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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
14 October 2021 (14.10.2021)

WIPO | PCT

(10) International Publication Number
WO 2021/205144 A1

(51) International Patent Classification:
C07D 209/32 (2006.01) *A61P 21/00* (2006.01)
A61K 31/405 (2006.01) *A61P 25/22* (2006.01)
A61P 9/10 (2006.01) *A61P 27/06* (2006.01)
A61P 9/12 (2006.01)

(21) International Application Number:
PCT/GB2021/050799

(22) International Filing Date:
31 March 2021 (31.03.2021)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2005112.4 07 April 2020 (07.04.2020) GB

(71) Applicant: **ACTIMED THERAPEUTICS LTD** [GB/GB]; The Old Bakehouse, Course Road, Ascot Berkshire SL5 7HL (GB).

(72) Inventors: **BHATTACHERJEE, Robin Chandra**; Edgehill, Church Road, Maulden, Bedford Bedfordshire MK45 2AU (GB). **COATS, Andrew Justin Stewart**; 45 Lyndhurst Street, Richmond, Victoria 3121 (AU). **MORTEN, Elaine**; Saddlestones, 130 Main Road, Long Hanborough, Oxfordshire OX29 8JY (GB). **LAWRENCE, Ronnie Maxwell**; 65 Clophill Road, Upper Gravenhurst, Bedfordshire MK45 4JH (GB). **RAEBURN, Jaclyn**; Flat 3/2, 69 Armadale Street, Glasgow G31 2RA (GB). **LOBATO, Kiara Marissa**; 17/15 Caledonian Crescent, Edinburgh EH11 ZAL (GB). **LOUGHREY, Jonathan James**; 1F1, 153 Granton Road, Edinburgh EH5 3NL (GB).

(74) Agent: **J A KEMP LLP**; 80 Turnmill Street, London EC1M 5QU (GB).

(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).

Published:
— *with international search report (Art. 21(3))*

WO 2021/205144 A1

(54) Title: ORGANIC ACID ADDITION SALTS OF S-PINDOLOL

(57) Abstract: The invention relates to a pharmaceutically acceptable acid addition salt of: (i) S- pindolol; and (ii) an organic acid, wherein the organic acid has: a pKa1 of greater than or equal to 2.5; and a chemical formula of CxHy(CO2H)z, where x is from 1 to 10, y is from 2 to 20 and z is 1 or 2. The pharmaceutically acceptable acid addition salt is useful in treating conditions such as cachexia, sarcopenia, a neuromuscular disorder and muscle weakness.