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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
10 May 2013 (10.05.2013)

WIPO | PCT

(10) International Publication Number
WO 2013/067076 A2

(51) **International Patent Classification**:
C12N 15/113 (2010.01) *A61P 27/16* (2006.01)
A61K 31/713 (2006.01) *C12N 9/64* (2006.01)

(21) **International Application Number**:
PCT/US2012/062894

(22) **International Filing Date**:
1 November 2012 (01.11.2012)

(25) **Filing Language**: English

(26) **Publication Language**: English

(30) **Priority Data**:
61/554,982 3 November 2011 (03.11.2011) US
61/663,627 25 June 2012 (25.06.2012) US

(71) **Applicant** *(for all designated States except US)*: **QUARK PHARMACEUTICALS, INC.** [—/US]; 6501 Dumbarton Circle, Fremont, California 94555 (US).

(72) **Inventor; and**
(71) **Applicant** *(for US only)*: **FEINSTEIN, Elena** [IL/IL]; 13/55 HaCarmel Street, 76305 Rehovot (IL).

(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, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, 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, 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, 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, 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 2013/067076 A2

(54) **Title**: METHODS AND COMPOSITIONS FOR NEUROPROTECTION

(57) **Abstract**: Disclosed herein are methods and kits useful for providing neuroprotection to neurons in the inner ear and to methods of treating inner ear diseases and disorders, including tinnitus and Mnire's disease.