



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<p>(51) International Patent Classification ⁷ : C12N 15/54, 15/55, 15/62, 15/82, 9/10, 9/16, 1/19, A01H 5/00, 5/10 // C12R 1:865</p>	A3	<p>(11) International Publication Number: WO 00/22141</p> <p>(43) International Publication Date: 20 April 2000 (20.04.00)</p>
<p>(21) International Application Number: PCT/EP99/07913</p> <p>(22) International Filing Date: 15 October 1999 (15.10.99)</p> <p>(30) Priority Data: 98203469.6 15 October 1998 (15.10.98) EP</p> <p>(71) Applicants (for all designated States except US): K.U. LEUVEN RESEARCH & DEVELOPMENT [BE/BE]; Groot Begijnhof, Benedenstraat 60, B-3000 Leuven (BE). INSTITUTO DE BIOTECNOLOGIA-UNAM [MX/MX]; AV. Universidad 2001, Col. Chamilpa, Cuernavaca, Morelos 62210 (MX).</p> <p>(72) Inventors; and (75) Inventors/Applicants (for US only): ITURRIAGA DE LA FUENTE, Gabriel [MX/MX]; Nueva Fancia 211-1, Col. Lomas de Cortes, Cuernavaca, Morelos 62240 (MX). THEVELEIN, Johan M. [BE/BE]; Groeneweg 46, B-3001 Heverlee (BE). VAN DIJCK, Patrick [BE/BE]; Lobbensestraat 119, B-3217 Zichem (BE). MASCORRO-GALLARDO, José Oscar [MX/MX]; Queretaro 126 Int. E-01, Co. Acapatzingo, Cuernavaca, Morelos 62440 (MX). VAN VAECK, Christophe [BE/BE]; Eksterstraat 20, B-3150 Haacht (BE).</p>	<p>(74) Agent: VAN SOMEREN, Petronella, Francisca, Hendrika, Maria; Arnold & Siedsma, Sweelinckplein 1, NL-2517 GK The Hague (NL).</p> <p>(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, 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, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).</p> <p>Published <i>With international search report.</i></p> <p>(88) Date of publication of the international search report: 27 July 2000 (27.07.00)</p>	
<p>(54) Title: SPECIFIC GENETIC MODIFICATION OF THE ACTIVITY OF TREHALOSE-6-PHOSPHATE SYNTHASE AND EXPRESSION IN A HOMOLOGOUS OR HETEROLOGOUS ENVIRONMENT</p>		
<p>(57) Abstract</p> <p>The present invention relates to a method for the preparation of a eukaryotic organism, for example selected from plants, animals and fungi, showing constitutive, inducible and/or organ specific expression of a specifically modified <u>TPS</u> gene, which comprises the steps of providing a <u>TPS</u> gene; designing a suitable modification to the <u>TPS</u> gene by aligning the gene with the corresponding gene of yeast and establishing which part of the gene extends beyond the 5' terminus of the yeast gene; deleting or inactivating a part of the N-terminal region of the <u>TPS</u> gene extending beyond the 5' terminus of the yeast gene, preferably the complete extending part thereof, in order to achieve an increased trehalose-6-phosphate synthase activity; cloning the thus modified gene into an expression vector under the control of a constitutive, inducible and/or organ-specific promoter; transforming a plant cell or tissue with the thus obtained expression vector; and regenerating a complete plant from the transformed plant cell or tissue.</p>		

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER					
IPC 7	C12N15/54	C12N15/55	C12N15/62	C12N15/82	C12N9/10
	C12N9/16	C12N1/19	A01H5/00	A01H5/10	//C12R1:865
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 C12N A01H

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.
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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	Date of mailing of the international search report
12 April 2000	03/05/2000

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 Kania, T
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