

(19) World Intellectual Property Organization  
International Bureau(43) International Publication Date  
11 August 2005 (11.08.2005)

PCT

(10) International Publication Number  
WO 2005/073731 A3

(51) International Patent Classification<sup>7</sup>: G01N 33/68

(21) International Application Number:  
PCT/GB2005/000328

(22) International Filing Date: 27 January 2005 (27.01.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
0402123.4 30 January 2004 (30.01.2004) GB

(71) Applicant (for all designated States except US): PROTHERICS MOLECULAR DESIGN LIMITED [GB/GB]; The Health Business and Technical Park, Runcorn, Cheshire WA7 4QF (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): DOWNHAM, Matthew, Richard [GB/GB]; The Health Business and Technical Park, Runcorn, Cheshire WA7 4QF (GB). GLOVER, James, Francis [GB/GB]; The Health Business and Technical Park, Runcorn, Cheshire WA7 4QF (GB). HANILY, Rachel, Emma [GB/GB]; The Health Business and Technical Park, Runcorn, Cheshire WA7 4QF (GB).

(74) Agent: COCKBAIN, Julian; Frank B. Dehn & Co., 179 Queen Victoria Street, London EC4V 4EL (GB).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## Published:

— with international search report

(88) Date of publication of the international search report:  
23 March 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/073731 A3

(54) Title: CJD PRION TESTING

(57) Abstract: The present invention provides an assay method for detecting infectious prion protein in a sample from a mammalian subject, said method comprising: obtaining a prion protein containing sample from said subject; contacting said sample with an agent which serves to digest non-infectious prion protein and to partially digest infected prion protein to yield a prion protein polypeptide residue; contacting the digested sample with an antibody capable of binding to a polypeptide having the amino acid sequence Vc (Gly-Gly-Gly-Trp)-Gly-Gln-Gly-Gly-R<sub>1</sub>-R<sub>2</sub>-His -R<sub>3</sub>-Gln-Trp-Asn-Lys-Pro-R<sub>4</sub>-Lys-Pro-Lys-Thr-R<sub>5</sub>-R<sub>6</sub>-Lys (-His-R<sub>7</sub>-Ala-Gly) (Vc) and detecting conjugates of said antibody and said prion protein polypeptide residue; characterized in that the detection of said conjugates comprises chemical, biological or biochemical amplification of a detectable species and detection of the amplified species.

# INTERNATIONAL SEARCH REPORT

Int. onal Application No  
PCT/GB2005/000328

**A. CLASSIFICATION OF SUBJECT MATTER**  
G01N33/68

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)  
G01N

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 practical, search terms used)

EPO-Internal, WPI Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 773 572 A (FISHLEIGH ET AL) 30 June 1998 (1998-06-30) the whole document -----	1-4
X	US 2002/164335 A1 (HARRIS DAVID A ET AL) 7 November 2002 (2002-11-07) the whole document -----	1-4
X	US 6 537 548 B1 (PRUSINER STANLEY B ET AL) 25 March 2003 (2003-03-25) the whole document -----	1-4

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

<sup>a</sup> Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority, claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"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

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

15 September 2005

Date of mailing of the international search report

16.12.2005

Name and mailing address of the ISA  
European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Lüdemann, S

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/GB2005/000328

### Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
  
3.  Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

### Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1.  As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
  
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
3.  As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
  
4.  No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-4

#### Remark on Protest

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-4

A assay method for detecting infectious prion protein in a sample from a mammalian subject, said method comprising the steps as listed in claim 1 and in particular being based on an antibody capable of binding to a polypeptide having the sequence as given in claim 1.

---

2. claim: 5

Use of a iPrP binding antibody in the manufacture of a medicament for use in the treatment of human TSE.

---

# INTERNATIONAL SEARCH REPORT

## Information on patent family members

In  National Application No

PCT/GB2005/000328

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
US 5773572	A	30-06-1998	AT	177754 T		15-04-1999
			AU	675053 B2		23-01-1997
			AU	3089292 A		28-06-1993
			CA	2124953 A1		10-06-1993
			DE	69228701 D1		22-04-1999
			DE	69228701 T2		29-07-1999
			DK	616613 T3		27-09-1999
			EP	0616613 A1		28-09-1994
			ES	2128362 T3		16-05-1999
			WO	9311155 A1		10-06-1993
			GR	3029740 T3		30-06-1999
			JP	7501798 T		23-02-1995
			NZ	246059 A		28-08-1995
			US	6379905 B1		30-04-2002
<hr/>						
US 2002164335	A1	07-11-2002	NONE			
<hr/>						
US 6537548	B1	25-03-2003	AU	7597701 A		13-02-2002
			CA	2416029 A1		07-02-2002
			EP	1368644 A2		10-12-2003
			JP	2004509858 T		02-04-2004
			WO	0210335 A2		07-02-2002
			US	2003143224 A1		31-07-2003
<hr/>						