

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
19 August 2021 (19.08.2021)



(10) International Publication Number
WO 2021/160649 A1

(51) International Patent Classification:

C07C 231/02 (2006.01) C07C 51/41 (2006.01)
C07C 231/16 (2006.01) C07B 53/00 (2006.01)
C07C 51/487 (2006.01)

(21) International Application Number:

PCT/EP2021/053159

(22) International Filing Date:

10 February 2021 (10.02.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/972,779 11 February 2020 (11.02.2020) US

(71) Applicant: CHEMINOVA A/S [DK/DK]; Thyborønvej
78, Harboøre, 7673 Ronland (DK).

(72) Inventor: SØNDERGAARD, Kåre; c/o FMC Corpora-
tion, Patent Dept., 2929 Walnut Street, Philadelphia, Penn-
sylvania 19104 (US).

(74) Agent: BEACHAM, Annabel; Delns, St. Bride's House,
10 Salisbury Square, London EC4Y 8JD (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,

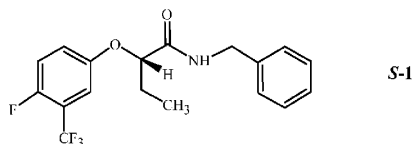
CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO,
DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,
HR, HU, ID, IL, IN, IR, IS, IT, JO, JP, KE, KG, KH, KN,
KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD,
ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO,
NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, 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).

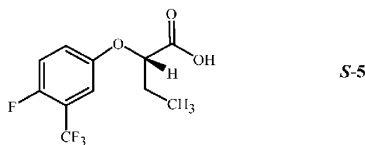
Published:

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

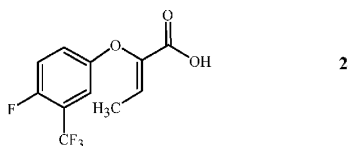
(54) Title: PROCESS FOR THE SYNTHESIS OF S-BEFLUBUTAMID USING ASYMMETRIC HYDROGENATION



S-1



S-5



2

(57) Abstract: Disclosed is a method for preparing compound S-1, from compound S-5; wherein compound S-5 is prepared by treating compound 2 with a tertiary amine and a hydrogen source in the presence of a chiral complex.



WO 2021/160649 A1