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ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*

(54) Title: HUMAN POLY(ADP-RIBOSE) POLYMERASE 2 MATERIALS AND METHODS

(57) Abstract: The invention provides a novel human poly(ADP-ribose) polymerase (hPARP2) polypeptides, polynucleotides encoding the polypeptides, expression constructs comprising the polynucleotides, and host cells transformed with the expression constructs. Also provided are methods for producing the hPARP2 polypeptides, antibodies that are immunoreactive with the hPARP2 polypeptides. In addition, there are provided methods for identifying specific binding partners of hPARP2, and more particularly methods for identifying binding partners that modulate biological activity of hPARP2. Methods of modulating biological activity of hPARP2 *in vitro* and *in vivo* are also provided.

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 00/16629

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/54 C12N9/10 C12Q1/68 C12Q1/48 A61K38/45
C07K16/40 //A61P9/00,25/00,29/00,35/00

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)

IPC 7 C12N A61K 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)

BIOSIS, EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	BERGHAMMER H ET AL: "PADPRT-2: A NOVEL MAMMALIAN POLYMERIZING (ADP-RIBOSYL) TRANSFERASE GENE RELATED TO TRUNCATED PADPRT HOMOLOGUES IN PLANTS AND CAENORHABDITIS ELEGANS" FEBS LETTERS, vol. 449, 23 April 1999 (1999-04-23), pages 259-263, XP000867424 ISSN: 0014-5793 the whole document --- -/--	1,2,4-9

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
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- *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

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- *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
- *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.
- *Z* document member of the same patent family

Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 00/16629

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JOHANSSON M: "A HUMAN POLY(ADP-RIBOSE) POLYMERASE GENE FAMILY (ADPRTL) CDNA CLONING OF TWO NOVEL POLY(ADP-RIBOSE) POLYMERASE HOMOLOGUES" GENOMICS, vol. 57, no. 3, 1 May 1999 (1999-05-01), pages 442-445, XP000870418 ISSN: 0888-7543 the whole document ---	1,2,4-9
A	SHIEH W MELISSA ET AL: "Poly(ADP-ribose) polymerase null mouse cells synthesize ADP-ribose polymers." JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 273, no. 46, 13 November 1998 (1998-11-13), pages 30069-30072, XP002154243 ISSN: 0021-9258 cited in the application ---	
A	PIEPER, A. ET AL.: "Poly (ADP-ribose) polymerase, nitric oxide and cell death." TRENDS IN PHARMACOLOGICAL SCIENCES, vol. 20, no. 4, April 1999 (1999-04), pages 171-181, XP004172564 ISSN: 0165-6147 cited in the application the whole document ---	
A	SZABO C ET AL: "Role of poly(ADP-ribose) synthetase in inflammation and ischaemia-reperfusion" TRENDS IN PHARMACOLOGICAL SCIENCES, vol. 19, no. 7, 1 July 1998 (1998-07-01), pages 287-298, XP004131514 ISSN: 0165-6147 cited in the application the whole document ---	
P,X	WO 99 64572 A (BASF AG ;HOEGER THOMAS (DE); KOCK MICHAEL (DE); OTTERBACH BERND (D) 16 December 1999 (1999-12-16) page 6, line 22 -page 18, line 4 --- -/--	1,2, 4-15, 17-24

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 00/16629

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	AME J-C ET AL: "PARP-2, a novel mammalian DNA damage-dependent poly(ADP-ribose) polymerase" JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 274, no. 25, 18 June 1999 (1999-06-18), pages 17860-17868, XP002129094 ISSN: 0021-9258 the whole document examples page 49 -page 54 claims -----	1,2,4-9

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 25-32

Present claims 25 to 32 relate to methods using compounds defined by reference to a desirable characteristic or property, namely their capacity to inhibit expression or activity of hPARP2. The claims cover all compounds having this characteristic or property, whereas the application provides support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT for only a very limited number of such compounds. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search is impossible. Independent of the above reasoning, the claims also lack clarity (Article 6 PCT). An attempt is made to define the methods by reference to a result to be achieved. Again, this lack of clarity in the present case is such as to render a meaningful search impossible. Consequently, no search has been carried out for claims 25 to 32.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 00/16629

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9964572 A	16-12-1999	AU 4605999 A	30-12-1999