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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
20 January 2022 (20.01.2022)

WIPO | PCT

(10) International Publication Number
WO 2022/012758 A1

(51) International Patent Classification:
C07K 16/00 (2006.01) *C12N 9/22* (2006.01)
C12N 9/12 (2006.01) *C12N 15/85* (2006.01)

(21) International Application Number:
PCT/EP2020/070320

(22) International Filing Date:
17 July 2020 (17.07.2020)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant: **PROBIOGEN AG** [DE/DE]; Herbert-Bayer-Straße 8, 13086 Berlin (DE).

(72) Inventors: **SANDIG, Volker**; Buchhorster Straße 5, 13158 Berlin (DE). **KRÜGENER, Sven**; Str. 56 Nr. 16, 13129 Berlin (DE). **ROSE, Thomas**; Paul-Robeson-Str. 7, 10439 Berlin (DE).

(74) Agent: **GELING, Andrea**; Zwicker Schnappauf & Partner Patentanwälte PartG mbB, Hansastr. 32, 80686 München (DE).

(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, IT, 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).

Published:
— *with international search report (Art. 21(3))*
— *with sequence listing part of description (Rule 5.2(a))*

(54) Title: HYPERACTIVE TRANSPOSONS AND TRANSPOSASES

(57) Abstract: The present invention relates to a polypeptide comprising a piggyBac transposase or a fragment or a derivative thereof having transposase function comprising at least one amino acid substitution. Further, the present invention relates to a transposable element comprising a piggyBac or piggyBac-like left repeat sequence and left internal repeat sequence, wherein the left internal repeat sequence comprises at least one nucleotide modification. Furthermore, the present invention relates to a kit comprising the above transposase and/or transposable element. In addition, the present invention relates to a targeting system comprising the above transposase and/or transposable element.

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