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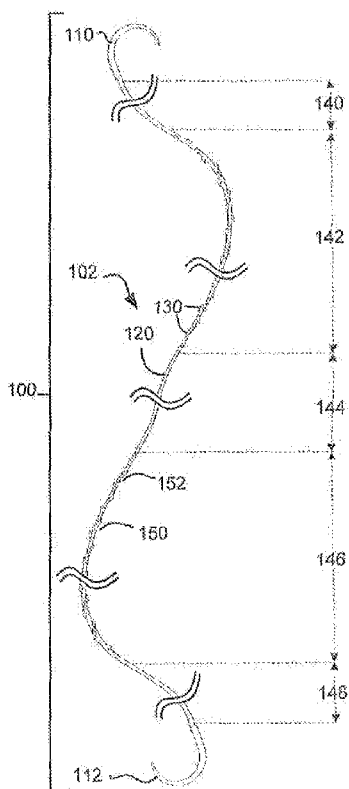
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[Continued on next page]

(54) Title: DRUG-ELUTING SELF-RETAINING SUTURES AND METHODS RELATING THERETO

FIG. 1A



(57) Abstract: A drug-eluting self-retaining suture comprises a filament, a plurality of retainers, and a drug impregnated in or coated on the filament. The shape and distribution of retainers modifies the in vivo release kinetics of the drug. The drug release kinetics may be modified uniformly or region by region. The self-retaining suture may for example be used for reattaching severed nerves and release nerve growth factor or other regeneration accelerating agents into the region of the nerve injury.





CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2011/059238**A. CLASSIFICATION OF SUBJECT MATTER***A61B 17/04(2006.01)i, A61L 17/14(2006.01)i, D02J 3/00(2006.01)i, A61L 27/54(2006.01)i*

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)

A61B 17/04; A61P 29/00; A61K 9/00; A61B 17/06; A61L 17/00

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: suture, retainer, drug, barb, nerve repair

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	US 2008-0009902 A1 (HUNTER, WILLIAM L. et al.) 10 January 2008 See claims 1, 2, 14, 24, 34, 37, 42; paragraphs 47-50, 313, 314, 323, 434, 435.	1-9, 11, 17, 21 10, 12-16, 18-20
X A	US 2010-0021516 A1 (MCKAY, WILLIAM F.) 28 January 2010 See abstract; claims 1, 2, 4; paragraphs 65, 66, 125, 129, 144, 151-154.	1, 2, 4, 5, 9, 11, 17, 21 3, 6-8, 10, 12-16 , 18-20
A	US 2010-0211098 A1 (HADBA, AHMAD ROBERT et al.) 19 August 2010 See abstract; claims 1, 4, 5, 9.	1-21
PX	WO 2011-053375 A1 (WARSAW ORTHOPEDIC, INC.) 05 May 2011 See figs. 1, 2; claims 1-4; page 23, line 1 - page 24, line 16.	1, 21

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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Date of the actual completion of the international search

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21 MAY 2012 (21.05.2012)

Name and mailing address of the ISA/KR

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Telephone No. 82-42-481-8264



INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2011/059238**Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.: 22-42
because they relate to subject matter not required to be searched by this Authority, namely:
Claims 22-42 pertain to method for treatment of human body by surgery or therapy, and thus relate to a subject matter which this International Searching Authority is not required to search under Article 17(2)(a)(i) of the PCT and Rule 39.1(iv) of the Regulations under the PCT.
2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2011/059238

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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