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(54) Title: METHODS AND COMPOSITIONS FOR IDENTIFYING AND USING P21-REGULATED PROTEINS

(57) Abstract: This disclosure identifies p21-regulated proteins that may be used to induce anti- apoptotic and/or mitogenic cellular effects, both paracrine and within the p21-expressing cell itself. Three proteins released from HT- 1080 human fibrosarcoma cells displaying inducible p21 expression were identified; β-2-microglobulin, cystatin C, and pro-platelet basic protein. The disclosure also provides therapeutic compositions, methods for using, and methods for identifying p21-regulated proteins.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US07/68619

A. CLASSIFICATION OF SUBJECT MATTER
IPC: **A61K 38/00**(2006.01),**49/00**(2006.01);**C12Q 1/00**(2006.01),**1/68**(2006.01);**G01N 33/53**(2006.01)

USPC: 514/2,44;435/6,7.1;424/9.2
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. : 514/2, 44; 435/6, 7.1; 424/9.2

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)
MEDLINE; WEST

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Gleich. Gene therapy for head and neck cancer. Laryngoscope. 2000. Vol. 110. p. 708-726.	1-8
X	Mori et al. Antitumor effect of β2-microgolbulin in leukemic cell-bearing mice via apoptosis-inducing activity: caspase-3 and nuclear factor-κB. Cancer Research. June 2001. Vol. 61:4414-4417.	1-3 and 5-8
X	Gordon et al. β2-microgolbulin induces caspase-dependent apoptosis in the CCRF-HSB-2 human leukemia cell line independently of the caspase-3, -8, and -9 pathways but through increased reactive oxygen species. Int. J. Cancer. 2003. Vol. 103. p. 316-327.	1-3, 5-10, 14, and 16
X	Wu et al. β2-microgolbulin induces apoptosis in HL-60 human leukemia cell line and its multidrug resistant variants overexpressing MRP1 but lacking Bax or overexpressing P-glycoprotein. Oncogene. 2001. Vol. 20, p. 7006-7020.	1-3, 5-10, 14, and 16

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:

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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

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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	Ogretmen et al. Molecular mechanisms of loss of β2-microgolbulin expression in drug-resistant breast cancer sublines and its involvement in drug resistance. Biochemistry. 1998. Vol. 37. p. 11679-11691.	1-3, 5-9, and 12-16
X	Matin et al. Specific knockdown of Oct4 and β2-microgolbulin expression by RNA interference in human embryonic stem cells and embryonic carcinoma cells. Stem Cells. 2004. Vol. 22. p. 659-668.	9, 11, 14, and 16
X	Grundtvig et al. Beta-2-microglobulin excretion: an indicator of long term nephrotoxicity during cis-platinum treatment? Cancer Chemother Pharmacol. 1985. Vol. 14. p. 247-249.	17, 19, and 20
X	US Patent 5,427,916. Gewirtz et al. Issued June 17, 1995.	17, 18, and 20