

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

(19) World Intellectual Property
Organization

International Bureau

(43) International Publication Date
01 December 2022 (01.12.2022)



(10) International Publication Number
WO 2022/249146 A1

(51) International Patent Classification:

C07K 16/00 (2006.01) A61K 39/00 (2006.01)

(21) International Application Number:

PCT/IB2022/055019

(22) International Filing Date:

27 May 2022 (27.05.2022)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/193,665 27 May 2021 (27.05.2021) US
21315127.7 15 July 2021 (15.07.2021) EP

(71) Applicant: **SANOFI** [FR/FR]; 54 rue La Boétie, 75008 Paris (FR).

(72) Inventors: **CAMERON, Béatrice**; c/o Sanofi, Patent Department, 54 rue La Boétie, 75008 Paris (FR). **KATHURIA, Sagar**; c/o Sanofi, Patent Department, 450 Water Street, Cambridge, Massachusetts 02141 (US). **MASIERO, Alessandro**; c/o Sanofi, Patent Department, 54 rue La Boétie, 75008 Paris (FR). **PARK, Sunghae**; c/o Sanofi, Patent Department, 450 Water Street, Cambridge, Massachusetts 02141 (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, 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, 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).

Declarations under Rule 4.17:

— of inventorship (Rule 4.17(iv))

(54) Title: Fc VARIANT WITH ENHANCED AFFINITY TO Fc RECEPTORS AND IMPROVED THERMAL STABILITY

(57) Abstract: The present disclosure provides Fc domain variants, including effector-competent Fc domain variants. The present disclosure also provides nucleic acids encoding Fc domain variants and host cells for making Fc domain variants. Methods for increasing the yield of Fc domain variants, and methods of using Fc domain variants to treat disease, are also provided.

WO 2022/249146 A1