

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
27 September 2007 (27.09.2007)

PCT

(10) International Publication Number
WO 2007/109441 A3

(51) International Patent Classification:
C12N 9/42 (2006.01) *C12N 15/11* (2006.01)
C12N 15/56 (2006.01) *C12N 5/10* (2006.01)

(21) International Application Number:
PCT/US2007/063710

(22) International Filing Date: 9 March 2007 (09.03.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/784,088 20 March 2006 (20.03.2006) US

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(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, GT, HN, HR, HU, ID, IL, IN, IS,
JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS,
LT, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ,
NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU,
SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR,
TT, TZ, UA, UG, US, UZ, VC, VN, 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, LV, MC, MT, 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
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments
- with sequence listing part of description published sepa-
rately in electronic form and available upon request from
the International Bureau

(88) Date of publication of the international search report:
13 March 2008

(54) Title: POLYPEPTIDES HAVING ENDOGLUCANASE ACTIVITY AND POLYNUCLEOTIDES ENCODING SAME

(57) Abstract: The present invention relates to isolated polypeptides having endoglucanase activity and isolated polynucleotides encoding the polypeptides. The invention also relates to nucleic acid constructs, vectors, and host cells comprising the polynucleotides as well as methods for producing and using the polypeptides.



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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2007/063710

A. CLASSIFICATION OF SUBJECT MATTER
 INV. C12N9/42 C12N15/56 C12N15/11 C12N5/10

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)
 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, Sequence Search, BIOSIS, EMBASE, 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	WO 2005/059084 A (NOVOZYMES AS [DK]; FESTERSEN RIKKE MONICA [DK]; VIKSOE-NIELSEN ANDERS) 30 June 2005 (2005-06-30) sequence 5	1-55
X	WO 03/062409 A (ROCHE VITAMINS AG [CH]; WU WENPING [CN]; PETERSSON DAN [DK]; FUGLSANG) 31 July 2003 (2003-07-31) sequences 1, 2	1-55

Further documents are listed in the continuation of Box C. 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	*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
E earlier document but published on or after the international filing date	*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
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)	*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.
O document referring to an oral disclosure, use, exhibition or other means	*Z* document member of the same patent family
P document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search 25 October 2007	Date of mailing of the international search report 28/01/2008
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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 Schmitz, Till
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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2007/063710

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	<p>DATABASE UniProt [Online] Archive 21 March 2006 (2006-03-21), "Putative uncharacterized protein." XP002456143 retrieved from EBI accession no. UNIPROT:Q2HF16 Database accession no. Q2HF16 the whole document</p> <p>-----</p>	1-55
X	<p>DATABASE UniProt [Online] Archive 07-FEB-2006, entry version 15 15 December 2003 (2003-12-15), "Putative uncharacterized protein NCU00762.1 (Probable cellulase)." XP002456144 retrieved from EBI accession no. UNIPROT:Q7SDR1 Database accession no. Q7SDR1 the whole document</p> <p>-----</p>	1-55
P,X	<p>ROSGAARD LISA ET AL: "Efficiency of new fungal cellulase systems in boosting enzymatic degradation of barley straw lignocellulose." BIOTECHNOLOGY PROGRESS 2006 MAR-APR, vol. 22, no. 2, March 2006 (2006-03), pages 493-498, XP002456128 ISSN: 8756-7938 the whole document</p> <p>-----</p>	1-55
X	<p>DALBOGE H ET AL: "A NOVEL METHOD FOR EFFICIENT EXPRESSION CLONING OF FUNGAL ENZYME GENES" MOLECULAR AND GENERAL GENETICS, SPRINGER VERLAG, BERLIN, DE, vol. 243, 10 May 1994 (1994-05-10), pages 253-260, XP000647716 ISSN: 0026-8925 the whole document</p> <p>-----</p>	1-55
X	<p>WO 03/000941 A (NOVOZYMES AS [DK]; LANGE LENE [DK]; WU WENPING [CN]; AUBERT DOMINIQUE) 3 January 2003 (2003-01-03) sequences 21, 41, 42 page 67, line 21 - line 28</p> <p>-----</p>	1-55
X	<p>SEN S ET AL: "CHARACTERISTICS OF THE CELLULASE PRODUCED BY MYCELIOPHTHORA-THERMOPHILA D-14" CANADIAN JOURNAL OF MICROBIOLOGY, vol. 28, no. 3, 1982, pages 271-277, XP008085182 ISSN: 0008-4166 the whole document</p> <p>-----</p>	1-55
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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2007/063710

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	MAHESHWARI R ET AL: "Thermophilic fungi: Their physiology and enzymes" MICROBIOLOGY AND MOLECULAR BIOLOGY REVIEWS, AMERICAN SOCIETY FOR MICROBIOLOGY, US, vol. 64, no. 3, September 2000 (2000-09), pages 461-488, XP002398222 ISSN: 1092-2172 page 472 - page 474 -----	
A	HENRIKSSON G ET AL: "A critical review of cellobiose dehydrogenases" JOURNAL OF BIOTECHNOLOGY, ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL, vol. 78, no. 2, March 2000 (2000-03), pages 93-113, XP004192121 ISSN: 0168-1656 the whole document -----	

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2007/063710

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. 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 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.:

1-55 (all partially)

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.
- 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: 1-55 (all partially)

Polypeptide according to SEQ ID NO:4. Furthermore the coding DNA, constructs, host cell, methods, mutant cells, transgenic plant, RNA relating thereto.

2. claims: 1-55 (all partially)

As invention 1, but relating to polypeptide according to SEQ ID NO:6.

3. claims: 1-55 (all partially)

As invention 1, but relating to polypeptide according to SEQ ID NO:8.

4. claims: 1-55 (all partially)

As invention 1, but relating to polypeptide according to SEQ ID NO:10.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2007/063710

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		EP 1421224 A2	26-05-2004
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