

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
13 April 2023 (13.04.2023)



(10) International Publication Number
WO 2023/060089 A2

(51) International Patent Classification:
C12N 9/12 (2006.01) C12N 15/90 (2006.01)

(21) International Application Number:
PCT/US2022/077549

(22) International Filing Date:
04 October 2022 (04.10.2022)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
63/252,028 04 October 2021 (04.10.2021) US
63/312,928 23 February 2022 (23.02.2022) US
63/369,863 29 July 2022 (29.07.2022) US

(71) Applicant: POSEIDA THERAPEUTICS, INC.
[US/US]; 9390 Towne Centre Drive, Suite 200, San Diego,
CA 92121 (US).

(72) Inventors: ZHANG, Dongyang; 9390 Towne Centre Drive,
Suite 200, c/o Poseida Therapeutics, Inc., San Diego,
CA 92121 (US). MADISON, Blair, B.; 9390 Towne Centre
Drive, Suite 200, c/o Poseida Therapeutics, Inc., San
Diego, CA 92121 (US). LUCAS, Joseph, S.; 9390 Towne
Centre Drive, Suite 200, c/o Poseida Therapeutics, Inc., San
Diego, CA 92121 (US). BATALOV, Olga; 9390 Towne
Centre Drive, Suite 200, c/o Poseida Therapeutics, Inc.,

San Diego, CA 92121 (US). VALDERRAMA, J., Andres;
9390 Towne Centre Drive, Suite 200, c/o Poseida Therapeu-
tics, Inc., San Diego, CA 92121 (US).

(74) Agent: PAVAO, Matthew et al.; Cooley LLP, 1299 Penn-
sylvania Ave., Suite 700, Washington, DC 20004 (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, CV, CZ, DE, DJ, DK, DM,
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE,
KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU,
LY, MA, MD, 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, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK,

(54) Title: TRANSPOSASES AND USES THEREOF

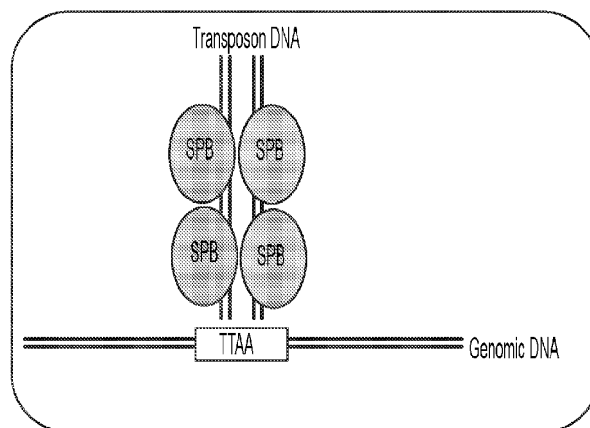


FIG. 2A

(57) Abstract: This disclosure generally relates to transposase domains, in particular, transposase domains comprising amino terminal deletions, as well as transposase domains forming obligate heterodimers and transposase domains comprising DNA targeting domains.

[Continued on next page]

WO 2023/060089 A2

SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, KM, 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))*

Published:

- *without international search report and to be republished upon receipt of that report (Rule 48.2(g))*
- *with sequence listing part of description (Rule 5.2(a))*