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(54) Title: ANTI-AMYLOID ANTIBODIES, COMPOSITIONS, METHODS AND USES

(57) Abstract: The present invention relates to at least one anti-amyloid antibody, including isolated nucleic acids that encode at least one anti-amyloid antibody, amyloid, vectors, host cells, transgenic animals or plants, and methods of making and using thereof, including therapeutic compositions, methods and devices.



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## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US2004/009522

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC 7 C07K16/18 C12N15/13 C12N15/79 A61K39/395 C07K16/42  
G01N33/68 G01N33/577 A61P25/28

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)

IPC 7 C07K C12N A61K G01N A61P

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, BIOSIS, EMBASE, CHEM ABS Data, WPI Data, PAJ, Sequence Search

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/46237 A (NEURALAB LTD. & J. WYETH) 13 June 2002 (2002-06-13) examples claims figures 1,2,9,10 sequences 5,8,14,16	2,4,6,8, 20,29-37
X	WO 02/088307 A (ELI LILLY AND COMPANY) 7 November 2002 (2002-11-07) examples claims sequences 4,5	6,8,20, 29-37
X	EP 1 172 378 A (R. DODEL & Y. DU) 16 January 2002 (2002-01-16) examples claims	18,20, 26,29-31
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* 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

28 July 2005

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## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US2004/009522

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Q. FANG ET AL.: "VH and VL gene usage by anti-beta-amyloid autoantibodies in Alzheimer's disease: Detection of highly mutated V regions in both heavy and light chains." CLINICAL IMMUNOLOGY AND IMMUNOPATHOLOGY, vol. 75, no. 2, May 1995 (1995-05), pages 159-167, XP001030584 USA abstract page 160, left-hand column, line 1 - line 22	18
X	J. CAI ET AL.: "Screening and characterization of human single-chain Fv antibody against beta-amyloid peptide 40." NEUROREPORT, vol. 14, no. 2, 10 February 2003 (2003-02-10), pages 265-268, XP008050190 GB the whole document	18,36,37
A	WO 02/088306 A (ELI LILLY AND COMPANY) 7 November 2002 (2002-11-07) examples	1-38
A	WO 03/016467 A (ELI LILLY AND COMPANY) 27 February 2003 (2003-02-27) examples claims	1-38
A	F. GASKIN ET AL.: "Human antibodies reactive with beta-amyloid protein in Alzheimer's disease." JOURNAL OF EXPERIMENTAL MEDICINE, vol. 177, no. 4, April 1993 (1993-04), pages 1181-1186, XP001030627 Tokyo, Japan abstract page 1185, right-hand column, line 24 - line 28	28
A	F. KAMETANI ET AL.: "A monoclonal antibody Hy20-54-16-3L to lambda light chain of human immunoglobulin reacts with amyloid in Alzheimer's disease brain." NEUROSCIENCE LETTERS, vol. 117, no. 1/2, 1990, pages 62-67, XP009013620 Limerick, Ireland the whole document	28

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## INTERNATIONAL SEARCH REPORT

International Application No  
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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	J. DAVIES ET AL.: "Affinity improvement of single antibody VH domains: residues in all three hypervariable regions affect antigen binding." IMMUNOTECHNOLOGY, vol. 2, 1996, pages 169-179, XP004070292 abstract -----	2,6,10, 14
E	WO 2004/029630 A (JANSSEN PHARMACEUTICA N.V.) 8 April 2004 (2004-04-08)  sequences 5-12 claims -----	1-4, 9-16,29, 31,33, 34,36,37
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## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US2004/009522

### 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:  
  
Although claims 29-32 (partially, as far as an in vivo method is concerned) are directed to a method of treatment of, and a diagnostic method practised on the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
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:

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.:

#### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

## INTERNATIONAL SEARCH REPORT

 International Application No  
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