Use of osteoblasts derived from neurectodermal oral stem cells for maxillary repair

OFFICE DU TRANSFERT DE TECHNOLOGIE & DES PARTENARIATS INDUSTRIELS
LICENSING & TECHNOLOGY TRANSFER

Pathology : *Maxillary bone loss associated with periodontal defects (congenital malformation, tumor resection and traumas) weakens or mutilates the dentition of patients. The current treatment of choice is the surgical treatment by bone grafts, often autologous, and requiring, for massive bone loss, an extra-oral donor site.*

Medical care : *Use of a serum-free (platelet lysate) culture medium supplemented with growth hormone (GH) for gum stem cells (GSC) differenciation into osteoblasts.*

Innovation : *GSC allow an optimal cicatrisation of the facial-maxillary bones since they share a common origin from the neural crest, compared to current treatment with mesenchymal stem cells (MSC) which derive from the mesoderm . In addition GSC are easy to access and only need a small incision in the gum which heals very fast. Finally GSC seem to have specific immunomodulator properties that may be used in the graft process or other indications.*

Market: *The WHO has estimated the world economic impact of small sized maxillary bone defects (< 1cm) to be around 442 billions dollars in 2010. Main causes are carious and parodontal diseases.*

42%
Toothlessness rate at 60 In Europe

26%
Toothlessness rate at 60 in the US

58%
Toothlessness rate at 60 in Canada

Intellectual property

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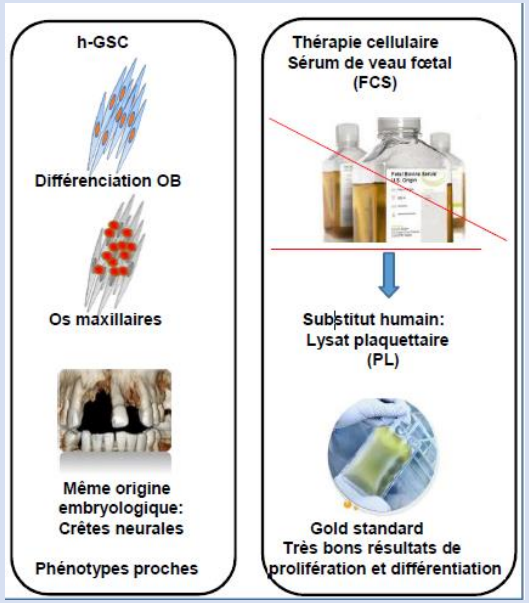
(Priority: 06/05/2021)



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