20030 61983

23 OCT 2003

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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
14 November 2002 (14.11.2002)

PCT

(10) International Publication Number
WO 02/090558 A1

(51) International Patent Classification[7]: C12N 15/86, 15/63, 15/85, A61K 48/00, A61P 31/00

(21) International Application Number: PCT/FI02/00379

(22) International Filing Date: 3 May 2002 (03.05.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
20010922 3 May 2001 (03.05.2001) FI
10/138,098 3 May 2002 (03.05.2002) US

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(81) Designated States *(national)*: AE, AG, AL, AM, AT (utility model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE (utility model), EE, ES, FI (utility model), 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, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK (utility model), SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, 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, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**
— *with international search report*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

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WO 02/090558 A1

(54) Title: NOVEL EXPRESSION VECTORS AND USES THEREOF

(57) Abstract: The present invention relates to novel vectors, to DNA vaccines and gene therapeutics containing said vectors, to methods for the preparation of the vectors and DNA vaccines and gene therapeutics containing the vectors, and to therapeutic uses of said vectors. More specifically, the present invention relates to novel vectors comprising (a) an expression cassette of a gene of a nuclear-anchoring protein, which contains (i) a DNA binding domain capable of binding to a specific DNA sequence and (ii) a functional domain capable of binding to a nuclear component and (b) a multimerized DNA sequence forming a binding site for the anchoring protein, and optionally (c) one or more expression cassettes of a DNA sequence of interest. In particular the invention relates to vectors that lack a papilloma virus origin of replication. The nuclear-anchoring protein might be the E2 protein of Bovine Papilloma Virus type 1 or Epstein-Barr Virus Nuclear Antigen 1. The invention also relates to vectors that lack an origin of replication functional in a mammalian cell. The invention further relates to methods for expressing a DNA sequence of interest in a subject.