PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 7 : A61K 39/00 | A2

(11) International Publication Number: WO 00/69456

(43) International Publication Date: 23 November 2000 (23.11.00)

(21) International Application Number: PCT/US00/13156

(22) International Filing Date: 12 May 2000 (12.05.00)

(30) Priority Data:
60/133,963 13 May 1999 (13.05.99) US

(71) Applicant *(for all designated States except US)*: AMERICAN CYANAMID COMPANY [US/US]; Five Giralda Farms, Madison, NJ 07940 (US).

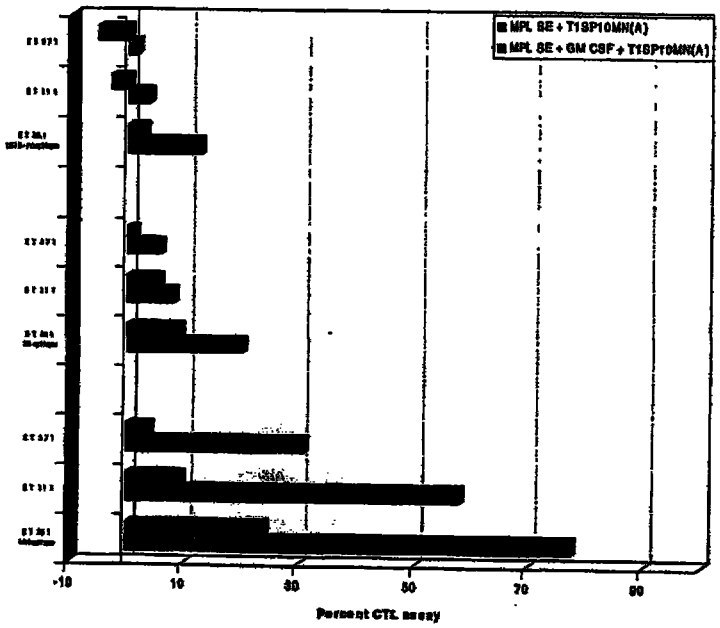
(72) Inventor; and
(75) Inventor/Applicant *(for US only)*: HAGEN, Michael [CA/US]; 12 Summit Oaks, Pittsford, NY 14534 (US).

(74) Agents: GORDON, Alan, M.; American Home Products Corporation, Patent Law Dept. – 2B2, One Campus Drive, Parsippany, NJ 07054 (US) et al.

(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published
Without international search report and to be republished upon receipt of that report.

(54) Title: ADJUVANT COMBINATION FORMULATIONS



(57) Abstract

The use of 3–O–deacylated monophosphoryl lipid A or monophosphoryl lipid A and derivatives and analogs thereof, in combination with a cytokine or lymphokine such as granulocyte macrophage colony stimulating factor or interleukin–12 is useful as an adjuvant combination in an antigenic composition to enhance the immune response in a vertebrate host to a selected antigen.