

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

(19) World Intellectual Property
Organization

International Bureau

(43) International Publication Date
25 July 2019 (25.07.2019)



(10) International Publication Number
WO 2019/141422 A1

(51) International Patent Classification:
G01N 33/574 (2006.01) G01N 33/92 (2006.01)

(21) International Application Number:
PCT/EP2018/082811

(22) International Filing Date:
28 November 2018 (28.11.2018)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
18152687.2 22 January 2018 (22.01.2018) EP
18174963.1 29 May 2018 (29.05.2018) EP

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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, 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, 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, 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

(54) Title: A METHOD OF DIAGNOSING CANCER BASED ON LIPIDOMIC ANALYSIS OF A BODY FLUID

(57) Abstract: The present invention provides a method of diagnosing cancer based on lipidomic analysis of a body fluid taken from the body of a patient, characterized in that it comprises the steps of: - spiking of the sample with a set of internal standards comprising at least one internal standard for each lipid class present in the sample, - subsequently processing the sample by liquid-liquid lipidomic extraction or by solid phase lipidomic extraction, - measurement of the processed sample by a mass spectrometry method, - determining concentrations for at least 51, more preferably for all lipids present at a level above detection threshold of the mass spectrometry method, using the internal standards for the corresponding lipid classes for the quantitation, or using relative concentrations of lipids, or using ratios of concentrations and/or signal intensities, - statistical evaluation of the determined concentrations of the lipids, said statistical evaluation determining the level of probability of the patient suffering from cancer, or optionally from a specific type of cancer, based on the determined lipid concentrations compared to a cancerous pattern, or optionally a specific cancerous pattern, and a non-cancerous pattern, wherein the cancerous pattern or the specific cancerous pattern and the non-cancerous pattern are determined by statistical analysis of the lipid concentrations for a group of known cancer samples and non-cancer samples.

