(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
18 November 2010 (18.11.2010)

PCT

(10) International Publication Number
WO 2010/132273 A1

(51) International Patent Classification:
A61B 5/02 (2006.01)

(21) International Application Number:
PCT/US2010/033907

(22) International Filing Date:
6 May 2010 (06.05.2010)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

61/177,341	12 May 2009 (12.05.2009)	US
12/483,930	12 June 2009 (12.06.2009)	US

(71) Applicant *(for all designated States except US)*: **ANGIOLOGIX, INC.** [US/US]; 1793 San Ramon Avenue, Suite 100, Mountain View, California 94043 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **PARFENOV, Alexander** [RU/RU]; Nizhnyaya Pervomayskaya Street, Bldg. 48/9, Apt. 19, Moscow, 105203 (RU). **PARFENOVA, Maria** [US/US]; 1793 San Ramon Aveneu, Mountain View, California 94043 (US). **KONSTANTINOV, Nilolay** [RU/RU]; Chelyabinskaya Street, Bldg. 2, Apt. 106, Moscow, 105568 (RU).

(74) Agent: **WELLER, Edward**; Law Office of Edward B. Weller, PO Box 985, Campbell, California 95009-0985 (US).

[Continued on next page]

(54) Title: SYSTEM AND METHOD OF MEASURING CHANGES IN ARTERIAL VOLUME OF A LIMB SEGMENT

(57) Abstract: A medical diagnostic device performs diagnostics for assessing the ability of the arteries to respond to an increase in blood flow. The medical diagnostic device determines relative changes in arterial volume of the limb segment during a time period after a stimulus relative to the arterial volume of the limb segment during a baseline period using the amplitudes or other portions of the component pulse waves (such as early systolic components) of volume pulse waves during the baseline period and after the stimulus.

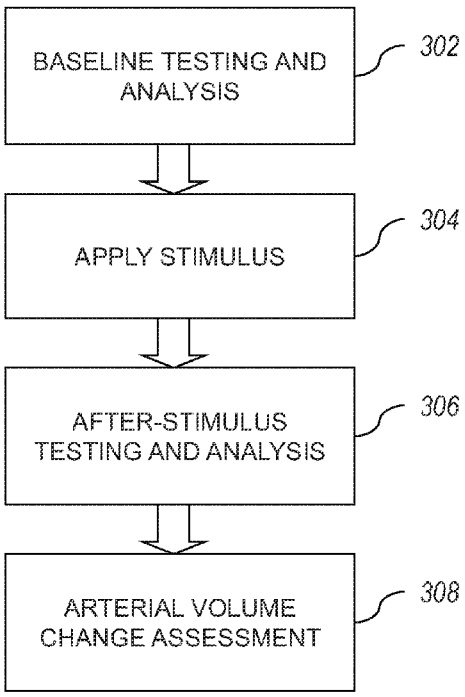


FIG. 3

WO 2010/132273 A1

(81) **Designated States** *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, 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, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report (Art. 21(3))*