

(19) World Intellectual Property
Organization
International Bureau



WIPO | PCT



(10) International Publication Number
WO 2024/168325 A9

(43) International Publication Date
15 August 2024 (15.08.2024)

(51) International Patent Classification:

A61K 38/39 (2006.01) *A61P 3/04* (2006.01)
A61K 47/18 (2017.01) *A61P 3/06* (2006.01)
A61K 47/26 (2006.01) *A61P 3/10* (2006.01)
C07K 14/78 (2006.01)

(21) International Application Number:

PCT/US2024/015292

(22) International Filing Date:

10 February 2024 (10.02.2024)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

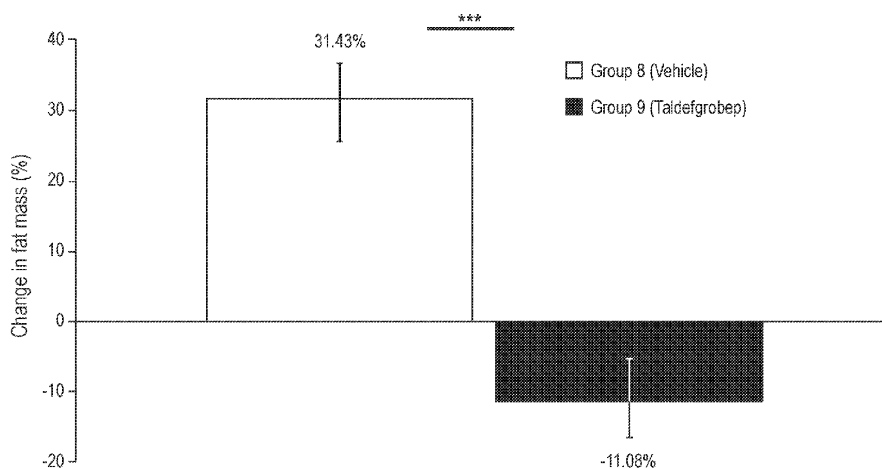
63/484,286 10 February 2023 (10.02.2023) US
63/588,035 05 October 2023 (05.10.2023) US

(71) Applicant: **BIOHAVEN THERAPEUTICS LTD.**
[US/GB]; Ritter House, P.O. BOX 173, Road Town, Torto-
la, VG1110 (VG).

(72) Inventors: **BECHTOLD, Clifford M.**; Biohaven Pharma-
ceuticals, Inc., 215 Church Street, New Haven, Connecti-
cut 06510 (US). **CORIC, Vladimir**; Biohaven Pharmaceu-
ticals, Inc., 215 Church Street, New Haven, Connecticut
06510 (US). **QURESHI, Irfan**; Biohaven Pharmaceuticals,
Inc., 215 Church Street, New Haven, Connecticut 06510
(US). **ACKERMAN, Peter J.**; Biohaven Pharmaceuticals,
Inc., 215 Church Street, New Haven, Connecticut 06510
(US). **GRANIT, Volkan**; Biohaven Pharmaceuticals, Inc.,
215 Church Street, New Haven, Connecticut 06510 (US).

(74) Agent: **REMILLARD, Jane E.** et al.; Nelson Mullins Ri-
ley & Scarborough LLP, One Financial Center, Suite 3500,
Boston, MA 02111 (US).

(54) Title: ADMINISTRATION OF FIBRONECTIN BASED SCAFFOLD DOMAIN PROTEINS TO TREAT OVERWEIGHT, OBESITY, AND RELATED HEALTH CONDITIONS



*** $P \leq 0.001$. Error bars represent standard error.

FIG. 3

(57) Abstract: Provided herein are methods for improving glycemic control in a human patient, methods for treating, preventing, or reducing overweight or obesity and related comorbidities, and methods of treating or preventing type II diabetes, by administering to the patient a polypeptide comprising a fibronectin type III tenth (¹⁰Fn3) domain which binds to myostatin. In some embodiments, the polypeptide is administered (or is for administration) according to a particular clinical dosage regimen (e.g., at particular doses and according to a specific schedule).

[Continued on next page]

(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, 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))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

Published:

- *with international search report (Art. 21(3))*
- *with amended claims (Art. 19(1))*
- *with sequence listing part of description (Rule 5.2(a))*

(88) Date of publication of the international search report:
19 September 2024 (19.09.2024)

Date of publication of the revised international search report:
06 March 2025 (06.03.2025)

Date of publication of the amended claims:
17 October 2024 (17.10.2024)

(15) Information about Correction:
see Notice of 06 March 2025 (06.03.2025)

Previous Correction:
see Notice of 16 January 2025 (16.01.2025)