

(51) International Patent Classification:
C07K 7/00 (2006.01)

(21) International Application Number:

PCT/IB2013/050666

(22) International Filing Date:

25 January 2013 (25.01.2013)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/591,557	27 January 2012 (27.01.2012)	US
61/717,760	24 October 2012 (24.10.2012)	US
61/731,697	30 November 2012 (30.11.2012)	US

(71) Applicant: **NOVARTIS AG** [CH/CH]; Lichtstrasse 35,
CH-4056 Basel (CH).

(72) Inventors: **GOLOSOV, Andrei**; Novartis Institutes for BioMedical Research, Inc., 100 Technology Square, Cambridge, MA 02139 (US). **GROSCHE, Philipp**; Novartis Pharma AG, Postfach, CH-4002 Basel (CH). **HU, Qi-Ying**; Novartis Institutes for BioMedical Research, Inc., 100 Technology Square, Cambridge, MA 02139 (US). **IMASE, Hidetomo**; Novartis Institutes for BioMedical Research, Inc., 100 Technology Square, Cambridge, MA 02139 (US). **PARKER, David, Thomas**; Novartis Institutes for BioMedical Research, Inc., 250 Massachusetts Avenue, Cambridge, MA 02139 (US). **YASOSHIMA, Kayo**; Novartis Institutes for BioMedical Research, Inc., 100 Technology Square, Cambridge, MA 02139 (US). **ZECRI, Frederic**; Novartis Institutes for BioMedical Research, Inc., 100 Technology Square, Cambridge, MA

02139 (US). **ZHAO, Hongjuan**; Novartis Institutes for BioMedical Research, Inc., 250 Massachusetts Avenue, Cambridge, MA 02139 (US).

(74) Agent: **BINET-CROSS, Sophie**; Novartis Pharma AG, Patent Department, CH-4002 Basel (CH).

(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, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, 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, 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, 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, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report (Rule 48.2(g))

(54) Title: SYNTHETIC APELIN MIMETICS FOR THE TREATMENT OF HEART FAILURE

X1-X2-X3-X4-X5-X6-X7-X8-X9-X10-X11-X12-X13

(57) Abstract: The invention provides a synthetic polypeptide of Formula 1': or an amide, an ester or a salt thereof, wherein X1, X2, X3, X4, X5, X6, X7, X8, X9, X10, X11, X12 and X13 are defined herein. The polypeptides are agonist of the APJ receptor. The invention also relates to a method for manufacturing the polypeptides of the invention, and its therapeutic uses such as treatment or prevention of acute decompensated heart failure (ADHF), chronic heart failure, pulmonary hypertension, atrial fibrillation, Brugada syndrome, ventricular tachycardia, atherosclerosis, hypertension, restenosis, ischemic cardiovascular diseases, cardiomyopathy, cardiac fibrosis, arrhythmia, water retention, diabetes (including gestational diabetes), obesity, peripheral arterial disease, cerebrovascular accidents, transient ischemic attacks, traumatic brain injuries, amyotrophic lateral sclerosis, burn injuries (including sunburn) and preeclampsia. The present invention further provides a combination of pharmacologically active agents and a pharmaceutical composition.



WO 2013/111110 A2