

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
01 July 2021 (01.07.2021)



(10) International Publication Number
WO 2021/129744 A1

(51) International Patent Classification:

A61K 39/395 (2006.01) C07K 16/28 (2006.01)
A61K 39/005 (2006.01)

TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
KM, ML, MR, NE, SN, TD, TG).

(21) International Application Number:

PCT/CN2020/139033

Declarations under Rule 4.17:

— as to the applicant's entitlement to claim the priority of the
earlier application (Rule 4.17(iii))

(22) International Filing Date:

24 December 2020 (24.12.2020)

Published:

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

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

PCT/CN2019/128294

25 December 2019 (25.12.2019) CN

(71) Applicants: SHANGHAI XBH BIOTECHNOLOGY
CO., LTD. [CN/CN]; 81 Cailun Road, Pudong New Area,
Shanghai 201203 (CN). GV20 THERAPEUTICS LLC
[US/US]; 1 Broadway Fl 14, Cambridge, MA 02142-1187
(US).

(72) Inventor; and

(71) Applicant: LIU, Xiaole [CN/US]; 18 Graystone Lane, We-
ston, MA 02493 (US).

(72) Inventors: HU, Xihao; 6 Old County Rd., Unit 37, Sud-
bury, MA 01776 (US). XIAO, Tengfei; Rm. 205, 3046
ChuanBeiGong Road, Pudong New Area, Shanghai 201203
(CN).

(74) Agent: LIU, SHEN & ASSOCIATES; 10th Floor, Build-
ing 1, 10 Caihefang Road, Haidian District, Beijing 100080
(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, 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,

(54) Title: COMPOSITIONS AND METHODS FOR TREATING AUTOIMMUNE DISEASES AND CANCERS BY TARGETING
IGSF8

(57) Abstract: Methods and compositions are provided. The methods and compositions are used for treating a cancer, and/or an au-
toimmune disease, by modulating the expression and / or activity of IGSF8 and its binding ligands. The pharmaceutical compositions
may include, but are not limited to, antibodies that specifically bind human IGSF8, and have an activity of inhibiting IGSF8-mediated
immunosuppression in a subject in need thereof.

WO 2021/129744 A1