

**CHAPTER SIX**  
**LITERATURE CITED**

- Adkins S. W.; Kunanuvatchaidach R.; Godwin I. D (1995).** Somaclonal variation in rice: drought tolerance and other agronomic characters. *Aust J Bot* 43: 201–209.
- Ahmadabadi, .S.R., u .f , R Bock (2007).** A leaf-based regeneration and transformation system for maize (*Zea mays* L.). *Transgenic Res.* 16:437-448
- Al-Abed, S. Redrabhatla, R .Talla, .S., Goldman (2006).** Split-seed: a new tool for maize researchers. *Planta* 223: 1355-1360
- Altpeter, F. Vasil V, Srivastava V, Stoger, E. Vasil, I.K (1996).** Accelerated production of transgenic wheat (*Triticum aestivum* L.) plants. *Plant Cell Rep* 16 :12–17
- Arantes, V. Saddler, J.N (2010).** Access to cellulose limits the efficiency of enzymatic hydrolysis: the role of amorphogenesis. *Biotechnol. Biofuels*, 3: 1–11
- Armaleo, D. Y .e. G.N., Klein, T.M, Shark, K.B Sanford, J.C., Johnston S.A (1990)** *Curr Gen* 17:97-103.
- Armstrong, .C, Green .C. (1985)** establish and maintenance of friable, embryogenic maize callus and the involvement of L-proline. *Planta* 164: 207-214
- Armstrong, C. L, Green, C. E, Phillips, R. L, (1991).** Development and availability of germplasm with high type II culture formation response. *Maize Genet. Coop. Newsl.*, 65: 92–93
- Armstrong, C.L., J. ROMERO -SEVERSON, T.K. HODGES, (1999)** Improved tissue culture response of an elite maize inbred through backcross breeding, and identification of chromosomal regions important for regeneration by RFLP analysis. *Theor. Appl. Genet.* 84: 755-762
- Atanassova R, Favet N, Matz F, Chabbert B, Tollier MT, Monties, B. Fritig, B, Legrand M.,(1995).** Altered lignin composition in transgenic tobacco expressing O-methyltransferase sequences in sense and antisense orientation. *Plant J.*, 8: 465–477.
- Aulinger I, Peter S, Schmid J, Stamp P (2003)** Gametic embryos of maize as a target for biolistic transformation: comparison to immature zygotic embryos *Plant Cell Rep* 21:585–591 DOI 10.1007/s00299-002-0556-7.
- Bailey M.R., S.L. Woodard, E. Callaway, K. Beifuss, M. Magal-Lanes-Lunback, J.R. Lane, M.E. Horn, H. Mallubhotla, D.D. Delaney, M. Ward, F. Van Gastel, J.A. Howerd, E.E. Hood,(2004).** Improved

recovery of active recombinant laccase from maize seed. *Appl. Microbiol. Biotechnol.* 63:390-397.

- Barrière Y, Ralph J, Méchin V, Guillaumie S, Grabber JH, Argillier O, Chabbert B, Lapierre C. (2004).** Genetic and molecular basis of grass cell wall biosynthesis and degradability. II. Lessons from brown-midrib mutants. *C. R. Biol.*, 327(9-10): 847–860
- Barro F, Rook L, Bekes F, Gras P, Tatham AS, Fido R, Lazzeri PA, Shewry PR, Barcelo P (1997)** Transformation of wheat with high molecular weight subunit genes results in improved functional properties. *Nat Biotechnol* 15 :1295–1299
- Baucher M, Chognot E, Chabbert, B, Tollier, MT, Petit-Conil, M, Leple JC, Pilate, G, Cornu, D, Monties B, Montagu MV, Inze D, Boerjan, W, Jouanin L. ,(1995).** A novel lignin in poplar trees with a reduced caffeic acid/5-hydroxyferulic acid O-methyltransferase activity. *Plant J.*, 8: 855–864
- Baucher M, Halpin C, Petit-Conil M, Boerjan W.(2003).** Lignin genetic engineering and impact on pulping. *Crit. Rev. Biochem. Mol. Biol.*,38: 305-350.
- Becker D, Brettschneider R, Lorz H (1994)** Fertile transgenic wheat from microprojectile bombardment of scutellar tissue. *Plant J* 5 :299–307
- Ben-Hayyim G.( 1987)** Relationship between salt tolerance and resistance to polyethylene glycol-induced water stress in cultured citrus cells. *Plant Physiol* 85: 430–433
- Bhojwani, S. S., Razdan, M. K. (1983).** *Plant tissue culture: Theory and practice: Developments in crop science.* Amsterdam: Elsevier.
- Binott, J.M., Songa, J., Ininda, E.M, Njagi, J, Machuka (2008).** Plant regeneration from immature zygotic embryos of Kenyan maize inbred lines and their respective single cross hybrids through somatic embryogenesis. *Afr. J. Biotechnol.* 7: 981
- Boerjan W, Ralph J, Baucher M, (2003)** Lignin biosynthesis. *Annu Rev Plant Biol* 54:519–546.
- Bohorova, B, Luna, RM, Briton, LD, Huerta, DA, Hoistington (1995).** Regeneration potential of tropical, subtropical, mid-altitude, and highland maize inbreds. *Maydica* 40: 275-281
- Brettschneider, R.; Becker, D. and Lorz, H. (1997)** Efficient transformation of scutellar tissue of immature maize embryos. *Theor. Appl. Genet.* 94:737–748.

- Bronsema FBF, Van Oostveen WJF, Van Lammeren AAM. (2001).** Influence of 2,4-D, TIBA and 3,5-D on the growth response of cultured maize embryos. *PlantCell Tiss. Org.*, 65(1): 45-56
- CARPit A, n. (1996)** Structure and biogenesis of the cell walls of grasses. *Ann. Rev. Plant Physiol. Plant Mol. Biol.* 47: 445-476.
- CARPit A, n. AnDMCCAnn, M. (2000)** The cell wall. In *Biochemistry and Molecular Biology of Plants*. Buchanan B.B., Gruissem, W., and Jones, R.L. (Eds) American Society of Plant Physiologists pp : 52-108.
- Carvalho ,N Bohorova ,PN Bordallo ,LL Abreu , FH Valicente ,W Bressan ,E Paiva (1997).** Type II callus production and plant regeneration in tropical maize genotypes. *Plant Cell Rep.*, 17: 73-76..
- Chaleff, R. S., Carlson, P. S. (1974)** Somatic cell genetics of higher plants. *Ann. Rev. Genet*8: 267-278
- Chang ML., Chen JC, Yeh CT, Chang MY, Liang CK, Chiu CT, LinDY, Liaw YF (2008)** Gene gun bombardment with DNA-coatedgold particles is a potential alternative to hydrodynamics-basedtransfection for delivering
- Chen F, Dixon RA,(2007)** Lignin modification improves fermentable sugar yieldsfor biofuel production. *Nat Biotechnol* 25:759–761
- Chen L, Marmey P, Taylor NJ, Bizard JP, EspinozaC, Cruz PD, Huet H, Zhang S,Kochko AD,Beachy RN, Fauquest CM. (1998).** Expressionand inheritance of multiple transgenes in rice plants. *Nat. Biotechnol.*, 16(11): 1060-1064
- CHIKWAMBAR., J. CUNNICK, D. HATHAWAY, J. MCMURRAY, H. MASON,K. WANG,( 2002).**a A functional antigen in a practical crop: LT-B producing maize protects mice against Escherichia coliheat labile enterotoxin (LT) and cholera toxin (CT). *Trans-genic Res.* 11:479-493.
- Christou P, McCabe DE, Swain WF (1988)** *Plant Physiol* 87:671-674.
- Chu CC, Wang CC, Sun CS, Hsn C, Yin KC, ChuCY, Bi FY. (1975).** Establishment of an efficient medium for anther culture of ricethrough comparative experiments on the nitrogen sources. *Sci. Sin.*, 18: 659-668.
- Chundawat, S.P., R. Vismeh, L.N. Sharma, J.F. Humpula,L. da Costa Sousa, C.K. Chambliss, A.D. Jones, V. Balan,and B.E. Dale.( 2010).** Multifaceted characterization of cellwall decomposition products formed during ammonia i berexpansion (AFEX) and dilute acid based pretreatments.*Bioresour. Technol.* 101:8429–8438. doi:10.1016/j.biortech.2010.06.027

- CoLeMAN, h.D, PARK, J.y, nAiR, R., ChAPPLe, C. AnDMAnsfiELD, s.D.(2008)**RNAi-mediated suppression of p-coumaroyl-CoA 3'-hydroxylase in hybrid poplar impacts lignin deposition and soluble secondary metabolism.Proceedings National Academy Sciences USA. 105: 4501-4506
- Collins, G. B., & Grosser, J. W. (1984).** Culture of embryos. In I. K. Vasil (Ed.), Cell culture and somatic cell genetics of plants (Vol. 1, pp. 241–257). New York: Academic Press.
- CONGER, B. V. - NOVAK, F. J. - AFZA, R. - ERDELSKY, K. (1987).** Somatic embryogenesis from cultured leaf segments of *Zea mays*
- Davey, M. R., Kumar, V., & Hammatt, N. (1994).** In vitro culture of legumes. In I. K. Vasil, & T. A. Thorpe (Eds.), Plant cell and tissue culture (pp. 313–329). Dordrecht, The Netherlands: Kluwer.
- Day, P. R. (1977)** Plant genetics: increasing crop yield. Science 197: 1334-1339; A re- view article.
- de O. Buanai na, M.M. (2009).** Feruloylation in grasses: Current and future perspectives. Mol. Plant 2:861–872. doi:10.1093/mp/ssp067.
- Debergh, P. (1994).** In vitro culture of ornamentals. In I. K. Vasil, & T. A. Thorpe (Eds.), Plant cell and tissue culture (pp. 561–573). Dordrecht, The Netherlands: Kluwer.
- Décima Oneto C, Bossio E, González G, Faccio P, Lewi D (2010)** High and low pressure gene gun devices give similar transformation efficiencies in maize calluses. Afr. J. Plant Sci., 4(7): 217-225.
- Denchev PD, Conger BV (1994)** Plant regeneration from callus cultures of switchgrass. Crop Sci 34:1623–1627
- D'Haljuin. K., Bonne, E., Bossut, M, De Beuc.kel M Leemans, J.,( 1992)** Transgenic maize plants by tissue electroporation. Plant Cell, 4:1495-1505.
- Dix, P. J. (1994).** Isolation and characterisation of mutant cell lines. In I. K. Vasil, & T. A. Thorpe (Eds.), Plant cell and tissue culture (pp. 119–138). Dordrecht, The Netherlands: Kluwer.
- DixonR.A., Chen, f., Guo, D. AnD koT A, P. (2001)** The Biosynthesis of Monolignols: A “Metabolic Grid” or Independent Pathway to Guaiacyl and Syringyl Units? Phytochemistry 57:1069-1084
- DOE , (2006).** US: Breaking the biological barriers to cellulosic ethanol: a joint research agenda. Edited by Houghton J, Weatherwax S, Ferrell J. Rockville, Maryland: US Department of Energy Office of Science

and Office of Energy Efficiency and Renewable Energy;  
[http://www1.eere.energy.gov/biomass/pdfs/technology\\_roadmap.pdf](http://www1.eere.energy.gov/biomass/pdfs/technology_roadmap.pdf).

- Doorselaere JV, Baucher M, Chognot E, Chabbert, B, Tollier, MT, Petit-Conil, M, Leple JC, Pilate, G, Cornu, D, Monties B, Montagu MV, Inze D, Boerjan, W, Jouanin L., (1995).** A novel lignin in poplar trees with a reduced caffeic acid/5-hydroxyferulic acid O-methyltransferase activity. *Plant J.*, 8: 855–864
- Doyle J.J. and Doyle J.L., (1990)** Isolation of plant DNA from fresh tissue. *Focus* 12:13-15.
- Du ,LY Xu ,GR Yu ,Y Wang ,CS Zhong (2007).** System establishment of maize immature zygotic embryos culture in vitro. *J. Maize Sci.* 15(2):73-75,78
- Duan X, Li X, Xue Q, Abo-El-Saad M, Xu D, Wu R., (1996).** Transgenic rice plants harbouring an introduced potato proteinase inhibitor II gene are insect resistant. *Nat. Biotechnol.*, 14: 494-498
- Dudits, D., Györgyey, J., Bögre, L., & Bakó, L. (1995).** Molecular biology of somatic embryogenesis. In T. A. Thorpe (Ed.), *In vitro embryogenesis in plants* (pp. 267–308). Dordrecht, The Netherlands: Kluwer.
- Duncan D. R.; Widholm J. M. (1989)** Differential response to potassium permanganate of regenerable and of non-regenerable tissue cell walls from maize callus cultures. *Plant Sci* 61: 91–103.
- Dunder, E.; Dawson, J.; Suttie, J. and Pace, G. (1995)** Maize transformation by microprojectile bombardment of immature embryos. In: Potrykus, I.; Spangenberg, G., eds. *Gene transfer to plants*. Berlin: Springer-Verlag; 127–138.
- Dutta Gupta S, Conger BV (1999)** Somatic embryogenesis and plant regeneration from suspension cultures of switchgrass. *Crop Sci* 39:243–247
- Dyer JM, Stymne S, Green AG, Carlsson AS (2008)** High-value oils from plants. *Plant J*, 54:640-655
- Eggeman, T., and R.T. Elander. (2005).** Process and economic analysis of pretreatment technologies. *Bioresour. Technol.* 96:2019–2025. doi:10.1016/j.biortech.2005.01.017
- El-Tayeb M. A.; Hassanein A. M. Germination; (2000),** seedling growth, some organic solutes and peroxidase expression of different *Vicia faba* lines as influenced by water stress. *Acta Agronomica Hungarica* 48: 11–20

- Endler A, Persson S,(2011)** Cellulose synthases and synthesis in Arabidopsis. Mol Plant 4:199–211
- Ethanol Across America, (2009).** Issue Brief: Converting Cellulose into Ethanol and Other Biofuels
- Fan L.; Linker R.; Shimon Gepstein S.; Tanimoto E.; Yamamoto R.;Neumann P. M.( 2006).** Progressive inhibition by water deficit of cellwall extensibility and growth along the elongation zone of maize roots is related to increased lignin metabolism and progressive stelar accumulation of wall phenolics. Plant Physiol 140: 603–612
- Fehér, A., & Dudits, D. (1994).** Plant protoplasts for cell fusion and direct DNA uptake: Culture and regeneration systems. In I. K. Vasil, & T. A. Thorpe (Eds.), Plant cell and tissue culture (pp. 71–118). Dordrecht, The Netherlands: Kluwer
- Finer JJ, Vain P, Jones MW, McMullen MD (1992)** Plant Cell Rep 11:323-328.
- Frame B. R .Drayton, P. R., Bagnali. SV,Lewna C Bullock. W. P.. Wilson. H. M., Dunwell, J M., Th son. J.A., Wang, K., (1994)** Production of fertile transgenic maize plants by silicon carbide whisker mediated transformation. Plant J., 6: 941 -948.
- Franke R, Humphreys JM, Hemm MR, Denault JW,Ruegger MO, Cusumano JC, Chapple C.,(2002).** The Arabidopsis REF8 gene encodes the 3-hydroxylase of phenylpropanoid metabolism. Plant J., 30: 33-45.
- fRAnke, R., heMM, M.R., DenAuL T, J.W., RueGGeR, M.o., huMPhReys, J.M., AnDChAPPLe, C. (2002)** Changes in secondary metabolism and deposition of an unusual lignin in the ref8 mutant of Arabidopsis. Plant J. 30: 47–59.
- Fromm M, Taylor LP,Walbot V .,(1985).** Expression of genes transferred into monocot and dicot plant cells by electroporation. Proc Natl Acad Sci USA;82:5824–8.
- Fu C, Mielenz JR, Xiao X, Ge Y, Hamilton CY, Rodriguez M Jr, Chen F,Foston M, Ragauskas AJ, Bouton J, Dixon RA, Wang Z-Y,(2011)** Genetic manipulation of lignin reduces recalcitrance and improves ethanol production from switchgrass. Proc Natl Acad Sci USA 108(9):3803–3808
- Fu C, Xiao X, Xi Y, Ge Y, Chen F, Bouton J, Dixon RA, Wang ZY,(2011)** Downregulation of cinnamyl alcohol dehydrogenase (CAD) leads to improved saccharification efficiency in switchgrass. BioEnergy Res 164– 4:153,

- Fukushima RS, Hartfield RD.,( 2004).** Comparison of acetyl bromide spectrophotometric method with other analytical methods for determining lignin concentration in forage samples. *Agric. Food Chem.*, 52: 3713-3720
- Furini ,DC Jewell (1994)** Somatic embryogenesis and plant regeneration from immature and mature embryos of tropical and subtropical Zea Mays L. genotypes. *Maydica* 39:155–164
- G, Cui H, Ye G, Xia Y, Sardana R, Cheng X, Li Y, Altosaar I, Shu Q.,( 2002).** Inheritance and expression of the cry1Ab gene in Bt (*Bacillus thuringiensis*) transgenic rice. *Theor. Appl. Genet.*, 104(4): 727–734
- Gautheret, R. J. (1985).** History of plant tissue and cell culture: A personal account. In I. K. Vasil (Ed.), *Cell culture and somatic cell genetics of plants* (Vol. 2, pp. 1–59). New York: Academic Press.
- Gilbert HJ. ,(2010).** The biochemistry and structural biology of plant cell wall deconstruction. *Plant Physiol.*, 153: 444–455.
- Gírio FM, Fonseca C, Carneiro F, Duarte LC, Marques S, Bogel-Lukasik R,(2010)** Hemicelluloses for fuel ethanol: a review. *Bioresour Technol*101:4775–4800
- Gordon-Kamm , W.J. , Spencer , T.M., Mangano , M.L. , Adams , T.R. , Daines , R.J. , Start , W.G. , O'Brien , J.V. , Chambers , S.A. , Whitney , J. , Adams , R. , Willetts , N.G. , Rice , T.B. , Mackey , C.J. , Krueger , R.W. , Kausch , A.P. , and Lemaux , P.G. (1990)** Transformation of maize cells and regeneration of fertile transgenic plants . *Plant Cell* 2 , 603 – 618
- Grabber JH, Mertens DR, Kim H, Funk C, Lu F, Ralph J,(2009)** Cell wall fermentation kinetics are impacted more by lignin content and ferulate cross-linking than by lignin composition. *J Sci Food Agric*89:122–129.
- Grabber JH., (2005).** How do lignin composition, structure, and Cross-linking affect degradability? A review of cell wall model studies. *Crop Sci.*, 45: 820-831
- Grabber, J.H., J. Ralph, R.D. Hatfield, and S. Quideau. (1997).** p-hydroxyphenyl, guaiacyl, and syringyl lignins have similar inhibitory effects on wall degradability. *J. Agric. Food Chem.* 45:2530–2532. doi:10.1021/jf970029v
- Grand C, Parmentier P, Boudet A, Boudet AM. ,(1985).** Comparison of lignins and of enzymes involved in lignification in normal and brown midrib (bm3) mutant. *Physiol. Veg.*, 23: 905–911

- Green C, Philips R (1975).** Plant regeneration from tissue culture of maize. *Crop Sci.*, 15, 417–421.
- Green CE, Armstrong CL, Anderson PC (1983)** In Downey K, Voellmy RW, Ahmad F, Schultz J, eds, *Advances in Gene Technology: Molecular Genetics of Plants and Animals*, Academic Press, New York, pp 147-157.
- Green C.E., R.L. Phillips, R.A. Kleese, (1974)** Tissue cultures of maize (*Zea mays* L.): initiation, maintenance and organic growth factors. *Crop Sci.* 14: 54-58.
- Gressel J. (2008)** Transgenics are imperative for biofuel crops. *Plant Science* 174: 246-263.
- Grevich JJ, Daniel H. ,( 2005).** Chloroplast genetic engineering: recent advances and future perspectives. *Crit. Rev. Plant Sci.*, 24: 83-107.
- Grosser, J. W. (1994).** In vitro culture of tropical fruits. In I. K. Vasil, & T. A. Thorpe (Eds.), *Plant cell and tissue culture* (pp. 475–496). Dordrecht, The Netherlands: Kluwer
- Guo, DG, Chen F, Wheeler J, Winder J, Selman S, Peterson M, Dixon RA. ,(2001).** Improvement of in-rumen digestibility of alfalfa forage by genetic manipulation of lignin O-methyltransferases. *Transgenic Res.*, 10(5): 457–464
- Haagen-Smit A.J., R. SIU, G. Wilson, (1945)** A method for the culturing of excised, immature corn embryos in vitro. *Science* 101: 234.
- Haberlandt, G. (1902).** Kulturversuche mit isolierten Pflanzenzellen. *Sitzungsber. Akad. Wiss. Wien., Math.-Naturwiss. Kl., Abt.*, 1(111), 69–92.
- Halpin, C.; Holt, K.; Chojecki, J.; Oliver, D.; Chabbert, B.;Monties, B.; Edwards, K.; Barakate, A.; Foxon, G, (1998)** . Brown-midrib maize (bml)sa mutation affecting the cinnamyl alcohol dehydrogenase gene.*Plant J.*1998, 14, 545-553
- HARMS C.T., H. LORZ, I. POTRYKUS, ( 1976 )** Regeneration of plantlets from callus cultures of *Zea mays* L. *Z. Pflanzenzuchtg.* 77:347-351
- Harry, I. S., & Thorpe, T. A. (1994).** In vitro culture of forest trees. In I. K. Vasil, & T. A. Thorpe (Eds.), *Plant cell and tissue culture* (pp. 539–560). Dordrecht, The Netherlands: Kluwer
- Herrera -Estrella, L.; Simpson, J. and Martineztrujillo, M. (2005)** Transgenic plants: an historical perspective.*Methods of Molecular Biology*, v.286, p.3-32

- Hertel TW, Golub AA, Jones AD, O'Hare M, Plevin RJ, Kammen DM, (2010).** Effects of US maize ethanol on global land use and greenhouse gas emissions: Estimating market-mediated responses. *BioScience* 60: 223-231.
- Heyser J. W.; Nabors M. W. (1981)** Growth, water content, and solute accumulation of two tobacco cell lines cultured on sodium chloride, dextran, and polyethylene glycol. *Plant Physiol* 68:1454–1459.
- Higuchi, T (1985)** . Biosynthesis of lignin. In *Biosynthesis and Biodegradation of Wood Components*; Higuchi, T., Ed.; Academic Press: Orlando, FL,; pp 141-160.
- HiL L, J., NeLs o n, E., Til m an, D., PoL As k y, S. et al. (2006)** Environmental, economic, and energetic costs and benefits of biodiesel and ethanol biofuels. *Proceedings of the National Academy of Sciences* 103(30): 11206-11210
- Himmel , M. E. , Ding SY, Johnson DK, Adney WS, Nimlos MR Brady JW, Foust TD, (2007)** Biomass recalcitrance: engineering plants and enzymes for biofuels production. *Science* 315:804-807
- Hinchee, M. A.W., Corbin, D. R., Armstrong, C. L., Fry, J. E., Sato, S. S., Deboer, D. L., Petersen, W. L., Armstrong, T. A., Connor-Ward, D. V., Layton, J. G., & Horsch, R. B. (1994).** Plant transformation. In I. K. Vasil, & T. A. Thorpe (Eds.), *Plant cell and tissue culture* (pp. 231–270). Dordrecht, The Netherlands: Kluwer.
- Hisano H, Nandakumar R, Wang Z-Y,(2009)** Genetic modification of lignin biosynthesis for improved biofuel production. *In Vitro Cell Dev Biol-Plant* 45:306–313
- Hodges, T.K., Kamo, K.K., Imbrie, C.W., and Becwar, M.R. (1986).** Genotype specificity of somatic embryogenesis and regeneration in maize. *Biofitechnol.* 4, 219-223.
- Hoffmann, L., besseau, s., Geoffroy, P., RitzenthALeR, C., Meyer, D., Lapierre, C., PoLLeT, b., Legr and, M.(2004)** Silencing of hydroxycinnamoyl-coenzyme A shikimate/ quinate hydroxycinnamoyl transferase affects phenylpropanoid biosynthesis. *Plant Cell* 16: 1446–1465
- Hoffmann, L., MAuRy, s., Martz, f., Geoffroy, P., and Legrand, M. (2003)** Purification, cloning, and properties of an acyltransferase controlling shikimate and quinate ester intermediates in phenylpropanoid metabolism. *J. Biol. Chem.* 278: 95–103

- Huang ;Z.M. Wei (2004).** High-frequency plant regeneration through callus initiation from mature embryos of maize (*Zea Mays* L.). *Plant Cell Rep.* 22(11): 793–800;. doi:10.1007/s00299-003-0748-9.
- HumPhReys, J.M., and ChAPPLe, C.(2002)** Rewriting the lignin roadmap. *Curr. Opin. Plant Biol.* 5: 224–229
- Humphreys, J.M., heMM, M.R., and ChAPPLe, C.(1999)** New routes for 358 D. Lee et al.ferulate 5-hydroxylase, a multifunctional cytochrome P450-dependent monooxygenase. *Proc. Natl. Acad. Sci. USA* 96: 10045–10050
- Is h iD A, Y. S., H, OhT A, S., Hi e i, Y., KoM A Ri, T. AnD KuM As h iRo, T. (1996)** High efficiency transformation of maize (*Zea mays* L.) mediated by *Agrobacterium tumefaciens*. *Nat Biotech* 14: 745-750
- Jefferson A, Kavanagh T, Bevan M (1987).** GUS fusions: B glucuronidase as a sensitive and versatile gene fusion marker in higher plants. *Embo J.*, 6(13): 3901-3907.
- Jones, M. G. K. (1994).** In vitro culture of potato. In I. K. Vasil, & T. A. Thorpe (Eds.), *Plant cell and tissue culture* (pp. 363–378). Dordrecht, The Netherlands: Kluwer.
- Jouanin L, Goujon T, de Nadaï V, Martin M-T, Mila I, Vallet C, Pollet B, Yoshinaga A, Chabbert B, Petit-Conil M, Lapierre C,(2000)** Lignification intransgenic poplars with extremely reduced caffeic acidO-methyl transferase activity. *Plant Physiol* 123:1363–1373
- Jouanin L, Goujon T, de Nadaï V, Martin M-T, Mila I, Vallet C, Pollet B, Yoshinaga A, Chabbert B, Petit-Conil M, Lapierre C,(2000)** Lignification intransgenic poplars with extremely reduced caffeic acidO-methyl transferase activity. *Plant Physiol* 123:1363–1373.
- JW Danson ,M Lagat, M Mbogori (2006).** Screening tropical maize lines for the production and regeneration of friable and embryogenic Type II callus. *Afr. J. Biotechnol.* 5(23): 2367-2370
- Kawamura, M., Keim, P. S., Goto, Y., Zalkin, H. and Heinrikson, R. L. (1978)** *J. Biol. Chem.* 253, 4659.
- Kemble R (2006)** Plant-produced enzymes for improved animal nutritionand bioethanol processing. *Agric. Biotechnol. Inter. Conf.* MelbourneAustralia
- Kikkert, J. R. (1993)** The Biolistic® PDS-1000/He device. *Plant Cell Tiss. Org. Cult.* 33, 221–226
- Kim H, Ralph J,(2010)***Org Biomol Chem*8:576.

- King P., Potrykus Z., Thomas E. (1978)** Genetically transformed maize plants from protoplasts. *Science*, 240: 204- 207. *Physiol Veg* 16:381-399
- Klein, T. M., Wolf, E. D., Wu, R., & Sanford, J. C. (1987).** High-velocity microprojectiles for delivering nucleic acids into living cells. *Nature*, 327, 70–73.
- Klein, T.M.; Fromm, M.E.; Weissinger, A.; Tomes, D.; Schaff, S.; Slettern, M. and Sanford, J.C.(1988)** Transfer of foreign genes into intact maize cells using high velocity microprojectiles. *Proceedings National Academy of Science of the United States of America*, v.85, p.4305-4309, 1988
- Klinke HB, Thomsen A, Ahring BK, (2004)** Inhibition of ethanol-producing yeast and bacteria by degradation products produced during pre-treatment of biomass. *Appl Microbiol Biotechnol* 66:10–26
- Koehler, L., and F.W. Telewski.( 2006).** Bio mechanics and transgenic wood. *Am. J. Bot.* 93:1433–1438. doi:10.3732/ajb.93.10.1433
- Krikorian, A. D. (1994b).** In vitro culture of plantation crops. In I. K. Vasil, & T. A. Thorpe (Eds.), *Plant cell and tissue culture* (pp. 497–537). Dordrecht, The Netherlands: Kluwer.
- Lapierre C, Pollet B, Petit-Conil, M, Toval G, Romero J, Pilate G, Leple JC, Boerjan W. (1999).** Structural alteration of lignins in transgenic poplars with depressed cinnamyl alcohol dehydrogenase or caffeic acid O-methyltransferase activity have an opposite impact on the efficiency of industrial Kraft pulping. *Plant Physiol.*, 119: 153-163
- Lapierre C, Tollier MT, B Monties.,( 1988).** A new type of constitutive unit in lignins from the corn bm3 mutant. *C. R. Acad. Sci.*, 307(3): 723–728.
- LARUE C.D., (1936)** The growth of plant embryos in culture. *Bull.Torrey Bot. Club* 63: 365-382.
- Lee M., R.L. Phillips, (1987)** Genomic rearrangements in maize induced by tissue culture. *Genome* 29: 122-128
- Lerouxel O, Cavalier DM, Liepman AH, Keegstra K (2006)** Biosynthesis of plant cell wall polysaccharides—a complex process. *Curr Opin Plant Biol* 2006, 9:621-630.
- Li L, Zhou Y, Cheng X, Sun J, Marita JM, Ralph J, Chiang VL,(2003)** Combinatorial modification of multiple lignin traits in trees through multigenecotransformation. *Proc Natl Acad Sci USA* 100:4939–4944.
- Li X, Weng J-K, Chapple C, (2008)** Improvement of biomass through lignin modification. *Plant J* 54:569–581.

- Li, L., PoPko, J.L., uMezA W A, T., AnDChiAnG, v.L.(2000)** 5-Hydroxyconiferyl aldehyde modulates enzymatic methylation for syringyl monolignol formation, a new view of monolignol biosynthesis in angiosperms. *J. Biol. Chem.* 275: 6537–6545
- Lorence, A. and Verpoorte, R. (2004)** Gene transfer and expression in plants. In: TUAN, R.S. *Recombinant gene expression: reviews and protocols*. 2nd ed. Totowa: Humana Press, p.329-350.
- Lozovaya V.; Gorshkova T.; Yablokova E.; Zabolina O.; Ageeva M.;Rumyantseva N.; Kolesnichenko E.; Waranyuwat A.; Widholm J.( 1996)**Callus cell wall phenotics and plant regeneration ability. *J PlantPhysiol* 148: 711–717.
- Lu C., IK Vasil, P Ozias-Akins (1982)** Somatic embryogenesis in *Zea mays* L. *Theor Appl Genet* 62:109112
- LU C., V. VASIL, I.K. VASIL, (1983)** Improved efficiency of somatic embryogenesis and plant regeneration in tissue cultures ofmaize (*Zea mays* L.). *Theor. Appl. Genet.* 66: 285-289.
- Mol Plant3:*
- Moore A, (2008)** Biofuels are dead: long live biofuels(?) – part two. *New Biotechnology*;25(2-3):96-100.
- Mosier NS, Wyman, CE, Dale BE, Elander R, Holtzapple M, Ladisch MR.,( 2005).** Features of promising technologies for pretreatment of lignocellulosic biomass. *Bioresource Technol.*, 96 (6): 673-686.
- Murashige, T. (1978)** The impact of plant tissue culture on agriculture. Thorpe, T. A., ed. *Frontiers of plant tissue culture*. Calgary (Alberta, Canada): The International Association for Plant Tissue Culture;: 15-26. A review article in the pro- ceedings of a meeting of the IAPTC.
- nAderson WF, Akin DE. (2008).** Structural and chemical properties of grass lignocelluloses related to conversion for biofuel. *J. Ind. Microbiol. Biotechnol.*, 35(5): 355-366.
- nAiR, R.b., xiA, Q., kARThA, C.J., kuRyLo, e., hiRJi, R.n., DATLA, R. AnD seLvARAJ, G.(2002)** Arabidopsis CYP98A3 mediating aromatic 3-hydroxylation: developmental regulation of the gene, and expression in yeast. *Plant Physiol.*130: 210–220
- Nehra, N.S., Chibbar R.N., Leung N, Caswell K., Mallard C., Stein-hauer L, Baga M, Kartha KK (1994)** Self-fertile transgenicwheat plants regenerated from isolated scutellar tissuesfollowing microprojectile bombardment with two distinct geneconstructs. *Plant J* 5:285–297

- O’Kennedy, M.M.; Burger, J.T.; Berger, D.K. (2001)** Transformation of elite white maize using the particle inflow gun and detailed analysis of a low-copy integration event. *Plant Cell Rep.* 20:721–730.
- Odour ,ENM Njagi ,S Ndung's ,J.S. Machuka (2006).** In vitro regeneration of dryland Kenyan maize Genotypes through somatic embryogenesis. *Int. J. Bot.* 2(2): 146-151. Oil supply.
- Ortiz, J.P.A, Reggiardo MI, Ravizzini RA, Altabe SG, Cervigni GDL, Spitteler MA, Morata MM, Elias FE, Vallejos RH (1996)** Hygromycin resistance as an efficient selectable marker for wheat stable transformation. *Plant Cell Rep* 15: 877–881
- Osakabe, k., Tsao, C.C., Li, L.G., Popko, J.L., uMeza W A, T., CARRA W Ay, D.T., sMeTzeR, R.h., Joshi, C.P., AnDChiAnG, v.L. (1999)** Coniferyl aldehyde 5-hydroxylation and methylation direct syringyl lignin biosynthesis in angiosperms. *Proc. Natl. Acad. Sci. USA* 96: 8955–8960
- Palmarola-Adrados B, Chotěborská P, Galbe M, Zacchi G, (2005)** Ethanol production from non-starch carbohydrates of wheat bran. *Bioresource technology*; 96(7):843-50.
- Palmer, C. E., & Keller, W. A. (1994).** In vitro culture of oilseeds. In I. K. Vasil, & T. A. Thorpe (Eds.), *Plant cell and tissue culture* (pp. 413–455). Dordrecht, The Netherlands: Kluwer.
- PARVA Thi, k., Chen, f., Guo, D., bLounT, J.W., AnDDixon, R.A. (2001)** Substrate preferences of O-methyltransferases in alfalfa suggest new pathways for 3-O-methylation of monolignols. *Plant J.* 25: 193–202
- Pauly, M., and K. Keegstra. (2008).** Cell-wall carbohydrates and their modification as a resource for biofuels. *Plant J.* 54:559–568. doi:10.1111/j.1365-3113.2008.03463.
- Pedersen JF, Vogel KP, Funnell DL. (2005).** Impact of reduced lignin on plant fitness. *Crop Sci.*, 45: 812-819
- Peterson JD, Ingra, LO, (2008).** Anaerobic respiration in engineered *Escherichia coli* with an internal electron acceptor to produce fuel ethanol. *Annals of the New York Academy of Sciences* 1125: 363-372.
- Petolino JF, Hopkins NL, Kosegi BD, Skokut M. Whisker (2000)** -mediated transformation of embryogenic callus of maize. *Plant Cell Rep*; 19:781–6
- Phillips . Invited review (2004):** In vitro morphogenesis in plants recent advances. *In Vitro Cell. Dev. Biol.*
- Pimentel, D, (2009).** Corn Ethanol as Energy. *Harvard International Review* 31(2): 50-52

- Piquemal J, Chamayou S, Nadaud I, Beckert M, Barriere Y, Mila I, Lapierre C, Rigau J, Puigdomenech P, Jauneau A.,( 2002).** Down-regulation of caffeic acid O-methyltransferase in maize revisited using a transgenic approach. *Plant Physiol.*, 130: 1675-1685.
- Pi T A, n. (1996)** Structure and biogenesis of the cell walls of grasses. *Ann. Rev. Plant Physiol. Plant Mol. Biol.* 47: 445-476.
- Raghavan, V. (1980).** Embryo culture. *International Review of Cytology, Supplement*, 11B, 209–240.
- Ralph, J., J.H. Grabber, and R.D. Hatfield. (1995).** Lignin-ferulate cross-links in grasses – Active incorporation of ferulate polysaccharide esters into ryegrass lignins. *Carbohydr. Res.* 275:167–178. doi:10.1016/0008-6215(95)00237-N
- Rasco-Gaunt S, Riley A, Barcelo P, Lazzeri PA (1999).** Analysis of particle bombardment parameters to optimise DNA delivery into wheat tissues. *Plant Cell Reports* 19: 118–127.
- Reddy, M.s.s., Chen, f., Shadle, G., Jackson, L., AlJoe, h. And Dixon, R.A. (2005)** Targeted down-regulation of cytochrome P450 enzymes for forage quality improvement in alfalfa (*Medicago sativa* L.). *Proc.Natl. Acad.Sci. USA* 102, 16573-16578
- Reinert J. (1973.)** Aspects of organization—organogenesis and embryogenesis. In: Street H. E. (ed) *Plant tissue and cell culture.* Botanicalmonographs, Vol 11. University of California Press, Los Angeles,pp 338–355.
- Rhodes, C.A, Pierce DA, Mettler IJ, Mascarenhas D, Detmer JJ(1988).** Genetically transformedmaize plants from protoplasts. *Science*;240:204–7.
- Robinson PH,(2008)** Karges K, Gibson ML. Nutritional evaluation of four co-product feedstuffs from the motor fuel ethanol distillation industry in the Midwestern USA. *Animal Feed Science and Technology*;146(3-4):345-52.
- Rubin EM (2008)** Genomics of cellulosic biofuels. *Nature* 2008, 454:841-845.
- Russell JA, Roy MK, Sanford JC (1992)** *In Vitro CellDev Biol* 28P:97-105.
- Saathoff AJ, Sarath G, Chow EK, Dien BS, Tobias CM,(2011)** Downregulation of cinnamyl-alcohol dehydrogenase in switchgrass by RNA silencing results in enhanced glucose release after cellulase treatment. *PLoS One*:6:e16416
- Sambrook J, Fritsch EF, Maniatis, T. ,(1989)** *Molecular cloning: a laboratory manual.* 2nd ed. New York: Cold Spring Harbor Laboratory Press. Scott

- A, Woodfield D, White DWR. 1998. Allelic composition and genetic background effects on transgene expression and inheritance in white clover. *Mol. Breeding*, 4(6): 479–490.
- Sanford, J. C. (2000)** The development of the biolistic process. *In Vitro Cell. Dev. Biol. Plant* 36, 303–308
- Saunders JA, Rosentrater KA,(2009)** Survey of US fuel ethanol plants. *Bioresource technology*;100(13):3277-84.
- Sautter C, Waldner H, Neuhaus-Url G, Galli A, Nuehaus G, Potrykus I (1991)** *BioTechnology* 9:1080-1085
- Scheller HV, Ulvskov P, (2010)** Hemicelluloses .*Annu Rev Plant Biol* 61:263–289
- Schleiden MJ (1838)** Beiträge zur Phyto-genesis. *Arch Anat Physiol Wiss Med (J Müller)* pp. 137–176
- Schmer MR, Vogel KP, Mitchell RB, Perrin RK, (2008).** Net energy of cellulosic ethanol from switchgrass. *Proceedings of the National Academy of Sciences* 105: 464-469
- SCHMIDT, E. - GUZZO, D. F. - TOONEN, M.A. - DE VRIES, S.C. (1997).** A leucine-rich repeat containing receptor-like kinase marks somatic plant cells competent to form embryos. *In: Development*, vol. 124, , p. 2049–2062.
- Schubert C:(2006)** Can biofuels finally take center stage? *Nat Biotechnol* , 24:777-784.
- Service RF, (2007).** Biofuel researchers prepare to reap a new harvest. *Science* 315: 1488-1491.
- Sewalt VJH, Weiting N, Jung HG, Dixon RA. ,(1997).** Lignin impact on fiber degradation: Increased enzymatic digestibility of genetically engineered tobacco (*Nicotiana tabacum*) stems reduced in lignin content. *J. Agric. Food Chem.* 45:1977–1983.
- Shillito R.D., G.K. Caswell, C.M. Johnsons, J.J. Dimiao, C.T.Harms, (1989)** Regeneration of fertile plants from proto-plasts of elite inbred maize. *Bio/Technology* 7: 581-587.
- Singh S, Simmons BA, Vogel KP:Biotechnol Bioeng104,(2009).Lee SH, Doherty TV, Linhardt RJ, Dordick JS, BiotechnolBioeng1021368**
- Somleva MN, Snell KD (2008)** Beaulieu JJ, Peoples OP, Garrison BR, Patterson NA: Production of polyhydroxybutyrate in switchgrass, a value-added co-product in an important lignocellulosic biomass crop. *Plant Biotechnol J*, 6:663-678

- Songstad D.D., C.L. Armstrong, W.L. Peterson, (1991)** AgNO<sub>3</sub> increases type II callus production from immature embryos of maize inbred B73 and its derivatives. *Plant Cell Rep.* 9: 699-702.
- Sorrell S.A.S. Jr. (2009)** Global oil depletion: an assessment of
- Speight J. (2011)** The biofuels handbook. Cambridge, UK: Royal Society of Chemistry Energy Series.
- Spencer TM, O'Brien JV, Start WG, Adams TR, Gordon-Kamm WJ, Lemaux PG. ,(1992).** Segregation of transgenes in maize. *Plant Mol. Biol.*, 18: 201-210.
- Sprague, G. F.; Alexander, D. E.; Dudley, J. W. (1980)** Plant breeding and genetic engineering: a perspective. *Bioscience* 30: 17-21; A review article
- Stasolla C.; van Zyl L.; Egertsdotter U.; Craig D.; Liu W. B.; Sederoff R. R (2003).** The effects of polyethylene glycol on gene expression of developing white spruce somatic embryos. *Plant Physiol* 131:49–60.
- Stasolla, C., & Thorpe, T. A. (2011).** Tissue culture; historical perspectives and applications. In A. Kumar, & S. K. Sopory (Eds.), *Applications of Plant Biotechnology* (in press). Dordrecht, The Netherlands Kluwer Academic Publishers.
- Sticklen, M.B (2008)** Plant genetic engineering for biofuel production: towards affordable cellulosic ethanol. *Nat Rev Genet*, 9:433-443
- STRAUS, J., (1954)** Maize endosperm tissue grown in vitro. II. Morphology and cytology. *Amer. J. Bot.* 41: 833-839.
- STREATFIELD S.J., J.M. JILKA, E.E. HOOD, D.D. TURNER, M.R.STREATFIELDS.J.,( 2001).** Approaches to achieve high-level heterologous protein production in plants. *Plant Biotechnol. J.* 5:2-15
- Street, H. E. (1977)** Introduction. Street, H. E., ed. *Plant tissue and cell culture*, 2nd ed., Botanical Monographs, Volume II. Berkeley: University of California Press; 11-30. An excellent introduction to plant tissue culture
- Studer MH, DeMartini JD, Davis MF, Sykes RW, Davison B, Keller M, Tuskan GA, Wyman CE,(2011)** Lignin content in natural *Populus* variants affects sugar release. *Proc Natl Acad Sci USA* 108(15):6300–6305
- Tang Y, Koike Y, Liu K, An M, Morimura S, Wu X, Kida K,(2008)** Ethanol production from kitchen waste using the flocculating yeast *Saccharomyces cerevisiae* strain KF-7. *Biomass and Bioenergy*;32(11):1037-45.

- Thorpe, T. A. (1990).** The current status of plant tissue culture. In S. S. Bhojwani (Ed.), *Plant tissue culture: Applications and limitations* (pp. 1–33). Amsterdam: Elsevier.
- Thorpe, T. A. (2007).** History of plant tissue culture. *Molecular Biotechnology*, 37, 169–180.
- Tilman D, Socolow R, Foley JA, Hill J, Larson E, Lynd L, Pacala S, Reilly J, Searchinger T, Somerville C (2009)** Energy. Beneficial biofuels—the food, energy, and environment trilemma. *Science*, 325:270-271.
- TING, Y. C. – YU, M. – ZHENG, W. Z. (1981).** Improved anther culture of maize. In: *Plant Science Letters*, vol. 23, 1981, p. 139–145
- TOMES, D. T. , SMITH, O. S. (1985).** The effect of parental genotype on initiation of embryogenic callus from elite (*Zea mays* L.) germplasm. In: *Theoretical and Applied Genetics*, vol. 70 (5), 1985, p. 505–509
- Torney F, Trewyn BG, Lin VSY, Wang k. ,(2007).** Mesoporous silica nanoparticles deliver DNA and chemicals into plants. *Nat. Nanotechnol.*, 2: 295-300
- Tschaplinski TJ, Standaert RF, Engle NL, Martin MZ, Sangha AK, Parks JM, Smith JC, Samuel R, Jiang N, Pu Y, et al, (2012)** Down-regulation of the caffeoyl O-methyltransferase gene in switchgrass reveals a novel monolignol analog. *Biotechnology for Biofuels* 5:71
- Tyner WE, (2008).** The US ethanol and biofuels boom: Its origins, current status, and future prospects. *BioScience* 58: 646-653
- US researchers, (2008)** investigate use of ethanol co-products as fillers for plastics. *Additives for Polymers*; 2008(8):4-.
- Vailhe MAB, Migne C, Cornu A, Maillot MP, Grenet, E, Besle JM. ,(1996).** Effect of modification of the O-methyltransferase activity on cell wall composition, ultrastructure and degradability of transgenic tobacco. *J. Sci. Food Agric.*, 72: 385–391
- Vain P, Yean H, Flament P (1989)** *Plant Cell Tiss Org Cult* 18:143-151.
- Vanholme R, Demedts B, Morreel K, Ralph J, Boerjan W, (2010)** Lignin biosynthesis and structure. *Plant Physiol* 153:895–905
- Vanholme, R., K. Morreel, J. Ralph, and W. Boerjan. (2008).** Lignin engineering. *Curr. Opin. Plant Biol.* 11:278–285. doi:10.1016/j.pbi.2008.03.005
- Vasil V, Brown SM, Re D, Fromm ME and Vasil IK (1991)** Stably transformed callus lines from microprojectile bombardment of cell-suspension cultures of wheat. *Biotechnology* 9:743–747

- Vasil V, Castillo AM, Fromm ME, Vasil IK (1992)** Herbicide-resistant fertile transgenic wheat plants obtained by microprojectile bombardment of regenerable embryogenic callus. *Bio/Technology* 10: 667–674.
- Vasil, I. K., & Vasil, V. (1994).** In vitro culture of cereals and grasses. In I. K. Vasil, & T. A. Thorpe (Eds.), *Plant cell and tissue culture* (pp. 293–312). Dordrecht, The Netherlands: Kluwer.
- Vermerris, W., D.M. Sherman, and L.M. McIntyre. (2010).** Phenotypic plasticity in cell walls of maize brown midrib mutants is limited by lignin composition. *J. Exp. Bot.* 61:2479–2490. doi:10.1093/jxb/erq093
- Vignols F, Rigau J, Torres MA, Capellades M, Puigdomenech P. ,(1995)** The brown midrib 3 (bm3) mutation in maize occurs in the gene encoding caffeic acid O-methyltransferase. *Plant Cell*, 7(4): 407–416
- Vöchting, H. (1878).** Über Organbildung im Pflanzenreich. Bonn: Max Cohen.
- Vogt T,(2010)** the evidence for near-term physical constraints on global
- Wada,C Feng ,A Gulati (2008)** Introduction and overview. In: Gulati A, Dixon J (eds) *Maize in Asia changing markets and incentives*. Academic Foundation, New Delhi, pp 27–75
- Walters DA, Vetch CS, Potts DE, Lundquist RC (1992)** *Plant Mol Biol* 18:189-200
- Walter DA, Vetsch CS, Potts DE, Lundaquist RC., (1992).** Transformation and inheritance of a hygromycin phosphotransferase gene in maize plants. *Mol. Biol.*, 18(2): 189-200
- Wan YC, Widholm JM, Lemaux PG., (1994).** Type I callus as a bombardment target for generating fertile transgenic maize (*Zea mays* L.). *Planta*, 196(1): 7-14.
- Wan YC, Widholm JM, Lemaux PG., (1995).** Type I callus as a bombardment target for generating fertile transgenic maize (*Zea mays* L.). *Planta*, 196(1): 7-14
- Wang YJ, White P, Pollak L, Jane JL.(1987)** Characterization of starch structures of 17 maize endosperm mutant genotypes with Oh43 inbred line background. *Cereal Chem*;70:171–9
- Weeks T, Anderson OD, Blechl AE (1993)** Rapid production of multiple independent lines of fertile transgenic wheat (*Triticum aestivum*). *Plant Physiol* 102: 1077–1084.
- White, P. R. (1963).** *The cultivation of animal and plant cells* (2nd ed.). New York: Ronald Press.
- Williams RS, Johnston SA, Reidy M, DeVit MJ, McElligott SG, Sanford JC (1991)** *Proc Natl Acad Sci* 88:2726-2730.

- Williams PRD, Inman D, Aden A, Heath GA, (2009)** Environmental and sustainability factors associated with next-generation biofuels in the U.S.: what do we really know? *Env Sci Technol* 43:4763-4775
- Woodson M, Jablonowski CJ, (2008).** An economic assessment of traditional and cellulosic ethanol technologies. *Energy Sources* 3: 372-383.
- Xi Y, Ge Y, Wang ZY(2009)** Genetic transformation of switchgrass. *Methods Mol Biol*, 581:53-59
- Yang B, Wyman CE,(2009)** *Methods Mol Biol* (Totowa, NJ, United States) 581:103
- Yeung, E. C., Thorpe, T. A., & Jensen, C. J. (1981).** In vitro fertilization and embryo culture. In T. A. Thorpe (Ed.), *Plant tissue culture: Methods and applications in agriculture* (pp. 253–271). New York: Academic Press.
- Yoshida M, Liu Y, Uchida S, Kawarada K, Ukagami Y, Ichinose H, Satoshi K, Fukuda K,(2008)** Effects of cellulose crystallinity, hemicellulose, and lignin on the enzymatic hydrolysis of *Miscanthus sinensis* monosaccharides. *Biosci Biotechnol Biochem* 3(72):805–810.
- Yuan JS, Tiller KH, Al-Ahmad H, Stewart NR, Stewart NC Jr ,(2008)** Plants to power :bioenergy to fuel the future. *Trends Plant Sci* 13:421–429
- Zah R. (2007)** Energy and raw materials: the contributions of chemistry and biochemistry in the future: biofuels—which one is the most ecological one? *Chimera* 61, 571–572.
- Zenk, M. H. (1978).** The impact of plant cell culture on industry. In T. A. Thorpe (Ed.), *Frontiers of plant tissue culture 1978* (pp. 1–13). Univ. of Calgary: International Association of Plant Tissue Culture.
- Zenkter, M., Misiura, E., & Guzowska, I. (1990).** Studies on obtaining hybrid embryos in test tubes. In H. Y. Mohan Ram, J. J. Shaw, & C. K. Shaw (Eds.), *Form, structure and function in plants* (pp. 180–187). Meerut, India: Sarita Prakashan.
- Zhang ,CH Zhao ,C Ge (2008).** Regeneration system and influencing factors of maize. *J. Maize Sci.* 16(2): 77-79, 87.
- Zhang, S., Williams-Carrier, R., Lemaux, P. G. (2002)** Transformation of recalcitrant maize elite inbreds using in vitro shoot meristematic cultures induced from germinated seedlings. *Plant Cell Rep.* 21:263–270.
- Zhong G, Peterson D, Delaney D, Bailey M, Witcher D, Register III J, et al(1999).** Commercial production of aprotinin in transgenic maize seeds. *Mol Breed*;5:345–56.
- Zhou H, Arrowsmith, J.W., Fromm, M.E., Hironaka CM, TaylorML, Rodriguez D, Pajeau ME, Brown SM, Santino CG, JEFry (1995)**

Glyphosate-tolerant CP4 and GOX genes as a selectable marker in wheat transformation. *Plant Cell Rep* 15:159–163

**ZIMMERMAN, J. L. (1993).** Somatic embryogenesis. In: *Plant Cell*, vol. 5, 1993, p. 1411-1423.

**Zimmerman, R. H., & Swartz, H. J. (1994).** In vitro culture of temperate fruits. In I. K. Vasil, & T. A. Thorpe (Eds.), *Plant cell and tissue culture* (pp. 457–474). Dordrecht, The Netherlands: Kluwer.