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| <b>(51) International Patent Classification <sup>7</sup> :</b><br><b>C12N 15/49, A61K 48/00</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>A2</b> | <b>(11) International Publication Number:</b> <b>WO 00/39302</b><br><b>(43) International Publication Date:</b> 6 July 2000 (06.07.00)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>(21) International Application Number:</b> PCT/US99/31245<br><b>(22) International Filing Date:</b> 30 December 1999 (30.12.99)<br><br><b>(30) Priority Data:</b><br>60/114,495 31 December 1998 (31.12.98) US<br>60/168,471 1 December 1999 (01.12.99) US<br><br><b>(71) Applicant:</b> CHIRON CORPORATION [US/US]; 4560 Horton Street, Emeryville, CA 94608 (US).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |           | <b>(72) Inventors:</b> BARNETT, Susan; Chiron Corporation, 4560 Horton Street - R440, Emeryville, CA 94608 (US). ZUR MEGEDE, Jan; Chiron Corporation, 4560 Horton Street - R440, Emeryville, CA 94608 (US). SRIVASTAVA, Indresh; Chiron Corporation, 4560 Horton Street - R440, Emeryville, CA 94608 (US). LIAN, Ying; Chiron Corporation, 4560 Horton Street - R440, Emeryville, CA 94608 (US). HARTOG, Karin; Chiron Corporation, 4560 Horton Street - R440, Emeryville, CA 94608 (US). LIU, Hong; Chiron Corporation, 4560 Horton Street - R440, Emeryville, CA 94608 (US). GREER, Catherine; Chiron Corporation, 4560 Horton Street - R440, Emeryville, CA 94608 (US). SELBY, Mark; Chiron Corporation, 4560 Horton Street - R440, Emeryville, CA 94608 (US). WALKER, Christopher; Chiron Corporation, 4560 Horton Street - R440, Emeryville, CA 94608 (US).<br><br><b>(74) Agents:</b> DOLLARD, Anne, S.; Chiron Corporation, Intellectual Property - R440, P.O. Box 8097, Emeryville, CA 94662-8097 (US) et al.<br><br><b>(81) Designated States:</b> 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, 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).<br><br><b>Published</b><br><i>Without international search report and to be republished upon receipt of that report.</i> |
| <b>(54) Title:</b> IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION OF VIRUS-LIKE PARTICLES<br><br><b>(57) Abstract</b><br><br>The present invention relates to the efficient expression of HIV polypeptides in a variety of cell types, including, but not limited to, mammalian, insect, and plant cells. Synthetic expression cassettes encoding the HIV Gag-containing polypeptides are described, as are uses of the expression cassettes in applications including DNA immunization, generation of packaging cell lines, and production of Env-, tat- or Gag-containing proteins. The invention provides methods of producing Virus-Like Particles (VLPs), as well as, uses of the VLPs including, but not limited to, vehicles for the presentation of antigens and stimulation of immune response in subjects to whom the VLPs are administered. |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

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