

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
10 November 2022 (10.11.2022)



(10) International Publication Number
WO 2022/232938 A1

(51) International Patent Classification:
G16H 50/30 (2018.01) *G16H 50/20* (2018.01)
G01N 33/48 (2006.01)

(21) International Application Number:
PCT/CA2022/050706

(22) International Filing Date:
05 May 2022 (05.05.2022)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
63/184,560 05 May 2021 (05.05.2021) US

(71) Applicant: **KLICK INC.** [CA/CA]; 175 Bloor Street East,
Suite 300, Toronto, Ontario M4W 3R8 (CA).

(72) Inventors: **FOSSAT, Yan**; 78 Chester Avenue, Toronto,
Ontario M4K 2Z9 (CA). **KAUFMAN, Jaycee Morgan**; 8
Thrush Ct., Elmira, Ontario N3B 3C6 (CA). **NG, Eric Sin
Hang**; Unit 80, 1105 Ormond Drive, Oshawa, Ontario L1K

0E9 (CA). **VAN VEEN, Lennaert**; 110 Malvern Avenue,
Toronto, Ontario M4E 3E5 (CA).

(74) Agent: **BERESKIN & PARR LLP/S.E.N.C.R.L., S.R.L.**;
Scotia Plaza, 40 King Street West, 40th Floor, Toronto, On-
tario M5H 3Y2 (CA).

(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, IQ, IR, IS, IT, JM, 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,

(54) Title: METHODS AND SYSTEMS FOR THE CLASSIFICATION OF SUBJECTS INTO GLUCOSE HOMEOSTASIS PHE-
NOTYPES

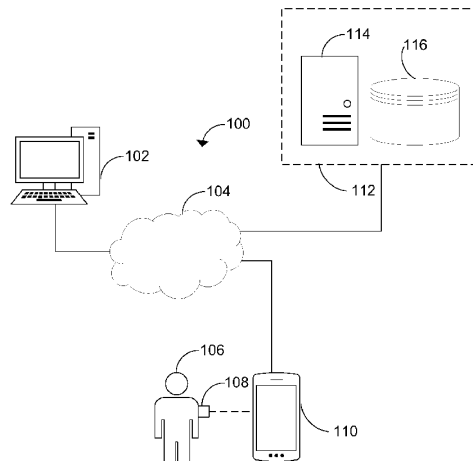


FIG. 1

(57) Abstract: Described are methods and systems for classifying a subject into a glucose homeostasis phenotype such as a prediabetic subphenotype based on modelling glycemic control and glucose homeostasis in the subject. Also described is a model of glucose homeostasis based on proportional and integral terms in a control system. A representative curve is generated based on glucose time series data and fit to the model in order to determine coefficients for each subject. The coefficients provide a digital biomarker of glycemic control for the subject and may be used to classify subjects into different glucose homeostasis phenotypes.

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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).

Published:

- with international search report (Art. 21(3))
- in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE