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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
8 October 2015 (08.10.2015)

WIPO | PCT

(10) International Publication Number
WO 2015/150360 A1

(51) International Patent Classification:
G01N 33/569 (2006.01) *G01N 33/68* (2006.01)
G01N 33/92 (2006.01)

(21) International Application Number:
PCT/EP2015/056977

(22) International Filing Date:
31 March 2015 (31.03.2015)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
14001259.2 4 April 2014 (04.04.2014) EP

(71) Applicants: **IDCGS CLINICA DE DIAGNOSTICOS MEDICOS** [BR/BR]; Avenida Noe de Azevedo 208 Cj54 Vila Mariana, 04117-000 Sao Paulo (BR). **CENTRO DE GENOMAS** [BR/BR]; Rua Leandro Dupret 967, 04025-014 Sao Paulo (BR). **BIOCRATES LIFE SCIENCES AG** [AT/AT]; Eduard-Bodem-Gasse 8, A-6020 Innsbruck (AT).

(72) Inventors: **DA SILVA, Ismael Dale Cotrim Guerreiro**; c/o IDCGS Clinica de Diagnostics Medicos LTDA, Avenida Professor Noe de Azevedo 208, 13rd Floor, Vila Mariana, 04117-000 Sao Paulo - SP (BR). **LOTURCO, Edson Guimaraes**; c/o IDCGS Clinica de Diagnostics Medicos LTDA, Avenida Professor Noe de Azevedo 208, 13rd Floor, Vila Mariana, 04117-000 Sao Paulo - SP (BR). **DIAZ, Ricoardo Soubie**; c/o Centro de Genomas, Rua Leandro Dupret 967, 04025-014 Sao Paulo - SP (BR). **KOAL, Therese**; c/o Biocrates Life Sciences AG, Eduard-Bodem-Gasse 8, A-6020 Innsbruck (AT).

(74) Agents: **TER MEER STEINMEISTER & PARTNER PATENTANWÄLTE MBB** et al.; Nymphenburger Strasse 4, 80335 München (DE).

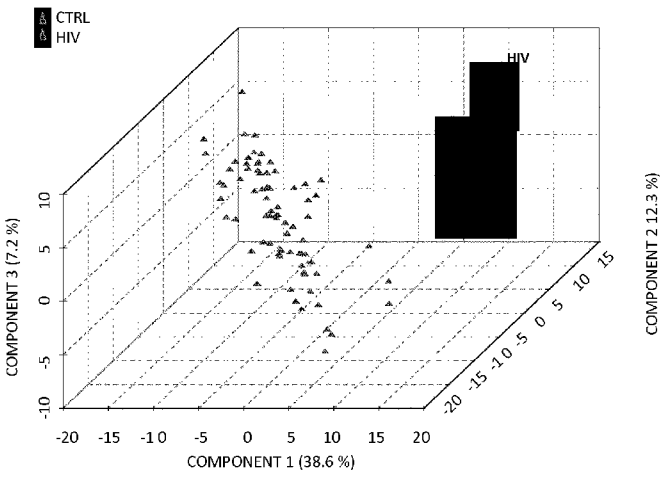
(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, 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, 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, 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,

[Continued on next page]

(54) Title: BIOMARKERS FOR ASSESSING HIV

Figure 1



(57) Abstract: The present invention relates to metabolic biomarker sets for assessing HIV. In preferred embodiments, the present invention relates to the use of biomarker sets for screening and/or diagnosing HIV infection, for prediction of immunologic response of a mammalian subject to antiretroviral therapy and/or prognosis of HIV disease progression, and for monitoring of HIV disease activity in a mammalian subject.In other embodiments, the invention relates to methods for screening and/or diagnosing HIV infection, for prediction of immunologic response of a mammalian subject to antiretroviral therapy and/or prognosis of HIV disease progression, and for monitoring of HIV disease activity in a mammalian subject, as well as to a kit adapted to carry out the methods. By employing the specific biomarkers and the method according to the present invention it becomes possible to more properly and reliably assess HIV. In particular, it becomes possible to screen for and diagnose HIV in a patient with high accuracy and predict early in advance the patient's therapeutic response to antiretroviral therapy.

WO 2015/150360 A1

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))*

— *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))*