

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
25 January 2007 (25.01.2007)

PCT

(10) International Publication Number
WO 2007/010263 A3

(51) International Patent Classification:
C12Q 1/68 (2006.01)

(21) International Application Number:
PCT/GB2006/002709

(22) International Filing Date: 20 July 2006 (20.07.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0514935.6 20 July 2005 (20.07.2005) GB

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, 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, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

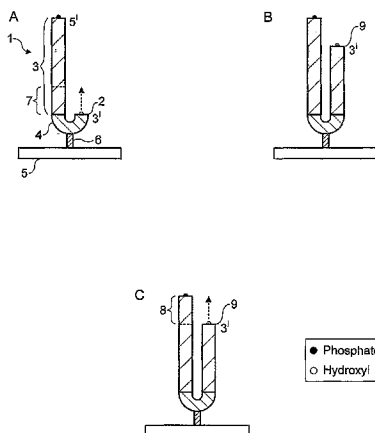
Published:

— with international search report

(88) Date of publication of the international search report:
12 April 2007

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.

(54) Title: METHODS FOR SEQUENCING A POLYNUCLEOTIDE TEMPLATE



(57) Abstract: The invention relates to methods for pairwise sequencing of a polynucleotide template which result in the sequential determination of nucleotide sequence in two distinct and separate regions of the polynucleotide template.

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INTERNATIONAL SEARCH REPORT

International application No

PCT/GB2006/002709

A. CLASSIFICATION OF SUBJECT MATTER
INV. C12Q1/68

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
C12Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, EMBASE, FSTA, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2004/072294 A2 (GLOBAL GENOMICS AB [SE]; LINNARSSON STEN [SE]) 26 August 2004 (2004-08-26) page 25, paragraph 4 - page 26, paragraph 2	1-34
A	WO 03/056030 A2 (UNIV JOHNS HOPKINS [US]; ESHLEMAN JAMES R [US]; MURPHY KATHLEEN M [US]) 10 July 2003 (2003-07-10) the whole document	1-34
A	WO 2005/003375 A (454 CORP [US]; LEAMON JOHN H [US]; LOHMAN KENTON [US]; ROTHBERG JONATH) 13 January 2005 (2005-01-13) page 58, paragraph 2 - page 67, paragraph 2	1-34
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☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

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Date of the actual completion of the international search

19 December 2006

Date of mailing of the international search report

02/01/2007

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INTERNATIONAL SEARCH REPORT

International application No

PCT/GB2006/002709

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	BRASLAVSKY IDO ET AL: "Sequence information can be obtained from single DNA molecules" PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, NATIONAL ACADEMY OF SCIENCE, WASHINGTON, DC, US, vol. 100, no. 7, 1 April 2003 (2003-04-01), pages 3960-3964, XP002341053 ISSN: 0027-8424 the whole document -----	1-34
A	ROACH J C ET AL: "Pairwise end sequencing: a unified approach to genomic mapping and sequencing" GENOMICS, ACADEMIC PRESS, SAN DIEGO, US, vol. 26, no. 2, 20 March 1995 (1995-03-20), pages 345-353, XP004796696 ISSN: 0888-7543 cited in the application the whole document -----	1-34

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/GB2006/002709

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
WO 2004072294	A2	26-08-2004	CA	2515938 A1		26-08-2004
			EP	1592810 A2		09-11-2005
			JP	2006517798 T		03-08-2006

WO 03056030	A2	10-07-2003	AU	2002365157 A1		15-07-2003
			EP	1472335 A2		03-11-2004

WO 2005003375	A	13-01-2005	AU	2004209001 A1		19-08-2004
			AU	2004209416 A1		19-08-2004
			AU	2004209426 A1		19-08-2004
			AU	2004254552 A1		13-01-2005
			CA	2513535 A1		19-08-2004
			CA	2513541 A1		19-08-2004
			CA	2513889 A1		19-08-2004
			CA	2513899 A1		13-01-2005
			EP	1594980 A2		16-11-2005
			EP	1594981 A2		16-11-2005
			EP	1594950 A2		16-11-2005
			EP	1590477 A2		02-11-2005
			JP	2006515522 T		01-06-2006
			WO	2004069849 A2		19-08-2004
			WO	2004070005 A2		19-08-2004
			WO	2004070007 A2		19-08-2004
