

(19) World Intellectual Property Organization
International Bureau



PCT



(43) International Publication Date
29 May 2008 (29.05.2008)

(10) International Publication Number
WO 2008/063935 A3

(51) **International Patent Classification:**
A61B 8/12 (2006.01)

(21) **International Application Number:**
PCT/US2007/084330

(22) **International Filing Date:**
9 November 2007 (09.11.2007)

(25) **Filing Language:** English

(26) **Publication Language:** English

(30) **Priority Data:**
60/867,076 22 November 2006 (22.11.2006) US

(71) **Applicant (for all designated States except US):** **BRONCUS TECHNOLOGIES, INC.** [US/US]; 1400 N. Shoreline Blvd., Bldg A, Suite 8, Mountain View, California 94043 (US).

(72) **Inventors; and**

(75) **Inventors/Applicants (for US only):** **GWERDER, Eric** [US/US]; 1432 Gilbert Avenue, Fremont, California 94536 (US). **KEAST, Thomas M.** [US/US]; 1343 Sandia Avenue, Sunnyvale, California 94089 (US). **ROSCHAK, Edmund J.** [US/US]; 26262 Verona Place, Mission Viejo, California 92692 (US).

(74) **Agents:** **BAGADE, Sanjay S.** et al.; Levine Bagade Han LLP, 2483 E. Bayshore Road, Suite 100, Palo Alto, California 94303 (US).

(81) **Designated States (unless otherwise indicated, for every kind of national protection available):** AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, **BR**, BW, BY, BZ, CA, CH, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, 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, MT, 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).

Declaration under Rule 4.17:

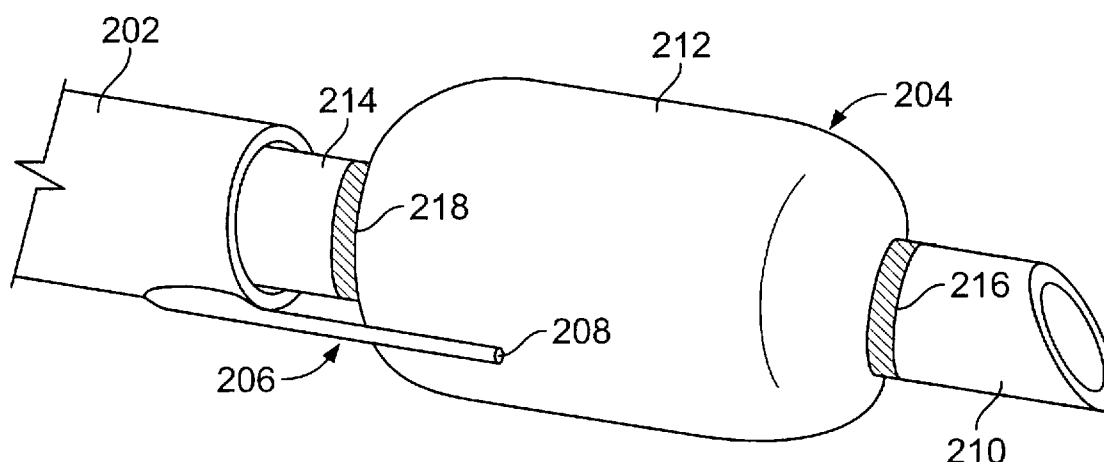
— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(U))

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:**
14 August 2008

(54) **Title:** DEVICES FOR CREATING PASSAGES AND SENSING FOR BLOOD VESSELS



(57) **Abstract:** Devices and methods are disclosed for creating passages in tissue and detecting blood vessels in and around the passages. The devices may be used to create opening in tissue without removing a sensing assembly from the tissue. The devices herein may be used for altering gaseous flow within a lung to improve the expiration cycle of an individual, particularly individuals having Chronic Obstructive Pulmonary Disease (COPD). In addition, the devices may be used to sample tissue during biopsy or other medical procedures where perforating a blood vessel could result in injury to a patient.

WO 2008/063935 A3

INTERNATIONAL SEARCH REPORT

International application No

PCT/US 07/84330

A CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A61 B 8/12 (2008.04)

USPC - 600/466, 600/464

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)

USPC - 600/466, 600/464

IPC(8) - A61B 8/12 (2008 04)

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

USPC - 600/466, 600/464, see keywords below

IPC(8) - A61B 8/12 (2008 04)

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

PubWEST (DB=PGPB,USPT,USOC,EPAB,JPAB, PLUR=NO, OP=ADJ) freepatentsonlirt0 com, WIPO; Google Patents, Google,
 Keywords ablating tissue, sensing, second lumen, Doppler, catheter, tip, lumen, transducer, biopsy, actuator, polymer tube, dilation,
 non-distensible, COPD, pulmonary disease, sense, detect

C DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
X ----- Y	WO 2005/006963 A2 (KRAMER et al) 27 January 2005 (27 01 2005) see entire document, especially para [0004], [0022], [0026], [0035], [0038], [0039], [0040], [0041], [0042], [0043], [0044], [00104], [001 14], [001 15], [00127], [00130], [00131], [00133], [00134], [00136], [00158], [00159], [00160], [00161], [00162], [00165], [00166], [00167], [00168], [00172], [00173], [00178], [00182], [00184], [00189], [00190], [00196], [00198]	1, 15-21, 24-27, 31-44 ----- 2-14, 22, 23, 28-30
Y	US 2004/0158143 A1 (FLAHERTY et al) 12 August 2004 (12 08 2004) see entire document, especially para [0061], [0063], [0065], [0070], [0101], [0102], [0103], [0104], [0107], [01 14], [01 16]	2-14, 22, 23, 28-30

☐ Further documents are listed in the continuation of Box C

D

* Special categories of cited documents	"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
"A" document defining the general state of the art which is not considered to be of particular relevance	"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
"E" earlier application or patent but published on or after the international filing date	"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
"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)	"&" document member of the same patent family
"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	

Date of the actual completion of the international search

20 May 2008 (20 05 2008)

Date of mailing of the international search report

26 JUN 2008

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 571-273-3201

Authorized officer

Lee W Young

PCT Helpdesk 571 272-4300

PCTOSP 571-272-7774