

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

(19) World Intellectual Property
Organization

International Bureau

(43) International Publication Date
23 August 2018 (23.08.2018)



(10) International Publication Number
WO 2018/152326 A1

(51) International Patent Classification:

C07K 14/79 (2006.01) A61K 39/00 (2006.01)

C07K 14/705 (2006.01) A61K 38/40 (2006.01)

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.

(21) International Application Number:

PCT/US2018/018371

(22) International Filing Date:

15 February 2018 (15.02.2018)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/460,692 17 February 2017 (17.02.2017) US

62/543,658 10 August 2017 (10.08.2017) US

62/583,314 08 November 2017 (08.11.2017) US

(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,
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))

— with sequence listing part of description (Rule 5.2(a))

(71) Applicant: **DENALI THERAPEUTICS INC.** [US/US];
151 Oyster Point Blvd., 2nd Floor, South San Francisco,
California 94080 (US).

(72) Inventors: **CHEN, Xiaocheng**; c/o Denali Therapeutics
Inc., 151 Oyster Point Blvd., 2nd Floor, South San Fran-
cisco, California 94080 (US). **DENNIS, Mark S.**; c/o De-
nali Therapeutics Inc., 151 Oyster Point Blvd., 2nd Floor,
South San Francisco, California 94080 (US). **KAROLIS,
Mihalis**; c/o Denali Therapeutics Inc., 151 Oyster Point
Blvd., 2nd Floor, South San Francisco, California 94080
(US). **SILVERMAN, Adam P.**; c/o Denali Therapeutics
Inc., 151 Oyster Point Blvd., 2nd Floor, South San Fran-
cisco, California 94080 (US). **SRIVASTAVA, Ankita**; c/
o Denali Therapeutics Inc., 151 Oyster Point Blvd., 2nd
Floor, South San Francisco, California 94080 (US). **WAT-
TS, Ryan J.**; c/o Denali Therapeutics Inc., 151 Oyster Point
Blvd., 2nd Floor, South San Francisco, California 94080
(US). **WELLS, Robert C.**; c/o Denali Therapeutics Inc.,
151 Oyster Point Blvd., 2nd Floor, South San Francisco,
California 94080 (US). **ZUCHERO, Joy Yu**; c/o Denali
Therapeutics Inc., 151 Oyster Point Blvd., 2nd Floor, South
San Francisco, California 94080 (US).

(74) Agent: **HAO, Joe C.** et al.; Kilpatrick Townsend & Stock-
ton LLP, Mailstop: IP Docketing - 22, 1100 Peachtree Street
- Suite 2800, Atlanta, Georgia 30309 (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, DJ, DK, DM, DO,
DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,
HR, HU, ID, IL, IN, IR, IS, 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,

(54) Title: ENGINEERED TRANSFERRIN RECEPTOR BINDING POLYPEPTIDES

(57) Abstract: Provided herein are polypeptides that bind to a transferrin receptor, methods of generating such polypeptides, and methods of using the polypeptides to target a composition to a transferrin receptor-expressing cell.

WO 2018/152326 A1