



(11) **EP 1 953 551 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
18.03.2009 Bulletin 2009/12

(51) Int Cl.:
G01N 33/53 (2006.01) **G01N 33/543** (2006.01)
G01N 33/567 (2006.01) **C07K 16/00** (2006.01)
A61K 39/395 (2006.01)

(43) Date of publication A2:
06.08.2008 Bulletin 2008/32

(21) Application number: **08150151.2**

(22) Date of filing: **03.12.2003**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR
Designated Extension States:
AL LT LV MK

(72) Inventors:
• **Hammond, David**
Laytonville, MD 20882 (US)
• **Lathrop, Julia T.**
Falls Church, VA 22046 (US)
• **Cervenakova, Larisa**
Rockville, MD 20850 (US)
• **Carbonell, Ruben G.**
Raleigh, NC 27612 (US)

(30) Priority: **03.12.2002 US 430423 P**

(74) Representative: **Hutter, Anton et al**
AdamsonJones
BioCity Nottingham
Pennyfoot Street
Nottingham
NG1 1GF (GB)

(62) Document number(s) of the earlier application(s) in accordance with Art. 76 EPC:
03808431.5 / 1 573 323

(71) Applicants:
• **Pathogen Removal and Diagnostic Technologies, Inc.**
Wilmington, DE 19801 (US)
• **NORTH CAROLINA STATE UNIVERSITY**
Raleigh, NC 27695-8210 (US)

(54) **Prion protein ligands and methods of use**

(57) Ligands that bind to prion proteins and methods for using the ligands for detecting or removing a prion protein from a sample, such as a biological fluid or an environmental sample. The ligands are capable of binding to one or more forms of prion protein including cellular prion protein (PrP^C), infectious prion protein (PrP^{Sc}), and recombinant prion protein (PrPr). Prions from various species, including humans and hamsters, are bound by the ligands. Also provided is a method of treating or retarding the development of a prion-associated pathology in a subject.

Bead Bound PrP

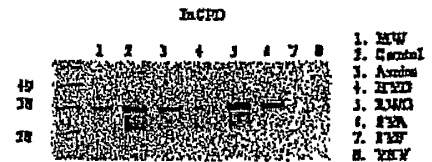
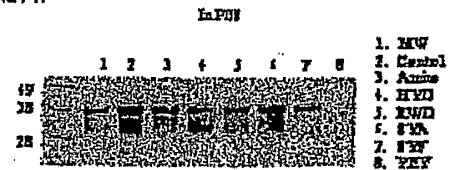


FIGURE 2



EUROPEAN SEARCH REPORT

Application Number
EP 08 15 0151

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	KOBAYASHI I ET AL: "RELATIVE RATES OF MONO IODO TYROSINE AND DI IODO TYROSINE LIBERATION DURING ENZYMATIC HYDROLYSIS OF IODINATED DI PEPTIDES AND TRI PEPTIDES" ENDOCRINOLOGY, vol. 92, no. 6, 1973, pages 1612-1616, XP009111373 ISSN: 0013-7227 * page 1612, left-hand column, paragraph 2 - right-hand column, paragraph 3 *	1-3,13,14	INV. G01N33/53 G01N33/543 G01N33/567 C07K16/00 A61K39/395
X	WO 01/81367 A (UNIV GENEVE [CH]; ROSE KEITH [CH]; VILLAIN MATTEO [CH]; VIZZAVONNA JEA) 1 November 2001 (2001-11-01) * example 4 *	1-3,13,14	
D,A	WO 01/77687 A (V.I TECHNOLOGIES, INC; HAMMOND, DAVID, J; WILTSHIRE, VITE, ROSE; CARBO) 18 October 2001 (2001-10-18) * page 8, line 25 - line 30 * * page 14, line 20 - page 16, line 18 * * claims 27-29,40,41,45-47 *	1-14	
			TECHNICAL FIELDS SEARCHED (IPC)
			G01N A61K C07K
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 2 February 2009	Examiner Fleitmann, J
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	

9
EPO FORM 1503 03/82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.

EP 08 15 0151

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.

02-02-2009

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 0181367 A	01-11-2001	AU 4862801 A	07-11-2001
		CA 2406721 A1	01-11-2001
		EP 1274722 A2	15-01-2003
		US 2008194872 A1	14-08-2008
		US 2003135031 A1	17-07-2003

WO 0177687 A	18-10-2001	AU 5135801 A	23-10-2001
		CA 2405568 A1	18-10-2001
		EP 1272509 A2	08-01-2003
		JP 2003530554 T	14-10-2003
		US 2004186273 A1	23-09-2004

专利名称(译)	朊蛋白配体和使用方法		
公开(公告)号	EP1953551A3	公开(公告)日	2009-03-18
申请号	EP2008150151	申请日	2003-12-03
[标]申请(专利权)人(译)	病原体切除与诊断科技公司 北卡罗莱纳州立大学		
申请(专利权)人(译)	病原拆卸和诊断技术, INC. 北卡罗莱纳州立大学		
当前申请(专利权)人(译)	病原拆卸和诊断技术, INC. 北卡罗莱纳州立大学		
[标]发明人	HAMMOND DAVID LATHROP JULIA T CERVENAKOVA LARISA CARBONELL RUBEN G		
发明人	HAMMOND, DAVID LATHROP, JULIA T. CERVENAKOVA, LARISA CARBONELL, RUBEN G.		
IPC分类号	G01N33/53 G01N33/543 G01N33/567 C07K16/00 A61K39/395 C07K5/083 C07K5/087 C07K5/093 C07K5/097 C07K7/06 C07K14/47 C07K16/18 G01N33/68		
CPC分类号	A61P25/00 C07K5/0808 C07K5/081 C07K5/0812 C07K5/0819 C07K5/0821 C07K14/47 G01N33/6896 G01N2800/2828		
代理机构(译)	HUTTER, ANTON		
优先权	60/430423 2002-12-03 US		
其他公开文献	EP1953551B1 EP1953551A2		
外部链接	Espacenet		

摘要(译)

与朊病毒蛋白结合的配体和使用配体从样品(例如生物流体或环境样品)中检测或去除朊病毒蛋白的方法。配体能够结合一种或多种形式的朊病毒蛋白,包括细胞朊蛋白(PrP^c),感染性朊病毒蛋白(PrP^{sc})和重组朊病毒蛋白(PrP^r)。来自各种物种(包括人类和仓鼠)的朊病毒被配体结合。还提供了治疗或延迟受试者中朊病毒相关病理学发展的方法。

Bead Bound PrP

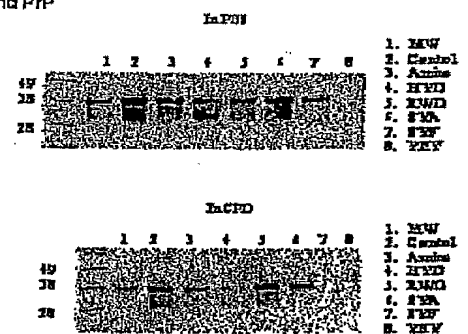


FIGURE 2