(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 23 February 2006 (23.02.2006)

(10) International Publication Number WO 2006/020644 A3

(51) International Patent Classification: A61L 31/16 (2006.01) A61L 27/54 (2006.01)

(21) International Application Number:

PCT/US2005/028279

(22) International Filing Date: 8 August 2005 (08.08.2005)

(25) Filing Language: **English**

(26) Publication Language: English

(30) Priority Data:

10/915.274 10 August 2004 (10.08.2004)

(71) Applicant (for all designated States except US): BOSTON SCIENTIFIC SCIMED, INC. [US/US]; One Scimed Place, Maple Grove, MN 55311 (US).

(72) Inventor; and

- (75) Inventor/Applicant (for US only): HANSEN, James, G. [US/US]; 12776 Verdin Street NW, Coon Rapids, MN 55448 (US).
- (74) Agents: PARK, Keum, J. et al.; Mayer Fortkort & Williams, PC, 251 North Avenue West, 2nd Floor, Westfield, NJ 07090 (US).
- (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, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, 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.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 10 August 2006

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.

(54) Title: SOLVENT-ASSISTED LOADING OF THERAPEUTIC AGENTS

(57) Abstract: Methods are provided for loading polymeric regions of medical devices with therapeutic agents. In these methods, a polymeric region of a medical device is first pretreated with a solvent system. Subsequently, therapeutic-agent-containing particles are impacted into the pretreated polymeric region at a velocity that is effective to at least partially embed the particles within the pretreated polymeric region. The pretreatment step parameters (e.g., the particular solvent system employed, amount of time that the solvent system contacts the polymeric region, etc.) are typically selected such that the surface tack of the polymeric region is increased. Consequently, the depth, the amount, or both the depth and the amount off the particles that become at least partially embedded in the polymeric region is/are typically increased, relative to what would be achieved in the absence of the pretreatment step. Also provided are medical devices made by such methods.

INTERNATIONAL SEARCH REPORT



International application No T/US2005/028279

A. CLASSIFICATION OF SUBJECT MATTER
INV. A61L27/54 A61L31/16

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, EMBASE, BIOSIS, PAJ

0.4	One of the second of				
Category*	Citation of document, with indication, where appropriate, of the	ne relevant passages	Relevant to claim No.		
X Y	EP 0 850 651 A (SCHNEIDER INC 1 July 1998 (1998-07-01)	1,2,8,9, 11,12, 14-21 1-22			
	column 1, line 42 - column 3, column 3, line 51 - column 5, example 3 claims 1-25				
Y	US 2004/059409 A1 (STENZEL ERI 25 March 2004 (2004-03-25) page 1, paragraph 4 - page 2, page 3, paragraphs 20,21,23,26 page 4, paragraphs 29,31-35 page 5, paragraph 39-44 page 6, paragraphs 47,49,50,53 page 7, paragraphs 56,59,60 claims 1-24	1-22			
		-/			
X Furth	ner documents are listed in the continuation of Box C.	See patent family annex.			
"A" docume consid "E" earlier of filing d "L" docume which citatior "O" docume other r "P" docume	nt which may throw doubts on priority claim(s) or is cited to establish the publication date of another n or other special reason (as specified) ent referring to an oral disclosure, use, exhibition or	 *T* later document published after the international filing date or priority date and not in conflict with the application but clied 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 *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 a	actual completion of the international search	Date of mailing of the international sea	rch report		
1	7 May 2006	30/05/2006			
Name and n	nailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Derrien, A-C			

INTERNATIONAL SEARCH REPORT



International application No T/US2005/028279

Relevant to claim No.
1.0.0
1,2,8, 11,12, 14-21
1-22
1-22
1-22

INTERNATIONAL SEARCH REPORT



Information on patent family members

International application No T/US2005/028279

Patent document cited in search report		Publication date,		Patent family member(s)	Publication date
EP 0850651	A	01-07-1998	CA DE DE JP	2225096 A1 69727777 D1 69727777 T2 10192413 A	20-06-1998 01-04-2004 05-08-2004 28-07-1998
US 2004059409	A1	25-03-2004	AU CA EP JP WO	2003273359 A1 2499873 A1 1549251 A1 2006500163 T 2004028407 A1	19-04-2004 08-04-2004 06-07-2005 05-01-2006 08-04-2004
US 2004234748	A1	25-11-2004	EP US WO	1635888 A1 2005112273 A1 2004103428 A1	22-03-2006 26-05-2005 02-12-2004
US 2003054090	A1	20-03-2003	CA EP JP WO US	2460561 A1 1427456 A1 2005503909 T 03024497 A1 2004081745 A1	27-03-2003 16-06-2004 10-02-2005 27-03-2003 29-04-2004
WO 2004014448	Α	19-02-2004	AU CA EP JP	2003265446 A1 2495181 A1 1530489 A1 2006502136 T	25-02-2004 19-02-2004 18-05-2005 19-01-2006
US 2003077310	A1	24-04-2003	CA EP WO US	2464329 A1 1438084 A1 03035134 A1 2003083740 A1	01-05-2003 21-07-2004 01-05-2003 01-05-2003