

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

(19) World Intellectual Property  
Organization  
International Bureau

(43) International Publication Date  
31 August 2023 (31.08.2023)



(10) International Publication Number  
**WO 2023/160672 A1**

(51) International Patent Classification:

A61P 11/00 (2006.01) C07D 401/12 (2006.01)  
A61P 35/00 (2006.01) C07D 405/12 (2006.01)  
A61P 37/00 (2006.01) C07D 407/12 (2006.01)  
C07C 59/13 (2006.01) A61K 31/196 (2006.01)  
C07D 205/04 (2006.01) A61K 31/192 (2006.01)  
C07D 211/66 (2006.01) A61K 31/351 (2006.01)  
C07D 213/65 (2006.01) A61K 31/36 (2006.01)  
C07D 309/14 (2006.01) A61K 31/397 (2006.01)  
C07D 317/50 (2006.01) A61K 31/4433 (2006.01)

(21) International Application Number:

PCT/CN2023/078288

(22) International Filing Date:

25 February 2023 (25.02.2023)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

PCT/CN2022/077844  
25 February 2022 (25.02.2022) CN  
PCT/CN2022/094839  
25 May 2022 (25.05.2022) CN  
PCT/CN2022/117690  
08 September 2022 (08.09.2022) CN

(71) Applicant: **LHOTSE BIO , INC.** [US/US]; 611 Gateway Blvd., Suite 223, South San Francisco, California 94080 (US).

(72) Inventor; and

(71) Applicant (for SC only): **HUANG, Wei** [CN/CN]; 5 F, No. 1 South Bldg., Jin Chuang 4560 JinKe Rd, Zhangjiang Hi-Tech Park, Pudong New Area, Shanghai 200003 (CN).

(72) Inventors: **LEI, Hui**; 5 F, No. 1 South Bldg., Jin Chuang 4560 JinKe Rd, Zhangjiang Hi-Tech Park, Pudong New Area, Shanghai 200003 (CN). **XU, Zhongmiao**; 5 F, No. 1 South Bldg., Jin Chuang 4560 JinKe Rd, Zhangjiang Hi-Tech Park, Pudong New Area, Shanghai 200003 (CN). **ZHANG, Haizhen**; 5 F, No. 1 South Bldg., Jin Chuang 4560 JinKe Rd, Zhangjiang Hi-Tech Park, Pudong New Area, Shanghai 200003 (CN). **ZHANG, Qiong**; 5 F, No. 1 South Bldg., Jin Chuang 4560 JinKe Rd, Zhangjiang Hi-Tech Park, Pudong New Area, Shanghai 200003 (CN).

(74) Agent: **WU , FENG & ZHANG**; 3FL, Building 4, Yard 38, LinFengErLu Road, Greenland Central Square, Haidian District, Beijing 100089 (CN).

(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, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, 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, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, 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, ME, 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).

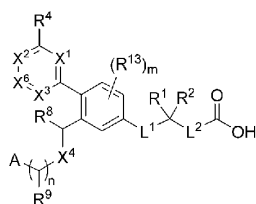
Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

Published:

- with international search report (Art. 21(3))

(54) Title: COMPOUNDS AND COMPOSITIONS FOR TREATING CONDITIONS ASSOCIATED WITH LPA RECEPTOR ACTIVITY



I

(57) Abstract: The present disclosure provides LPA antagonists of formula I, as well as pharmaceutical compositions comprising the compounds disclosed herein. Also provided are methods for treating LPA-associated diseases, disorders, and conditions.



WO 2023/160672 A1