

CORRECTED VERSION

(19) World Intellectual Property  
Organization  
International Bureau



WIPO | PCT



(10) International Publication Number  
**WO 2015/187674 A8**

(43) International Publication Date  
**10 December 2015 (10.12.2015)**

- (51) **International Patent Classification:**  
C12N 15/63 (2006.01) C12N 15/74 (2006.01)  
C12N 15/82 (2006.01)
- (21) **International Application Number:**  
PCT/US2015/033753
- (22) **International Filing Date:**  
2 June 2015 (02.06.2015)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**  
62/006,557 2 June 2014 (02.06.2014) US
- (71) **Applicant:** UNIVERSITY OF TENNESSEE RESEARCH FOUNDATION [US/US]; 600 Henley Street, Ut Conference Center, Suite 211, Knoxville, TN 37996-4122 (US).
- (72) **Inventors:** STEWART, C., Neal, Jr.; 1600 Wheaton Place, Knoxville, TN 37919 (US). WILLIS, Jonathan, D.; 1433A Cornelia Street, Knoxville, TN 37917 (US). BURRIS, Jason; 8025 Phyllis Lane, Knoxville, TN 37938 (US). MAZAREL, Mitra; 421 Anteelah Trail, Knoxville, TN 37919 (US).
- (74) **Agents:** EISENSCHENK, Frank, C. et al.; Saliwanchik, Lloyd & Eisenschenk, P.O. box 142950, Gainesville, FL 32614-2950 (US).
- (81) **Designated States** (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
- (84) **Designated States** (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).
- Published:**  
— with international search report (Art. 21(3))
- (48) **Date of publication of this corrected version:**  
29 December 2016
- (15) **Information about Correction:**  
see Notice of 29 December 2016



WO 2015/187674 A8

(54) **Title:** METHODS OF PLANT TRANSFORMATION USING TRANSFORMABLE CELL SUSPENSION CULTURE AND USES THEREOF

(57) **Abstract:** The subject invention pertains to a method of rapidly transforming a plant with a gene of interest. The method of the current invention comprises the steps of a) preparing a bacterial culture, wherein the bacterial culture comprises a vector containing the gene of interest, b) producing a plant cell suspension culture from the plant, c) contacting the plant cell suspension culture with the bacterial culture to produce a plant cell transformed with the gene of interest from the plant cell suspension culture, and e) producing a plant from the plant cell transformed with the gene of interest. The method of the current invention can be designed for a high throughput transformation and screening of a plant with a plurality of genes of interest and screening the plants to identify and obtain plants having desirable characteristics.