

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
26 January 2012 (26.01.2012)

PCT

(10) International Publication Number
WO 2012/011125 A1

(51) International Patent Classification:

C07C 251/48 (2006.01) **A61P 9/00** (2006.01)
C07C 251/52 (2006.01) **C07C 317/32** (2006.01)
C07C 255/41 (2006.01) **C07D 261/08** (2006.01)
C07C 255/61 (2006.01) **C07D 307/79** (2006.01)
A61K 31/343 (2006.01) **C07D 333/58** (2006.01)
A61K 31/381 (2006.01) **C07F 9/40** (2006.01)
A61K 31/42 (2006.01)

(21) International Application Number:

PCT/IN2011/000479

(22) International Filing Date:

20 July 2011 (20.07.2011)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2110/CHE/2010 23 July 2010 (23.07.2010) IN
 61/389,508 4 October 2010 (04.10.2010) US

(71) **Applicant** (for all designated States except US): **CON-NEXIOS LIFE SCIENCES PVT. LTD.** [IN/IN]; No.49, Shilpa Vidya, First Main Road, J P Nagar 3rd Phase, Bangalore 560078 (IN).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **RANGANATH**

RAO, Jagannath Madanahalli [IN/IN]; Y-146, 111 Block, 50th Cross, Rajajinagar, Bangalore 560 010 (IN). **ARUMUGAM, Nagarajan** [IN/IN]; G-13, Kristal Jade, 80/3 Amblipura Village, Bellandur, Outer Ring Road, Bangalore 560034 (IN). **ANSARI, Mohd Mudabbir** [IN/IN]; Behind Saleem Cottage, Amankhan Plats, Akola 444001 (IN). **GUDLA, Chandrasekhar** [IN/IN]; Appalaraju gudem Po, T.Narasa Puram, (Mandal), West Godavari Dt, Andhra Pradesh 534456 (IN). **PACHIYAPPAN, Shanmugam** [IN/IN]; No.29 Big Street, Tamil Nadu, Cheyyar 604407 (IN). **RAMALINGAM, Manivannan** [IN/IN]; S/o R.Jagathambal, 110/70-Pacchai, Amman Kovil (opp), K.M. Nagar, Ayodhiyapattinam, Tamil Nadu Salem 636103 (IN). **GEORGE, Jensen** [IN/IN]; Thiruthanathil (H), Manjappa Post, Margiri, Angamau (Via), Ernakulam (Dist), Kerela-, Ernakulam 683581 (IN). **ARUL, George Fernanda** [IN/IN]; Peruvallappur Post, Lalgudi Tq, Trichy (Dt), Tamil Nadu, Trichy 621704 (IN). **BOMMEGOWDA, Y, Kenchegowda** [IN/IN]; S/o Kenchegowda Y.B, Yadavanahalli (vil), Maddur

(tq), Karnataka, 5711422 Mandya (IN). **ANGUPILLAI, Sathesh Kumar** [IN/IN]; Vellalar Street, Ayyam Palayam, Dindigal, (dist). Tamil Nadu-, Tamil Nadu 624204 (IN). **KOTTAMALAI, Ramamoorthy** [IN/IN]; 198/66, Keelappatti Street, Srivilliputtur, Virudhunagar, Tamil Nadu 626125 (IN). **JIDUGU, Pradeep** [IN/IN]; D.no.19-15-98,3rd Line, Indira, Priyadharshini Colony, Sangadi Gunte, Ponner Main Road, Guntur-522001, Andhra Pradesh Guntur 522001 (IN). **RAO, D, Shivan-ageshwara** [IN/IN]; Hanuman Palem Post Kollipar, Guntur, Andhra Pradesh, Guntur 522001 (IN).

(74) **Agent: KEWALRAMANI, Nishant**; No 40,1st Floor, 3rd Main Road, JC Industrial Estate, Kanakapura Road, Bangalore 560062 (IN).

(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, 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, PE, PG, PH, PL, PT, RO, RS, RU, 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, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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).

Declarations under Rule 4.17:

- as to the identity of the inventor (Rule 4.17(i))
- of inventorship (Rule 4.17(iv))

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))

(54) Title: AGONISTS OF GPR40

(57) **Abstract:** The present invention relates to compounds that have the ability to modulate the activity of GPR40 and are therefore useful in the treatment of GPR40 related disorders. In addition the invention relates to the compounds, methods for their preparation, pharmaceutical compositions containing the compounds and the uses of these compounds in the treatment of certain disorders related to GPR40 activity.



WO 2012/011125 A1