



(51) **International Patent Classification:**
G16B 20/00 (2019.01) *G16B 40/00* (2019.01)

(21) **International Application Number:**
PCT/GB2021/053069

(22) **International Filing Date:**
26 November 2021 (26.11.2021)

(25) **Filing Language:** English

(26) **Publication Language:** English

(30) **Priority Data:**
2018905.6 01 December 2020 (01.12.2020) GB

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(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:** COMPUTER-IMPLEMENTED METHOD AND APPARATUS FOR ANALYSING GENETIC DATA

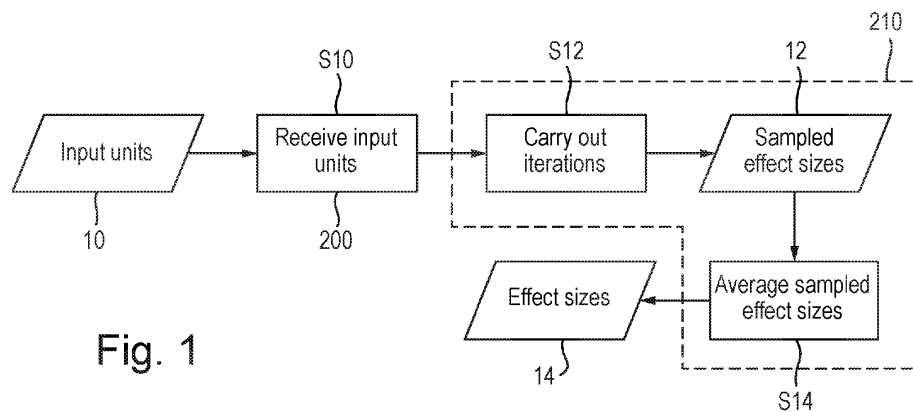


Fig. 1

(57) **Abstract:** Disclosed is a method of analysing genetic data about an organism comprising receiving a plurality of input units. Each input unit comprises information about the association between genetic variants in a region of the genome and phenotypes or phenotype combinations. The method comprises carrying out iterations comprising, for each variant determining for which of the phenotypes or phenotype combinations the variant is causal based on the input units. If the variant is causal for phenotypes or phenotype combinations, a sampled effect size is determined of the variant on the phenotypes or phenotype combinations based on the input units and information about correlations between the variants in the region. For each variant, a prediction effect size is determined variant on the phenotypes or phenotype combinations based on an average across the iterations of the sampled effect sizes or of posterior effect sizes calculated using the sampled effect sizes.

Published:

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