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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
12 February 2015 (12.02.2015)

WIPO | PCT

(10) International Publication Number
WO 2015/021457 A3

(51) International Patent Classification:
C12N 15/113 (2010.01) *A61K 48/00* (2006.01)

(21) International Application Number:
PCT/US2014/050481

(22) International Filing Date:
11 August 2014 (11.08.2014)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/864,439 9 August 2013 (09.08.2013) US
61/889,337 10 October 2013 (10.10.2013) US

(71) Applicant: **ISIS PHARMACEUTICALS, INC.** [US/US]; 2855 Gazelle Court, Carlsbad, CA 92010 (US).

(72) Inventors: **PANDEY, Sanjay, K.**; 2855 Gazelle Court, Carlsbad, CA 92010 (US). **MACLEOD, Robert, A.**; 2855 Gazelle Court, Carlsbad, CA 92010 (US). **SWAYZE, Eric, E.**; 2855 Gazelle Court, Carlsbad, CA 92010 (US). **BENNETT, C., Frank**; 2855 Gazelle Court, Carlsbad, CA 92010 (US).

(74) Agents: **GINGRICH, Brenden** et al.; Knobbe Martens LLP, 2040 Main Street, 14th Floor, Irvine, CA 92614 (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, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, 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, SA, 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, 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))*

(88) Date of publication of the international search report:
9 April 2015

(54) Title: COMPOUNDS AND METHODS FOR MODULATION OF DYSTROPHIA MYOTONICA-PROTEIN KINASE (DMPK) EXPRESSION

(57) Abstract: Provided herein are methods, compounds, and compositions for reducing expression of a DMPK mRNA and protein in an animal. Also provided herein are methods, compounds, and compositions for preferentially reducing CUGexp DMPK RNA, reducing myotonia or reducing spliceopathy in an animal. Such methods, compounds, and compositions are useful to treat, prevent, delay, or ameliorate type 1 myotonic dystrophy, or a symptom thereof.

WO 2015/021457 A3