

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
27 December 2007 (27.12.2007)

PCT

(10) International Publication Number  
**WO 2007/149302 A3**

(51) International Patent Classification:  
**A61B 10/00 (2006.01)** **A61B 17/00 (2006.01)**  
**A61M 5/178 (2006.01)**

(74) Agents: CALDWELL, John, W. et al; Woodcock Washburn LLP, 2929 Arch Street, Suite 1200, Philadelphia, PA 19104 (US).

(21) International Application Number:  
PCT/US2007/0 13990

(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, FT, 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

(22) International Filing Date: 14 June 2007 (14.06.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
11/471,394 19 June 2006 (19.06.2006) US

(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).

(71) Applicant (*for all designated States except US*): ORTHOVITA, INC. [US/US]; 45 Great Valley Parkway, Malvern, PA 19355 (US).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): ENTREKIN, Dean, Allen [US/US]; 1507 Doyle Drive, Downingtown, PA 19335 (US). PARIS, Michael, W. [US/US]; 3311 Fisher Road, Lansdale, PA 19446 (US). BAGGA, Charanpreet, S. [US/US]; 370 Shelbourne Lane, Phoenixville, PA 19460 (US). SCANLAN, Donald, L. [US/US]; 875 Furrow Lane, Huntingdon Valley, PA 19006 (US). ALAMIN, Todd, F. [US/US]; 168 Eleanor Drive, Woodside, CA 94062 (US). KHOO, Lawrence, T. [US/US]; 12144 Laurel Terrace Drive, Studio City, CA 91604 (US).

**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:  
28 August 2008

(54) Title: BONE HARVEST SYSTEM

(57) Abstract: Harvesting apparatuses comprising a generally cylindrical outer cannula having one end secured in a first handle and having a distal end that is generally semicylindrical, and a generally cylindrical inner cannula having one end secured in a second handle and having a distal end that is generally semicylindrical, are provided. The present invention provides for apparatuses wherein the inner cannula is rotatable with respect to the outer cannula such that, when the inner cannula is in cooperation with the outer cannula, a volume at the distal end of both cannulas is substantially enclosed. Also provided are kits comprising the apparatuses of the present invention, as well as methods of using the apparatuses of the present invention.



WO 2007/149302 A3

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US07/13990

## A. CLASSIFICATION OF SUBJECT MATTER

IPC: A61B 10/00( 2006.01);A61M 5/178( 2006.01);A61B 17/00( 2006.01)  
A61 B 10/00( 2006.01);A61 M 5/1 78( 2006.01);A61B 17/00( 2006.01)

USPC: 600/562,564,565,566,567;604/164.01;606/79

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. : 600/562,564,565,566,567; 604/164.01 ; 606/79

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 practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,823,970 (TERWILLIGER) 20 October 1998 (20. 10. 1998) All text and Figs.	46
---		-----
Y		1-46
Y	US 5,807,277 (SWAIM) 15 September 1998 (15.09. 1998) All text and Figs.	37-45
Y	US 5,357,974 (BALDRIDGE) 25 October 1994 (25. 10. 1994) All text and Figs.	1-45
Y	US 6,1 10, 128 (ANDELIN et al) 29 August 2000 (29.08.2000) Figs. 6-7	7-10,28
Y	US 2004/0267154 (SUTTON et al) 30 December 2004 (30. 12.2004) All text and Figs.	29, 35,36, 41, 45
Y	US 2004/01278 14 (NEGRONI) 0 1 July 2004 (01 .07.2004) para. [0044-0048]	37-42



Further documents are listed in the continuation of Box C.



See patent family annex.

\* 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 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)

"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

"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

"&amp;"

document member of the same patent family

Date of the actual completion of the international search

21 May 2008 (21 .05.2008)

Date of mailing of the international search report

24 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 223 13-1450

Facsimile No. (571) 273-3201

Authorized officer

Max Hindenburg

Telephone No. 571-270-1996

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US07/13990

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,197,967 (WILSON) 30 March 1993 (30.03. 1993) col. 3-4	37-41