



General description: Established in 1995, Biomatlante develops, manufactures and commercializes synthetic bone substitutes used in orthopaedic, spine, maxillo facial and dental surgery fields. The company currently employs 48 people including 3 PhD. In the full-year 2008, the turnover reached 3 158 K€.

Website: www.biomatlante.com

Expertise: Biomatlante's expertise and know-how is based on micro macroporous biphasic calcium phosphate (MBCP®) bone substitute allowing in-depth cellular colonization and bone growth at the expense of the bioceramic (1). This product is available as blocks of different shapes, granules, non-hardening injectable version (MBCP Gel) (2), self-hardening mouldable composite with fibrin glue (TricOs™, a Baxter-Biomatlante partnership development) (3) as well as specific scaffolds for drug delivery and tissue engineering (4, 5). In addition, Biomatlante has developed composite implants which consist of a mixture of resorbable bio-polymers and calcium phosphates. These products provide an intrinsic mechanical strength which allows the development of resorbable osteosynthetic systems such as interference screws and fusion cages.

Facilities: clean rooms, X-ray diffractometer, sintering ovens, materials testing machine, injection press machine

Other European projects: REBORNE-Project No. 241879- ongoing negotiation

Role in the project: Biomatlante will contribute to the GAMBA project by:

- optimising biphasic calcium phosphate granules as carriers for gene vectors
- developing injectable calcium phosphate ceramics by combination with hydrosoluble polymers
- defining packaging and sterilisation processes for the “gene delivery system”

Workpackages responsibility: Development and optimisation of MBCP carriers for gene vectors; optimisation of processes for manufacturing

[WP01](#) , [WP02](#) , **[WP03](#)** , [WP05](#) , [WP06](#) , [WP07](#) (bold = WP leader; WP = Workpackage)

Key personnel

[Chantal Gobin](#) : (F), Président. Expertise in management and sterilisation processes. She is the legal entity authorized representative.

[Pascal Borget](#) : (M), PhD, R&D project Manager. Expertise in Physical Chemistry of biomaterials (polymers, CaP). He will be the scientific manager.

[Cecile Charrier](#) : (F), Administrative manager. Expertise in accounting. She will be the financial manager.

[Guy Daculsi](#) : (M) Prof., Research director INSERM, is scientific advisor to Biomatlante.

One doctorate will eventually be hired by Biomatlante.

Publications:

1.

Daculsi G, Laboux O, Malard O, Weiss P. J. Mater. Sci. Mater. Medecine 2003, 14:195-200

2.

Daculsi G, Weiss P, Bouler JM, Gauthier O, Aguado E. Bone 1999, 25:59-61

3.

Le Guehennec L, Goyenvalle E, Aguado E, Pilet P, Bagot d'Arc M, Bilban M, Spaethe R, Daculsi G. J. Mater. Sci. Mater. Medecine 2005, 16:29-35

4.

Smuckere JD, Aggarwal D, Zamora PO, Atkinson BL, Bobst JA, Nepola JV Fredericks DC. Proceeding of AAOS annual congress, San Diego 2007

5.

Arinze TL, Tran T, McAlary J, Daculsi G. Biomaterials 2005, 26(17):3631-8

Patents:

Owner

Reference number

Period of validity

Title

CNRS/University of Nantes

94 014 14

20 years from 8 february 1994

MBCP Gel

Biomatlante

06/10064

20 years from 17 november 2006

New Gel

Biomatlante

0753590

20 years from 1 march 2007

Freeze-dried hydrogel

Specific awards and certifications: ISO 13485