

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

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
10 February 2011 (10.02.2011)

(10) International Publication Number
WO 2011/017561 A1

(51) International Patent Classification:
A01N 43/42 (2006.01)

TAVERAS, Arthur, G. [US/US]; 6 Joslin Lane, South-
borough, MA 01772 (US).

(21) International Application Number:
PCT/US2010/044607

(74) Agents: FOX, Harold, H. et al.; Steptoe & Johnson LLP,
1330 Connecticut Avenue NW, Washington, DC 20036
(US).

(22) International Filing Date:
5 August 2010 (05.08.2010)

(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.

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/231,539 5 August 2009 (05.08.2009) US

(71) Applicant (for all designated States except US): BIO-
GEN IDEC MA INC. [US/US]; 14 Cambridge Center,
Cambridge, MA 02142 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): THOMAS, Jer-
maine [CA/US]; 130 Library Street, Chelsea, MA 02150
(US). LIU, Xiaogao [US/US]; 28 Tisdale Drive, Dover,
MA 02030 (US). LIN, Edward, Yin-Shiang [CA/US];
73 Thornton Rd, Chestnut Hill, MA 02467 (US).
ZHENG, Guo, Zhu [US/US]; 14 Meriam Street, Lexing-
ton, MA 02420 (US). MA, Bin [CN/US]; 276 Mas-
sachusetts Ave #202, Arlington, MA 02474 (US). CALD-
WELL, Richard, D. [US/US]; 33 Aberdeen Road,
Somerville, MA 02144 (US). GUCKIAN, Kevin, M.
[US/US]; 51 Violetwood Circle, Marlborough, MA
01752 (US). KUMARAVEL, Gnanasambandam
[US/US]; 10 Perham Circle, Westford, MA 01886 (US).

(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, 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))

(54) Title: BICYCLIC ARYL SPHINGOSINE 1-PHOSPHATE ANALOGS

(57) Abstract: Compounds that have agonist activity at one or more of the SIP receptors are provided. The compounds are sphin-
gosine analogs that, after phosphorylation, can behave as agonists at SIP receptors.



WO 2011/017561 A1