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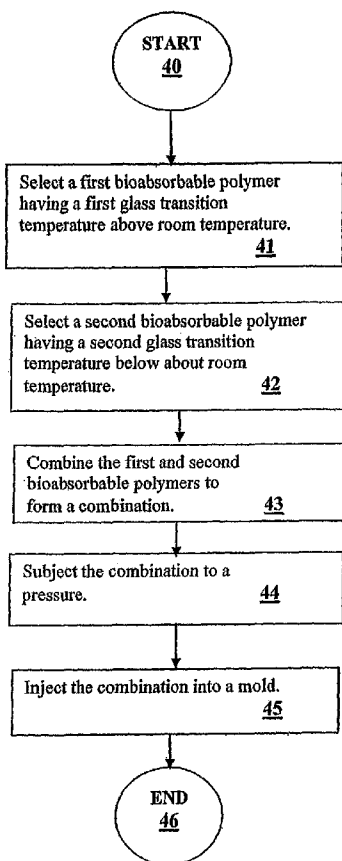
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- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
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[Continued on next page]

(54) Title: MEDICAL DEVICES AND THERAPEUTIC DELIVERY DEVICES



(57) Abstract: A method is provided of making a bioabsorbable appliance that includes selecting a first bioabsorbable polymer having a first glass transition temperature above about room temperature and selecting a second bioabsorbable polymer having a second glass transition temperature below about room temperature. The method also includes combining the first and second bioabsorbable polymers to form a combination and subjecting the combination to a pressure. Additionally, the method includes injecting the combination into a mold in a shape of the bioabsorbable appliance and removing the bioabsorbable appliance from the mold. The method may include adding a bioactive agent to the combination. The steps of combining the first and second bioabsorbable polymers, subjecting the combination to pressure, and injecting the combination into a mold, may be performed at about room temperature. The bioabsorbable appliance may be a stent, a catheter, a guide wire, a balloon, filter, a vena cava filter, a stent graft, a vascular graft, an intraluminal paving system, or an implant. A medical appliance is provided that includes a polymer combination including first and second bioabsorbable polymers formed in a shape of the medical appliance.

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER
INV. A61L31/14 A61L31/04

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)
A61L

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

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

EPO-Internal, WPI Data, PAJ, COMPENDEX, INSPEC, BIOSIS, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01/60912 A (MASSACHUSETTS INSTITUTE OF TECHNOLOGY) 23 August 2001 (2001-08-23) claims	1-14
X	WO 2004/063271 A (MASSACHUSETTS INSTITUTE OF TECHNOLOGY; MAYES, ANNE, M; RYU, SANG, WOOG) 29 July 2004 (2004-07-29) claims	1-14
X	WO 2004/014450 A (MEDTRONIC, INC) 19 February 2004 (2004-02-19) page 6, line 26 - page 7, line 6 page 18, line 26 - line 32 page 25, line 11 - line 27 claims	14-24
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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 document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "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

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- "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
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2005/011767 A (SCIMED LIFE SYSTEMS, INC; RICHARD, ROBERT, E; SCHWARZ, MARLENE, C; STR) 10 February 2005 (2005-02-10) paragraph [0030] - paragraph [0053] paragraph [0063] - paragraph [0065] Especially claims 15,21; claims -----	14-24
X	WO 2004/014451 A (MEDTRONIC, INC) 19 February 2004 (2004-02-19) page 28, line 9 - line 30 page 36, line 15 - line 17 tables 1,5 examples claims -----	14-24
X	WO 2004/014449 A (MEDTRONIC, INC) 19 February 2004 (2004-02-19) page 35, line 24 - line 29 examples figure 1 claims -----	14-24
E	WO 2006/081210 A (BOSTON SCIENTIFIC SCIMED, INC; RICHARD, ROBERT E) 3 August 2006 (2006-08-03) claims -----	14-24
E	WO 2006/014607 A (BOSTON SCIENTIFIC SCIMED, INC; STRICKLER, FREDERICK, H; RICHARD, ROBER) 9 February 2006 (2006-02-09) paragraph [0042] - paragraph [0063] claims -----	14-24

INTERNATIONAL SEARCH REPORT

International application No.
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Box 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.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claim 4 is directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the composition.
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 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.
- No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2006/003446

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
WO 0160912	A	23-08-2001	AU	3977301 A		27-08-2001
WO 2004063271	A	29-07-2004	CA	2512209 A1		29-07-2004
			EP	1581592 A2		05-10-2005
			JP	2006516299 T		29-06-2006
WO 2004014450	A	19-02-2004	AU	2003258205 A1		25-02-2004
			CA	2494188 A1		19-02-2004
			EP	1539265 A1		15-06-2005
WO 2005011767	A	10-02-2005	AU	2004261258 A1		10-02-2005
			CA	2534318 A1		10-02-2005
			EP	1663331 A1		07-06-2006
			US	2005027283 A1		03-02-2005
WO 2004014451	A	19-02-2004	AU	2003258209 A1		25-02-2004
			CA	2495172 A1		19-02-2004
			EP	1530491 A1		18-05-2005
			JP	2006502135 T		19-01-2006
WO 2004014449	A	19-02-2004	AU	2003258206 A1		25-02-2004
			CA	2494187 A1		19-02-2004
			EP	1536846 A1		08-06-2005
WO 2006081210	A	03-08-2006	US	2006165753 A1		27-07-2006
WO 2006014607	A	09-02-2006	US	2006013849 A1		19-01-2006