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

CORRECTED VERSION

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
18 June 2009 (18.06.2009)

PCT

(10) International Publication Number
WO 2009/075886 A8

(51) International Patent Classification:
C12N 15/10 (2006.01) *C12N 15/67* (2006.01)

(21) International Application Number:
PCT/US2008/013662

(22) International Filing Date:
11 December 2008 (11.12.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/007,440 11 December 2007 (11.12.2007) US

(71) Applicant *(for all designated States except US)*: **THE SCRIPPS RESEARCH INSTITUTE** [US/US]; 10550 North Torrey Pines Road, La Jolla, CA 92037 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **MAURO, Vincent, P.** [CA/US]; 7311 Juncus Court, San Diego, CA 92121 (US). **EDELMAN, Gerald, M.** [US/US]; 7428 High Avenue, San Diego, CA 92037 (US). **ZHOU, Wei** [CN/US]; 9338 Babuata Road, #77, San Diego, CA 92129 (US).

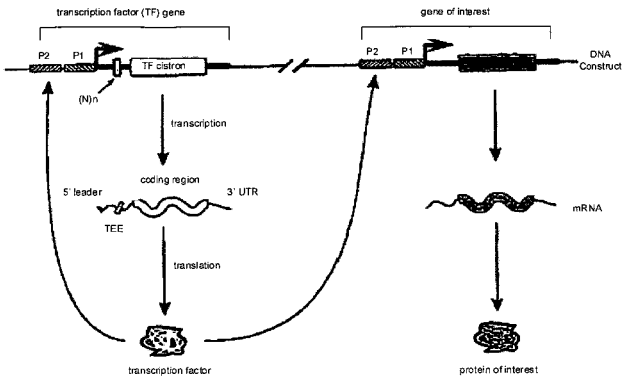
(74) Agents: **NOLAN, James, S.** et al.; Mintz, Levin, Cohn, Ferris, Glovsky & Popeo, P.C., 3850 Carmel Mountain Road, Suite 300, San Diego, CA 92130 (US).

(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, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, 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, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI

[Continued on next page]

(54) Title: COMPOSITIONS AND METHODS RELATED TO MRNA TRANSLATIONAL ENHANCER ELEMENTS



Promoter Elements:
P1: - minimal promoter (TATA)
- regulatable promoter
P2: - upstream activating sequence (UAS; one to multiple copies)
- T7 promoter
- other transcription elements

Transcription factor genes:
- GAL4, GAL4/VP16
- T7 RNA polymerase
- other transcription factors

Genes of Interest:
- fluorescent protein genes (e.g. enhanced green fluorescent protein; EGFP)
- luciferase genes (*Renilla* or *Photinus*)
- therapeutic protein (e.g. monoclonal antibodies)

FIG. 1

(57) Abstract: Provided are mRNA translational enhancer elements (TEEs), *e.g.*, SEQ ID NOs: 1-35. Also provided are translational enhancer polynucleotides that comprise one or more of the specific TEEs exemplified herein or their variants, homologs or functional derivatives. Further provided are expression vectors comprising such TEEs or translational enhancer polynucleotides, as well as host cells and expression systems that harbor such vectors.

WO 2009/075886 A8

(BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report (Art. 21(3))*

— *with sequence listing part of description (Rule 5.2(a))*

(48) Date of publication of this corrected version:
11 November 2010

(15) Information about Correction:
see Notice of 11 November 2010