

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
07 November 2024 (07.11.2024)



(10) International Publication Number
WO 2024/228094 A1

(51) International Patent Classification:

C12Q 1/6876 (2018.01) C12Q 1/6858 (2018.01)
C12Q 1/6851 (2018.01) C12Q 1/6886 (2018.01)

(21) International Application Number:

PCT/IB2024/054086

(22) International Filing Date:

26 April 2024 (26.04.2024)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

202341030874 29 April 2023 (29.04.2023) IN

(72) Inventor; and

(71) Applicant: **RAMAN, Srikar** [IN/IN]; Tvaster Genkalp Private Limited, Flat No. A 1303, Brentwood, Hiranandani, OMR, Egattur, Chennai Kancheepuram, Tamil Nadu 603103 (IN).

(72) Inventors: **SREEDURGALAKSHMI, K**; Flat 6, 1st Floor, Acharya Apartments, 2nd Main Road, RA Puram, Chennai, Tamil Nadu 600028 (IN). **RAMMOHAN, Ashwin**; Flat H, KG Sagar Apts, 3 ID 4th Seaward Road, Valmiki Nagar, Thiruvanniyur, Chennai, Tamil Nadu 600041 (IN). **GUNASEKARAN, Vasanthakumar**; D5-301, Purva Windmere Apartments, Bhavani Amman Kovil Street, Palikaranai, Chennai, Tamil Nadu 600100 (IN). **RELA, S Mohamed**; 9/17 Hamlet of Kovalam, ECR Road, Semecheri, Kancheepuram, Kovalam, Tamil Nadu 603112 (IN).

(74) Agent: **KHURANA & KHURANA, ADVOCATES & IP ATTORNEYS**; D 45, UPSIDC, Site-IV, Kasna Road, Greater Noida, National Capital Region, Uttar Pradesh 201310 (IN).

(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, CV, 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, MG, MK, MN, MU, 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, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, 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, ME, 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))
- with sequence listing part of description (Rule 5.2(a))
- in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE

(54) Title: SEQUENCING INDEPENDENT COMPOSITIONS FOR DETECTING CARCINOMAS USING METHYLATION MARKERS

(57) Abstract: The present invention provides sequencing independent quantitative methylation profiling compositions, epigenetic biomarker primers, epigenetic biomarker probes, multiplex compositions, kit, and uses thereof for (i) quantifying and assessing the levels and patterns of epigenetic methylation to predict the risk of developing cancer and specifically, to predict the risk of developing carcinomas marked by epigenetic aberrations or (ii) to detect the presence or absence of cancer and specifically, to detect the presence or absence of carcinomas marked by epigenetic aberrations or (iii) combination thereof.

WO 2024/228094 A1