

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

(19) World Intellectual Property  
Organization  
International Bureau

(43) International Publication Date  
09 December 2021 (09.12.2021)



(10) International Publication Number  
**WO 2021/247608 A1**

(51) International Patent Classification:

C07K 16/28 (2006.01) A61P 35/00 (2006.01)  
A61K 47/68 (2017.01) A61K 39/00 (2006.01)

(21) International Application Number:

PCT/US2021/035291

(22) International Filing Date:

01 June 2021 (01.06.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/032,886 01 June 2020 (01.06.2020) US  
17/199,258 11 March 2021 (11.03.2021) US

(71) Applicant: **ABEXXA BIOLOGICS, INC.** [US/US];  
NanoFab Building, Box 19072, Arlington, Texas 76019  
(US).

(72) Inventors: **WEIDANZ, Jon**; NanoFab Building,  
Box 19072, Arlington, Texas 76019 (US). **UP-  
CHURCH-ANGE, Katherine**; NanoFab Building, Box  
19072, Arlington, Texas 76019 (US).

(74) Agent: **POULOS, Sabrina** et al.; 100 Northern Avenue,  
IP Docketing Dept./7Th Fl, Boston, Massachusetts 02210  
(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, 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: ANTIBODIES TARGETING A COMPLEX COMPRISING NON-CLASSICAL HLA-I AND NEOANTIGEN AND THEIR METHODS OF USE

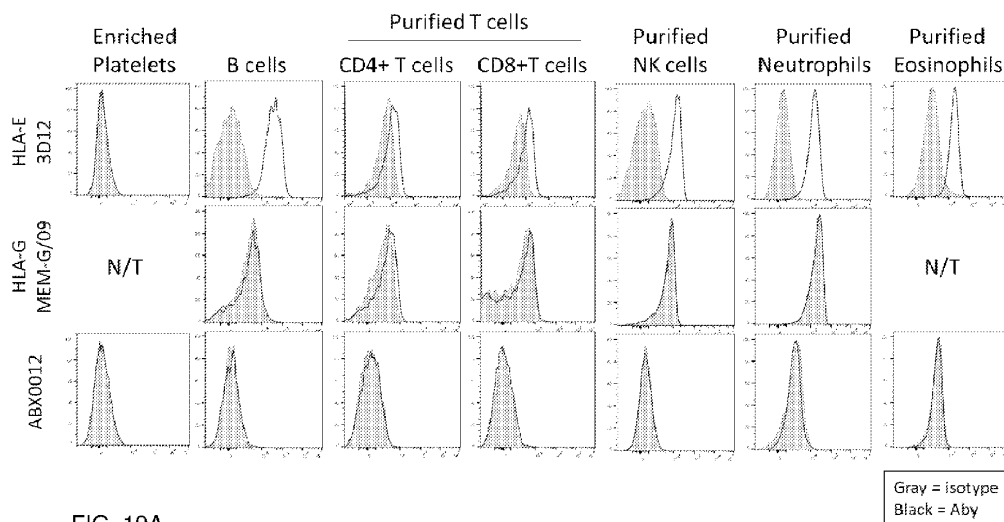


FIG. 19A

(57) Abstract: Provided herein are antibodies that selectively bind to complex comprising a non-classical HLA-I (e.g. HLA-E) and a neoantigen having variable heavy chain domains (VH), variable light chain domains (VL), and complementarity determining regions (CDRs) as disclosed herein, as well as methods and uses thereof.