

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
06 April 2023 (06.04.2023)



(10) International Publication Number
WO 2023/056329 A1

(51) International Patent Classification:
C07K 14/705 (2006.01) A61P 27/16 (2006.01)
A61P 25/14 (2006.01)

(21) International Application Number:
PCT/US2022/077222

(22) International Filing Date:
29 September 2022 (29.09.2022)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
63/250,857 30 September 2021 (30.09.2021) US
63/305,740 02 February 2022 (02.02.2022) US
63/309,061 11 February 2022 (11.02.2022) US

(71) Applicant: AKOUOS, INC. [US/US]; 645 Summer Street,
Suite 200, Boston, MA 02210 (US).

(72) Inventors: GRIBBLE, Katherine, Diane; 39 Priscilla
Road, Chestnut Hill, MA 02467 (US). NG, Robert; 47 Lin-
coln Road, Unit 1, Newton, MA 02458 (US). SIMONS,
Emmanuel, John; 7 Stetson Street, Brookline, MA 02446
(US). ROBINSON, Gregory, Scott; 4 Foley Farm Road,
Wilmington, MA 01887 (US).

(74) Agent: MONROE, Margo, R. et al.; Choate, Hall & Ste-
wart LLP, Two International Place, Boston, MA 02110
(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, 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.

(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,

(54) Title: COMPOSITIONS AND METHODS FOR TREATING KCNQ4-ASSOCIATED HEARING LOSS

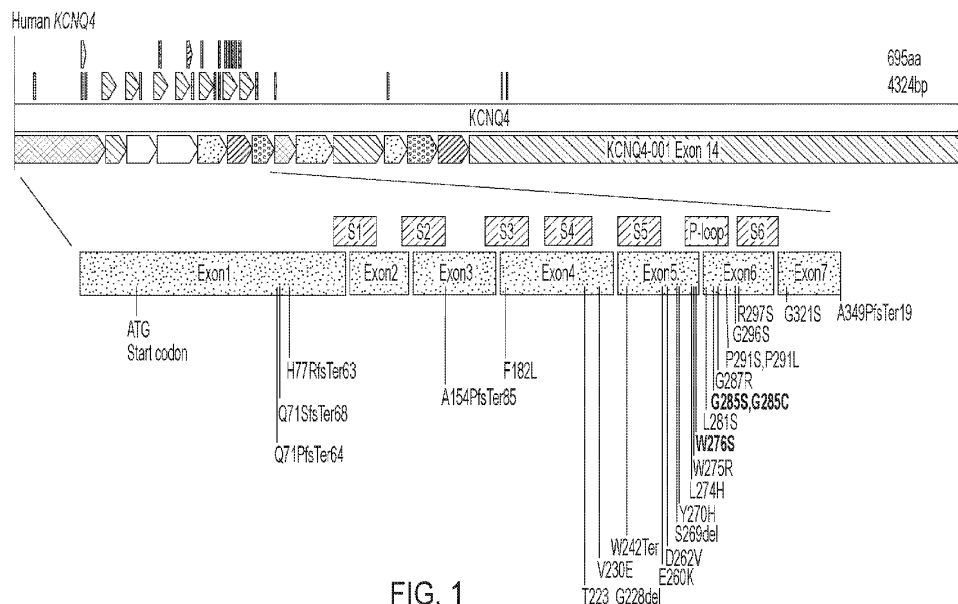


FIG. 1

(57) Abstract: The present disclosure provides technologies comprising a polynucleotide capable of expressing and/or inhibiting a KCNQ4 gene product.

[Continued on next page]

TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

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))*