



(51) International Patent Classification:

C07K 7/06 (2006.01) C12N 9/64 (2006.01)

A61K 38/00 (2006.01)

(21) International Application Number:

PCT/US2019/038155

(22) International Filing Date:

20 June 2019 (20.06.2019)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/687,913 21 June 2018 (21.06.2018) US

(71) Applicant: MERCK SHARP & DOHME CORP.

[US/US]; 126 East Lincoln Avenue, Rahway, NJ 07065-0907 (US).

(72) Inventors: WOOD, Harold, B.; c/o Merck Sharp &

Dohme Corp, 2000 Galloping Hill Road, Kenilworth, NJ 07033 (US).

JOSIEN, Hubert, B.; c/o Merck Sharp &

Dohme Corp, 2000 Galloping Hill Road, Kenilworth, NJ 07033 (US).

TUCKER, Thomas, Joseph; c/o Merck Sharp &

Dohme Corp, 770 Summeytown Pike, West Point, PA 19486 (US).

KEREKES, Angela, Dawn; c/o Merck Sharp &

Dohme Corp., 2000 Galloping Hill Road, Kenilworth, NJ 07033 (US).

TONG, Ling; c/o Merck Sharp & Dohme Corp, 770 Summeytown Pike, West Point, PA 19486 (US).

WALJI, Abbas, M.; c/o Merck Sharp & Dohme Corp,

770 Summeytown Pike, West Point, PA 19486 (US).

NAIR, Anikumar, G.; c/o Merck Sharp & Dohme Corp, 2000

Galloping Hill Road, Kenilworth, NJ 07033 (US).

DING, Fa-Xiang; c/o Merck Sharp & Dohme Corp., 2000 Gal-

loping Hill Road, Kenilworth, NJ 07033 (US).

BIANCHI, Elisabetta; c/o Irbm Science Park S.p.A., Via Pontina

Km 30, 600-0040 Pomezia (IT).

BRANCA, Danila; c/o Irbm Science Park S.p.A., Via Pontina Km 30, 600-0400

Pomezia (IT).

WU, Chengwei; c/o Merck Sharp & Dohme Corp., 770 Summeytown Pike, West Point, PA 19486 (US).

XIONG, Yusheng; c/o Merck Sharp & Dohme Corp., 2000

Galloping Hill Road, Kenilworth, NJ 07033 (US).

HA, Sookhee, Nicole; c/o Merck Sharp & Dohme Corp., 2000

Galloping Hill Road, Kenilworth, NJ 07033 (US).

LIU, Jian; c/o Merck Sharp & Dohme Corp., 2000 Galloping

Hill Road, Kenilworth, NJ 07033 (US).

BOGA, Sobhana, Babu; c/o Merck Sharp & Dohme Corp., 2000 Galloping

Hill Road, Kenilworth, NJ 07033 (US).

(74) Agent: TRINQUE, Brian, C. et al.; Lathrop Gage LLP, 28

State Street, 7th Floor, Boston, MA 02109 (US).

(81) Designated States (unless otherwise indicated, for every

kind of national protection available): AE, AG, AL, AM,

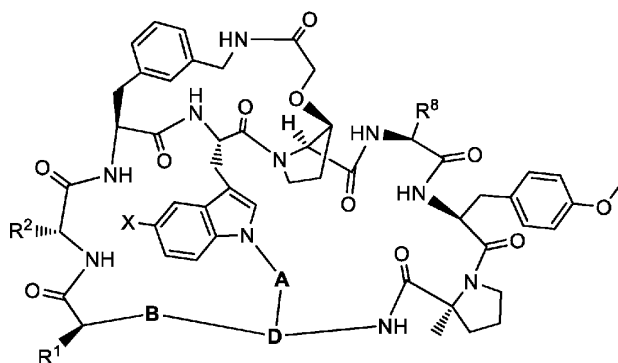
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ,

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,

(54) Title: PCSK9 ANTAGONIST COMPOUNDS



(I)

(57) **Abstract:** Disclosed are compounds of Formula I, or a salt thereof: where A, B, D, X, R₁, R₂ and R₈ are as defined herein, which compounds have properties for antagonizing PCSK9. Also described are pharmaceutical formulations comprising the compounds of Formula I or their salts, and methods of treating cardiovascular disease and conditions related to PCSK9 activity, e.g. atherosclerosis, hypercholesterolemia, coronary heart disease, metabolic syndrome, acute coronary syndrome, or related cardiovascular disease and cardiometabolic conditions.

[Continued on next page]

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, 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, 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))*
- *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))*