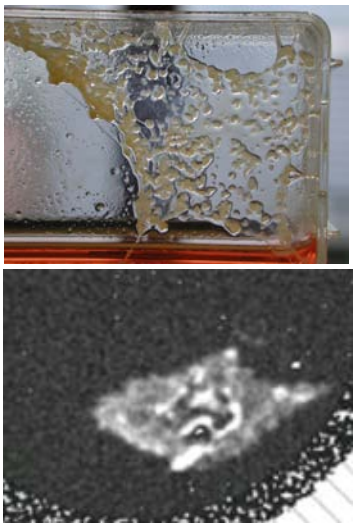
SOPARTEC

Technology Transfer Company of the Université catholique de Louvain

# NEW MULTI-DIMENSIONNAL STRUCTURE WITH ADIPOSE TISSUE-DERIVED CELLS FOR BONE AND CARTILAGE REPAIR

**Sopartec, the technology transfer company of the Université catholique de Louvain (UCL), presents a new treatment for bone and cartilage reconstruction and reinforcement.**



**Top: Multidimensional bone graft made of adipose mesenchymal stem cells with mineralization. Bottom: Bone reconstruction at day 30 post-implantation in nude rats.**

## Technology Keywords

- Adipose stem cells
- Multi-dimensional biomaterial
- Bone and cartilage repair/replacement

## Technology Market : Orthopaedic/ Rhumatology/ Plastic and Maxillofacial surgery.

Tissue engineering is a growing field where new materials are being developed for implantation into the body. One important area involves bone graft materials to replace areas of bone lost to trauma or disease (as tumor resection). Traditionally, graft material may be harvested from the bone of the individual receiving the graft material. However, this requires an additional surgery and additional recovery. Bone also may be taken from others, or even cadavers, but this introduces biocompatibility problems as well as the risk of disease transfer.

Therefore, the production of **multi-dimensional tissues for use in bone graft, reinforcement or reconstruction** remains a real technical issue. The same issue also remains in cartilage reconstruction, or for alleviation of cartilage defects.

## The UCL invention

This invention is directed to the field of **adipose tissue-derived stem cells** and their differentiation for the production of **multi-dimensional tissues**.

The biomaterials of the invention

- have the same properties as a real bone or cartilage;
- are advantageously non-immunogenic and present an immunomodulating effect;
- have desirable handling and mechanical characteristics required for implantation in the native disease area;
- may be useful in rheumatology, in tissue reconstruction, and/or in surgery, especially traumatology, orthopaedic, plastic and maxillofacial surgery.

## Technology Status

This work is the subject of a patent application : European patent application N° EP09161976.7 filed on 04/06/2009 (internal file reference number : SOP-220).

Sopartec would like to talk to companies interested in developing and commercializing this opportunity.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