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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
21 September 2006 (21.09.2006)

PCT

(10) International Publication Number
WO 2006/096989 A3

(51) International Patent Classification:
C12N 15/38 (2006.01) *C07K 14/05* (2006.01)
C12P 21/00 (2006.01) *C12N 5/10* (2006.01)
C12N 15/86 (2006.01)

(21) International Application Number:
PCT/CA2006/000403

(22) International Filing Date: 17 March 2006 (17.03.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/662,392 17 March 2005 (17.03.2005) US

(71) Applicant *(for all designated States except US)*: **NATIONAL RESEARCH COUNCIL OF CANADA** [CA/CA]; 200 Montreal Road, Ottawa, Ontario K1A 0R6 (CA).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **DUROCHER, Yves** [CA/CA]; 5335 Place d'Argenteuil, Montreal, Quebec H4J 1M1 (CA).

(74) Agents: **CONN, David, L.** et al.; BORDEN LADNER GERVAIS LLP, World Exchange Plaza, 100 Queen Street, Suite 1100, Ottawa, Ontario K1P 1J9 (CA).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

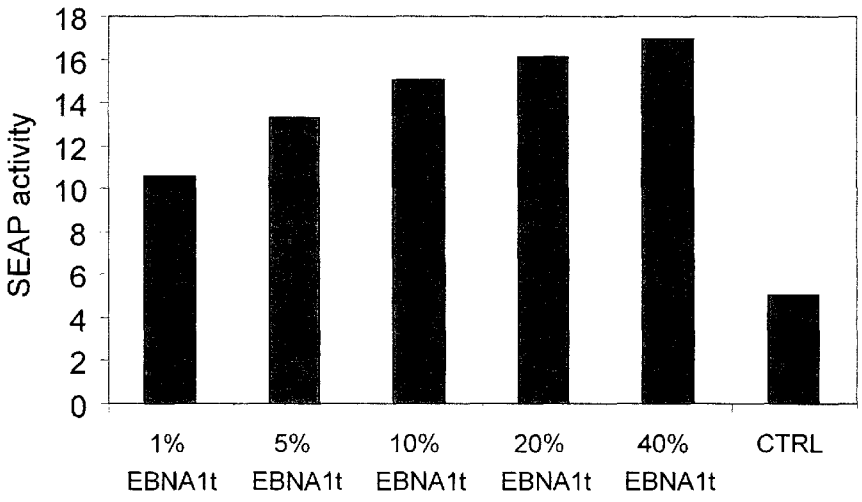
(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:
— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
— *of inventorship (Rule 4.17(iv))*

Published:
— *with international search report*

[Continued on next page]

(54) **Title:** EXPRESSION VECTORS CONTAINING A TRUNCATED EPSTEIN BARR NUCLEAR ANTIGEN 1 LACKING THE GLY-GLY-ALA DOMAIN FOR ENHANCED TRANSIENT GENE EXPRESSION



Transient co-expression of truncated EBNA1 (EBNA1t) significantly enhance protein expression in 293F cells

(57) **Abstract:** This invention relates to the unexpected discovery that nucleotide coding sequences coding for a truncated Epstein Barr Nuclear Antigen 1 (EBNA1t) protein (lacking the Gly-Gly-Ala domain), when in cells of mammalian origin, are associated with improved growth and increased transient gene expression when compared with cells expressing a complete EBNA1 coding sequence. The expression of EBNA1t also appear to be more stable over time.

WO 2006/096989 A3

(88) Date of publication of the international search report:
13 September 2007

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.