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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
29 April 2010 (29.04.2010)

PCT

(10) International Publication Number
WO 2010/048520 A1

(51) **International Patent Classification**:
A61K 39/395 (2006.01) *C07K 16/46* (2006.01)

(21) **International Application Number**:
PCT/US2009/061867

(22) **International Filing Date**:
23 October 2009 (23.10.2009)

(25) **Filing Language**: English

(26) **Publication Language**: English

(30) **Priority Data**:

61/108,210	24 October 2008 (24.10.2008)	US
61/224,226	9 July 2009 (09.07.2009)	US
61/229,933	30 July 2009 (30.07.2009)	US

(71) **Applicant** *(for all designated States except US)*: **GLAXOSMITHKLINE BIOLOGICALS SA** [BE/BE]; Rue de l'Institut 89, B-1330 Rixensart (BE).

(72) **Inventor; and**
(75) **Inventor/Applicant** *(for US only)*: **JOHNSON, David** [US/US]; GlaxoSmithKline Biologicals S.A. Hamiliton, Old Corvallis Road 553-MT, Hamilton, Montana 59840 (US).

(74) **Agents**: **CONGER, Michael M.** et al.; GlaxoSmithKline, Corporate Intellectual Property Department, Five Moore Drive, PO Box 13398, Research Triangle Park, North Carolina 27709-3398 (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, 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, 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, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (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))*

WO 2010/048520 A1

(54) **Title**: LIPIDATED IMIDAZOQUINOLINE DERIVATIVES

(57) **Abstract**: The compounds of the subject invention are adjuvant molecules that comprise an imidazoquinoline molecule covalently linked to a phospho- or phosphonolipid group. The compounds of the invention have been shown to be inducers of interferon-a, IL-12 and other immunostimulatory cytokines and possess an improved activity profile in comparison to known cytokine inducers when used as adjuvants for vaccine antigens