200003231-8 Ipos Copy

PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 :
C12N 15/29, A01H 5/00, 7/00

A1

(11) International Publication Number: **WO 99/50417**

(43) International Publication Date: 7 October 1999 (07.10.99)

(21) International Application Number: PCT/SE99/00543

(22) International Filing Date: 31 March 1999 (31.03.99)

(30) Priority Data:
9801129-9 31 March 1998 (31.03.98) SE

(71) Applicant *(for all designated States except US)*: A+ SCIENCE INVEST AB [SE/SE]; Kungportsavenyn 31–35, P.O. Box 3096, S–400 10 Göteborg (SE).

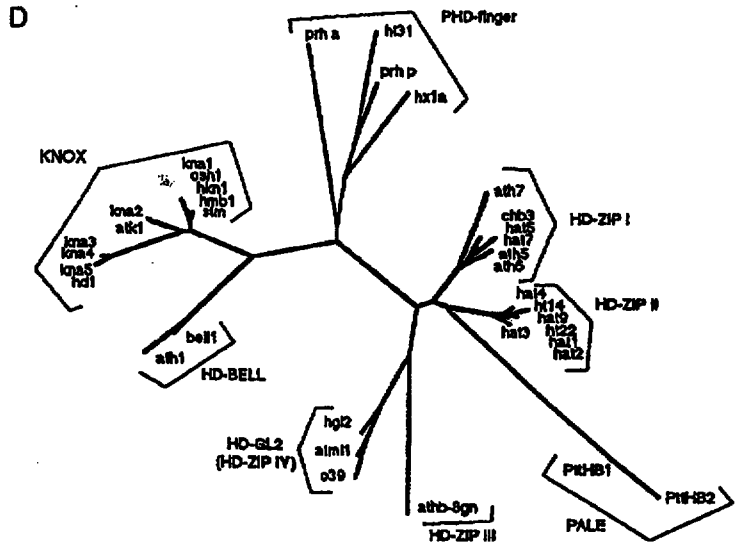
(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: OLSSON, Olof [SE/SE]; Långesandsvägen 33, S–430 90 Öckerö (SE). HERTZBERG, Magnus [SE/SE]; Tvistevägen 46:804, S–907 36 Umeå (SE).

(74) Agent: HOLMBERG, Martin; Göteborgs Patentbyrå Dahls AB, Karlsrovägen 2A, P.O. Box 606, S–182 16 Danderyd (SE).

(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, 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, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, 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).

Published
With international search report.

(54) Title: NOVEL SEQUENCE CLASS OF GENES, CORRESPONDING PROTEINS AND THE USE OF THE SAME



(57) Abstract

The properties of fibrous raw material can be modified already in the growing plant through the functional inclusion of a novel homeobox gene. More specifically, the present invention concerns the expression of homeobox genes in the cambial region of fibrous plants. In particular the present invention concerns the expression of homeobox genes in the xylem maturation zone during secondary phases of vascular development in fibrous plants. A novel class of homeobox genes is disclosed, together with the nucleotide squence and deduced amino acid sequence for five genes from three different plant species, belonging to said sequence class.