

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
19 September 2024 (19.09.2024)



(10) International Publication Number
WO 2024/191714 A1

(51) International Patent Classification:

A61P 9/00 (2006.01) C07D 417/04 (2006.01)
C07D 401/04 (2006.01) C07D 417/14 (2006.01)
C07D 401/14 (2006.01) A61K 31/501 (2006.01)
C07D 403/04 (2006.01)

SI, SK, SM, 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 the identity of the inventor (Rule 4.17(i))
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

(21) International Application Number:

PCT/US2024/018774

(22) International Filing Date:

07 March 2024 (07.03.2024)

(25) Filing Language:

English

(26) Publication Language:

English

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))

(30) Priority Data:

63/489,441 10 March 2023 (10.03.2023) US
63/626,812 30 January 2024 (30.01.2024) US

(71) Applicant: **ZOETIS SERVICES LLC** [US/US]; 10 Sylvan Way, Parsippany, New Jersey 07054 (US).

(72) Inventors: **EWIN, Richard A.**; c/o Zoetis Services LLC, 333 Portage Street, Kalamazoo, Michigan 49007 (US). **CURTIS, Michael P.**; c/o Zoetis Services LLC, 333 Portage Street, Kalamazoo, Michigan 49007 (US). **MADDUX, Todd M.**; c/o Zoetis Services LLC, 333 Portage Street, Kalamazoo, Michigan 49007 (US). **KYNE, Graham M.**; c/o Zoetis Services LLC, 333 Portage Street, Kalamazoo, Michigan 49007 (US).

(74) Agent: **MISIAK, Paul M.** et al.; c/o Zoetis Services LLC, 10 Sylvan Way, Parsippany, New Jersey 07054 (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, MG, MK, MN, MU, 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, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, 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, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE,

(54) Title: PHOSPHODIESTERASE 3 (PDE3) INHIBITORS

(57) Abstract: The invention describes novel PDE3 inhibitors for treating a cardiovascular disease including myxomatous mitral valve disease, congestive heart failure and/or asymptomatic heart failure in animals, particularly canines.

WO 2024/191714 A1