



(51) International Patent Classification:

C07K 14/47 (2006.01) C07K 14/725 (2006.01)

C12N 9/88 (2006.01) A61P 35/00 (2006.01)

(21) International Application Number:

PCT/EP2019/074273

(22) International Filing Date:

11 September 2019 (11.09.2019)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

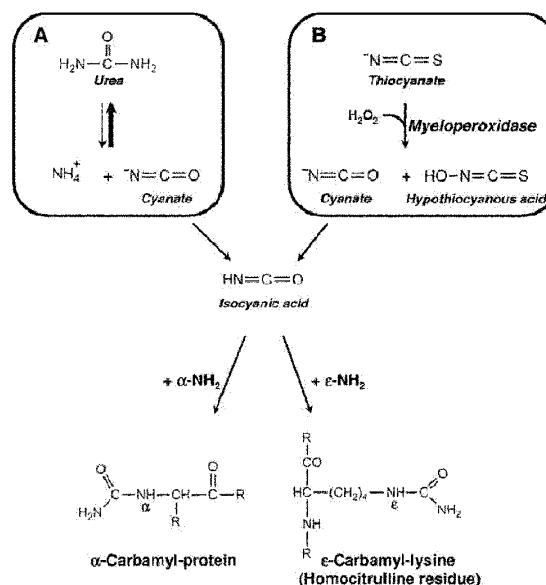
1815041.7 14 September 2018 (14.09.2018) GB

(71) Applicant: **SCANCELL LIMITED** [GB/GB]; John Eccles House, Robert Robinson Avenue, Oxford Science Park, Oxford, Oxfordshire OX4 4GP (GB).(72) Inventors: **XUE, Wei**; c/o Scancell Limited, John Eccles House, Robert Robinson Avenue, Oxford Science Park, Oxford, Oxfordshire OX4 4GP (GB). **COOK, Katherine, Wendy**; John Eccles House, Robert Robinson Av-enue, Oxford Science Park, Oxford, Oxfordshire OX4 4GP (GB). **DURRANT, Linda, Gillian**; John Eccles House, Robert Robinson Avenue, Oxford Science Park, Oxford, Oxfordshire OX4 4GP (GB). **BRENTVILLE, Victoria, Anne**; John Eccles House, Robert Robinson Avenue, Oxford Science Park, Oxford, Oxfordshire OX4 4GP (GB).(74) Agent: **KILBURN & STRODE LLP** et al.; Lacon London, 84 Theobalds Road, London WC1X 8NL (GB).

(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.

(54) Title: EPITOPES

Figure 1

(57) Abstract: The present invention relates to epitopes containing homocitrulline (Hcit) that can be used as targets for cancer immunotherapy. The homocitrullinated T cell epitope has (i) a predicted binding score to MHC class II or class I of < 30 using the online IEDB prediction program (<http://www.iedb.org/>) and (ii) at least 5 consecutive amino acids that form a spiral conformational structure. These modified peptides can be used as vaccines or as targets for T cell receptor (TCR) and adoptive T cell transfer therapies.

[Continued on next page]

(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))*
- *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))*

(88) Date of publication of the international search report:

18 June 2020 (18.06.2020)