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(54) Title: METHODS AND COMPOSITIONS FOR FACILITATING CELL DEATH OF CANCER STEM CELLS AND FOR TREATING CANCER

(57) Abstract: The invention provides methods and compositions for reducing the number of cancer stem cells in a mixed population of differentiated cells (for example, cancer cells) and cancer stem cells. The cancer stem cells, if present, can be more resistant to traditional drug-based therapies and can provide a source for new, differentiated cancer cells associated with the development of drug-resistance and more aggressive phenotypes. When combined with traditional cancer therapies, for example, drug-based therapies, the methods and compositions of the invention provide a more effective way for treating cancer and can provide a model system for developing new cancer therapies and new treatment modalities.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

INV. A61P35/00 A61K38/00 A61K31/713 A61K31/00 A61K39/395

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)
A61K

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, WPI Data, EMBASE, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	WO 2008/073878 A (UNIV TEXAS [US]; LUTHRA RAJYALAKSHMI [US]; AJANI JAFFER A [US]; LUTHRA) 19 June 2008 (2008-06-19)	20-30
P, Y	but see especially claims 38-43 the whole document	1-26, 31-39
X	WO 2006/113181 A (UNIV FLORIDA [US]; GIBBS JR CHARLES PARKER [US]; STEINDLER DENNIS [US]) 26 October 2006 (2006-10-26) but see especially claims and [109] onwards the whole document	1-39
X	WO 2006/025802 A (AGENCY SCIENCE TECH & RES [SG]; ROBSON PAUL [SG]; RODDA DAVID [SG]; NG) 9 March 2006 (2006-03-09) the whole document	1-39
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☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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"&" document member of the same patent family

Date of the actual completion of the international search

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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.
X	DATABASE EMBASE [Online] ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL; August 2006 (2006-08), IKI K ET AL: "Expression of Oct4, a stem cell marker, in the hamster pancreatic cancer model" XP002507510 Database accession no. EMB-2006428975	27,28
Y	abstract & PANCREATOLOGY 200608 CH, vol. 6, no. 4, August 2006 (2006-08), pages 406-413, ISSN: 1424-3903	1-16, 29-39
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Y	abstract the whole document	1-26, 29-39
Y	----- ZHANG JINGYU ET AL: "NANOGP8 is a retrogene expressed in cancers." THE FEBS JOURNAL APR 2006, vol. 273, no. 8, April 2006 (2006-04), pages 1723-1730, XP002507509 ISSN: 1742-464X the whole document	1-39
Y	----- TROSKO ET AL: "The role of human adult stem cells and cell-cell communication in cancer chemoprevention and chemotherapy strategies" MUTATION RESEARCH, AMSTERDAM, NL, vol. 591, no. 1-2, 11 December 2005 (2005-12-11), pages 187-197, XP005174269 ISSN: 0027-5107 the whole document ----- -/--	1-39

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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.
Y	<p>PIESTUN ET AL: "Nanog transforms NIH3T3 cells and targets cell-type restricted genes"</p> <p>BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, ACADEMIC PRESS INC. ORLANDO, FL, US, vol. 343, no. 1, 28 April 2006 (2006-04-28), pages 279-285, XP005345595</p> <p>ISSN: 0006-291X</p> <p>abstract</p> <p>page 280, left-hand column, paragraph 2</p> <p>figure 3</p> <p>table 1</p> <p>page 284, left-hand column, paragraph 1 -</p> <p>page 285, left-hand column, paragraph 1</p> <p>-----</p>	1-39

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 2008073878	A	19-06-2008	NONE	
WO 2006113181	A	26-10-2006	NONE	
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