

(19) World Intellectual Property
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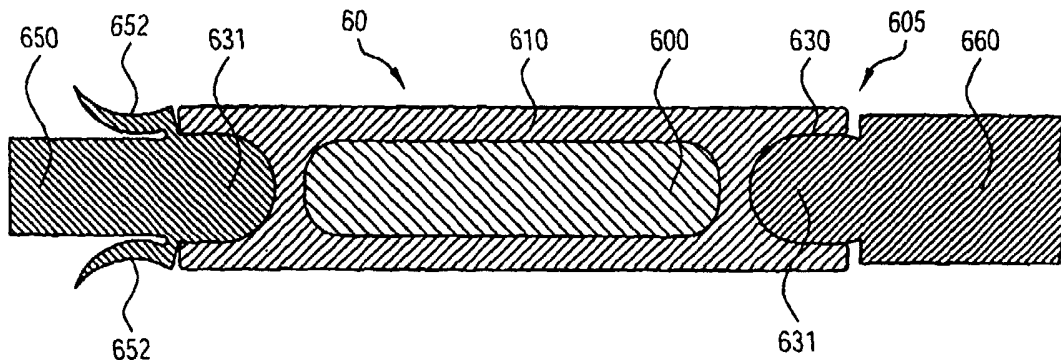
(43) International Publication Date
3 March 2005 (03.03.2005)

PCT

(10) International Publication Number
WO 2005/018736 A3

- (51) International Patent Classification⁷: **A61N 5/00**
- (21) International Application Number:
PCT/US2004/027116
- (22) International Filing Date: 20 August 2004 (20.08.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/496,474 20 August 2003 (20.08.2003) US
- (71) Applicant (for all designated States except US): **INTERNATIONAL BRACHYTHERAPY, S.A.** [BE/BE]; Zone Industrielle C, B-7180 Senefte (BE).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **RUSSELL, John, L., Jr.** [US/US]; 6000 Live Oak Parkway, Norcross, GA 30093 (US). **CARDEN, John, L., Jr.** [US/BE]; Zone Industrielle C, B-7180 Senefte (BE). **CONIGLIONE, Roy** [US/BE]; Zone Industrielle C, B-7180 Senefte (BE). **MOYAUX, Dominique** [BE/BE]; Zone Industrielle C, B-7180 Senefte (BE).
- (74) Agent: **ELMAN, Gerry, J.**; Elman Technology Law, P.C., P.O. Box 209, Swarthmore, PA 19081-0209 (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, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, 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, IT, LU, 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
- (88) Date of publication of the international search report:
21 July 2005
- 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: PLASTIC BRACHYTHERAPY SOURCES



(57) Abstract: An implantable source (40) of therapeutic radiation for brachytherapy is provided as a sealed, biocompatible capsule (410) of plastic (e.g. polyethylene or PEEK) transparent to the radiation. The capsule contains a radiation source (400) comprising particles of a radioactive isotope (e.g. Pd¹⁰³, I¹²⁵, Cs¹³¹) in a fluid carrier that is resistant to radiation polymerization but solidifies at elevated temperature. It also has a marker (420), and desirably has a socket (430) which accommodates attaching spacers (660) and makes possible linear strands and planar arrays of the capsules. The spacers may be functional, e.g. heat-generating or medication-releasing.

WO 2005/018736 A3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/27116

A. CLASSIFICATION OF SUBJECT MATTER IPC(7) : A61N 5/00 US CL : 600/8 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) U.S. : 600/1-8 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched None Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EAST		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y Y --- A X --- Y Y --- A	US 2002/0058057 A (KAPLAN) 16 May 2002. See entire document. US 6,273,851 B1 (SLATER ET AL) 14 August 2001. See entire document. US 2002/0022781 A (MCINTIRE ET AL) 21 February 2002. See entire document. US 6,264,599 B1 (SLATER ET AL) 24 July 2001. See entire document.	1, 2, 12, 13, 14, 16, 17, 27-32, 34 ----- 8, 23, 35, 36 8, 23, 35, 36 ----- 1-7, 9-22, 24-34, 37-41 1-2, 12-14, 16, 17, 27, 28, 29 ----- 4, 5, 8, 19, 20, 23, 35, 36 18, 19, 23 ----- 1-9, 12-17, 20-24, 27-41
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> 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 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 21 February 2005 (21.02.2005)	Date of mailing of the international search report 28 APR 2005	
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Authorized officer Samuel G. Gilbert Telephone No. 866-217-9197	

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/27116

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.: 10,11,25 and 26
because they relate to subject matter not required to be searched by this Authority, namely: improper dependent claims, these claims depend from non existing claims.
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.
 No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US04/27116

C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,498,227 A (MAWAD) 12 March 1996. See entire document.	7