



Joint filler biomaterials



An innovation that brings to you...

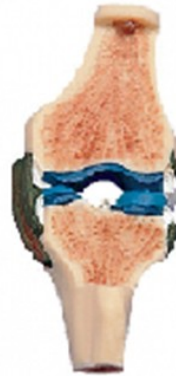
- ✓ Easily adaptable to the dimension of the lesion to fill
- ✓ Perfect integration to the target zone (good mechanical and biological properties, modular composition)
- ✓ Possibility to increase the joint filler thickness (deposition of successive layers)



How does it work?

This new biomaterial is made of **sodium alginate**. Different layers are deposited on an inert or functionalized medium thanks to aerographic stylets and a compressor. The alginate solution can be enriched with eukaryote cells or can be associated with other molecules (hyaluronic acid, chondroitine sulfate).

The originality resides in initiating reticulation of the sodium alginate solution by adding a defined quantity of calcium chloride solution. **The obtained reaction allows the deposition of successive layers**, interacting with one another, which enables obtaining an increased material thickness, and therefore, the treatment of deeper lesions.



What is it for?

- ✓ Treatment of focal lesion of joint cartilage
- ✓ Reconstruction tissue engineering de reconstruction (skin, urothelial vesical epithelium)



Innovation availability...

- ✓ Patent FR 1153563



A laboratory to accompany you...

This innovation was conceived at the **laboratoire en Ingénierie Moléculaire et Physiopathologie Articulaire (IMOPA)** of the University of Lorraine. The Biopôle teams work mainly on different aspects related to inflammatory pathologies, on enzymes involved in the regulation of the answer to oxidizing stress and on biomaterial developments for cartilage tissue therapy.

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