



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<b>(51) International Patent Classification <sup>6</sup> :</b> <b>C12N 15/55, 9/20, 1/15, 1/21 // (C12N 9/20, C12R 1:65),</b> <b>(C12N 1/21, C12R 1:19), (C12N 1/15, C12R 1:66)</b>		<b>A3</b>	<b>(11) International Publication Number:</b> <b>WO 97/27276</b>  <b>(43) International Publication Date:</b> 31 July 1997 (31.07.97)
<b>(21) International Application Number:</b> PCT/US97/00598  <b>(22) International Filing Date:</b> 21 January 1997 (21.01.97)  <b>(30) Priority Data:</b> 60/013,616      24 January 1996 (24.01.96)      US  <b>(71) Applicants:</b> NOVO NORDISK BIOTECH, INC. [US/US]; 1445 Drew Avenue, Davis, CA 95616-4880 (US). NOVO NORDISK A/S [DK/DK]; Novo Allé, DK-2880 Bagsværd (DK).  <b>(72) Inventors:</b> BERKA, Randy, M.; 3609 Modoc Place, Davis, CA 95616 (US). BOOMINATHAN, Karuppan, C.; 2233 Humboldt Avenue, Davis, CA 95616 (US). SANDAL, Thomas; Novo Nordisk A/S, Novo Allé, DK-2880 Bagsvæd (DK).  <b>(74) Agents:</b> ZELSON, Steve, T. et al.; Novo Nordisk of North America, Inc., Suite 6400, 405 Lexington Avenue, New York, NY 10174 (US).		<b>(81) Designated States:</b> AL, AU, BB, BG, BR, CA, CN, CU, CZ, EE, GE, HU, IL, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, TR, TT, UA, UZ, VN, ARIPO patent (KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>With international search report.</i>  <b>(88) Date of publication of the international search report:</b> 2 October 1997 (02.10.97)	
<b>(54) Title:</b> NUCLEIC ACIDS ENCODING POLYPEPTIDES HAVING ABSIDIA LIPASE ACTIVITY			
<b>(57) Abstract</b>  The present invention relates to isolated nucleic acid sequences encoding polypeptides having <i>Absidia</i> lipase activity. The invention also relates to nucleic acid constructs, vectors, and host cells comprising the nucleic acid sequences as well as methods for producing the polypeptides. The invention further relates to compositions comprising the polypeptides.			

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# INTERNATIONAL SEARCH REPORT

International Application No.  
PCT/US 97/00598

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 6 C12N15/55 C12N9/20 C12N1/15 C12N1/21 //(C12N9/20,  
C12R1:65), (C12N1/21, C12R1:19), (C12N1/15, C12R1:66)

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 6 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)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 3 634 195 A (MELACHOURIS NICHOLAS ET AL) 11 January 1972 cited in the application see the whole document ---	1-56
Y	LIPIDS, vol. 23, no. 7, 1988, pages 701-706, XP002035116 BOEL E. ET AL.: "Rhizomucor miehei triglyceride lipase is synthesized as a precursor." cited in the application see the whole document --- -/--	1-56

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

15 July 1997

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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

Mandl, B

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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	<p>CURRENT SCIENCE, vol. 50, no. 15, 1981, pages 680-682, XP002035117 SATYANARAYANA T. AND JOHRI B.N.: "Lipolytic activity of thermophilic fungi of paddy straw compost." cited in the application see table 1</p> <p style="text-align: center;">---</p>	1-56
A	<p>AGRIC. BIOL. CHEM., vol. 43, no. 10, 1979, pages 2125-2129, XP002035118 AISAKA K. AND TERADA: "Production of lipoprotein lipase and lipase by Rhizopus japonicus." cited in the application see table 1</p> <p style="text-align: center;">---</p>	1-56
A	<p>WO 94 01541 A (NOVONORDISK AS ;SVENDSEN ALLAN (DK); PATHAR SHAMKANT ANANT (DK); E) 20 January 1994 see page 18, line 22 - page 21, line 23</p> <p style="text-align: center;">-----</p>	39-56

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 97/00598

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 3634195 A	11-01-72	NONE	
WO 9401541 A	20-01-94	EP 0652945 A JP 7508416 T	17-05-95 21-09-95