200306017S

02 OCT 2003

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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
17 October 2002 (17.10.2002)

PCT

(10) International Publication Number
WO 02/081683 A3

(51) International Patent Classification[7]: C12N 15/10, 15/62, G01N 33/533, C12Q 1/68

(21) International Application Number: PCT/GB02/01623

(22) International Filing Date: 4 April 2002 (04.04.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

0108521.6	5 April 2001 (05.04.2001)	GB
0131025.9	28 December 2001 (28.12.2001)	GB
0203448.6	14 February 2002 (14.02.2002)	GB

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(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

(88) Date of publication of the international search report:
6 March 2003

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.



162162

(54) Title: PROTEIN ANALYSIS BY MEANS OF IMMOBILIZED ARRAYS OF ANTIGENS OR ANTIBODIES

(57) Abstract: A method of forming an array of proteins selected from antigens or antibodies; said method comprising the steps of (i) expressing in a recombinant cell, a fusion protein which comprises either (a) an antigen or (b) an antibody binding protein, fused to a peptide having up to 50 amino acids, which peptide comprises amino acid sequence of SEQ ID NO 1 $LX_1X_2IX_3X_4X_5X_6KX_7X_8X_9X_{10}$ (SEQ ID NO 1) where X_1 is a naturally occurring amino acid, X_2 is any naturally occurring amino acid other than leucine, valine, isoleucine, tryptophan, phenylalanine or tyrosine, X_3 is phenylalanine or leucine, X_4 is glutamine or asparagine, X_5 is alanine, glycine, serine or threonine, X_6 is glycine or methionine, X_7 is isoleucine, methionine or valine, X_8 is glutamine, leucine, valine, tyrosine or isoleucine, X_9 is tryptophan, tyrosine, valine, phenylalanine, leucine or isoleucine and X_{10} is any naturally occurring amino acid other than asparagine or glutamine; where said peptide is capable of being biotinylated by a biotin ligase at the lysine residue adjacent to X_6; (ii) biotinylating said peptide of the fusion protein at the lysine residue adjacent X_6; (iii) isolating the biotinylated fusion protein; (iv) applying the biotinylated fusion protein to an avidin or streptavidin coated non-porous support; (v) forming an array of at least three different proteins on the support by either (a) where the fusion protein comprises an antigen, carrying out steps (i) to (iv) the desired number of times to form an antigen array; or (b) where the fusion protein comprises an antibody binding protein, applying to said protein, either prior to or after step (iv) a plurality of different antibodies or binding fragments thereof.

WO 02/081683 A3



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