

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

(19) World Intellectual Property  
Organization  
International Bureau

(43) International Publication Date  
28 March 2019 (28.03.2019)



(10) International Publication Number  
**WO 2019/056106 A1**

(51) International Patent Classification:

*C07K 16/46* (2006.01) *C07K 19/00* (2006.01)  
*A61K 35/17* (2015.01) *C12N 15/13* (2006.01)  
*A61P 37/06* (2006.01) *C12N 15/62* (2006.01)  
*C07K 14/705* (2006.01) *C12N 5/10* (2006.01)  
*C07K 16/28* (2006.01)

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))

(21) International Application Number:

PCT/CA2018/051174

Published:

— with international search report (Art. 21(3))  
— with sequence listing part of description (Rule 5.2(a))  
— in black and white; the international application as filed  
contained color or greyscale and is available for download  
from PATENTSCOPE

(22) International Filing Date:

20 September 2018 (20.09.2018)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/560,841 20 September 2017 (20.09.2017) US  
62/691,027 28 June 2018 (28.06.2018) US

(71) Applicants: THE UNIVERSITY OF BRITISH

COLUMBIA [CA/CA]; c/o University Industry Liaison  
Office, 103-6190 Agronomy Road, Vancouver, British Co-  
lumbia V6T 1Z3 (CA). **TXCELL** [FR/FR]; Allée de la Ner-  
tière, Les Cardoulines, 06560 Valbonne Sophia Antipolis  
(FR).

(72) Inventors: ZHOU, Li; 93 Searle Road, West Roxbury,

Massachusetts 02132 (US). **ABEL, Tobias;** 1, avenue de  
la Libération, Résidence Port Vauban, Appt A 206, 06600  
Antibes (FR). **MEYER, François;** Chemin des Minoux  
27, 2900 Porrentruy (CH). **LEVINGS, Megan;** 3435 West  
15th Avenue, Vancouver, British Columbia V6R 2Z2 (CA).  
**DAWSON, Nicolas;** 304-995 West 59th Avenue, Vancou-  
ver, British Columbia V6P 6Z2 (CA). **LAMARCHE, Car-  
oline;** 703-456 Moberly Avenue, Vancouver, British Co-  
lumbia V5Z 4L7 (CA).

(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, 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, SM, ST, SV, SY, TH, TJ, TM, TN,  
TR, TT, TZ, UA, UG, US, UZ, VC, VN, 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,

(54) Title: NOVEL ANTI-HLA-A2 ANTIBODIES AND USES THEREOF

(57) Abstract: The present invention relates to a novel anti-HLA-A2 antibody, and to a chimeric antigen receptor comprising said HLA-A2 antibody. The present invention further relates to an immune cell expressing said chimeric receptor antigen, and to therapeutic uses thereof, in particular for treating or preventing graft rejection or GVHD.



WO 2019/056106 A1