9804104-9
IPOS copy.

9804109[4]-9

PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification [6]:
C12N 15/63, 15/79, 15/82

A1

(11) International Publication Number: WO 97/30162

(43) International Publication Date: 21 August 1997 (21.08.97)

(21) International Application Number: PCT/AU97/00089

(22) International Filing Date: 19 February 1997 (19.02.97)

(30) Priority Data:
PN 8161 19 February 1996 (19.02.96) AU

(71) Applicant (*for all designated States except US*): FORBIO RESEARCH PTY. LTD. [AU/AU]; 50 Meiers Road, Indooroopilly, QLD 4068 (AU).

(72) Inventors; and
(75) Inventors/Applicants (*for US only*): TEASDALE, Robert, Dixon [AU/AU]; 33 Maculata Drive, Chapel Hill, QLD 4069 (AU). MOURADOV, Aidyn [AU/AU]; 4 Eversden Street, Kenmore, QLD 4069 (AU). SOUTHERTON, Simon, George [AU/AU]; 1 Castlewood Court, Samford, QLD 4520 (AU). SAWBRIDGE, Timothy, Ivor [AU/AU]; Unit 1, 142 Carmody Road, St Lucia, QLD 4067 (AU).

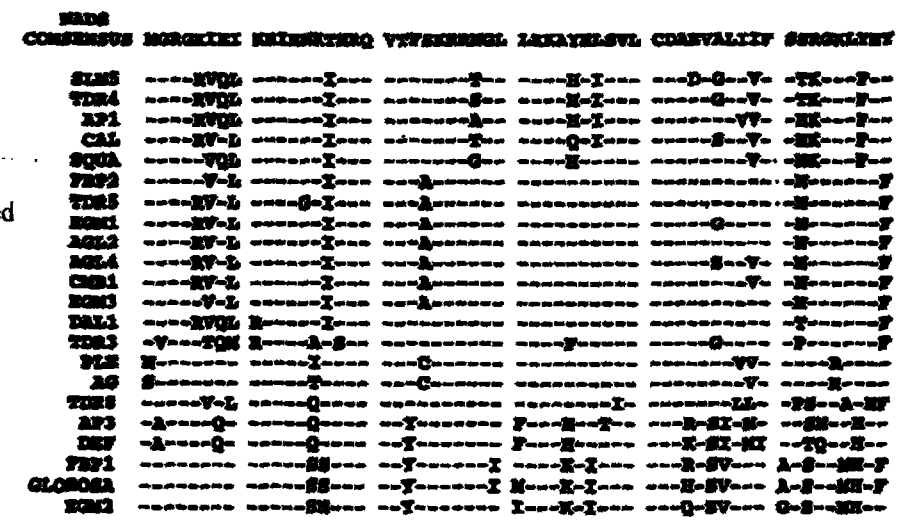
(74) Agent: PIZZEYS PATENT AND TRADE MARK ATTORNEYS; Level 6, 444 Queen Street, Brisbane, QLD 4000 (AU).

(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, 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, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, 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).

Published
With international search report.

REPLACED SHEETS SG
Description : paged 1-20, 22-27, 29-33, 34-37 to paged
Claim(s) : paged 38 to paged 44
Drawing(s) : paged 1/37 to paged 37/37
Abstract : paged 45 to paged
DATE OF RECEIPT

(54) Title: REGULATION OF GENE EXPRESSION IN EUKARYOTES



This Sheet Has Been Replaced

(57) Abstract

There is provided a method of regulating a eukaryotically active gene, comprising transforming a cell with a transformation cassette expressing a modulator gene product regulating the eukaryotically gene or its product and a further gene product regulating said modulator gene or its product, the promoters of two of said gene, modulator gene and further genes being selected from inducible promoters and developmental promoters for the same or complementary tissues. The lethal gene expressing barnase, a ribonuclease of *B. amiloliquefaciens*, is placed under the control of a tissue specific promoter, such as those derived from PrMADS1, 2 or 3 of *Pinus radiata* or EGM1, 2 or 3 of *Eucalyptus grandis*. The same tissue specific promoter is used to express LacIq gene, a repressor for barnase (barstar) being promoted by a modified 35s RNA CaMV promoter including the lac operon. The cassette is used to transform plant cells for regeneration into plants expressing the barnase in the target tissues with improved specificity and reduced promoter leakage.