

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
17 October 2019 (17.10.2019)



(10) International Publication Number
WO 2019/197469 A1

(51) International Patent Classification:
C07K 1/06 (2006.01)

(21) International Application Number:
PCT/EP2019/059090

(22) International Filing Date:
10 April 2019 (10.04.2019)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
18166551.4 10 April 2018 (10.04.2018) EP

(71) Applicant: **SANOFI-AVENTIS DEUTSCHLAND GMBH** [DE/DE]; Brüningstrasse 50, 65929 Frankfurt (DE).

(72) Inventors: **HENKEL, Bernd**; c/o Sanofi-Aventis Deutschland GmbH, 65926 Frankfurt am Main (DE). **METZEN-THIN, Tobias**; c/o Sanofi-Aventis Deutschland GmbH, 65926 Frankfurt am Main (DE). **GERKEN, Manfred**; c/o Sanofi-Aventis Deutschland GmbH, 65926 Frankfurt am Main (DE). **FIEDLER, Wolfgang**; c/o Sanofi-Aventis Deutschland GmbH, 65926 Frankfurt am Main (DE).

(74) Agent: **WEICKMANN & WEICKMANN PARTMBB**; Postfach 860 820, 81635 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, 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, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, 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).

(54) Title: LIXISENATIDE SYNTHESIS WITH CAPPING

(57) Abstract: The present invention relates to a method for the synthesis of a polypeptide comprising a pre-determined amino acid sequence. The method according to the invention comprises coupling cycles of coupling an N-terminally protected amino acid building block C-terminally at an unprotected N-terminal amino group of an amino acid chain, wherein at least one coupling cycle comprises a coupling step (a), a capping step (b), and a de-protecting step (c).

