



(51) International Patent Classification:

C07K 16/28 (2006.01) *C07K 16/46* (2006.01)
A61K 39/395 (2006.01) *C07K 19/00* (2006.01)
A61K 47/48 (2006.01) *G01N 33/574* (2006.01)
A61K 49/00 (2006.01) *C07K 14/21* (2006.01)
A61P 35/00 (2006.01) *C07K 14/415* (2006.01)

(21) International Application Number:

PCT/CA2014/050950

(22) International Filing Date:

2 October 2014 (02.10.2014)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/885,817 2 October 2013 (02.10.2013) US
62/030,805 30 July 2014 (30.07.2014) US

(71) Applicant: **VIVENTIA BIO INC.** [CA/CA]; 147 Hamelin Street, Winnipeg, Manitoba R3T 3Z1 (CA).

(72) Inventors: **CIZEAU, Jeannick**; 56 Roseglen Crescent, Winnipeg, Manitoba R3Y 1R5 (CA). **PREMSUKH, Arjune**; 19 Brookland Bay, Winnipeg, Manitoba R3Y 0C1 (CA). **CHOONIEDASS, Shilpa**; 59 Pincarrow Road, Winnipeg, Manitoba R3Y 1E3 (CA). **MACDONALD, Glen**; 475 Raglan Road, Winnipeg, Manitoba R3G 3E4 (CA). **ENTWISTLE, Joycelyn**; 380 Lindenwood Drive East, Winnipeg, Manitoba R3P 2H1 (CA).

(74) Agents: **CHARI, Santosh, K.** et al.; Blake, Cassels & Graydon LLP, 199 Bay Street, Suite 4000, Box 25, Commerce Court West, Toronto, Ontario M5L 1A9 (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, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, 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, 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))
- with sequence listing part of description (Rule 5.2(a))

(54) Title: ANTI-EPCAM ANTIBODIES AND METHODS OF USE

(57) Abstract: The present disclosure is related to compositions of antibodies and immunoconjugates that potentially lack T-cell epitopes and elicit reduced immune response. The antibody may be an antibody fragment, such as Fab, Fab', F(ab')₂, scFv, dsFv, dimers, minibodies, diabodies, bispecific antibody fragments, multimers, and any combination thereof. In a further embodiment, the antibody may bind to an antigen epithelial cell adhesion molecule (EpcAM). In another embodiment, an immunoconjugate may comprise an antibody attached to an effector molecule, wherein the effector molecule may be a radioisotope, an antineoplastic agent, an immunomodulator, a biological response modifier, lectin, a toxin, a chromophore, a fluorophore, a chemiluminescent compound, an enzyme, a metal ion, and any combination thereof.

