

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

(19) World Intellectual Property
Organization

International Bureau

(43) International Publication Date
10 February 2022 (10.02.2022)



(10) International Publication Number
WO 2022/029231 A1

(51) International Patent Classification:

C07K 14/575 (2006.01) A61K 38/22 (2006.01)

(21) International Application Number:

PCT/EP2021/071873

(22) International Filing Date:

05 August 2021 (05.08.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

20189966.3 07 August 2020 (07.08.2020) EP

(71) Applicant: **BOEHRINGER INGELHEIM INTERNATIONAL GMBH** [DE/DE]; Binger Strasse 173, 55216 INGELHEIM AM RHEIN (DE).

(72) Inventors: **HAEBEL, Peter**; Boehringer Ingelheim International GmbH, Corporate Patents Binger, Strasse 173, 55216 INGELHEIM AM RHEIN (DE). **BRENNAUER, Albert**; Boehringer Ingelheim International GmbH, Corporate Patents Binger, Strasse 173, 55216 INGELHEIM AM RHEIN (DE). **PETERS, Stefan**; Boehringer Ingelheim International GmbH, Corporate Patents Binger, Strasse 173, 55216 INGELHEIM AM RHEIN (DE). **MADSEN, Charlotte, Stahl**; 2760 Måløv (DK). **PEDERSEN, Søren, Ljungberg**; 4140 Borup (DK).

(74) Agent: **SIMON ET AL.** et al.; Elke Anna Maria, Binger Strasse 173, 55216 INGELHEIM AM RHEIN (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, 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).

(54) Title: SOLUBLE NPY2 RECEPTOR AGONISTS

(57) Abstract: The invention relates to PYY analogues having alanine at position 4, lysine at position 7, QRY as the C-terminal end and a half-life extending group. The analogues of the invention are soluble around pH 6 and 7. The invention also relates to pharmaceutical compositions comprising such PYY analogues, and to the medical use of the analogues.

WO 2022/029231 A1