



(51) International Patent Classification:

C07D 403/06 (2006.01) *A61P 27/02* (2006.01)
C07D 413/06 (2006.01) *A61P 37/00* (2006.01)
C07D 417/06 (2006.01)

(21) International Application Number:

PCT/IB2013/053546

(22) International Filing Date:

3 May 2013 (03.05.2013)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/642,798 4 May 2012 (04.05.2012) US
 61/782,820 14 March 2013 (14.03.2013) US

(71) Applicant (for all designated States except US): **NOVARTIS AG** [CH/CH]; Lichtstrasse 35, CH-4056 Basel (CH).

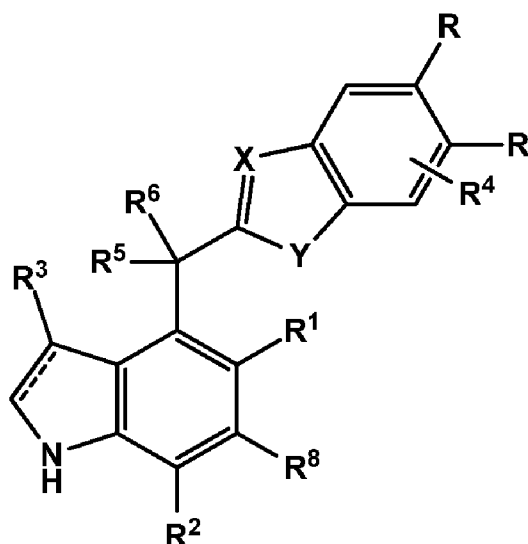
(72) Inventors; and

(71) Applicants (for US only): **ADAMS, Christopher Michael** [US/US]; Novartis Institutes for BioMedical Research, Inc., 100 Technology Square Cambridge, Cambridge, Massachusetts 02139 (US). **BABU, Charles** [US/US]; Novartis Institutes for BioMedical Research, Inc., 6201 South Freeway, Fort Worth, Texas 76134 (US).

DING, Jian [US/US]; Novartis Institutes for BioMedical Research, Inc., 100 Technology Square Cambridge, Cambridge, Massachusetts 02139 (US). **EHARA, Takeru** [JP/US]; Novartis Institutes for BioMedical Research, Inc., 100 Technology Square Cambridge, Cambridge, Massachusetts 02139 (US). **JENDZA, Keith** [US/US]; Novartis Institutes for BioMedical Research, Inc., 100 Technology Square Cambridge, Cambridge, Massachusetts 02139 (US). **JL, Nan** [CN/US]; Novartis Institutes for BioMedical Research, Inc., 100 Technology Square Cambridge, Cambridge, Massachusetts 02139 (US). **KARKI, Rajeshri Ganesh** [IN/US]; Novartis Institutes for BioMedical Research, Inc., 100 Technology Square Cambridge, Cambridge, Massachusetts 02139 (US). **KAWANAMI, Toshio** [JP/US]; Novartis Institutes for BioMedical Research, Inc., 100 Technology Square Cambridge, Cambridge, Massachusetts 02139 (US). **XUE, Liang** [US/US]; Novartis Institutes for BioMedical Research, Inc., 6201 South Freeway, Fort Worth, Texas 76134 (US). **MAIN-OLFI, Nello** [IT/US]; Novartis Institutes for BioMedical Research, Inc., 400 Technology Square Cambridge, Cambridge, Massachusetts 02139 (US). **POWERS, James J.** [US/US]; Novartis Institutes for BioMedical Research, Inc., 400 Technology Square Cambridge, Cambridge, Massachusetts 02139 (US). **SERRANO-WU, Michael H.** [US/US]; Novartis Institutes for BioMedical Research, Inc., 100 Technology Square Cambridge, Cambridge, Mas-

[Continued on next page]

(54) Title: COMPLEMENT PATHWAY MODULATORS AND USES THEREOF



(I)

(57) **Abstract:** The present invention provides a compound of formula I: (I) a method for manufacturing the compounds of the invention, and its therapeutic uses. The present invention further provides a combination of pharmacologically active agents and a pharmaceutical composition.



sachusetts 02139 (US). **ZHANG, Chun** [CN/US]; Novartis Institutes for BioMedical Research, Inc., 100 Technology Square Cambridge, Cambridge, Massachusetts 02139 (US).

(74) Common Representative: **NOVARTIS AG**; Lichtstrasse 35, CH-4056 Basel (CH).

(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, IS, JP, KE, KG, KM, 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, 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, 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))