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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
21 December 2000 (21.12.2000)

PCT

(10) International Publication Number
WO 00/77230 A1

(51) International Patent Classification[7]: C12N 15/82

(21) International Application Number: PCT/SG99/00058

(22) International Filing Date: 11 June 1999 (11.06.1999)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant *(for all designated States except US)*: INSTITUTE OF MOLECULAR AGROBIOLOGY [SG/SG]; The National University of Singapore, 1 Research Link, Singapore 117604 (SG).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: CHEN, Zhi, Xian [CN/CN]; Cotton Research Institute, Yuncheng Shanxi 044000 (CN). ZHANG, Lianhui [AU/SG]; 360 Pasir Panjang, #03-11, Goldcoast Condominium, Singapore 118699 (SG).

(74) Agent: ELLA CHEONG & G. MIRANDAH; P.O. Box 0931, Raffles City, Singapore 911732 (SG).

(81) Designated States *(national)*: 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.

(84) Designated States *(regional)*: 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).

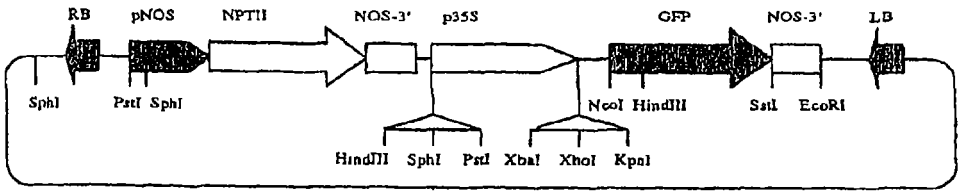
Published:
— *With international search report.*

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.



G00001

(54) Title: HIGH-EFFICIENCY *AGROBACTERIUM*-MEDIATED TRANSFORMATION OF COTTON USING PETIOLE EXPLANTS



(57) Abstract: A method is disclosed for producing a transgenic cotton plant by *Agrobacterium*-mediated transformation of petiole tissue. The method comprises the steps of (a) obtaining cotton petiole explants, (b) exposing the petiole explants to a culture of *Agrobacterium tumefaciens* that harbors a vector comprising an exogenous gene and a selectable marker, the *Agrobacterium* being capable of effecting the stable transfer of the exogenous gene and selection agent resistance gene to the genome of the cells of the petiole explant, (c) culturing the petiole explants to induce callus formation, (d) selecting transformed callus that expresses the exogenous gene, (e) culturing the selected callus in suspension culture to induce formation of embryoids, (f) regenerating the embryoids into whole transgenic cotton plants.

WO 00/77230 A1



162162