



(51) International Patent Classification:

C07D 473/08 (2006.01) **A61P 13/12** (2006.01)
C07D 473/06 (2006.01) **A61P 17/06** (2006.01)
A61K 31/52 (2006.01) **A61P 19/00** (2006.01)
A61K 31/522 (2006.01) **A61P 19/02** (2006.01)
A61K 31/5377 (2006.01) **A61P 35/00** (2006.01)
A61P 3/00 (2006.01) **A61P 35/02** (2006.01)
A61P 9/00 (2006.01)

(21) International Application Number:

PCT/SG2014/000217

(22) International Filing Date:

19 May 2014 (19.05.2014)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

1309333.1 23 May 2013 (23.05.2013) GB

(71) Applicant: **AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH** [SG/SG]; 1 Fusionopolis Way, #20-10 Connexis, Singapore 138632 (SG).

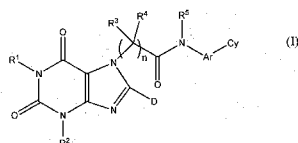
(72) Inventors: **HO, Soo Yei**; Experimental Therapeutics Centre, 11 Biopolis Way #03-10/11, Helios, Singapore 138667 (SG). **BLANCHARD, Stephanie Eliane**; Experimental Therapeutics Centre, 11 Biopolis Way #03-10/11, Helios, Singapore 138667 (SG). **DURAISWAMY, Athisayamani Jeyaraj**; Experimental Therapeutics Centre, 11 Biopolis Way #03-10/11, Helios, Singapore 138667 (SG). **ALAM, Jenefer**; Experimental Therapeutics Centre, 11 Biopolis Way #03-10/11, Helios, Singapore 138667 (SG). **ADSOOL, Vikrant Arun**; Institute of Chemical and Engineering Sciences, 11 Biopolis Way #03-08 Helios, Singapore 138667 (SG).

(74) Agent: **SPRUSON & FERGUSON (ASIA) PTE LTD**; P.O. Box 1531, Robinson Road Post Office, Singapore 903031 (SG).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

[Continued on next page]

(54) Title: PURINE DIONES AS WNT PATHWAY MODULATORS



(57) Abstract: The invention relates to the use of compounds of general structure (I) in modulation of the Wnt pathway [Formula should be inserted here] wherein R^1 , R^2 , R^3 , R^4 and R^5 are each, independently, H or an alkyl group; D is selected from the group consisting of H, halogen, alkyl, cycloalkyl, aryl, and dialkylamino, each (other than H and halogen) being optionally substituted; Ar is an aryl or heteroaryl group, optionally substituted; Cy is an aryl, heteroaryl or a saturated ring containing at least one heteroatom, each being optionally substituted; and n is an integer from 1 to 3.

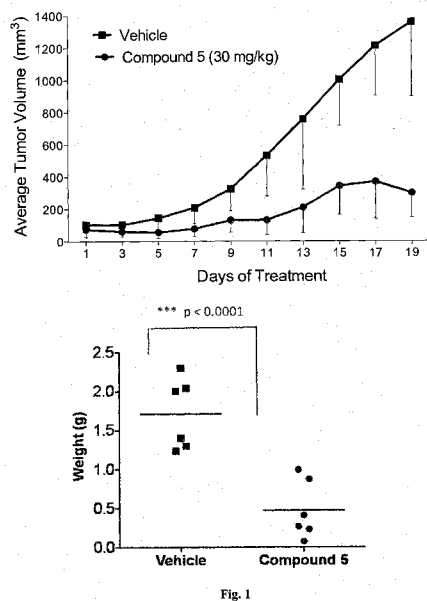


Fig. 1



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).

Declarations under Rule 4.17:

— *of inventorship (Rule 4.17(iv))*

Published:

— *with international search report (Art. 21(3))*