



Mathilde Fénelon PhD Student

Thesis director: Pr J.C. Fricain



Research interest:

My Ph.D is focused on the potential of human amniotic membrane (hAM) to repair bone defect. Oral surgeons are often confronted with damages tissue of oral cavity requiring reconstruction. Guided bone regeneration is one of the most commonly used technique to deal with this situation.

hAM is the innermost layer of the foetal membrane. Human placentas can be recovered after elective cesarean surgery from consenting healthy mothers, this makes it a highly abundant and readily available tissue. hAM possesses low immunogenicity and exerts an anti-inflammatory, anti-fibrotic and an anti-mutagen effect. Moreover, hAM is a source of stem cells and delivers growth factors. The clinical use of hAM in medicine was first reported by Davis in 1910 for skin replacement. Due to its biological properties, and wide availability, hAM is already used in the field of ophthalmology and dermatology.

The aim of my Ph.D is to assess the cytotoxicity and biocompatibility of hAM according to several preservation methods, in order to determine what kind of preservation method was suitable to use hAM as a membrane for bone guided regeneration.

Keywords/expertise:

Bone regeneration
Tissue-engineering
Bioengineering
Regenerative Medicine
Amniotic membrane
Histology
Animal experimentation

Prolonged delivery of BMP-2 by a non-polymer hydrogel for bone defect regeneration.
Maisani M, Sindhu KR, Fenelon M, Siadous R, Rey S, Mantovani D, Chassande O. Drug Deliv Transl Res. 2017 Nov 30. doi: 10.1007/s13346-017-0451-y.

- Teaching activities :

Assistant professor

Faculté d'Odontologie, Université de Bordeaux

- Clinical activities :

Oral surgery

CHU de Bordeaux, Service d'Odontologie et de santé buccale, Bordeaux, France

- Memberships :

SFCO (Société française de chirurgie orale)

- Awards :

SFBTM award « Human Amniotic Membrane for osteoregeneration of calvaria defects»
Congrès JFBTM, Clermont Ferrand, 2015.

- Link :

https://www.researchgate.net/profile/Mathilde_Fenelon