

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
5 February 2004 (05.02.2004)

PCT

(10) International Publication Number
WO 2004/011612 A3

- (51) International Patent Classification⁷: C12Q 1/68, 1/70 (74) Agents: SCHODIN, David, J. et al.; Dept 377/AP6A-1, 100 Abbott Park Road, Abbott Park, IL 60064-6008 (US).
- (21) International Application Number: PCT/US2003/023431 (81) Designated States (*national*): CA, JP.
- (22) International Filing Date: 25 July 2003 (25.07.2003) (84) Designated States (*regional*): European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR).
- (25) Filing Language: English
- (26) Publication Language: English **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
- (30) Priority Data:
10/207,693 26 July 2002 (26.07.2002) US
60/398,805 26 July 2002 (26.07.2002) US
- (71) Applicant: ABBOTT LABORATORIES [US/US]; D-377 AP6A-1, 100 Abbott Park Road, Abbott Park, IL 60064-6008 (US). (88) Date of publication of the international search report: 9 December 2004
- (72) Inventor: WILLIAMS, Gregg, T.; 37 East Monroe Street, Villa Park, IL 60181 (US).
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.



WO 2004/011612 A3

(54) Title: METHOD OF DETECTING AND QUANTIFYING HEPATITIS C VIRUS

(57) Abstract: Methods, reagents, and kits for detecting hepatitis C virus (HCV) in biological samples.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/23431

A. CLASSIFICATION OF SUBJECT MATTER		
IPC(7) : C12Q 1/68, 70 US CL : 435/5,6		
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) U.S. : 435/5,6		
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 practicable, search terms used)		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 714 986 A1 (TOSOH CORPORATION) 01 December 1995 (01.12.1995), see document, esp., page 11.	1-4
X	WO 92/02642 A1 (CHIRON CORPORATION) 20 February 1992 (20.02.1992), see document, page 43.	1-4
---		-----
Y	Pages 23 and 43.	5-10
X	YULAN et al., Establishment of labeling primer reverse transcription in situ polymerase chain reaction and detection of hepatitis C virus in liver tissues, Chinese Medical Journal, 2000, Vol 113, No 2, pages 103-6, esp., page 104.	1-3
---		-----
Y		7-10
X	6,001,990 A (WANDS et al) 14 December 1999 (14.12.1999), claims 1, 10, and column 3, lines 30-39.	1-4
X	US 6,297,370 B1 (CHA et al.) 02 October 2001 (02.10.2001), claims 6 and 8, columns 14-15.	1-3
---		-----
Y		7-10
Y	WO 02/08447 A2 (INSTITUTE OF MOLECULAR CELL AND BIOLOGY) 31 January 2002 (31.01.2002), page 23, Table 1, seq id 5	8
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
*	Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E"	earlier application or patent published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O"	document referring to an oral disclosure, use, exhibition or other means	
"P"	document published prior to the international filing date but later than the priority date claimed	
Date of the actual completion of the international search		Date of mailing of the international search report
18 June 2004 (18.06.2004)		18 OCT 2004
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230		Authorized officer Zachariah Lucas <i>James Ford</i> Telephone No. 571-272-1600 <i>for</i>

INTERNATIONAL SEARCH REPORT

C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	DE 198 32 050 A1 (JOCHUM, Christoph) 27 January 2000 (27.01.2000), abstract, page 2 lines 46-47.	8
Y	US 5,527,669 A (RESNICK et al.) 18 June 1996 (18.06.1996), claims 1 and 9, columns 6-7, 27-28.	1-6
Y	US 5,457,027 A (NADEAU et al.) 10 October 1995 (10.10.1995), document, esp., column 2, lines 12-31; and column 6, lines 7-25.	7-10
Y	WIDADA et al., Quantification of the carbazole 1,9a-dioxygenase gene by real-time competitive PCR combined with co-extraction of internal standards, FEMS Microbiology Letters, 2001, Vol 202, pages 51-57.	7-10
Y	US 6,077,661 A (NATARAJAN et al.) 20 June 2000 (20.06.2000), document, esp., columns 1-2, column 8, lines 23-45; and column 12, lines 5-45.	7-10
A	Database on NCBI Sequence Viewer, Accession AF387806, " Synthetic construct HCV type 1a polyprotein mRNA, complete cds.", Weiner et al., 24 June 2001 (24.06.2001), residues 226-300.	7-10
A	LYON et al. Quantification of HER2/neu gene amplification by competitive pcr using fluorescent melting curve analysis. Clinical Chemistry, 2001, Vol 47, No 5, pages 844-51.	7-10
A	MASTERNAK et al., Novel competitive PCR methods for quantitation of T-cell receptor delta (TCRD) gene rearrangements. Journal of Applied Genetics, 2002, Vol 43 No 2, pages 235-44.	7-10