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(54) **Brain endothelial cell expression patterns**

(57) To gain a better understanding of brain tumor angiogenesis, new techniques for isolating brain endothelial cells (ECs) and evaluating gene expression patterns were developed. When transcripts from brain ECs derived from normal and malignant colorectal tissues were compared with transcripts from non-endothelial cells, genes predominantly expressed in the endothelium were identified. Comparison between normal- and tumor-derived endothelium revealed genes that were specifically elevated in tumor-associated brain endothelium. These results confirm that neoplastic and normal endothelium in human brains are distinct at the molecular level, and have significant implications for the development of anti-angiogenic therapies in the future.

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EUROPEAN SEARCH REPORT

Application Number
EP 10 16 8014

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	LU R Q ET AL: "Oligodendrocyte lineage genes (OLIG) as molecular markers for human glial brain tumors" PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, NATIONAL ACADEMY OF SCIENCE, WASHINGTON, DC, vol. 98, no. 19, 9 November 2001 (2001-11-09), pages 10851-10856, XP002267119 ISSN: 0027-8424 * abstract *	1-20	INV. C12Q1/00 C12Q1/68 C12Q1/70 G01N33/53 G01N33/567 G01N33/569
A	KANEMURA Y ET AL: "MUSASHI1, AN EVOLUTIONARILY CONSERVED NEURAL RNA-BINDING PROTEIN, IS A VERSATILE MARKER OF HUMAN GLIOMA CELLS IN DETERMINING THEIR CELLULAR ORIGIN, MALIGNANCY, AND PROLIFERATIVE ACTIVITY" DIFFERENTIATION, SPRINGER VERLAG, DE, vol. 68, no. 2/03, 1 September 2001 (2001-09-01), pages 141-152, XP001182891 ISSN: 0301-4681 * abstract *	1-20	TECHNICAL FIELDS SEARCHED (IPC) C12Q
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Y	WO 02/10217 A2 (UNIV JOHNS HOPKINS [US]; ST CROIX BRAD [US]; KINZLER KENNETH W [US]; V) 7 February 2002 (2002-02-07) * the whole document *	1-3,6-20	

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~~The present search report has been drawn up for all claims~~

Place of search	Date of completion of the search	Examiner
The Hague	21 July 2010	Cornelis, Karen

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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A : technological background
O : non-written disclosure
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EUROPEAN SEARCH REPORT

Application Number
EP 10 16 8014

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	WO 02/47535 A (NYXIS NEUROTHERAPIES INC [US]; YAMAMOTO HIROTAKA [US]; MOSKAL JOSEPH []) 20 June 2002 (2002-06-20) * the whole document * -----	1-20	
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X	STAN R V ET AL: "Isolation, cloning, and localization of rat PV-1, a novel endothelial caveolar protein." THE JOURNAL OF CELL BIOLOGY 14 JUN 1999 LNKD- PUBMED:10366592, vol. 145, no. 6, 14 June 1999 (1999-06-14), pages 1189-1198, XP002592998 ISSN: 0021-9525 * the whole document * -----	2,6, 18-20	
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Y	* abstract * & N TO SHINKEI = BRAIN AND NERVE JAN 1991 LNKD- PUBMED:1647189, vol. 43, no. 1, January 1991 (1991-01), pages 25-29, ISSN: 0006-8969 -----	1-3,6-20	
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1 ~~The present search report has been drawn up for all claims~~

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The Hague	21 July 2010	Cornelis, Karen

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DOCUMENTS CONSIDERED TO BE RELEVANT

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A	KOJIMA S ET AL: "RADIOIMMUNOIMAGING OF TUMORS WITH RADIOACTIVE ANTIBODY AGAINST A GLYCOPROTEIN (GP68) FOUND IN DEVELOPING MOUSE BRAIN" JOURNAL OF CANCER RESEARCH AND CLINICAL ONCOLOGY, SPRINGER INTERNATIONAL, BERLIN, DE LNKD- DOI:10.1007/BF01612915, vol. 116, no. 4, 1 January 1990 (1990-01-01), pages 336-340, XP009035182 ISSN: 0171-5216 -----	1-20	

TECHNICAL FIELDS SEARCHED (IPC)

~~The present search report has been drawn up for all claims~~

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Application Number
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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☒ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

1-3, 6, 10-12, 18-20(completely); 7-9, 13-17(partially)

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).

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LACK OF UNITY OF INVENTION
SHEET B

Application Number
EP 10 16 8014

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

Invention: 1; Claims: 1-3, 6, 10-12, 18-20(completely); 7-9, 13-17(partially)

Methods to aid in diagnosing glioma, detecting expression of plasmalemma vesicle associated protein in brain tissue sample; methods of identifying a test compound comprising contacting a test compound with a cell which expresses at least the signal sequence receptor delta gene; the protein or nucleic acid encoding the protein of plasmalemma vesicle associated protein, an antibody against plasmalemma vesicle associated protein.

Invention: 2; Claims: 4, 5, 7-9, 13-17(all partially)

methods to aid in diagnosing glioma comprising detecting a mRNA of at least the gene identified by the tag corresponding to SEQ ID NO: 1; methods of identifying a test compound as a potential anti-cancer or anti-glioma drug, comprising contacting a test compound with a cell which express a mRNA of of at least the gene identified by the tag corresponding to SEQ ID NO: 1

Inventions: 3-33; Claims: 4, 5, 7-9, 13-17(all partially)

as invention 2, wherein the genes are identified by the tags corresponding to SEQ ID Nos: 2-32, respectively

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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 10 16 8014

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

21-07-2010

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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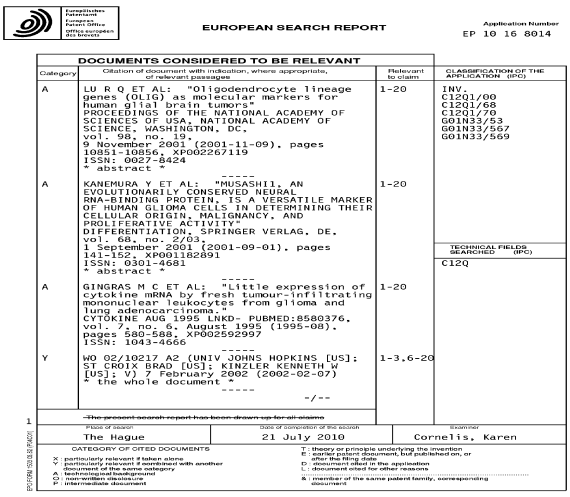
EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

专利名称(译)	脑内皮细胞表达模式		
公开(公告)号	EP2236614A3	公开(公告)日	2011-01-26
申请号	EP2010168014	申请日	2003-08-15
[标]申请(专利权)人(译)	建新公司 约翰霍普金斯大学		
申请(专利权)人(译)	Genzyme公司 约翰·霍普金斯大学		
当前申请(专利权)人(译)	Genzyme公司 约翰·霍普金斯大学		
[标]发明人	MADDEN STEPHEN WANG CLARENCE COOK BRIAN LATTERA JOHN WALTER KEVIN		
发明人	MADDEN, STEPHEN WANG, CLARENCE COOK, BRIAN LATTERA, JOHN WALTER, KEVIN		
IPC分类号	C12Q1/00 C12Q1/68 C12Q1/70 G01N33/53 G01N33/567 G01N33/569 C12N5/09 G01N33/574		
CPC分类号	A61P25/00 C12N5/0693 C12Q1/6886 C12Q2600/112 C12Q2600/136 G01N33/57407 G01N33/57484 G01N2500/00		
优先权	60/403390 2002-08-15 US 60/458978 2003-04-01 US		
其他公开文献	EP2236614A2		
外部链接	Espacenet		

摘要(译)

为了更好地了解脑肿瘤血管生成，开发了分离脑内皮细胞（EC）和评估基因表达模式的新技术。当将来自正常和恶性结肠直肠组织的脑EC的转录物与来自非内皮细胞的转录物进行比较时，鉴定了主要在内皮中表达的基因。正常和肿瘤来源的内皮之间的比较揭示了在肿瘤相关的脑内皮中特异性升高的基因。这些结果证实，人脑中的肿瘤和正常内皮在分子水平上是不同的，并且对于未来抗血管生成疗法的发展具有重要意义。



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Y	WO 02/10217 A2 (UNIV JOHNS HOPKINS [US]; ST CROIX BRAD [US]; KINZLER KENNETH W [US]; V) 7 February 2002 (2002-02-07) * the whole document *	1-3,6-20	

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