

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

(19) World Intellectual Property
Organization

International Bureau

(43) International Publication Date
13 August 2020 (13.08.2020)



(10) International Publication Number
WO 2020/163475 A1

(51) International Patent Classification:

C12N 15/86 (2006.01) C12Q 1/70 (2006.01)
C12Q 1/6897 (2018.01)

Declarations under Rule 4.17:

— of inventorship (Rule 4.17(iv))

(21) International Application Number:

PCT/US2020/016787

Published:

— with international search report (Art. 21(3))
— before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments (Rule 48.2(h))

(22) International Filing Date:

05 February 2020 (05.02.2020)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/801,524 05 February 2019 (05.02.2019) US
62/950,848 19 December 2019 (19.12.2019) US

(71) Applicant: **THE TRUSTEES OF PRINCETON
UNIVERSITY** [US/US]; 87 Prospect Avenue, Princeton,
New Jersey 08544 (US).

(72) Inventors: **ENGEL, Esteban**; 87 Prospect Avenue, Prince-
ton, New Jersey 08544 (US). **MATURANA, Carola**; 87
Prospect Avenue, Princeton, New Jersey 08544 (US). **EN-
QUIST, Lynn**; 87 Prospect Avenue, Princeton, New Jersey
08544 (US).

(74) Agent: **BALICKY, Eric M.**; Hamilton, Brook, Smith &
Reynolds, P.C., 530 Virginia Rd, P.O. Box 9133, Concord,
Massachusetts 01742-9133 (US).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ,
CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO,
DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,
HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP,
KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME,
MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ,
OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA,
SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR,
TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ,
UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ,
TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV,
MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM,
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
KM, ML, MR, NE, SN, TD, TG).

(54) Title: RECOMBINANT NUCLEIC ACIDS CONTAINING ALPHAHERPESVIRUS PROMOTER SEQUENCES

(57) Abstract: Provided are recombinant nucleic acids (e.g., vectors), and related methods, for expression of a target gene in a host cell. The recombinant nucleic acids comprise a promoter comprising a nucleic acid sequence having at least 70% sequence identity to a sequence selected from SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8 and SEQ ID NO: 9; a cloning site for insertion of a nucleic acid encoding the target gene; and at least one non-promoter regulatory element required for the expression of the target gene in the host cell.

WO 2020/163475 A1