PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 7 : A61K 47/48 — A2

(11) International Publication Number: **WO 00/23114**

(43) International Publication Date: 27 April 2000 (27.04.00)

(21) International Application Number: PCT/US99/24201

(22) International Filing Date: 15 October 1999 (15.10.99)

(30) Priority Data:

60/104,572	16 October 1998 (16.10.98)	US
60/120,161	16 February 1999 (16.02.99)	US

(71) Applicant *(for all designated States except US)*: BIOGEN, INC. [US/US]; 14 Cambridge Center, Cambridge, MA 02142 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: PEPINSKY, Blake [US/US]; 30 Falmouth Road, Arlington, MA 02174 (US). RUNKEL, Laura [US/US]; 37 Lee Street #7, Cambridge, MA 02142 (US). BRICKELMAIER, Margot [US/US]; 20 Pinehurst Drive, Boxford, MA 01921 (US). WHITTY, Adrian [GB/US]; 71 South Mill Street, Hopkinton, MA 01748 (US). HOCHMAN, Paula [US/US]; 14 White Avenue, Newton, MA 02459 (US).

(74) Agent: KAPLAN, Warren, A.; Biogen, Inc., 14 Cambridge Center, Cambridge, MA 02142 (US).

(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, GE, GH, GM, HR, HU, ID, IL, 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: POLYMER CONJUGATES OF INTERFERON BETA-1A AND USES

(57) Abstract

An interferon beta polypeptide comprising interferon-beta 1a coupled to a polymer containing a polyalkylene glycol moiety wherein the interferon-beta-1a and the polyalkylene glycol moiety are arranged such that the interferon-beta-1a has an enhanced activity relative to another therapeutic form of interferon beta (interferon-beta-1b) and exhibits no decrease in activity as compared to non-conjugated interferon-beta-1a. The conjugates of the invention are usefully employed in therapeutic as well as non-therapeutic, e.g., diagnostic, applications.