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(54) Title: MINERALIZED GUIDED BONE REGENERATION MEMBRANES AND METHODS OF MAKING THE SAME

(57) Abstract: The present invention provides a method for mineralizing commercially available guided bone regeneration membranes. The method comprises the steps of (a) providing a commercially available guided bone regeneration membrane, (b) applying a mineralizing solution, and (c) microwaving the membrane. The method may further comprise (d) rinsing the membrane in a solution such as distilled water and (e) drying the membrane. The mineralizing solution may be a solution capable of supplying or delivering a mineral such as calcium or zinc. The invention further provides guided bone regeneration membranes made by the methods described. The guided bone regeneration membrane comprises a mineral, such as, for instance calcium or zinc at a weight percent of at least 5%, at least 10%, at least 12%, at least 15%, at least 18%, at least 20% or at least 25% (weight percent) of the membrane. Further, the invention provides methods for enhancing bone regeneration and methods for inhibiting bacterial infection and inflammation.



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A CLASSIFICATION OF SUBJECT MATTER

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According to International Patent Classification (IPC) or to both national classification and IPC

B FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC(8) A61F 2/28, A61F 2/02 (2008 04)

USPC 623/16 11, 623/23 76

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

IPC(8) A61F 2/80 (2008 01)

USPC 623/16 11, 23 76, 23 57, 23 72, 37 61, 23 75

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Databases PubEAST(USPT,PGPB,EPAB,JPAB), GoogleScholar

Search terms guided bone regeneration membrane, scaffold, zinc, calcium, mineralizing, PLA, PLGA, bone regeneration, proliferation

C DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
X ----- Y	US 2004/0191292 A1 (CHOU) 30 September 2004 (30 09 2004) entire documents, especially abstract, para[0009], para[0020], para[0033] and para[0035]	16-18, 20-34 and 37 ----- 1-15, 19, 35, 36, 38-40
Y	US 6,406,498 B1 (TORMALA et al) 18 June 2002 (18 06 2002) entire document, especially col 7, ln 40-45	1-15, 19, 38 and 40
Y	US 2003/01 14936 A1 (SHERWOOD et al) 19 June 2003 (19 06 2003) para[0217]	2, 35, 36, 39, 40

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