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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.
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(54) Title: PROCESS FOR THE DETECTION OF OXIDATIVE STRESS AND KIT FOR ITS IMPLEMENTATION

(57) Abstract: The present invention relates to a process for detecting oxidative stress in a sample and to a kit for this implementation. According to one embodiment the present invention provides a method for the detection of oxidative stress in an individual carrying a risk factor for oxidative stress comprising determining the risk factor for oxidative stress of said individual ; selecting at least two oxidative stress markers being increased or decreased for said risk factor relative to healthy individuals ; and measuring the amount of said at least two oxidative stress markers in a sample obtained from said individual.

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 02/09079

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 C12N15/10 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)

IPC 7 C12N 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)

WPI Data, PAJ, CAB Data, SEQUENCE SEARCH, 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	PINCEMAIL J ET AL: "Determination of plasmatic concentrations in antioxidants, antibodies against oxidized LDL, and homocystein in a sampling of Liege population." ANNALES DE BIOLOGIE CLINIQUE, vol. 58, no. 2, March 2000 (2000-03), pages 177-185, XP008019153 ISSN: 0003-3898 the whole document	29-32
Y	WO 99 63341 A (NIKKEN FOODS CO LTD ;OCHI HIROTOMO (JP); CUTLER RICHARD G (US)) 9 December 1999 (1999-12-09) the whole document	1-47



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
- *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)
- *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

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

Date of the actual completion of the international search

2 July 2003

Date of mailing of the international search report

15/07/2003

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 02/09079

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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X	NAPOLI CLAUDIO ET AL: "Multiple role of reactive oxygen species in the arterial wall." JOURNAL OF CELLULAR BIOCHEMISTRY, vol. 82, no. 4, 19 June 2001 (2001-06-19), pages 674-682, XP002196769 ISSN: 0730-2312 the whole document ---	43-47
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Y	KENNEDY C H CUETO R BELINSKY S A LECHNER J F PRYOR W: "Overexpression of hMTH1 mRNA: a molecular marker of oxidative stress in lung cancer cells" FEBS LETTERS, ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL, vol. 429, no. 1, 5 June 1998 (1998-06-05), pages 17-20, XP004257965 ISSN: 0014-5793 the whole document ---	1-47
Y	WEIGEL A L ET AL: "Microarray analysis of tert-butyl hydroperoxide and hydrogen peroxide induced gene expression in ARPE-19 cells." IOVS, vol. 42, no. 4, 15 March 2001 (2001-03-15), page S754 XP001073569 Annual Meeting of the Association for Research in Vision and Ophthalmology;Fort Lauderdale, Florida, USA; April 29-May 04, 2001 Abstract no. 4036-B55 abstract ---	1-47
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INTERNATIONAL SEARCH REPORT

International Application No
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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INTERNATIONAL SEARCH REPORT

International application No.
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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 1-28 are directed to a diagnostic method practised on the human/animal body, the search has been carried out and based on the in vitro assay of detection of oxidative stress in a blood sample.
2. Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International Application No
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