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Europäisches Patentamt
Zweigstelle in Den Haag
Recherchen-abteilung

European Patent Office
Branch at The Hague
Search Division

Office européen des brevets
Département à La Haye
Division de la recherche

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Datum/Date
22.12.03

Zeichen/Ref./Réf.	Anmeldung Nr./Application No./Demande n°.//Patent Nr./Patent No./Brevet n°
P033089Ep:CPM	01970530.0-2107/US0124469

Anmelder/Applicant/Demandeur//Patentinhaber/Proprietor/Titulaire
Ortho-McNeil Pharmaceutical, Inc., et al

COMMUNICATION

The European Patent Office herewith transmits the **supplementary** partial European search report under Rule 46(1) EPC relating to the above-mentioned European patent application.

Copies of the documents cited in the search report are enclosed.

The applicant's attention is drawn to the following:

The search Division informs the applicant that if the European search report is also to cover inventions other than the invention first mentioned in the claims, a further search fee must be paid for each of these inventions, within ONE MONTH after notification of this communication.

If the application has been filed up to 30 June 1999, the search fee in force before 01 July 1999 (EUR 869,--) or the equivalent applicable on the date of payment is payable.
This applies also to the search fees requested under Rule 46(1) EPC.
See also OJ EPO 06/1999, 405.

Moreover, the Search Division considers that the present European patent application does not comply with the provisions of the European Patent Convention to such an extent that it is not possible to carry out a meaningful search into the state of the art on the basis of some of the claims; reference is made to sheet C, which is attached to the search report.

☒ Additional set(s) of copies of the documents cited in the supplementary European search report is (are) enclosed as well.

Note to users of the automatic debiting procedure:

Unless the EPO receives prior instructions to the contrary, the search fee(s) will be debited on the last day of the period for payment. For further details see the Arrangements for the automatic debiting procedure, Supplement to OJ EPO 02/1999.

REGISTERED LETTER

European Patent Office

SUPPLEMENTARY PARTIAL EUROPEAN SEARCH REPORT

under Rule 46, paragraph 1 of the European Patent Convention

Application Number EP 01 97 0530

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
P,X	JENNER R G ET AL: "Kaposi's sarcoma-associated herpesvirus latent and lytic gene expression as revealed by DNA arrays." JOURNAL OF VIROLOGY. UNITED STATES JAN 2001, vol. 75, no. 2, January 2001 (2001-01), pages 891-902, XP002263535 ISSN: 0022-538X * the whole document * ---	1-10	A61K47/48 A61K38/19 A61K31/203 A61K31/337 A61K38/16 A61K31/445 A61K31/55 B01J19/00 C12Q1/68 A61P35/00
T	MOSES ASHLEE V ET AL: "Kaposi's sarcoma-associated herpesvirus-induced upregulation of the c-kit proto-oncogene, as identified by gene expression profiling, is essential for the transformation of endothelial cells." JOURNAL OF VIROLOGY. UNITED STATES AUG 2002, vol. 76, no. 16, August 2002 (2002-08), pages 8383-8399, XP002263536 ISSN: 0022-538X * the whole document * --- -/--	1-10	

TECHNICAL FIELDS SEARCHED (Int.Cl.7)

A61K
B01J
C12Q
A61P

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 severalinventions or groups of inventions, namely:

see sheet B

The present partial 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.

Place of search	Date of completion of the search	Examiner
MUNICH	4 December 2003	Fayos, C

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P04C23)

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European Patent Office

SUPPLEMENTARY PARTIAL EUROPEAN SEARCH REPORT

Application Number
EP 01 97 0530

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
T	MOSES ASHLEE V ET AL: "A functional genomics approach to Kaposi's sarcoma." ANNALS OF THE NEW YORK ACADEMY OF SCIENCES. UNITED STATES DEC 2002, vol. 975, December 2002 (2002-12), pages 180-191, XP009022180 ISSN: 0077-8923 * the whole document * ---	1-10	
X	HEINRICH M C ET AL: "INHIBITION OF C-KIT RECEPTOR TYROSINE KINASE ACTIVITY BY STI 571, A SELECTIVE TYROSINE KINASE INHIBITOR" BLOOD, W.B.SAUNDERS COMPAGNY, ORLANDO, FL, US, vol. 96, no. 3, 1 August 2000 (2000-08-01), pages 925-932, XP001097629 ISSN: 0006-4971 * the whole document * ---	1,8,9	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
X	NASTI G ET AL: "A RISK AND BENEFIT ASSESSMENT OF TREATMENT FOR AIDS-RELATED KAPOSI'S SARCOMA" DRUG SAFETY, ADIS PRESS, AUCKLAND, NZ, vol. 20, no. 5, 1999, pages 403-425, XP000964808 ISSN: 0114-5916 * page 418, paragraph 4.2; table IV * ---	6-10	
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EPO FORM 1503 09.98 (P04C26)

European Patent Office

SUPPLEMENTARY PARTIAL EUROPEAN SEARCH REPORT

Application Number
EP 01 97 0530

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X	FEIGAL E G: "AIDS-associated malignancies: research perspectives." BIOCHIMICA ET BIOPHYSICA ACTA. NETHERLANDS 29 JAN 1999, vol. 1423, no. 1, 29 January 1999 (1999-01-29), pages C1-C9, XP004281846 ISSN: 0006-3002 * page C1, column 2, line 6 - page C2, column 1, line 3 * * page C3, column 2, paragraph 4.1 - page C4, column 1 * * page C5, column 1, paragraph 5.1 - column 2 * ---	6-10	
X	KEKUDA R ET AL: "Cloning and functional expression of the human type 1 Sigma receptor (hSigmaR1)" BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, ACADEMIC PRESS INC. ORLANDO, FL, US, vol. 229, 1996, pages 553-558, XP002087117 ISSN: 0006-291X * the whole document * ---	1,6,7	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
Y	SCHENA M ET AL: "QUANTITATIVE MONITORING OF GENE EXPRESSION PATTERNS WITH A COMPLEMENTARY DNA MICROARRAY" SCIENCE, AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE,, US, vol. 270, 20 October 1995 (1995-10-20), pages 467-470, XP000644675 ISSN: 0036-8075 * the whole document * --- -/--	2-5	

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EPO FORM 1503 09.88 (P04C26)

European Patent Office

SUPPLEMENTARY PARTIAL EUROPEAN SEARCH REPORT

Application Number
EP 01 97 0530

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X	SHIH M ET AL: "Dynamic complexes of beta2-adrenergic receptors with protein kinases and phosphatases and the role of gravin." THE JOURNAL OF BIOLOGICAL CHEMISTRY. UNITED STATES 15 JAN 1999, vol. 274, no. 3, 15 January 1999 (1999-01-15), pages 1588-1595, XP002263801 ISSN: 0021-9258 * the whole document *	6-9	
A	MIETTINEN M ET AL: "KIT expression in angiosarcomas and fetal endothelial cells: lack of mutations of exon 11 and exon 17 of C-kit." MODERN PATHOLOGY: AN OFFICIAL JOURNAL OF THE UNITED STATES AND CANADIAN ACADEMY OF PATHOLOGY, INC. UNITED STATES MAY 2000, vol. 13, no. 5, May 2000 (2000-05), pages 536-541, XP002263539 ISSN: 0893-3952 * the whole document *	1	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
Y	GEISS G K ET AL: "Large-scale monitoring of host cell gene expression during HIV-1 infection using cDNA microarrays." VIROLOGY. UNITED STATES 5 JAN 2000, vol. 266, no. 1, 5 January 2000 (2000-01-05), pages 8-16, XP004436178 ISSN: 0042-6822 * the whole document *	2-5	
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EPO FORM 1503 09.88 (P04C26)

European Patent Office

SUPPLEMENTARY PARTIAL EUROPEAN SEARCH REPORT

Application Number
EP 01 97 0530

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
Y	BOSHOFF C ET AL: "Kaposi's sarcoma-associated herpesvirus infects endothelial and spindle cells." NATURE MEDICINE. UNITED STATES DEC 1995, vol. 1, no. 12, December 1995 (1995-12), pages 1274-1278, XP009022260 ISSN: 1078-8956	2-5	
A	* the whole document *	1-10	
X	KANNAN K ET AL: "Profile of gene expression regulated by induced p53: connection to the TGF-beta family" FEBS LETTERS, ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL, vol. 470, no. 1, 17 March 2000 (2000-03-17), pages 77-82, XP004261095 ISSN: 0014-5793 * tables 1,2 *	3	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
X	CARLISLE A J ET AL: "Development of a prostate cDNA microarray and statistical gene expression analysis package" MOLECULAR CARCINOGENESIS, ALAN LISS, NEW YORK, NY,, US, vol. 28, no. 1, May 2000 (2000-05), pages 12-22, XP002225396 ISSN: 0899-1987 * table 1 *	3	

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EPO FORM 1503 09.99 (P04C26)

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:

1. Claims: 1-10

Coupounds that inhibit c-Kit signalling pathway or type I sigma receptor signalling pathway for inhibiting replication of KSHV or for the treatment of Kaposi sarcoma; a gene expression profile sopecific for the lytic phase of KSHV comprising at east one of the genes listed in table 2; a microarray comprising nucleic acid encoding probes to hbridize with one or more of the genes listed in table 2; a method for diagnosing KSHV; and a method for identifying modulators of KSHV replication.

2. Claims: 11-17

A method determining the level of RNA expression for an RNA sample, amplifying and labeling it, hybridizing it to an array, normalizing said expression level using an algorithm , and scoring said RNA sample against a gene expression profile database.

There is no common concept linking claims 1-10 with claims 11-17.

Claims 1-10 (invention 1) are directed to the identification of compounds which inhibit c-Kit signalling pathway or type I sigma receptor signalling pathway for inhibiting replication of KSHV or for the treatment of Kaposi sarcoma as well as to the compounds of claim 10 for the same use.

The problem posed in invention is to provide means for inhibiting replication of KSHV or for the treatment f kaposi sarcoma. This problem is solved by compounds which inhibit c-Kit signalling pathway or type I sigma receptor signalling pathway and by the compounds of claim 10.

Claims 11-17 (invention 2), on the contrary, relate to a general method in which the RNA expression in a sample is scored against a gene expression profile database.

The problem posed in invention 2 could be seen as providing a general method for e.g. the diagnosis of a disease or the identification of a particular physiological state. This problem is solved by scoring the RNA expression in a sample a gene expression profile database.

A search for the second invention would have involved significant extra searching effort.

Claim(s) searched completely:
2, 5, 10

Claim(s) searched incompletely:
1, 3-4, 6-9

Reason for the limitation of the search:

Present claim 1 relates to compounds defined by reference to a desirable characteristic or property, namely by their ability to inhibit c-Kit signalling pathway or by their ability to inhibit type I sigma receptor signalling pathway. Furthermore, claims 6-9 relate to compounds defined by reference to a desirable characteristic or property, namely by their ability to modulate KSHV replication or to modulate Kaposi sarcoma.

The claims cover all compounds having this characteristic or property, whereas the application provides support within the meaning of Article 84 EPC and/or disclosure within the meaning of Article 83 EPC for only a very limited number of such compounds.

In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Independent of the above reasoning, the claims also lack clarity (Article 84 EPC).

An attempt is made to define the compounds by reference to a result to be achieved. Again, this lack of clarity in the present case is such as to render a meaningful search over the whole of the claimed scope impossible. Consequently, the search has been carried out for those parts of the claims which appear to be clear, supported and disclosed, namely those parts relating to the compounds explicitly mentioned in claim 10 (namely: daunorubicin, doxorubicin, interferon alpha, a retinoid or taxol), and Haloperidol, Ht-31 and STI 571 (as mentioned in the examples of the present application).

Moreover, present claim 3 relates to a product defined by reference to a desirable characteristic or property, namely "nucleic acid encopding a probe to hybridize with one or more of the genes listed in table 2".

The claims cover all products having this characteristic or property, whereas the application provides support within the meaning of Article 84 EPC and/or disclosure within the meaning of Article 83 EPC for only a very limited number of such products. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Independent of the above reasoning, the claims also lack clarity (Article 84 EPC). An attempt is made to define the products by reference to a result to be achieved. Again, this lack of clarity in the present case is such as to render a meaningful search over the whole of the claimed scope impossible. Consequently, the search has been carried out for those parts of the claims which appear to be clear, supported and disclosed, namely those parts relating to the microarray as described on p 40 line 18 - p 41 line 10 of the present application.

专利名称(译)	KSHV感染的基因表达谱及其治疗方法		
公开(公告)号	EP1307539A4	公开(公告)日	2004-04-28
申请号	EP2001970530	申请日	2001-08-01
[标]申请(专利权)人(译)	奥索 - 麦克尼尔药品公司		
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[标]发明人	LUUKKONEN MATTIAS MOSES ASHLEE FRUEH KLAUS NELSON JAY BELL YOLANDA HEINRICH MICHAEL SIMMEN KENNETH		
发明人	LUUKKONEN, MATTIAS MOSES, ASHLEE FRUEH, KLAUS NELSON, JAY BELL, YOLANDA HEINRICH, MICHAEL SIMMEN, KENNETH		
IPC分类号	G01N33/53 A61K31/00 A61K31/07 A61K31/337 A61K31/704 A61K38/21 A61K45/00 A61K45/06 A61P31/22 C12M1/00 C12N15/09 C12Q1/02 C12Q1/68 C12Q1/6837 C12Q1/6883 G01N21/77 G01N21/78 G01N33/58 G01N37/00 G06Q50/22 A61K47/48 A61K38/19 A61K31/203 A61K38/16 A61K31/445 A61K31/55 B01J19/00 A61P35/00		
CPC分类号	C12Q1/6883 A61K31/00 A61K31/337 A61K31/704 A61K38/212 A61K45/06 C12Q1/6837 C12Q2600/158 G06Q50/22 Y02A90/22 A61K2300/00		
代理机构(译)	MERCER，CHRISTOPHER PAUL		
优先权	60/222162 2000-08-01 US		
其他公开文献	EP1307539A2		
外部链接	Espacenet		

摘要(译)

本发明利用核酸微阵列技术鉴定在KSHV生命周期的潜伏期和裂解期期间发生的宿主内皮细胞转录模式的变化。随后抑制在裂解循环期间上调的一些基因的产生或活性，并且显示两个这样的靶标在晚期病毒基因的表达中起作用。使用这种组合方法，我们已经确定了以前未知对KSHV感染重要的细胞途径，并且提供了由此发现的新型抗病毒方法的效率的证据。此外，本发明鉴定了多种内皮细胞基因和途径，其涉及多种内皮细胞介导的活性，包括血管生成和转化。