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- (71) **Applicant:** **GENOMIC VISION** [FR/FR]; 80-84, rue des Meuniers, 92220 Bagneux (FR).
- (72) **Inventors:** **BISHT, Prakhar**; 70 Avenue Aristide Briand, 92120 Montrouge (FR). **AVARELLO, Mario Davide Maria**; 2 rue Victor Basch, 92120 Montrouge (FR). **ALTUNLU, Engin**; 2 rue Saint Vincent, 57000 Metz (FR). **KULAKOVSKYI, Andrii**; 102 Avenue Francis Tonner, Appartement 203, 06150 Cannes (FR). **BENSIMON**,

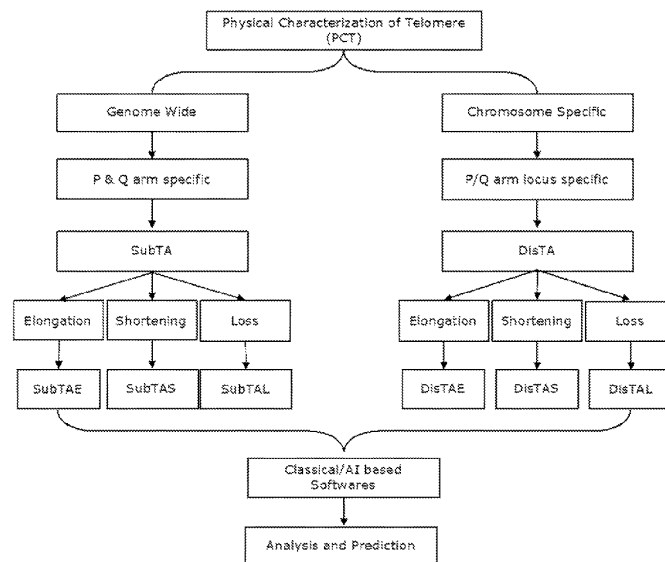
Aaron; c/o Genomic Vision, 80-84, rue des Meuniers, 92220 Bagneux (FR).

- (74) **Agent:** **ERNEST GUTMANN - YVES PLASSER-AUD SAS - ALMOND-MARTIN CAROL, DERAMBURE CHRISTIAN, DESAIX ANNE, JOLLY CHRISTOPHE, LE QUERÉ HERVÉ, PERNOT PIERRE, PICHAT THIERRY, POUCHAIN DELPHINE, ROBERT MATHIAS, SELLIN CAROLE**; 66, rue de la Chaussée d'Antin, 75009 Paris (FR).

- (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.

(54) **Title:** PHYSICAL CHARACTERIZATION OF TELOMERES

FIG. 2



- (57) **Abstract:** The present invention, called Physical Characterization of Telomere (PCT), provides an advantageous, accurate and convenient new methods for the visualization, characterization and measurements of telomere sequences. It employs probes and dyes to create a pattern of physical images, classifies the images, and determines the lengths of telomere sequences. PCT brings to a deeper understanding of telomere modifications that occur either genome wide manner or in a chromosome specific way.

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