A bioactive material rich in growth factors for tissue regeneration and 3D cell culture

June 2020
Existing bioactive materials

Liquid materials
- Platelet Rich Plasma
- Liquid platelet lysate

Soft materials
- Emdogain®
- Platelet Rich Fibrin family
- Collagen membranes/spo nges

OUR BIOMATERIAL:
A 3D PLATELET LYSATE SOLID FOAM OFFERING A SUSTAINED RELEASE OF GROWTH FACTOR AT THE SITE OF THE INJURY
Advantages of platelet lysate

High content in growth factors
(Sellberg et al., Transfusion and Apheresis Science, 2016)

Fields of interest

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<th>Cell culture</th>
<th>Chronic wounds</th>
<th>Degenerative diseases</th>
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A natural scaffold answering the current challenges for soft and hard tissue regeneration

- **Porous network** with microstructures favouring cell adhesion and protein adsorption.

- **Rich in growth factors** and allowing **sustained release** at the site of implantation.

- **Haemostatic** properties.

- **Solid form** allowing **easy handling** (with clamps, scalpels...).

- **Biocompatibility** tested in mouse and **controlled resorption**.

- **Sterile** material with **long term storage**.

- **Simple and robust manufacturing process**.
Ongoing operations

- Potential applications:
  - Bone reparation and regeneration
  - Soft tissue regeneration
  - 2D and 3D cell culture
  - Sustained Release Growth Factors Delivery System

- Ongoing research:
  - In-vivo experiments on bone regeneration
  - Enhancement of mechanical properties for bone application
  - Process scale-up

- IP status:
  - Patent application FR2002800 filed on March 2020
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