

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
13 September 2001 (13.09.2001)

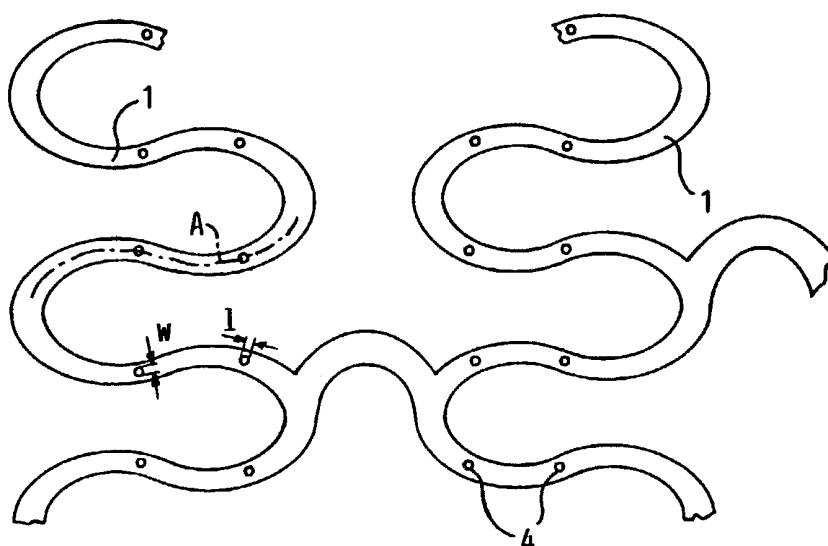
PCT

(10) International Publication Number
WO 01/66036 A3

- (51) International Patent Classification⁷: A61F 2/06 (74) Agents: VAN REET, Joseph et al.; Gevers & Vander Haeghen, 7, rue de Livourne, B-1060 Bruxelles (BE).
- (21) International Application Number: PCT/EP01/02410 (81) Designated States (national): AE, AG, AL, AM, AT, AT (utility model), AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ (utility model), DE, DE (utility model), DK, DK (utility model), DM, DZ, EE, EE (utility model), ES, FI, FI (utility model), GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (utility model), SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.
- (22) International Filing Date: 2 March 2001 (02.03.2001)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 00870035.3 6 March 2000 (06.03.2000) EP (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
- (71) Applicant: ADVANCED LASER APPLICATIONS HOLDING S.A. [LU/LU]; 1, rue Goethe, L-1637 Luxembourg (LU).
- (72) Inventors: DE SCHEERDER, Ivan; Eikeldreef 9, B-9830 St Martens Latem (BE). SOHIER, Jurgen; Hertbosweg 1/4, B-3210 Lubbeek (BE). VAN DER LEDEN, Natasja; Bergfemaas 15, NL-2641 VV Pijnacker (NL).
- Published:
— with international search report

[Continued on next page]

(54) Title: INTRALUMINAR PERFORATED RADIALY EXPANDABLE DRUG DELIVERY PROSTHESIS AND A METHOD FOR THE PRODUCTION THEREOF



(57) Abstract: The radially expandable prosthesis for implantation in a lumen comprises a tubular wall produced from sheet metal and showing cuts enabling the prosthesis to expand. By using water guided laser cutting technology to make these cuts and/or specific electrochemical polishing technology a more biocompatible prosthesis is obtained, causing less thrombogenicity and less foreign body reaction. By covering an intraluminal prosthesis with a titaniumnitride coating the biocompatibility of the prosthesis is improved. By applying perforating or non-perforating holes (4) and filling these holes with a therapeutic agent, the intraluminal prosthesis can be used to locally administer medicines, genes and or other substances to prevent in this way thrombotic occlusions and/or neointimal hyperplasia and prosthesis narrowing. Using this specific perforated prosthesis design the total drug capacity can be increased and also the drug release time prolongs significantly.



WO 01/66036 A3



(88) Date of publication of the international search report:
3 January 2002

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
PCT/EP 01/02410

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61F2/06

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 7 A61F

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)

WPI Data, EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	"Waterjet-guided lasers cut precisely" WWW.INDUSTRIAL-LASERS.COM/ARCHIVE/1999/11/ 1199FEA6.HTML, 1 November 1999 (1999-11-01), XP002176036	1, 2, 14, 15
Y	the whole document	3, 4, 13, 16
Y	--- "News-April 1997" WWW.INDUSTRIAL-LASERS.COM/ARCHIVE/1997/04/ 0497NEWS.HTML, 1 April 1997 (1997-04-01), XP002176037 paragraph '0008!	3
Y	--- WO 99 56907 A (SYNOVA S.A.) 11 November 1999 (1999-11-11) page 12, line 16 - line 18 --- -/--	4

Further documents are listed in the continuation of box C.

Patent family members are listed in 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

- *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
- *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

7 September 2001

Date of mailing of the international search report

14/09/2001

Name and mailing 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

Smith, C

INTERNATIONAL SEARCH REPORT

International Application No PCT/EP 01/02410

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	DE 199 16 086 A (INFLOW DYNAMICS INC.) 14 October 1999 (1999-10-14) column 3, line 9 - line 38; figures ---	13
Y	EP 0 950 386 A (CORDIS CORPORATION) 20 October 1999 (1999-10-20) cited in the application the whole document -----	16

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/EP 01/02410

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9956907 A	11-11-1999	CN 1306467 T	01-08-2001
DE 19916086 A	14-10-1999	US 5980566 A	09-11-1999
		US 6099561 A	08-08-2000
		WO 9952471 A	21-10-1999
EP 950386 A	20-10-1999	US 6273913 B	14-08-2001