

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
13 October 2022 (13.10.2022)



(10) International Publication Number
WO 2022/214649 A1

(51) International Patent Classification:
C07K 14/435 (2006.01)

(21) International Application Number:
PCT/EP2022/059406

(22) International Filing Date:
08 April 2022 (08.04.2022)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
21167385.0 08 April 2021 (08.04.2021) EP
21192311.5 20 August 2021 (20.08.2021) EP

(71) Applicant: **PIERIS PHARMACEUTICALS GMBH**
[DE/DE]; Zeppelinstrasse 3, 85399 Hallbergmoos (DE).

(72) Inventors: **PAVLIDOU, Marina**; c/o Pieris Pharmaceuticals GmbH, Zeppelinstrasse 3, 85399 Hallbergmoos (DE). **NEIENS, Vanessa**; c/o Pieris Pharmaceuticals GmbH, Zeppelinstrasse 3, 85399 Hallbergmoos (DE). **HANSBAUER, Eva-Maria**; c/o Pieris Pharmaceuticals GmbH, Zeppelinstrasse 3, 85399 Hallbergmoos (DE). **WURZENBERGER, Claudia**; c/o Pieris Pharmaceuticals GmbH, Zeppelinstrasse 3, 85399 Hallbergmoos (DE). **JAQUIN, Thomas**; c/o Pieris Pharmaceuticals GmbH, Zeppelinstrasse 3, 85399 Hallbergmoos (DE). **HERRMANN, Tanja**; c/o Pieris Pharmaceuticals GmbH, Zeppelinstrasse 3, 85399 Hallbergmoos (DE). **GRUENER, Stefan**; c/o Pieris Pharmaceuticals GmbH, Zeppelinstrasse 3, 85399 Hallbergmoos (DE). **MATSCHINER, Gabriele**; c/o Pieris Pharmaceuticals GmbH, Zeppelinstrasse 3, 85399 Hallbergmoos (DE).

(74) Agent: **SCHIWECK, Wolfram** et al.; Schiweck Weinzierl Koch, Patentanwälte, Ganghoferstrasse 68b, 80339 Munich (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, JM, 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).

Declarations under Rule 4.17:

— of inventorship (Rule 4.17(iv))

Published:

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

(54) Title: NOVEL LIPOCALIN MUTEINS SPECIFIC FOR CONNECTIVE TISSUE GROWTH FACTOR (CTGF)

(57) Abstract: The present disclosure provides lipocalin muteins capable of binding CTGF as well as fusion proteins comprising said muteins, which are useful for analytical, diagnostic or therapeutical purposes, for example in the treatment of a fibrotic disease, a cancer, an autoimmune disease, or an infectious disease. The present disclosure also concerns methods of making the lipocalin muteins or fusion proteins described herein. The present disclosure further relates to nucleic acid molecules encoding such lipocalin muteins or fusion proteins. In addition, the present disclosure relates to therapeutic and/or diagnostic uses of such lipocalin muteins or fusion proteins as well as to compositions comprising one or more of such lipocalin muteins or fusion proteins.

WO 2022/214649 A1