Europäisches Patentamt
European Patent Office
Office européen des brevets

SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application Number
EP 14 88 4539

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	NIEWOEHNER JENS ET AL: "Increased Brain Penetration and Potency of a Therapeutic Antibody Using a Monovalent Molecular Shuttle", NEURON, CELL PRESS, US, vol. 81, no. 1, 8 January 2014 (2014-01-08), pages 49-60, XP028813101, ISSN: 0896-6273, DOI: 10.1016/J.NEURON.2013.10.061 * the whole document *	1-16	INV. C07K16/28 A61K39/395 A61K49/00 C07K16/46 C07K17/00 C12N15/13 G01N33/53
A	WO 2011/066721 A1 (UNIV HONG KONG [CN]; ZHANG MEIYUN [CN]) 9 June 2011 (2011-06-09) * the whole document *	15	
T	STANIMIROVIC DANICA ET AL: "Engineering and pharmacology of blood-brain barrier-permeable bispecific antibodies", ADVANCES IN PHARMACO, ELSEVIER, USA, vol. 71, 1 January 2014 (2014-01-01), pages 301-335, XP009188677, ISSN: 1557-8925, DOI: 10.1016/BS.APHA.2014.06.005 * the whole document *		TECHNICAL FIELDS SEARCHED (IPC) C07K C12N G01N A61K
T	HADASSAH SADE ET AL: "A Human Blood-Brain Barrier Transcytosis Assay Reveals Antibody Transcytosis Influenced by pH-Dependent Receptor Binding", PLOS ONE, vol. 9, no. 4, 30 April 2014 (2014-04-30), page e96340, XP055221844, DOI: 10.1371/journal.pone.0096340 * the whole document *		

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search	Date of completion of the search	Examiner
The Hague	14 September 2017	Smalt, Rolf

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 (P04C04)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 14 88 4539

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.

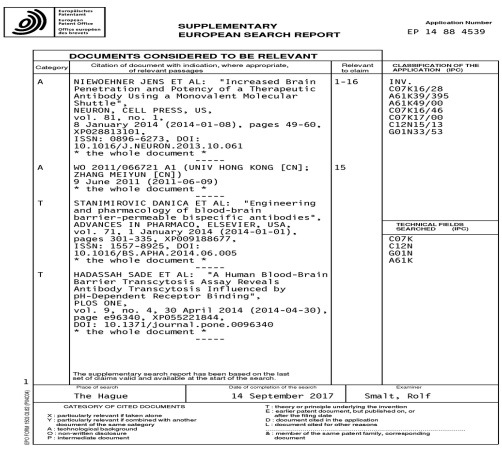
14-09-2017

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2011066721 A1	09-06-2011	CN 102753581 A	24-10-2012
		EP 2507263 A1	10-10-2012
		US 2011135663 A1	09-06-2011
		WO 2011066721 A1	09-06-2011

专利名称(译)	胰岛素样生长因子1受体特异性抗体及其用途		
公开(公告)号	EP3114140A4	公开(公告)日	2017-10-25
申请号	EP2014884539	申请日	2014-12-04
[标]申请(专利权)人(译)	加拿大国家研究委员会		
申请(专利权)人(译)	加拿大国家研究委员会的		
当前申请(专利权)人(译)	加拿大国家研究委员会的		
[标]发明人	STANIMIROVIC DANICA KEMMERICH KRISTIN HAQQANI ARSALAN S SULEA TRAIAN ARBABI GHAHROUDI MEHDI MASSIE BERNARD GILBERT RENALD		
发明人	STANIMIROVIC DANICA KEMMERICH KRISTIN HAQQANI, ARSALAN S. SULEA, TRAIAN ARBABI-GHAHROUDI, MEHDI MASSIE BERNARD GILBERT RÉNALD		
IPC分类号	C07K16/28 A61K39/395 A61K49/00 C07K16/46 C07K17/00 C12N15/13 G01N33/53		
CPC分类号	A61K47/6849 A61K49/0002 A61K2039/505 A61K47/6811 C07K16/2863 C07K16/465 C07K2317/22 C07K2317/569 C07K2317/64 C07K2317/77 C07K2317/92 C07K2317/94 G01N33/74 G01N2333/71 A61K49/0058 C07K2317/90 G01N33/68 C07K2317/24 C07K2317/34 C07K2317/35 C07K2317/565 G01N33/57492 G01N2333/72 G01N2570/00 G01N2800/28		
优先权	61/948831 2014-03-06 US		
其他公开文献	EP3114140A1 EP3114140B1		
外部链接	Espacenet		

摘要(译)

血脑屏障（BBB）可防止大于500道尔加仑的分子从血液转移到大脑。受体介导的转胞吞作用（RMT）促进跨特定分子的BBB的转运，所述特定分子结合形成BBB的脑内皮细胞上的受体。鉴定了通过RMT转移BBB的胰岛素样生长因子1受体（IGF1R）结合抗体或其片段。抗体或片段用于通过BBB递送货物分子，其中货物分子可以是治疗剂或可检测剂。抗体是骆驼科动物VHH，通过用933个氨基酸的IGF1R多肽免疫美洲驼制备。还产生骆驼科动物VHH的人源化形式。



SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application Number EP 14 88 4539

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	NIEWOEHNER JENS ET AL: "Increased Brain Penetration and Potency of a Therapeutic Antibody Using a Monovalent Molecular Shuttle", NEURON, CELL PRESS, US, vol. 81, no. 1, 8 January 2014 (2014-01-08), pages 49-60, XP028813101, ISSN: 0896-6273, DOI: 10.1016/J.NEURON.2013.10.061 * the whole document *	1-16	INV. C07K16/28 A61K39/395 A61K49/00 C07K16/46 C07K17/00 C12N15/13 G01N33/53
A	WO 2011/066721 A1 (UNIV HONG KONG [CN]; ZHANG MEIYUN [CN]) 9 June 2011 (2011-06-09) * the whole document *	15	
T	STANIMIROVIC DANICA ET AL: "Engineering and pharmacology of blood-brain barrier-permeable bispecific antibodies", ADVANCES IN PHARMACO, ELSEVIER, USA, vol. 71, 1 January 2014 (2014-01-01), pages 301-335, XP009188677, ISSN: 1557-8925, DOI: 10.1016/BS.APHA.2014.06.005 * the whole document *		TECHNICAL FIELDS SEARCHED (IPC) C07K C12N G01N A61K
T	HADASSAH SADE ET AL: "A Human Blood-Brain Barrier Transcytosis Assay Reveals Antibody Transcytosis Influenced by pH-Dependent Receptor Binding", PLOS ONE, vol. 9, no. 4, 30 April 2014 (2014-04-30), page e96340, XP055221844, DOI: 10.1371/journal.pone.0096340 * the whole document *		

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search	Date of completion of the search	Examiner
The Hague	14 September 2017	Smalt, Rolf

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 (P04C01)