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(71) Applicant *(for all designated States except US)*: **ELAN PHARMACEUTICALS, INC.** [US/US]; 800 Gateway Boulevard, South San Francisco, California 94080 (US).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **JOHNSTON, Jennifer, A.** [US/US]; 311 Via Recodo, Mill Valley, California 94941 (US).

(74) Agents: **APPLE, Randolph, T.** et al.; Two Embarcadero Center, 8th Floor, San Francisco, California 94111-3834 (US).

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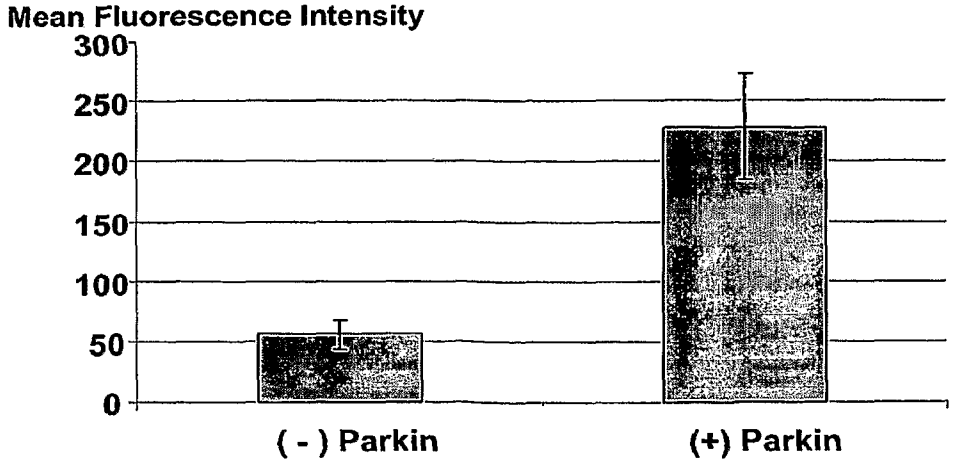
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Published:
— *with international search report*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ASSAY FOR PARKINSON'S DISEASE THERAPEUTICS AND ENZYMATICALLY ACTIVE PARKIN PREPARATIONS USEFUL THEREIN



(57) Abstract: The invention provides to assays for agent useful for treatment of Parkinson's Disease. Included are cell-based assays for agents that modulate the effect of Parkin proteins on proteasome function. The invention also provides recombinant, enzymatically active, Parkin protein produced in prokaryotic expression systems, such as E. coli cells. Methods for purification of Parkin protein are also provided.

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INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER
INV. G01N33/50 C12N15/10

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 C12N

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, Sequence Search, 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 2004/214763 A1 (CORTI OLGA [FR] ET AL) 28 October 2004 (2004-10-28)	15
A	abstract, paragraphs [0016] - [0018], example 12, particularly paragraphs [0250],[0251] ,claims 1 - 3	1-6
A	US 2005/042607 A1 (MIZUNO YOSHIKUNI [JP] ET AL) 24 February 2005 (2005-02-24) paragraphs [0027] - [0031], claims 23, 34	1-6
X	WO 02/079459 A (NSGENE AS [DK]; JENSEN POUL HENNING [DK]) 10 October 2002 (2002-10-10)	15
A	p 26, line 15 - p. 28, line 31, p. 44, lines 8 - 10, claims 70, 71	1-6

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[X] Further documents are listed in the continuation of Box C.

[X] See patent family 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

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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
30 October 2007	20/11/2007

Name and mailing address of the ISA/	Authorized officer
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	Hoesel, Heidi

Form PCT/ISA/210 (second sheet) (April 2005)

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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	BANDOPADHYAY ET AL: "Synphilin-1 and parkin show overlapping expression patterns in human brain and form aggresomes in response to proteasomal inhibition" NEUROBIOLOGY OF DISEASE, BLACKWELL SCIENCE, OXFORD, GB, vol. 20, no. 2, November 2005 (2005-11), pages 401-411, XP005118674 ISSN: 0969-9961 abstract	1-6
A	TANAKA KEIJI ET AL: "Parkin is linked to the ubiquitin pathway" JOURNAL OF MOLECULAR MEDICINE (BERLIN), vol. 79, no. 9, September 2001 (2001-09), pages 482-494, XP002440053 ISSN: 0946-2716 abstract	1-6
X	EP 1 416 272 A1 (RIKEN [JP]) 6 May 2004 (2004-05-06) paragraph [0048]	7-18
X	MATSUDA NORIYUKI ET AL: "Diverse effects of pathogenic mutations of parkin that catalyze multiple monoubiquitylation in vitro" JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 281, no. 6, 8 December 2005 (2005-12-08), pages 3204-3209, XP002453916 ISSN: 0021-9258 p. 3205, col. 1, lines 12 - 20, fig 1, cp. 3207, col. 2, lines 10 - 41 article was published on-line on 01.12.2005	17

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Box No. 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 No. 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. [X] As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search reportcovers 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 and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

[X] 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: 1-6

drug screening method involving exposure of mammalian cells that express Parkin protein to a test compound and assessment of the proteasome function in response to the test compound

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2. claims: 7-18

method of recombinantly producing His-tagged Parkin protein in a bacterial host.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2006/047515

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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US 2005042607 A1	24-02-2005	AT 343001 T	15-11-2006
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