

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
27 June 2024 (27.06.2024)



(10) International Publication Number
WO 2024/138154 A2

(51) International Patent Classification:
Not classified

(21) International Application Number:
PCT/US2023/085743

(22) International Filing Date:
22 December 2023 (22.12.2023)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
63/477,103 23 December 2022 (23.12.2022) US
63/586,872 29 September 2023 (29.09.2023) US
63/604,667 30 November 2023 (30.11.2023) US

(71) Applicant: **ILLUMINA, INC.** [US/US]; 5200 Illumina Way, San Diego, CA 92122 (US).

(72) Inventors: **STORMS, Lena**; 5200 Illumina Way, San Diego, CA 92122 (US). **APRIL, Craig**; 5200 Illumina Way, San Diego, CA 92122 (US). **EKSTRAND, Mats**; 5200 Illumina Way, San Diego, CA 92122 (US). **ZHANG, Kerou**; 5200 Illumina Way, San Diego, CA 92122 (US). **XIAO, Yao**; 5200 Illumina Way, San Diego, CA 92122 (US). **FLOWERS, Brittany**; 5200 Illumina Way, San Diego, CA 92122 (US). **PODDAR, Anustup**; 5200 Illumina Way, San Diego, CA 92122 (US). **MANZO, Andrea**; 5200 Illumina Way, San Diego, CA 92122 (US). **GHAZINEJAD, Olivia**; 5200 Illumina Way, San Diego, CA 92122 (US). **SHEN, Fei**; 5200 Illumina Way, San Diego, CA 92122 (US). **MATHER, Brian**; 5200 Illumina Way, San Diego, CA 92122 (US). **CANON, Se, Min**; 5200 Illumina Way, San Diego, CA 92122 (US). **OSTROW, Andrew**; 5200 Illumina Way, San Diego, CA 92122 (US).

(74) Agent: **NEVILLE, Katherine, L.**; Marshall, Gerstein & Borun LLP, 233 S. Wacker Drive, 6300 Willis Tower, Chicago, IL 60606-6357 (US).

(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:

- without international search report and to be republished upon receipt of that report (Rule 48.2(g))
- with sequence listing part of description (Rule 5.2(a))

WO 2024/138154 A2