

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
03 March 2022 (03.03.2022)



(10) International Publication Number
WO 2022/046326 A1

(51) International Patent Classification:

A61B 5/0205 (2006.01) A61B 5/024 (2006.01)
A61B 5/00 (2006.01) A61B 5/053 (2021.01)
A61B 5/021 (2006.01) G16H 40/67 (2018.01)

(21) International Application Number:

PCT/US2021/042622

(22) International Filing Date:

21 July 2021 (21.07.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/069,633 24 August 2020 (24.08.2020) US

(71) Applicant: **BAROPACE LLC** [US/US]; 124 Manzanita St., Ashland, Oregon 97520 (US).

(72) Inventor; and

(71) Applicant: **BURNAM, Michael** [US/US]; 124 Manzanita St., Ashland, Oregon 97520 (US).

(74) Agent: **DAWES, Daniel et al.**; 5200 Warner Ave., Suite 106, Huntington Beach, California 92649 (US).

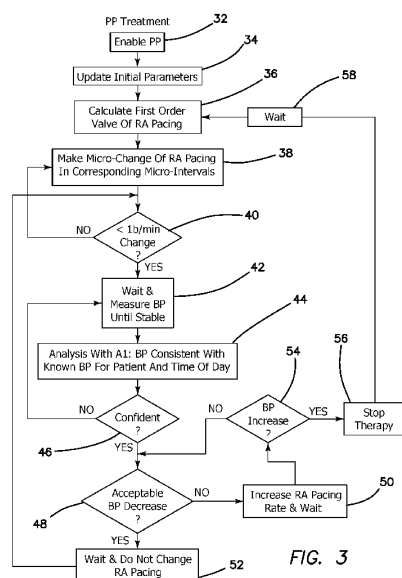
(81) Designated States (unless otherwise indicated, for every kind of national protection available):

AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, IT, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, 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, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, 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, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

(54) Title: A METHOD USING TREND ANALYSIS FOR CARDIAC TREATMENT WITH CALIBRATED AND POSITIONALLY CORRECTED BLOOD PRESSURE WATCHES, PRESSURE-PACE ALGORITHMS, ARTIFICIAL INTELLIGENCE AND THORACIC ELECTRICAL BIOIMPEDANCE



(57) Abstract: The invention is a method of using thoracic electrical bioimpedance (TEB) as a component in a real-time closed-loop system to treat drug resistant hypertension (DRH) or diastolic heart failure (called HFpEF in patients with pacemakers using machine learning/AI and an algorithm (PressurePace - see the incorporated specifications) utilizing a "micro-interval" or continually updated trending method with the pacemaker's hardware/software as the source of the bioimpedance measurement, e.g. OptiVol. An apparatus for performing the method, and software instructions stored on a tangible medium for controlling a computer or processor to perform the method are included.

WO 2022/046326 A1

[Continued on next page]

Published:

- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*