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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
11 May 2023 (11.05.2023)

WIPO | PCT

(10) International Publication Number
WO 2023/081160 A1

(51) International Patent Classification:
C07K 16/00 (2006.01) *C07K 14/435* (2006.01)

(21) International Application Number:
PCT/US2022/048609

(22) International Filing Date:
01 November 2022 (01.11.2022)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
63/274,716 02 November 2021 (02.11.2021) US

(71) Applicant: **VISTERRA, INC.** [US/US]; 275 2nd Avenue, 4th Floor, Waltham, Massachusetts 02451 (US).

(72) Inventor: **VISWANATHAN, Karthik**; c/o Visterra, Inc., 275 2nd Avenue, 4th Floor, Waltham, Massachusetts 02451 (US).

(74) Agent: **KIM, Sang-A**; Proskauer Rose LLP, One International Place, Boston, Massachusetts 02110 (US).

(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, 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).

Published:
— *with international search report (Art. 21(3))*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

WO 2023/081160 A1

(54) Title: FC VARIANTS WITH ABOLISHED BINDING TO FCGAMMAR AND C1Q

(57) Abstract: The present disclosure provides, among other things Fc variants that have significantly reduced ADCC, ADCP and CDC function As described herein, the present disclosure is, in part based on identification of novel combinations of mutations that abolish binding to all FcγRI, FcγRIIa, FcγRIIb, FcγRIIIa, FcγRIIIb, and Clq.