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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: REAGENTS AND METHODS FOR USING HUMAN EMBRYONIC STEM CELLS TO EVALUATE TOXICITY OF
PHARMACEUTICAL COMPOUNDS & OTHER CHEMICALS

(57) Abstract: The invention provides biomarker profiles of cellular metabolites and methods for screening chemical compounds including pharmaceutical agents, lead and candidate drug compounds and other chemicals using human embryonic stem cells (hESC) or lineage-specific cells produced therefrom. The inventive methods are useful for testing toxicity, particularly developmental toxicity and detecting teratogenic effects of such chemical compounds.



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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2007/008923

A. CLASSIFICATION OF SUBJECT MATTER
INV. G01N33/50

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)
G01N

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, EMBASE, BIOSIS, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2004/065616 A (GEN HOSPITAL CORP) 5 August 2004 (2004-08-05) page 66, line 28 - page 69; claims 1,10,11 -----	1-45, 49-54
X	US 6 197 575 B1 (GRIFFITH LINDA G [US] ET AL) 6 March 2001 (2001-03-06) column 32, lines 30,47-49,65 column 33, lines 34-50; claims 1,10,12,22; examples 4,8 column 36, line 12 -----	1-45, 49-54
X	WO 03/018760 A (ADVANCED CELL TECHNOLOGY INC) 6 March 2003 (2003-03-06) claims 1-3,14,17,18 -----	1-45, 49-54
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☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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- *A* document defining the general state of the art which is not considered to be of particular relevance
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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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- *Z* document member of the same patent family

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INTERNATIONAL SEARCH REPORT

 International application No
 PCT/US2007/008923

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>LINDON JOHN C ET AL: "Contemporary issues in toxicology the role of metabonomics in toxicology and its evaluation by the COMET project." TOXICOLOGY AND APPLIED PHARMACOLOGY, vol. 187, no. 3, 15 March 2003 (2003-03-15), pages 137-146, XP002458178 abstract page 145, left-hand column, paragraph 1</p>	1
A	<p>CROCKFORD D J ET AL: "Statistical heterospectroscopy, an approach to the integrated analysis of NMR and UPLC-MS data sets: Application in metabonomic toxicology studies" ANALYTICAL CHEMISTRY, vol. 78, no. 2, 15 January 2006 (2006-01-15), pages 363-371, XP002458179 abstract</p>	1
A	<p>HARENG L ET AL: "The Integrated Project ReProTect: A novel approach in reproductive toxicity hazard assessment" REPRODUCTIVE TOXICOLOGY, vol. 20, no. 3, September 2005 (2005-09), pages 441-452, XP004971417 page 442, right-hand column, last paragraph</p>	1-45, 49-54
A	<p>MCNEISH J: "Embryonic stem cells in drug discovery" NATURE REVIEWS DRUG DISCOVERY, vol. 3, no. 1, 2004, pages 70-80, XP002458180 page 77, right-hand column, lines 40-42; figure 1</p>	1-45, 49-54
A	<p>MARK R VIANT ET AL: "NMR-derived developmental metabolic trajectories: an approach for visualizing the toxic actions of trichloroethylene during embryogenesis" METABOLOMICS, vol. 1, no. 2, 1 April 2005 (2005-04-01), pages 149-158, XP019292678 the whole document</p>	1-45, 49-54

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2007/008923

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 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.: 46-48
because they relate to subject matter not required to be searched by this Authority, namely:
Rule 39.1(v) PCT - Presentation of information
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 No. III Observations where unity of invention is lacking (Continuation of item 3 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 allsearchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search reportcovers 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 and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 2004065616	A	05-08-2004	EP 1589814 A2	02-11-2005
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