



(51) International Patent Classification:

C12N 15/113 (2010.01) A61K 31/712 (2006.01)
A61K 31/7115 (2006.01) A61K 31/7125 (2006.01)

(21) International Application Number:

PCT/US2024/059808

(22) International Filing Date:

12 December 2024 (12.12.2024)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/609,644 13 December 2023 (13.12.2023) US

(71) Applicant: **PRETZEL THERAPEUTICS, INC.**
[US/US]; 1601 Trapelo Road, Suite 154, Waltham, Massachusetts 02451 (US).

(72) Inventors: **XIE, Xie**; c/o Pretzel Therapeutics, Inc., 1601 Trapelo Road, Suite 154, Waltham, Massachusetts 02451 (US). **SHI, Yonghong**; c/o Pretzel Therapeutics, Inc., 1601 Trapelo Road, Suite 154, Waltham, Massachusetts 02451 (US). **ZHU, Xuefeng**; c/o Pretzel Therapeutics, Inc., 1601 Trapelo Road, Suite 154, Waltham, Massachusetts 02451 (US).

(74) Agent: **DAUKSS, Dana M.** et al.; Choate, Hall & Stewart LLP, Two International Place, Boston, Massachusetts 02110 (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, MU, 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, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, 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,

(54) Title: OLIGONUCLEOTIDES TARGETING SAMHD1

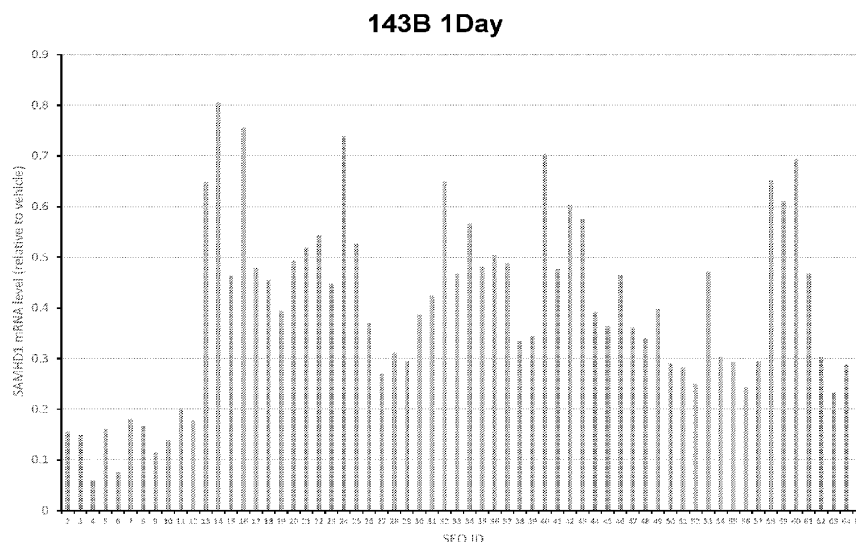


FIG. 1

Oligo (SEQ ID NO)

(57) Abstract: Oligonucleotides and their use in modulating (e.g., inhibiting) SAMHD1 expression are provided. Compositions and pharmaceutical compositions comprising such oligonucleotides are also provided.

[Continued on next page]

SI, SK, 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:

- *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))*

(88) Date of publication of the international search report:

21 August 2025 (21.08.2025)

(15) Information about Correction:

see Notice of 24 July 2025 (24.07.2025)