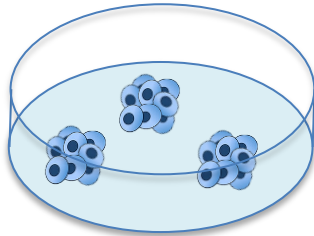


Adult Somatic cells

Cells Reprogramming

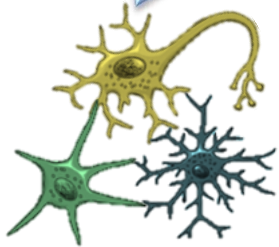


Gene Therapy



iPS cells

Neural cells



Liver cells



Blood cells



Cardiac cells

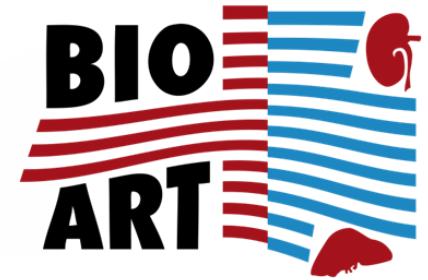


*Disease Modeling
Drug Screening
Transplantation Studies*

*Autologous / Allogenic
Cell Therapy*



Cell Encapsulation

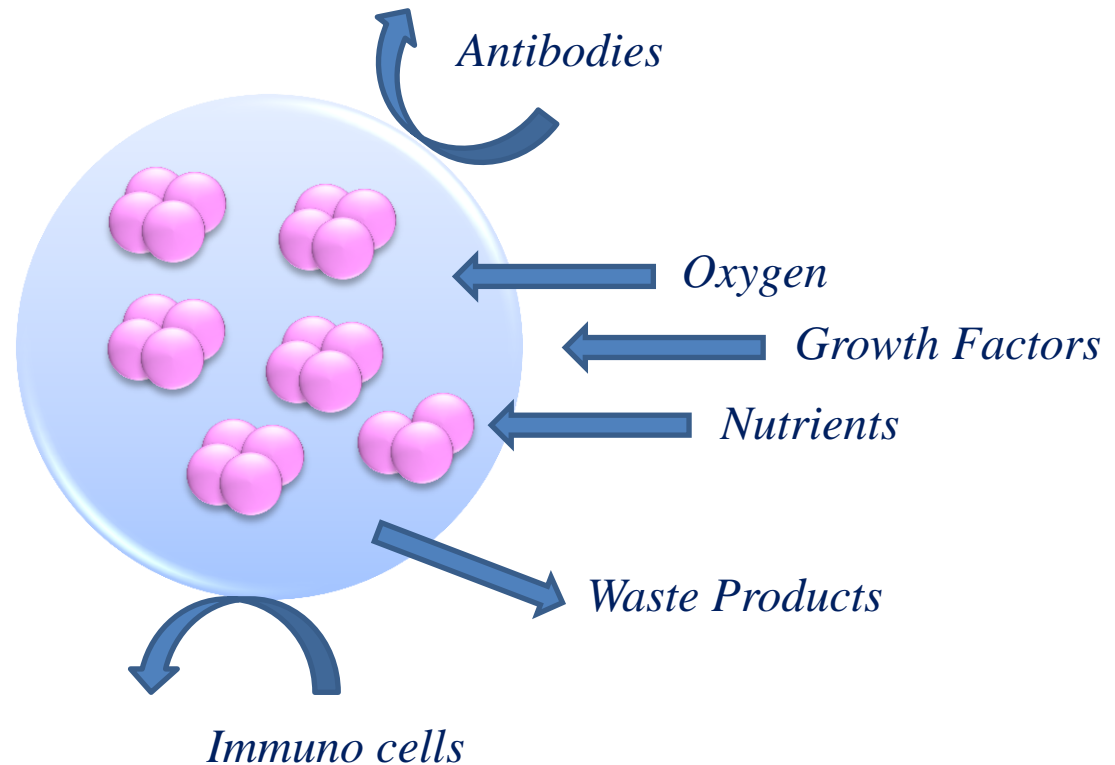


Hydrogel main properties

- i. Excellent biocompatibility**
- ii. Controlled biodegradability**
- iii. Easy to be processed**

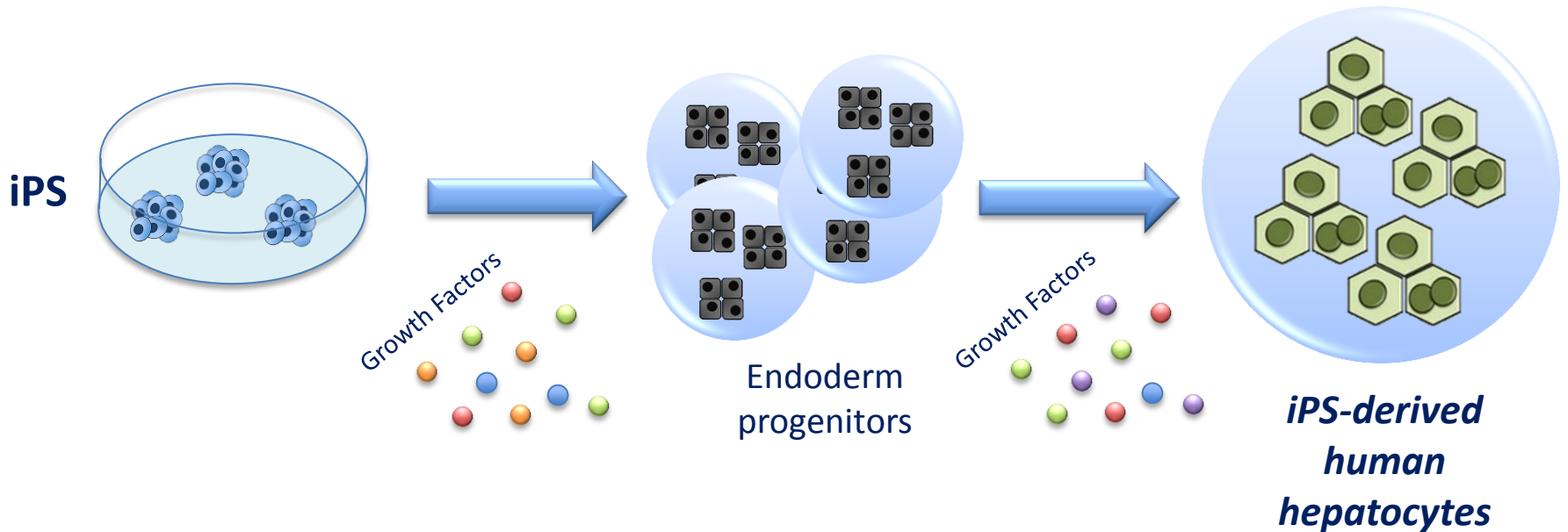
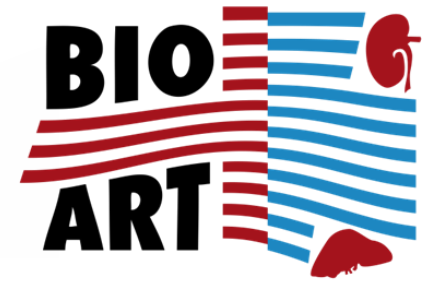


Mechanical strength
Semipermeability
Swelling control



From iPS cells to hepatocytes

iPS Encapsulation



Research Program carried out at the
Laboratory of Biomechanics and Bioengineering - University of Technology of Compiègne,
France - Senior Researcher: Dr. Cécile Legallais

In close collaboration with Dr. A. Dubart-Kupperschmitt, INSERM U 1193, Villejuif, FR.