

(51) International Patent Classification:
C12N 15/00 (2006.01) *C12N 15/87* (2006.01)(21) International Application Number:
PCT/US2011/000725(22) International Filing Date:
25 April 2011 (25.04.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/343,287 26 April 2010 (26.04.2010) US(71) Applicants (for all designated States except US): **SANG-AMO BIOSCIENCES, INC.** [US/US]; Point Richmond Tech Center, 501 Canal Blvd., Suite A100, Richmond, California 94804 (US). **SIGMA ALDRICH COMPANY** [US/US]; 3050 Spruce Street, St. Louis, Missouri 63103 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **CUI, Xiaoxia** [US/US]; c/o Sigma Aldrich Company, 3050 Spruce Street, St. Louis, Missouri 63103 (US). **DAVIS, Gregory** [US/US]; c/o Sigma Aldrich Company, 3050 Spruce Street, St. Louis, Missouri 63103 (US). **GREGORY, Philip, D.** [US/US]; c/o Sangamo BioSciences, Inc., Point Richmond Tech Center, 501 Canal Blvd., Suite A100, Richmond, California 94804 (US). **HOLMES, Michael, C.** [US/US]; c/o Sangamo BioSciences, Inc., Point Richmond Tech Center, 501 Canal Blvd., Suite A100, Rich-mond, California 94804 (US). **WEINSTEIN, Edward, J.** [US/US]; c/o Sigma Aldrich Company, 3050 Spruce Street, St. Louis, Missouri 63103 (US).(74) Agents: **PASTERNAK, Dahna, S.** et al.; Robins & Pasternak LLP, 1731 Embarcadero Rd., Suite 230, Palo Alto, California 94303 (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, CL, 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, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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, ML, MR, NE, SN, TD, TG).

Published:

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

[Continued on next page]

(54) Title: GENOME EDITING OF A *ROSA* LOCUS USING ZINC-FINGER NUCLEASES**FIGURE 1**(57) Abstract: Disclosed herein are methods and compositions for genome editing of a *Rosa* locus, using fusion proteins comprising a zinc-finger protein and a cleavage domain or cleavage half-domain. Polynucleotides encoding said fusion proteins are also provided, as are cells comprising said polynucleotides and fusion proteins.



-
- *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))*