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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
19 September 2013 (19.09.2013)

WIPO | PCT

(10) International Publication Number
WO 2013/135249 A3

(51) International Patent Classification:
A61B 5/145 (2006.01) *A61B 5/00* (2006.01)

(21) International Application Number:
PCT/EE2013/000002

(22) International Filing Date:
21 February 2013 (21.02.2013)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/596,250 21 February 2012 (21.02.2012) US

(71) Applicants: **MC PROFESSIONAL OÜ** [EE/EE]; Võistluse 23-35, Tallinn 10132, EE (EE). **SKREBOVA, Irina** [EE/EE]; Võistluse 23/25-35, Tallinn 10132 (EE).

(72) Inventor; and
(71) Applicant : **EIKJE, Natalja** [EE/NO]; Urnesveien 11, Tysvaervaag 5565 (NO).

(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, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, 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, RW, SD, SL, 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, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

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

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))*

(88) Date of publication of the international search report:
6 March 2014

(54) Title: A FORMULA AND METHOD FOR MONITORING INDIVIDUAL METABOLIC RESPONSE AND FOR GENERATING PREDICTIVE MEDICAL METRICS

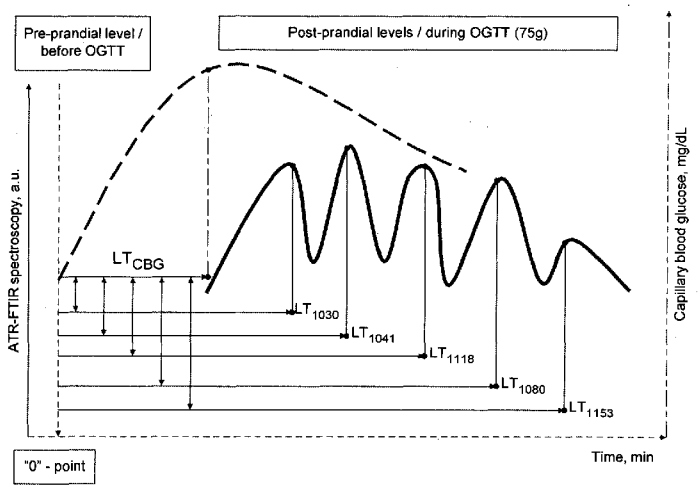


Fig. 1

(57) Abstract: Provided is a formula and method for monitoring individual metabolic response that involve calculation of the lag/latency time (LT) for the peak levels of measured a variety of glucose values by HATR-FTIR (horizontally attenuated total reflection Fourier transform infrared) spectroscopy and the LT for the peak level of capillary blood glucose (CBG), with subsequent calculation of the LT changes between them. Obtained meaningful time-dependent and dose-dependent glucose values and their LT changes characterize glycemic variability (GV) in a qualified subject, that can be used to predict the patient's risk of hyperglycemia, to stage Type II diabetes and, in general, to be considered as a new metrics of assessing the quality of metabolic control.

WO 2013/135249 A3