

B I B L I O G R A P H Y

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Agrawal, P.K. and Canvin, D. T. 1971. The pentose phosphate pathway in relation to fat synthesis in the developing castor oil seed. *Pl. Physiol.* 47: 672-675.

Akemine, T., Kikuta, Y. and Tagawa, T. 1975. Effect of kinetin and naphthaleneacetic acid application on the respiratory metabolism during callus development in potato tuber tissue cultured in vitro. *J. Fac. Agr. Hokkaido Univ.* 58: 247-261.

Albersheim, P. 1974. Structure and growth of walls of cells in culture. In : H. E. Street, ed., "Tissue culture and plant Science". pp. 379-404. Proceedings of the 3rd International Congress of Plant tissue and cell culture. Academic Press, London, New York.

* Allaway, W. G. 1973. *Planta* 110: 63-70.

Ammirato, P. V. 1978. Somatic cell embryogenesis in suspension culture of the medicinal yam, Dioscorea floribunda. 4th Inter. Cong. Plant Tissue and Cell Culture. Calgary, Canada (Abstr.) 1708.

Anita Rani and Bhojwani, S. S. 1976. Establishment of tissue cultures of cotton. *Plant Sci. Lett.* 7: 163-169.

* Anker, L. 1974. *Acta Bot. Neerl.* 23 : 705-714.

Anstis, P.J.P. and Northcote, C.H. 1973. The initiation, growth and characteristics of a tissue culture from potato tubers. *J. Expt. Bot.* 24: 425-441.

ap Rees, T. 1974. Pathways of carbohydrate breakdown in higher plants. In: D. H. Northcote ed., "MTP international review of Science. Biochemistry 11. Plant Biochemistry". pp. 89-127. London : Butterworths.

- ap Rees, T. 1977. Conservation of carbohydrate by the non-photosynthetic cells of higher plants. In : D. H. Jennings, ed. "Integration of activity in the higher plant". pp. 7-32. Cambridge : At the University Press. U.K.
- ap Rees, T. and Beevers, H. 1960. Pentose phosphate pathway as a major component of carrot and potato slices. *Plant Physiol.* 35: 839-847.
- Arya, H.C., Hildebrandt, A.C. and Riker, A.J. 1962. Clonal variation of grape stem and Phylloxera gall callus growing in vitro in different concentrations of sugars. *Amer. J. Bot.* 49: 368-372.
- Ashihara, H. and Komamine, A. 1974 a. Enzyme and metabolite profiles of the pentose phosphate pathway in hypocotyls of Phaseolus mungo seedlings. *Plant Sci. Lett.* 2:331-337.
- * Ashihara, H. and Komamine, A. 1974 b. *Z. Pflanzenphysiol.* 74: 130-142.
- Ashihara, H. and Komamine, A. 1975. The function of the pentose phosphate pathway in Phaseolus mungo hypocotyls. *Phytochemistry* 14: 95-98.
- Ashihara, H., Komamine, A. and Shimokoriyama, M. 1974. Glucose catabolism during ageing and differentiation in hypocotyls of Phaseolus mungo seedlings. *Bot. Mag. Tokyo* 87:121-131.
- * Ashihara, H. and Matsumura, H. 1977. *Int. J. Biochem.* 8:461-471.
- Audus, L. J. 1972. Plant Growth Substances. Leonard Hill Books. London.
- Bacon, J.S.D. 1955. Methods for measuring transglycosylase activity of invertases. In: S. P. Colowick and N.O. Kaplan, eds., "Methods in Enzymology" Vol. I. PP. 258-262. Academic Press, New York.

- Bacon, J.S.D., Mac Donald, I.R. and Knight, A.H. 1965. The development of invertase activity in slices of the root of Beta vulgaris L. washed under aseptic conditions. *Biochem. J.* 94: 175-182.
- Bajaj, Y.P.S. and Mäder, M. 1974. Growth and morphogenesis in tissue cultures of Anagallis arvensis. *Physiol. Plant.* 32: 43-48.
- Ball, E. 1953. Hydrolysis of sucrose by autoclaving media a neglected aspect in the technique of culture of plant tissues. *Bull. Torrey Bot. Club* 80: 409-411.
- * Ball, E. 1955. *Annu. Biol.* 59: 281-305.
- Bapat, V.A. and Narayanaswamy, S. 1977. Mesocarp and endosperm culture of Achras sapota Linn. *in vitro*. *Ind. J. Exp. Biol.* 15: 294-296.
- Barg, R. and Umiel, N. 1977. Effects of sugar concentrations on growth, greening and shoot formation in callus cultures from four genetic lines of tobacco. *Z. Pflanzenphysiol.* 81: 161-166.
- Beasley, C.A. and Ting, I.P. 1973. The effects of plant growth substances on *in vitro* fiber development from fertilized ovules. *Am. J. Bot.* 60: 130-139.
- Bellamy, A.R. and Bielefsky, R.L. 1966. Some salt-uptake and tissue-ageing phenomena studied with cultured tobacco cells. *Austr. J. Biol. Sci.* 19: 23-36.
- Bendana, F.E., Galston, A.W., Kaur-Sawhney, R. and Penny, P.J. 1965. Recovery of labelled ribonucleic acid following administration of labelled auxin to green pea stem sections. *Plant Physiol.* 40: 977-983.

- * Bergmann, L. 1963. *Planta* 62: 221-254.
- Bernfeld, P. 1955. Amylases, α and β . In : S. P. Colowick and N.O. Kaplan, eds., "Methods in Enzymology". Vol. I. pp. 149-158. Academic Press, New York.
- Bhatt, P.H. 1977. Induced growth and morphogenesis in cultured cells and tissues of Ipomoea. Ph. D. Thesis, The M.S. University of Baroda, Baroda, India.
- Bhatt, P.H., Rawal, S.K. and Mehta, A.R. 1978. Interactions of phytohormones on the control of growth, morphogenesis and the development of peroxidase and IAA oxidase in cells and tissues of Ipomoea and tobacco grown in vitro. Paper presented at the All India Symposium, 3rd Conference Plant Tissue Culture. pp. 53-54.
- Bonner, J.A. 1965. Development. In : J.A. Bonner and J.E. Varner eds., "Plant Biochemistry". pp. 850-866. Academic Press, New York. London.
- Bonnet, H.T. and Torrey, J.G. 1965. Chemical control of organ formation in root segments of Convolvulus cultured in vitro. *Plant Physiol.* 40: 1228-1236.
- Bornman, C.H. 1974. Cytodifferentiation in tissue culture. In: H.E. Street, ed., "Tissue Culture and Plant Science". pp. 43-70. Proceedings of the 3rd International Congress of plant tissue and cell culture. Academic Press, London, New York.
- Bourke, J.B., Butts, J.S. and Fang, S.C. 1962. Effect of various herbicides on glucose metabolism in root tissue of garden peas. I. 2,4-D and its analogs. *Plant Physiol.* 37: 233-237.

- Bowen, J.E. 1972. Sugar transport in immature internodal tissue of sugarcane. I. Mechanism and kinetics of accumulation. *Plant Physiol.* 49: 82-86.
- Bown, A.W., Dymock, I.J. and Aung, T. 1974. A synergistic stimulation of Avena sativa coleoptile elongation by IAA and carbon dioxide. *Plant Physiol.* 54: 15-18.
- Bown, A.W. and Lampman, W.W. 1971. The presence and role of phosphoenolpyruvate carboxylase in etiolated coleoptiles of Avena sativa. *Can. J. Bot.* 49: 321-326.
- Boxus, P. 1974. The production of strawberry plants by in vitro micropropagation. *Jr. of Hort. Sci.* 49: 209-210.
- Brakke, M.K. and Nickell, L.G. 1951. Secretion of α -amylase by Rumex virus tumors in vitro. Properties and assay. *Arch. Biochem. Biophys.* 32: 28-41.
- Brakke, M.K. and Nickell, L.G. 1955. Secretion of an enzyme from intact cells of a higher plant tumor. *Annee biol.* 31: 215-226.
- Brown, E.G. and Short, L.C. 1969. The changing nucleotide pattern of sycamore cells during culture in suspension. *Phytochem.* 8: 1365-1372.
- Butenko, R.G. 1968. Plant tissue culture and plant morphogenesis. Translated from Russian. In : M.Kh. Chailakhyan, ed., Israel Programme for Scientific Translations, Jerusalem.
- Butenko, R.G., Atanassov, A. and Urmantseva, W. 1972. Some features of the sugarbeet tissue culture. *Phytomorphology* 22: 140-143.
- Campbell, R.A. and Durzan, D.J. 1975. Induction of multiple buds and needles in tissue cultures of Picea glauca. *Can. J. Bot.* 53: 1652-1657.

- * Carpenter, F. 1961. *Planta*. 57: 331-338.
- Carceller, M., Davey, M.R., Fowler, M.W. and Street, H.E. 1971. The influence of sucrose, 2,4-D and kinetin on the growth, fine structure and lignin content of cultured sycamore cells. *Protoplasma* 73: 367-385.
- Chang, C.W. 1979. Starch and its component ratio in developing cotton leaves. *Plant Physiol.* 63: 973-977.
- Chaturvedi, H.C., Chowdhury, A.R. and Mitra, G.C. 1974. Shoot-bud differentiation in stem-callus tissue of Citrus grandis and correlated changes in its free amino acid content. *Current Sci.* 43: 536-537.
- Chaturvedi, H.C. and Mitra, G.C. 1975. A shift in morphogenetic pattern in Citrus callus tissue during prolonged culture. *Ann. Bot.* 39: 683-687.
- Chen, H.R. and Galston, A.W. 1967. Growth and development of Pelargonium pith cells in vitro. II. Initiation of organised development. *Physiol. Plant.* 20: 533-539.
- Cheng, T.Y. 1975. Adventitious bud formation in culture of Douglas Fir (Pseudotsuga menziesir (Mierb.) Franco). *Plant Sci. Lett.* 5: 97-102.
- Chong, C. and Taper, C.D. 1972. Malus tissue cultures. I. Sorbitol (D-glucitol) as a carbon source for callus initiation and growth. *Can. J. Bot.* 50: 1399-1404.
- Chong, C. and Taper, C.C. 1974. Malus tissue cultures. II. Sorbitol metabolism and carbon nutrition. *Can. J. Bot.* 52: 2361-2364.
- Chrispeels, M.J. and Varner, J.E. 1966. Inhibition of gibberellic acid induced formation of α -amylase by abscisic acid. *Nature* 212: 1066-1067.

- Chrispeels, M.J. and Varner, J.E. 1967. Gibberellic acid - enhanced synthesis and release of α -amylase and ribonuclease by isolated barley aleurone layers. *Plant Physiol. Wash.* 42: 398-406.
- Cleland, R. 1967. A dual role of turgor pressure in auxin-induced cell elongation in Avena coleoptiles. *Planta (Berl.)* 77: 182-191.
- Cleland, R. 1971. Cell wall extension. *Ann. Rev. Plant Physiol.* 22: 197-222.
- Cleland, R. 1977. The control of cell enlargement. In *Integration of Activity in the Higher Plant. S.E.B.Symp. XXXI.* (D.H.Jennings, ed.), pp. 101-115. University Press, Cambridge.
- Cleland, R.E. 1976. Kinetics of hormone induced H⁺ excretion. *Plant Physiol.* 58: 210-213.
- Cleland, W.W. 1964. Dithiothreitol, a new protective agent for SH groups. *Biochemistry* 3: 480-482.
- Click, R.E. and Hackett, D.P. 1963. The role of protein and nucleic acid synthesis in the development of respiration in potato tuber slices. *Proc. Nat. Acad. Sci., Wash.* 50: 243-250.
- Cocking, E.C. 1977. Growth substances and protoplasts. In: P.E. Pilet, ed., "Plant Growth Regulation". pp. 281-285. Springer-Verlag, Berlin, Heidelberg, New York.
- Coleman, W.K. and Greyson, R.I. 1977. Analysis of root formation in leaf discs of Lycopersicon esculentum Mill. cultured in vitro. *Ann. Bot.* 41: 307-320.
- Coleman, W.K. and Thorpe, T.A. 1977. In vitro culture of Western Redcedar (Thuja plicata Donn.) I. Plantlet Formation. *Bot. Gaz.* 138: 298-304.

- Constabel, F. 1960. Zur Amylase Sekretion pflanzlicher Gewebekulturen. Naturwissenschaften. 47: 17-18.
- Constabel, F. 1961. Das Wachstum von Juniperus communis in Gewebekulturen in Gegenwart verschiedener kohlenhydrate, insbesondere von stärke. Planta (Berl.) 57: 331-338.
- Constable, F. 1963. Quantitative Untersuchungen über die extracelluläre Hydrolyse von Kohlenhydrate durch Juniperus communis - Gewebekulturen. Planta (Berl.) 59: 330-337.
- Copping, L.G. and Street, H.E. 1972. Properties of the invertases of cultured sycamore cells and changes in their activity during culture growth. Physiol. Plant. 26 : 346-354.
- Crocomo, O.J., Peters, J.E. and Sharp, W.R. 1976. Interactions of phytohormones on the control of growth and root morphogenesis in cultured Phaseolus vulgaris leaf explants. Turrialba. 26: 232-236.
- Dalton, C.C. and Street, H.E. 1976. The role of the gas phase in the greening and growth of illuminated cell suspension cultures of Spinach (Spinacia oleracea L.). In Vitro 12: 485-494.
- Dalton, C.C. and Street, H.E. 1977. The influence of applied carbohydrates on the growth and greening of cultured Spinach (Spinacia oleracea L.). Plant Sci. Lett. 10: 157-164.
- Davies, D.D. 1973. Control of and by pH. Symp. Soc. Exp. Biol. 27: 513-529.
- Davies, D.D., Giovanelli, J. and ap Rees, T. 1964. Plant Biochemistry. pp. 85-155. Blackwell Scientific Publications, Oxford.

- De Jong, D.W. 1967. An investigation of the role of plant peroxidase in cell wall development by the histochemical method. *Cytochem.* 15: 335-346.
- Dhindsa, P.L.P., Dhindsa, R.S. and Thorpe, T.A. 1979. Non-autotrophic CO_2 fixation during shoot formation in tobacco callus. *J. Exp. Bot.* 30: 759-767.
- Dhindsa, R.S., Beasley, C.A. and Ting, I.P. 1975. Osmoregulation in cotton fiber. *Plant Physiol.* 56: 394-398.
- Digby, J. and Wareing, P.F. 1966. The effect of growth substances on cell division and expansion in liquid suspension cultures of Acer pseudoplatanus. *J. Exp. Bot.* 17: 718-725.
- Doley, D. and Leyton, L. 1970. Effects of growth regulating substances and water potential on the development of wound callus in Fraxinus. *New Phytol.* 69: 87-102.
- Dormer, K.J. and Street, H.E. 1949. The carbohydrate nutrition of tomato roots. *Ann. Bot.* 13: 199-217.
- Dymock, I.J., Hill, B. and Bown, A.W. 1977. An investigation into the influence of IAA and malate on in vivo and in vitro rates of dark carbon dioxide fixation in coleoptile tissue. *Can. J. Bot.* 55: 1641-1645.
- Earle, E. and Torrey, J. G. 1965. Morphogenesis in cell colonies grown from Convolvulus cell suspensions plated on synthetic media. *Am. J. Bot.* 52: 891-899.
- Edelman, J. and Hall, M.A. 1964. The effect of growth hormones on the development of invertase associated with cell walls. *Nature (Lond.)* 201: 296.
- Edelman, M. and Hall, M.A. 1965. Enzyme formation in higher-plant tissues : Development of invertase and ascorbate-oxidase activities in mature storage tissue of Helianthus tuberosus L. *Biochem. J.* 95: 403-410.

- Edelman, J. and Hanson, A.D. 1971 a. Sucrose suppression of chlorophyll synthesis in carrot tissue cultures. *Planta* 98: 150-156.
- Edelman, J. and Hanson, A.D. 1971 b. Sucrose suppression of chlorophyll synthesis in carrot tissue cultures : The role of invertase. *Planta* 101: 122-132.
- Elliott, M.C. 1977. Auxins and the regulation of root growth. In: P. E. Pilet, ed. "Plant Growth Regulation". pp. 100-108. Springer-Verlag, Berlin, Heidelberg, New York.
- Epps, H.M.R. and Gale, E.F. 1942. The influence of the presence of glucose during growth on the enzymic activities of Escherichia coli. *Biochem. J.* 36: 619-623.
- Everett, N.P., Wang, T.L. and Street, H.E. 1978. Hormone regulation of cell growth and development in vitro. In: T.A. Thorpe, ed., "Frontiers of Plant Tissue Culture 1978". pp. 307-316. Published by the International Association for Plant Tissue Culture 1978. The Book Store, University of Calgary, Alberta T2N 1N4, Canada.
- Fadia, V.P. and Mehta, A.R. 1973 a. Tissue culture studies on Cucurbits : Part III - Growth and nutrition of Cucumis melo L. callus cultures. *Ind. J. Exp. Biol.* 11: 424-426.
- Fadia, V.P. and Mehta, A.R. 1973 b. Tissue culture studies on Cucurbits : The effect of NAA, sucrose and kinetin on tracheal differentiation in Cucumis tissues cultured in vitro. *Phytomorph.* 23: 212-215.
- Ferguson, J.D., Street, H.E. and David, S.B. 1958 a. The carbohydrate nutrition of tomato roots. V. The promotion and inhibition of excised root growth by various sugars and sugar alcohols. *Ann. Bot.* 22: 513-524.

- Ferguson, J.D., Street, H.E. and David, S.B. 1958 b. The carbohydrate nutrition of tomato roots. VI. The inhibition of excised root growth by galactose and mannose and its reversal by dextrose and xylose. Ann. Bot. 22: 525-538.
- * Feung, C.S. 1975. J. Agric. Food Chem. 23: 373-376.
- Feung, C.S., Hamilton, R.H. and Mumma, R.O. 1976. Metabolism of indole-3-acetic acid. III. Identification of metabolites isolated from crown gall callus tissue. Plant Physiol. 58: 666-669.
- Filner, B. and Klein, A.O. 1968. Changes in enzymatic activities in etiolated bean seedling leaves after a brief illumination. Plant Physiol. 43: 1587-1596.
- Fletcher, R.A. 1969. Retardation of leaf senescence by benzyladenine in intact bean plants. Planta 89: 1-8.
- * Folin, O. and Malmrose, H. 1929. J. Biol. Chem. 83: 115.
- Fowler, M.W. 1971. Studies on the growth in culture of plant cells. XIV. Carbohydrate oxidation during the growth of Acer pseudoplatanus L. cells in suspension culture. J. Exp. Bot. 22: 715-724.
- Fowler, M.W. 1974. Role of the malic enzyme reaction in plant roots. Utilization of ($2,3-^{14}\text{C}$) malate, ($4-^{14}\text{C}$) malate and ($1-^{14}\text{C}$) pyruvate by pea root apices and measurements of enzyme activity. Biochim. Biophys. Acta. 372: 245-254.
- Fowler, M.W. 1977. Growth of cell cultures under chemostat conditions. In: W. Barz; E. Reinhard and M.H. Zenk. eds., "Plant tissue culture and its Bio-technological application". pp. 253-265. Springer-Verlag, Berlin, Heidelberg, New York.

- Fowler, M.W. 1978. Regulation of carbohydrate metabolism in cell suspension cultures. In: T.A. Thorpe ed., "Frontiers of Plant Tissue Culture 1978". pp. 443-452. Published by the International Association for Plant Tissue Culture 1978. Distribution : The Book store, University of Calgary, Calgary, Alberta, Canada.
- Fowler, M.W. and ap Rees, T. 1970. Carbohydrate oxidation during differentiation in roots of Pisum sativum. Biochim. Biophys. Acta 201: 33-44.
- Fox, J.E. and Erion, J. 1975. A cytokinin binding protein from higher plant ribosomes. Biochem. Biophys. Res. Commun. 64: 694-700.
- French, C.J. and Smith, H. 1975. An inactivator of phenylalanine-ammonia lyase from gherkin hypocotyls. Phytochemistry 14: 963-966.
- Fridborg, G. 1971. Growth and organogenesis in tissue cultures of Allium cepa var. proliferum. Physiol. Plantarum 25: 436-440.
- Fukuda, H. and Komamine, A. 1980 a. Establishment of an experimental system for the study of tracheary element differentiation from single cells isolated from the mesophyll of Zinnia elegans. Plant Physiol. 65: 57-60.
- Fukuda, H. and Komamine, A. 1980 b. Direct evidence for cyto-differentiation to tracheary elements without intervening mitosis in a culture of single cells isolated from the mesophyll of Zinnia elegans. Plant Physiol. 65: 61-64.
- Furuya, M. and Galston, A.W. 1961. Effect of in vitro preincubation with cofactors on the activity of the indole-acetic acid oxidase of peas. Physiol. Plant. 14: 750-766.

- Gahan, P.B., Auderset, G. and Greppin, H. 1979. Pentose phosphate pathway activity during floral induction in Spinacia oleracea var. Nobel. Ann. Bot. 44: 121-124.
- Galston, A.W. 1959. In: R.B. Withrow ed., "Photoperiodism and Related Phenomena in Plants and Animals". pp. 137-157. AAAS, Washington, D.C.
- Galston, A.W. and Dalberg, L.Y. 1954. The adaptive formation physiological significance of indoleacetic acid oxidase. Amer. J. Bot. 36: 85-94.
- Gamborg, O.L. and Eveleigh, D.E. 1968. Culture methods and detection of glucanases in suspension cultures of wheat and barley. Can. J. Biochem. 46: 417-421.
- Gamborg, O.L., Miller, R.A. and Ojima, K. 1968. Plant cell cultures. I. Nutrient requirements of suspension cultures of soybean root cells. Expt. cell Res. 50: 151-158.
- Gaspar, T., Thorpe, T.A. and Tran Thanh Van, M. 1977. Changes in isoperoxidases during differentiation of cultured tobacco epidermal layers. Acta Horticulturae 78: 61-73.
- Gathercole, R.W.E., Mansfield, K.G. and Street, H.E. 1976. Carbon dioxide as an essential requirement for cultured sycamore cells. Physiol. Plant. 37: 213-217.
- Gautheret, R.J. 1939. Sur la possibilite de realiser la culture indefinite des tissus de tubercules de carotte. C.R. Acad. Sci., Paris, 208: 118.
- Gautheret, R.J. 1941. Action du saccharose sur la croissance des tissus de carotte. Compt. Rend. Soc. Biol. 135: 875-877 (Paris).
- Gautheret, R.J. 1945. La culture des Tissus. Lagny sur Marne. France.

- Gautheret, R.J. 1948. Sur la culture indefinie des tissus de Salix caprea. Compt. Rend. Soc. Biol. 142: 807-808.
- Gautheret, R.J. 1959. "La Culture des Tissus Végétaux, Techniques et Réalisation," Masson et Cie, Paris.
- Gautheret, R.J. 1966. Factors affecting differentiation of plant tissues grown in vitro. In: Cell Differentiation and Morphogenesis. pp. 55-95. Amsterdam : North-Holland.
- Geier, T. 1977. Morphogenesis and plant regeneration from cultured organ fragments of Cyclamen persicum. Acta Horticulturae. 78: 167-174.
- Gibbs, M. and Beevers, H. 1955. Glucose dissimilation in the higher plant. Effect of age of tissue. Plant Physiol. 30: 343-347.
- Givan, C.V. and Collin, H.A. 1967. Studies on the growth in culture of plant cells. II. Changes in respiration rate and nitrogen content associated with the growth of Acer pseudoplatanus L. cells in suspension culture. J. Exp. Bot. 18: 321-331.
- Glasziou, K.T. and Gayler, K.R. 1972. Storage of sugars in stalks of sugarcane. The Botanical Review 38: 471-490.
- Glasziou, K.T., Gayler, K.R. and Waldron, J.C. 1968. Effects of auxin and gibberellic acid on the regulation of enzyme synthesis in sugarcane stem tissue. In: F. Wightman and G. Setterfield, eds., "Biochemistry and Physiology of Plant Growth Substances". pp. 433-442. Runge Press, Ottawa, Canada.
- Glasziou, K.T. and Waldron, J.C. 1964 a. Regulation of acid invertase levels in sugarcane stalks by auxin- and metabolite mediated control systems. Nature 203: 541-542.

Glasziou, K.T. and Waldron, J.C. 1964 b. The regulation of invertase synthesis in sugar-cane: Effects of sugars, sugar derivatives, and polyhydric alcohols. *Aust. J. of Biol. Sci.* 17: 609-618.

Glasziou, K.T., Waldron, J.C. and Bull, T.A. 1966. Control of invertase synthesis in sugarcane. Loci of auxin and glucose effects. *Plant Physiol.* 41: 282-288.

Goldsworthy, A. 1964. Studies in carbohydrate metabolism of excised roots Ph. D. Thesis, Univ. of Wales. England.

* Goris, A. 1971. *Rev. Gen. Bot.* 78: 103-112.

* Goris, M.A. 1968. *Rev. Gen. Bot.* 75: 465-480.

Granatek, C.H. and Cockerline, A.W. 1978. Callus formation versus differentiation of cultured barley embryos : hormonal osmotic interactions. *In Vitro* 14: 212-217.

Green, C.E. 1978. *In vitro* plant regeneration in cereals and grasses. In: T.A. Thorpe, ed., "Frontiers of Plant Tissue Culture 1978". pp. 411-418. Published by the International Association for Plant Tissue Culture 1978. The Book Store, University of Calgary, Alberta T2N 1N4, Canada.

Hager, A., Henzel, H. and Krauss, A. 1971. Versuche und Hypothese zur Primärwirkung des Auxins beim Streckungswachstum. *Planta*. 100: 47-75.

Halperin, W. and Wetherell, D.F. 1964. Adventive embryony in tissue cultures of the wild carrot, Daucus carota. *Am. J. Bot.* 51: 274-283.

Hammerling, J. 1963. Nucleo-cytoplasmic interactions in Acetabularia and other cells. *Ann. Rev. Pl. Physiol.* 14: 65-92.

Harkin, J.M. and Obst, J.R. 1973. Lignification in trees: Indication of exclusive peroxidase participation. Science 108: 296-298.

Harris, H. 1974. Nucleus and cytoplasm (3rd edition). Clarendon Press. Oxford.

Haschke, H.P. and Lüttge, U. 1975. Stoichiometric correlation of malate accumulation with auxin dependent K⁺ - H⁺ exchange and growth in Avena coleoptile segments. Plant Physiol. 56: 696-698.

Haschke, H.P. and Lüttge, U. 1977. Action of auxin on CO₂ dark fixation in Avena coleoptile segments as related to elongation growth. Plant Sci. Lett. 8: 53-58.

Hassid, W.Z. and Newfeld, E.F. 1964. Quantitative determination of starch in plant tissues. In: Methods in carbohydrate chemistry. Vol. 4. Starch. pp. 33-36. Academic Press. New York.

Hatch, M.D. and Glasziou, K.T. 1963. Sugar accumulation cycle in sugar cane. II. Relationship of invertase activity to sugar content and growth rate in storage tissue of plants grown in controlled environments. Plant Physiol. (Lancaster) 38: 344-348.

Hawker, J.S. 1969. Insoluble invertase from grapes : an artifact of extraction. Phytochem. 8: 337-344.

Heide, O.M. 1969. Non reversibility of gibberellin induced inhibition in Begonia leaves. Physiol. Plant. 22:671-679.

Hendre, R.R., Mascarenhas, A.F., Pathak, M. and Jagannathan, V. 1975. Tissue Cultures of Maize, Wheat, Rice and Sorghum : Part II - Growth and nutrition of callus cultures. Ind. J. Expt. Biol. 13: 108-111.

Higgins, T.J.V., Zwar, J.A. and Jacobsen, J.V. 1976.

Gibberellic acid enhances the level of translatable mRNA for α -amylase in barley aleurone layers. Nature 260: 166-169.

Higuchi, T. and Shimada, M. 1967 a. Changes in activity of shikimate : NADP oxidoreductase in relation to lignification of bamboo. Plant. Cell Physiol. 8: 61-69.

Higuchi, T. and Shimada, M. 1967 b. Changes in activity of D-glucose-6-phosphate : NADP and 6-phospho-D-gluconate: NADP oxidoreductases in relation to lignification of bamboo. Plant. Cell Physiol. 8: 71-78.

Hildebrandt, A.C. and Riker, A.J. 1948. Influence of some carbon compounds on growth of plant tissue cultures in vitro. Anat. Rec. 100: 674 (Abstract).

Hildebrandt, A.C. and Riker, A.J. 1949. The influence of various carbon compounds on the growth of marigold, paris-daisy, periwinkle, sunflower and tobacco tissue in vitro. Amer. J. Bot. 36: 74-85.

Hildebrandt, A.C. and Riker, A.J. 1953. Influence of concentration of sugars and polysaccharides on callus tissue growth in vitro. Amer. J. Bot. 40: 66-76.

Hildebrandt, A.C. and Riker, A.J. 1955. Inhibition by alcohols of diseased plant growth in tissue culture. J. Cancer Res. 15: 517-522.

Hildebrandt, A.C., Riker, A.J. and Dugger, B.M. 1945. Growth in vitro of excised tobacco and sunflower tissue with different temperatures, hydrogen-ion concentration and amounts of sugar. Amer. J. Bot. 32: 357-361.

- Hill, B.C. and Bown, A.W. 1978. Phosphoenolpyruvate carboxylase activity from Avena coleoptile tissue. Regulation by H⁺ and malate. *Can. J. Bot.* 56: 404-407.
- Hock, B. and Beevers, H. 1966. Development of the glyoxalate-cycle enzymes in water melon seedlings (Citrullus vulgaris Schrad.) *Z. Pflanzenphysiol.* 55: 405-414.
- * Homes, J.L.A. 1967. *C.R. Scane. Soc. Biol.* 161: 2641.
- Hsu, R.Y. and Lardy, H.A. 1969. Malic enzyme. In: Lowenstein, J.M. ed., "Methods in Enzymology". Vol. XIII. Citric Acid Cycle. pp. 230-235. Academic Press, New York and London.
- Humphreys, T.E. and Dugger, W.M. 1957. The effect of 2,4-dichlorophenoxyacetic acid on the pathway of glucose catabolism in higher plants. *Plant Physiol.* 32: 136-140.
- Jacobs, M. and Ray, P.M. 1976. Rapid auxin-induced decrease in free space pH and its relationship to auxin induced growth in maize and pea. *Plant Physiol.* 58: 203-209.
- Jacobsen, J.V. 1970. Control of α -amylase synthesis in isolated barley aleurone layers by gibberellic acid, abscisic acid and ethylene. In: D.J. Carr. ed., "Plant Growth Substances 1970". pp. 336-343. Springer-Verlag, Berlin, Heidelberg, New York.
- Jacobsen, J.V. and Knox, R.B. 1970. Cytochemical localization of gibberellic acid - induced enzymes in the barley aleurone layer. In: D.J. Carr, ed., "Plant Growth substances 1970". pp. 344-351. Springer-Verlag, Berlin, Heidelberg, New York. 1972.
- Jagannathan, V., Kartar Singh and Damodaran, V. 1956. Carbohydrate Metabolism in Citric Acid Fermentation. Purification and properties of Aldolase from Aspergillus niger. *Biochem. J.* 63: 94-105.

- Jagannathan, V., Mascarenhas, A.F., Hendre, R.R., Nadgir, A.L., Ghugale, D.D., Krishnamurthy, K.V. and Godbole, D.A. 1977. Propagation of plants through tissue culture. Symposium on Basic Sciences and Agriculture, pp. 78-86. Indian National Science Academy, New Delhi, India.
- James, D.J. 1979. The role of auxins and phloroglucinol in adventitious root formation in Rubus and Fragaria grown in vitro. Jr. of Hort. Sci. 54: 273-277.
- James, D.J. and Newton, B. 1977. Auxin : cytokinin interactions in the in vitro propagation of strawberry plants. Acta Horticulturae. 78: 321-331.
- Jaspars, E.M.J. and Veldstra, H. 1965. An α -amylase from tobacco crown-gall tissue cultures. II. Measurements of the activity in media and tissues. Physiol. Plant. 18: 626-634.
- Jaynes, T.A. and Nelson, O.E. 1971. Invertase activity in normal and mutant maize endosperms during development. Plant Physiol. 47: 623-628.
- Jeffs, R.A. and Northcote, D.H. 1966. Experimental induction of vascular tissue in an undifferentiated plant callus. Biochem. J. 101: 146-152.
- Jeffs, R.A. and Northcote, D.H. 1967. The influence of IAA and sugar on the pattern of induced differentiation in plant tissue culture. J. Cell Sci. 2: 77-88.
- Jensen, W.A. 1963. Cell development during plant embryogenesis. Brookhaven Symp. Biol. 16: 179-202.
- John, P.C.L., McCullough, W., Atkinson, A.W., Forde, B.G. and Gunning, B.E. 1973. The cell cycle in Chlorella. In: M. Balls and F.S. Billett eds., "The Cell Cycle in Development and Differentiation". Cambridge University Press. England.

- Johri, B.M. 1965. Chemical induction of polyembryony. In: C.V. Ramakrishnan, ed., "Tissue Culture". pp. 330-337. W. Junk Publishers, The Hague.
- Johri, M.M. 1978. Regulation of cell differentiation and morphogenesis in lower plants. In: T.A. Thorpe. ed., "Frontiers of Plant Tissue Culture 1978". pp. 27-36. Published by the International Association for Plant Tissue Culture 1978. The Book Store, University of Calgary, Alberta. T2N1N4, Canada.
- Johri, M.M. and Varner, J.E. 1968. Enhancement of RNA synthesis in isolated pea nuclei by gibberellic acid. Proc. Natn. Acad. Sci. U.S.A. 59: 269-276.
- Jones, L.H., Barrett, J.N. and Gopal, P.P.S. 1973. Growth and nutrition of a suspension culture of Pogostemon cablin Bentis (Patchouli). J. Exp. Bot. 24: 145-158.
- * Jouanneau, J.P. and Tandeau de Marsac, N. 1973. Exptl. Cell Res. 77: 167-174.
- Kaminek, M. and Lustinec, J. 1976. The effect of sugars on inverse relation between the growth and chlorophyll synthesis in tobacco tissue. Biologia Plantarum 18: 384-388.
- Karstens, W.K.H. and De Meester-Manger Cats, V. 1960. The cultivation of plant tissues in vitro with starch as a source of carbon. Acta. Bot. Neer. 9: 263-274.
- Kato, Y. 1965. Physiological and morphogenetic studies of fern gametophytes and sporophytes in aseptic culture. IV. Controlled differentiation in leaf callus tissues. Cytologia 30: 67-74.

- Katterman, F.R.H., Dale Williams, M. and Willard, F. Clay.
1977. The influence of a strong reducing agent upon
the initiation of callus from the germinating seedlings
of Gossypium barbadense. *Physiol. Plant.* 40: 98-100.
- Kende, H. 1971. The cytokinins. *Int. Rev. Cytol.* 31: 301-338.
- Kende, H. and Gardner, G. 1976. Hormone binding in plants.
Ann. Rev. Plant. Physiol. 27: 267-290.
- Kikuta, Y., Akemine, T. and Tagawa, T. 1971. Role of the
pentose phosphate pathway during callus development in
explants from potato tuber. *Plant and Cell Physiol.* 12:
73-79.
- Kikuta, Y., Harada, T., Akemine, T. and Tagawa, T. 1977. Role
of kinetin in activity of the pentose phosphate pathway
in relation to growth of potato tissue cultures. *Plant
and Cell Physiol.* 18: 361-370.
- Kimball, S.L., Beversdorf, W. D. and Bingham, E.T. 1975.
Influence of osmotic potential on the growth and
development of soybean tissue cultures. *Crop Sci.* 15:
750-752.
- King, P.J. and Street, H.E. 1973. Growth patterns in cell
cultures. In : H.E. Street, ed., "Plant Tissue and Cell
Culture". pp. 269-337. Blackwell Scientific Publications.
Oxford and University of California Press, Berkeley.
- Klämbt, D. 1977. Cytokinin and cell Metabolism. In: P.E.Pilet.
ed., "Plant Growth Regulation". pp. 154-160. Springer-
Verlag, Berlin, Heidelberg, New York.
- Klenovska, S. 1971. Wasserhaushalt der Nicotiana tabacum L.
Kallusgewebekultur bei herabgesetztem Bodenwasserpotential.
Z. Pflanzenphysiol. 64: 257-259.

Klenovska, S. 1973. Water relations and the dynamics of the sugar content in tobacco callus tissue cultures when using polyethyleneglycol as osmotic agent. *Acta Fac. Rerum Nat. Univ. Comenianae. Physiol. Plant.* 7: 19-29.

Klenovska, S. 1976. Dependence of growth, water relations and of the dynamics of free glycids in tobacco calluses upon the humidity of surroundings. *Physiol. Plant.* 11: 41-48.

Klis, F.M. 1971. α -Glucosidase activity located at the cell surface in callus of Convolvulus arvensis. *Physiol. Plant.* 25: 253-257.

Klis, F.M. and Akster, R.A. 1974. Acid cell wall invertases in Convolvulus callus. *Phytochemistry* 13: 1737-1740.

Klis, F.M., Dalhuizen, R. and Kees Sol. 1974. Wall bound enzymes in callus of Convolvulus arvensis. *Phytochemistry* 13: 55-57.

Klis, F.M. and Hak, A. 1972. Wall-bound invertase activity in Convolvulus callus : increase after subculturing, and paradoxical effects of actinomycin D, cycloheximide, and thienylalanine. *Physiol. Plant.* 26: 364-368.

* Koblitz, H., Koblitz, D. and Hagen, I. 1965. *Flora* 155: 544-557.

* Kochba, J. and Spiegel-Roy, P. 1977 a. *Hart. Science* 12: 110-114.

* Kochba, J. and Spiegel-Roy, P. 1977 b. *Z. Pflanzenphysiol.* 81: 283-288.

Kochba, J. Spiegel-Roy, P., Saad, S. and Newmann, H. 1978. Tissue culture studies with Citrus : 1) the effect of several sugars on embryogenesis and 2) application of

- citrus tissue cultures for selection of mutants. In: A.W. Alfermann and E. Reinhard, eds., "Production of Natural Compounds by Cell Culture Methods". pp. 223-232.
- Kogl, F. and Elma, J. 1960. Klirkungesbeziehungen Zwischen Indole-3-essig-saure und Gibberellin saure. Naturewissenschaften. 47: 90.
- * Koji, O., Kunihiko, O. and Fujiwara, A. 1973. Plant Cell Physiol. 14: 1113-1121.
- Komamine, A., Morigaki, T. and Fujimura, T. 1978. Metabolism in synchronous growth and differentiation in plant tissue and cell cultures. In: T.A. Thorpe, ed., "Frontiers of Plant Tissue Culture 1978". pp. 159-168. Published by the IAPTC 1978. Distribution : The Book Store, University of Calgary, Calgary, Alberta, Canada.
- Komamine, A., Morohashi, Y. and Shimokoriyama, M. 1969. Changes in respiratory metabolism in tissue cultures of carrot root. Plant and Cell Physiol. 10: 411-423.
- Komamine, A. and Schimizu, T. 1975. Changes in some enzyme activities and respiration in the early stage of callus formation in a carrot root tissue culture. Physiol. Plant. 33: 47-52.
- Kshirsagar, M.K. 1974. In vitro studies in ferns. Ph. D. Thesis. The M.S.University of Baroda, Baroda, India.
- Kshirsagar, M.K. and Mehta, A.R. 1978. In vitro studies in ferns : Growth and differentiation in rhizome callus of Pteris vittata. Phytomorphology 28: 50-58.
- * Kuraishi, S. and Muir, R.M. 1964. Plant Cell Physiol. (Tokyo) 5: 61-69.

Laetsch, W.M. and Stetler, A. 1965. Chloroplast structure and function in cultured tobacco tissue. Amer. J. Bot. 52: 798-804.

Lampert, D.T.A. 1964. Cell suspension cultures of higher plants : isolation and growth energetics. Expl. Cell Res. 33: 195-206.

Lampert, D.T.A. 1978. Cell wall carbohydrates in relation to structure and function. In: T.A. Thorpe. ed., "Frontiers of plant Tissue Culture 1978". pp. 235-244. Published by the International Association for Plant Tissue Culture 1978. The Book Store, University of Calgary, Alberta T2N1N4, Canada.

Lang, H. and Kohlenbach, A.W. 1975. In: H.Y. Mohan Ram, J.J. Shah and C.K. Shah, eds., "Form, Structure and Function in Plants". pp. 133-136. B.M. Johri Commemoration Volume. Sarita Prakashan, Nauchandi, Meerut, India.

Laties, G.G. 1963. In: B. Wright, ed. "Control Mechanisms in Respiration and Fermentation". pp. 129. Ronald Press, New York.

* Lau, O-M. and Yang, S.F. 1973. Plant Physiol. 51: 1011-1014.

Leaver, C.J. 1966. "The correlation between Nucleic Acid Synthesis and Induced Enzyme Activity in Plant Tissue Slices". Ph. D. Thesis. University of London.

Lee, T.T. 1974. Cytokinin control in subcellular localization of indoleacetic acid oxidase and peroxidase. Phytochem. 13: 2445-2453.

Lee, T.T. and Skoog, F. 1965 a. Effects of substituted phenols on bud formation and growth of tobacco tissue cultures. Physiol. Plant. 18: 386-402.

- Lee, T.T. and Skoog, F. 1965 b. Effects of hydroxybenzoic acid on indoleacetic acid inactivation by tobacco callus extracts. *Physiol. Plant.* 18: 577-585.
- Leffler, H.R., O'Brien, T.J., Glover, D.V. and Cherry, J.H. 1971. Enhanced DNA polymerase activity of chromatin from soybean hypocotyl treated with 2,4-D. *Plant Physiol.* 48: 43-45.
- Legrand, M. 1974. Influence des conditions d'éclairement sur la meoformation des bourgeois par les tissus de fenilles d'Endive cultives *in vitro* et sur l'activite peroxydasique de ces tissus. *C.R. Acad. Sci.* 278: 2425-2428.
- Legrand, B. and Vasseur, J. 1972. Evolution de l'acide ribonucleique, des proteines et de l'activite peroxydasique au cours de la culture *in vitro* de fragments de fenilles d'endive (*Cichorium intybus* L., var. Witloof). *C.R. Acad. Sci.* 275: 357-360.
- Leshem Ya'acov. 1973. "The molecular and hormonal basis of plant growth regulation". (First edition). Pergamon Press, Oxford. New York. Toronto. Sydney.
- Letham, D.S. 1968. A new cytokinin bioassay and the naturally occurring cytokinin complex. In: F. Wightman and G. Setterfield. eds., "Biochemistry and Physiology of Plant Growth Substances", pp. 19-32, Runge Press, Ottawa, Canada.
- Letham, D.S. and Williams, M.W. 1969. Regulation of cell division in plant tissue. VIII. The cytokinins of apple fruit. *Physiol. Plant.* 22: 925-936.
- Lowe, J. and Slack, C.R. 1971. Inhibition of maize leaf phosphopyruvate carboxylase by oxaloacetate. *Biochim. Biophys. Acta*. 235: 207-209.

- Lowry, O.H., Rosebrough, N.J., Farr, A.L. and Randall, R.J. 1951. Protein measurement with the Folin Phenol reagent. *J. Biol. Chem.* 193: 265-275.
- Luštinec, J. and Pokorná, V. 1962. Alternation of respiratory pathways during the development of wheat leaf. *Biol. Plant. (Praha)* 4: 101-109.
- Lyne, R.L. and ap Rees, T. 1971. Invertase and sugar content during differentiation of roots of Pisum sativum. *Phytochemistry* 10: 2593-2599.
- Mäder, M. 1975. Änderung der peroxidase isoenzym muster in Kallus-Kulturen in abhangigkeit non der differenzierung. *Planta Med. (Suppl.)* 153-162.
- Maeda, E. and Saka, H. 1973. Light microscopy of cell organelles in the shooting rice callus tissues (in Japanese) *Proc. Crop. Sci. Soc. Jpn.* 42: 442-453.
- Magasanik, B. 1961. Catabolite repression Cold. Spr. Harb. Symp. Quant. Biol. 26: 249-254.
- Maretzki, A., De La Cruz, A. and Nickell, L.G. 1971. Extracellular hydrolysis of starch in sugarcane cell suspensions. *Plant Physiol.* 48: 521-525.
- Maretzki, A. and Thom, M. 1972. Membrane transport of sugars in cell suspensions of sugarcane. *Plant Physiol.* 49: 177-182.
- Maretzki, A., Thom, Ma and Nickell, L.G. 1972. Influence of osmotic potentials on the growth and chemical composition of sugarcane cell cultures. *Hawaii. Plant Rec.* 48:183-199.
- Maretzki, A., Thom, M. and Nickell, L.G. 1974. Utilization and metabolism of carbohydrates in cell and callus cultures. In: H.E. Street ed., "Tissue Culture and Plant Science 1974". pp. 329-361. Academic Press. London and New York.

Marinos, N.G. 1967. Multifunctional plastids in the meristematic region of potato tuber buds. *J. Ultrastruct. Res.* 17: 91-113.

Maroti, M. and Levi, E. 1977. Hormonal regulation of the organization from meristem cultures. In: F.J. Novak, ed., "Use of Tissue Culture in Plant Breeding". pp. 273-290. Czechoslovak Acad. Sci. Prague, Czechoslovakia.

* Marvin, J.W. and Morselli, M. 1971. *Cryobiol.* 8: 339-344.

Mathes, M.C. 1967. The in vitro growth of Acer saccharum and Acer pennsylvanicum callus tissue. *Can. J. Bot.* 45: 2195-2200.

Mathes, M.C., Morselli, M.F. and Marvin, J.W. 1973. Use of various carbon sources by isolated maple callus cultures. *Plant and Cell Physiol.* 14: 797-801.

McCready, C.C. 1963. Movement of growth regulators in plants. I. Polar transport of radioactivity from indoleacetic acid (^{14}C) and 2,4-dichlorophenoxyacetic acid (^{14}C) in petioles of Phaseolus vulgaris. *New Phytol.* 62: 19-34.

Mehta, P.N. 1972. Some aspects of differentiation in cryptogams. *Res. Bull. Punjab Univ. Chandigarh.* 23: 221-242.

Mehta, A.R. 1966. Chemical regulation of vascular differentiation in plant tissue cultures. In: "The proceedings of the Autumn School in Botany". Mahabaleshwar.

Mehta, A.R. 1975. Experimental study of induced differentiation in Linum root callus. In: H.Y. Mohan Ram, J.J. Shah and C.K. Shah, eds., "Form, Structure and Function in Plants". pp. 133-136. B.M. Johri Commemoration Volume. Sarita Prakashan, Nauchandi, Meerut, India.

Mehta, A.R. 1980 a. Some physiological aspects of morphogenesis in tissues grown in culture. Twelfth Philip R. White Memorial Lecture delivered at Calcutta during the 67th Session of the Indian Science Congress (January 31, 1980).

Mehta, A.R. 1980 b. Physiological aspects of organ differentiation in vitro. Plenary lecture delivered at Symposium on "Plant Tissue Culture, Genetic Manipulation and Somatic Hybridization of Plant Cells" held at BARC, Bombay, India, Feb. 27-29.

* Meryl Smith, M. and Stone, B.A. 1973. Aust. J. Biol. Sci. 26: 123-133.

Mitra, G.C. and Chaturvedi, H.C. Embryoids and complete plants from unpollinated ovaries and from ovules of in vivo grown emasculated flower buds of Citrus sp. Bull. Torrey Botan. Cl. 99: 184-189.

Mizuno, K. and Komamine, A. 1978. A possible role of cyclic AM P on tracheary element formation in cultured carrot-root slice. Bot. Mag. Tokyo. 91: 213-219.

Mohan Ram, H.Y. and Wadhi, M. 1965. Morphogenesis in tissue cultures - Totipotency of cultured cells. In: C.V. Rama-krishnan, ed., "Tissue Culture". pp. 320-329. W. Junk Publishers, The Hague.

Monod, J. 1947. The phenomenon of enzymatic adaptation. Growth 11: 223-289.

Morel, G. 1948. Recherches sur la culture associee de parasites obligatoires et de tissus vegetaux. Ann. Epiphyt. 14:1.

Morgan, D.R. and Street, H.E. 1959. The carbohydrate nutrition of tomato roots. VII. Sugars, sugar phosphates and sugar alcohols as respiratory substrates for excised roots. Ann. Bot. 23: 89-105.

Morohashi, Y., Komamine, A., Sato, M. and Shimokoriyama, M. 1965. Physiological studies on the outgrowth of the epicotyl in Stizolobium hassjoo. III. Studies on glucose catabolism in outgrowth and the epicotyl. Bot. Mag. Tokyo. 78: 43-49.

Moyed, H. S. and Tuli, V. 1968. The oxindole pathway of 3-indoleacetic acid metabolism and the action of auxins. In: F. Wightman and G. Setterfield, eds., "Biochemistry and Physiology of Plant Growth Substances". pp. 289-300. Runge, Press, Ottawa, Canada.

Muri, W.H., Hildebrandt, A.C. and Riker, A.J. 1954. Plant tissue cultures produced from single isolated cells. Science 119: 877-878.

Muralidhar, C.E. and Mehta, A.R. 1980. In vitro seed germination and histomorphological changes in seedlings of Cymbidium longifolium D. Don. Paper presented at the "National Symposium on Orchids" held at ICAR, Bangalore, India, Oct. 24-25.

Murashige, T. 1964. Analysis of the inhibition of organ formation in tobacco tissue culture by gibberellin. Physiol. Plant. 17: 636-643.

Murashige, T. 1965. Effects of stem elongation retardants and gibberellins on callus growth and organ formation in tobacco tissue culture. Physiol. Plant. 18: 665-673.

Murashige, T. 1974. Plant propagation through tissue cultures. Ann. Rev. Plant Physiol. 25: 135-166.

- Murashige, T. 1977. Clonal crops Through Tissue Culture. In: W. Barz, E. Reinhard and M.H.Zenk, eds., "Plant Tissue Culture and Its Biotechnological Application". pp. 392-403. Springer-Verlag, Berlin, Heidelberg, New York.
- Murashige, T. and Skoog, F. 1962. A revised medium for rapid growth and bioassays with tobacco tissue cultures. *Physiol. Plant.* 15: 473-497.
- Murashige, T. and Tucker, D.P.H. 1969. Growth factor requirements of Citrus tissue culture. In: H.D.Chapman, ed., "Proc. 1st Intern. Citrus Symp." Vol. 3. pp. 1155-1161. Riverside, Univ. California.
- Nakano, H. and Maeda, E. 1974 a. Morphology of the process of shoot formation in the rice callus culture (In Japanese). *Proc. Crop Sci. Soc. Japan.* 43: 151-160.
- Nakano, H. and Maeda, E. 1974 b. Histology of development and root differentiation in rice callus (In Japanese). *Proc. Crop Sci. Soc. Japan.* 43: 345-353.
- Narayanaswamy, S. 1977. Regeneration of plants from tissue culture. In: J. Reinert and Y.P.S. Bajaj, eds., "Applied and Fundamental Aspects of Plant Cell, Tissue and Organ Culture". pp. 179-206. Springer-Verlag, Berlin, Heidelberg, New York.
- Narayanaswamy, S. 1981. The riddle of cytodifferentiation in tissue culture. Thirteenth Philip R. White Memorial Lecture delivered at Banaras during the 68th Session of the Indian Science Congress. January 2, 1981.
- Nash, D.T. and Boll, W.G. 1975. Carbohydrate nutrition of Paul's Scarlet Rose cell suspensions. *Can. J. Bot.* 53: 179-185.

- Nash, D.T. and Davies, M.E. 1972. Some aspects of growth and metabolism of Paul's Scarlet Rose cell suspensions. *J. Exp. Bot.* 23: 75-91.
- Nelson, N. 1944. A photometric adaptátion of the Somogyi method for the determination of glucose. *J. Biol. Chem.* 153: 275-279.
- Nickell, L.G. 1952. Vitamin B₁ requirement of Rumex virus tumour tissue. *Bull. Torrey Bot. Club* 79: 427-430.
- Nickell, L.G. and Brakke, M.K. 1950. An extracellular amylase from Rumex virus tumours grown in vitro. *Am. J. Bot.* 37: 681.
- Nickell, L.G. and Burkholder, P.R. 1950. A typical growth of plants. II. Growth in vitro of various tumors of Rumex in relation to temperature, pH and various sources of nitrogen, carbon and sulphur. *Amer. J. Bot.* 37: 538-547.
- Nickell, L.G. and Maretzki, A. 1969. Growth of suspension cultures of sugarcane cells in chemically defined media. *Physiol. Plantarum* 22: 117-125.
- Nickell, L.G. and Maretzki, A. 1970. The utilization of sugars and starch as carbon sources by sugarcane cell suspension cultures. *Plant and Cell Physiol.* 11:183-185.
- Nickell, L.G. and Tulecke, W. 1959. Responses of plant tissue cultures to gibberellin. *Bot. Gaz.* 120: 245-250.
- Nicolás, G. and Aldasoro, J.J. 1979. Activity of the pentose phosphate pathway and changes in nicotinamide nucleotide content during germination of seeds of Cicer arietinum L. *J. Expt. Bot.* 30: 1163-1170.

Nitsch, J.P. 1968. Studies on the mode of action of auxins, cytokinins and gibberellins at the subcellular level. In: F. Wightman and G. Setterfield, eds., "Biochemistry and Physiology of Plant Growth Substances": pp. 563-580. Runge Press, Ottawa, Canada.

* Nitsch, J.P. and Nitsch, C. 1959. Bull. Soc. Franc. Physiol. Vegetale. 5: 20-23.

* Nitsch, C. and Nitsch, J.P. 1963. Bull. Soc. Botan. France. 110: 7-17.

Nitsch, C. and Nitsch, J.P. 1967. Induction of flowering in vitro in segments of Plumbago indica L. I. The production of vegetative buds. Planta 72: 355-370.

Nobecourt, P. 1939. Sur les radicelles maissant des cultures de tissus de tubercule de carotte. Compt. Rend. Soc. Biol. 130: 1271-1272.

O'Brien, T.J., Jarvis, B.C., Cherry, J.H. and Hanson, J.B. 1968. Enhancement by 2,4-D of chromatin RNA polymerase in soybean hypocotyl tissue. Biochim. Biophys. Acta. 169: 35-43.

Ochoa, S. 1955. Malic dehydrogenase from pig heart. In: S.P. Colowick and N.O. Kaplan, eds., "Methods in Enzymology". Vol. pp. 735-739. Academic Press, New York.

Paleg, L. 1960 a. Physiological effects of gibberellic acid. I. On carbohydrate metabolism and amylase activity on barley endosperm. Plant Physiol. 35: 293-299.

Paleg, L.G. 1960 b. Physiological effects of gibberellic acid. II. On starch hydrolyzing enzymes of barley endosperm. Plant Physiol. Wash. 35: 902-906.

- Palmer, J.M. 1968. The effect of some plant growth substances on the induction of enzymatic activities in thin slices of plant tubers. In: F. Wightman and G. Setterfield, eds., "Biochemistry and Physiology of Plant Growth Substances". pp. 401-415. Runge Press, Ottawa, Canada.
- Parr, D.R., Edelman, J. and Hawker, J.S. 1976. Growth and sucrose metabolism of carrot callus strains with normal and low acid invertase. *Physiol. Plant.* 37: 223-228.
- Paulet, P. 1965. Etude de la neoformation in vitro de bourgeois vegetatifs et floreaux. *Rev. Gen. Bot.* 72: 697-792.
- Péaud-Lencöl, C. 1977. The hormonal regulation of the cell division cycle. In: P.E.Pilet. ed., "Plant Growth Regulation". pp. 240-248. Springer-Verlag, Berlin, Heidelberg, New York.
- Piesco, N.P. and Alvarez, M.R. 1972. Nuclear cytochemical changes in onion roots stimulated by Kinetin. *Expt. Cell Res.* 73: 129-139.
- Pollard, J.K., Shantz, E.M. and Steward, F.C. 1961. Hexitols in coconut milk : their role in nature of dividing cells. *Plant Physiol.* 36: 492-501.
- Prabhudesai, V.R. and Narayanaswamy, S. 1974. Organogenesis in tissue cultures of certain Asclepiads. *Z. Pflanzenphysiol.* 71: 181-185.
- Pryke, J.A. and ap Rees, T. 1976. Activity of the pentose phosphate pathway during lignification. *Planta (Berl.)* 132 : 279-284.

- * Radionova, N.A. and Runkova, L.V. 1963. Gibberellinyikh Deistvic Rast., Akad. Nauk SSSR Inst. Fiziol-Rast., 134-138.
- Raghavan, V. and Torrey, J.G. 1963. Growth and morphogenesis of globular and older embryos of Capsella in culture. Am. J. Bot. 50: 540-554.
- Rao, P.S., Bapát, V.A. and Harada, H. 1976. Gamma irradiation and hormonal factors controlling morphogenesis in organ cultures of Antirrhinum majus L. cv. Red Majestic Chief. Z. Pflanzenphysiol. 80: 144-152.
- Rao, P.S., Handro, W. and Harada, H. 1973. Hormonal control of differentiation of shoots, roots and embryos in leaf and stem cultures of Petunia inflata and Petunia hybrida. Physiol. Plant. 28: 458-463.
- Rao, P.S. and Narayanaswamy, S. 1968. Induced morphogenesis in tissue cultures of Solanum xanthocarpum. Planta (Berl.) 81: 372-375.
- Rao, P.S. and Narayanaswamy, S. 1972. Morphogenetic investigations in callus cultures of Tylophora indica. Physiol. Plant. 27: 271-276.
- Rao, P.S., Narayanaswamy, S. and Benjamin, B.D. 1970. Differentiation ex ovulo of embryos and plantlets in stem tissue cultures of Tylophora indica. Physiol. Plant. 23: 140-144.
- Rawal, S.K. 1979. Some physiological aspects of growth and differentiation in diploid and haploid tobacco tissues grown in culture. Ph. D. Thesis. The M.S. University of Baroda, Baroda, India.
- Rawal, S.K. and Mehta, A.R. 1980. Changes in enzyme activity and isoperoxidases in Haploid tobacco callus during organogenesis. Paper presented at Symposium on "Plant Tissue

Culture, Genetic Manipulation and Somatic Hybridization of Plant Cells" held at BARC, Bombay, India, Feb. 27-29.

Reich, E., Franklin, R., Shatkin, A. and Tatum, E. 1961.

Effect of actinomycin D on cellular nucleic acid synthesis and virus production. *Science* 134: 556-567.

Reinert, J. 1973. Aspects of organisation - organogenesis and embryogenesis. In: H.E. Street, ed., "Plant Tissue and Cell Culture". pp. 338-354. Blackwell Scientific Publications. Oxford and University of California Press, Berkeley.

Ricardo, C.P.P. and ap Rees, T. 1970. Invertase activity during the development of carrot roots. *Phytochem.* 9: 239-247.

Ricardo, C.P.P., ap Rees, T. and Fuller, W.A. 1972. Effects of sugars on invertase activity of carrot cells. *Phytochem.* 11: 2435-2436.

Rietsema, J., Satina, S. and Blakeslee, A.F. 1953. The effect of sucrose on the growth of Datura stramonium embryos in vitro. *Am. J. Bot.* 50: 540-554.

Risser, P.G. and White, P.R. 1964. Nutritional requirements of spruce tumor cells in vitro. *Physiol. Plant.* 17: 620-635.

* Robbins, W.J. 1922. *J. Bot. Gaz.* 73: 376-390.

Rose, D., Martin, S.M. and Clay, P.P.F. 1972. Metabolic rates for major nutrients in suspension cultures of plant cells. *Can. J. Bot.* 50: 1301-1308.

Ross, M.K. and Thorpe, T.A. 1973. Physiological gradients and shoot initiation in tobacco callus cultures. *Plant Cell Physiol.* 14: 473-480.

- Ross, M.K., Thorpe, T.A. and Costerton, J.W. 1973. Ultra-structural aspects of shoot initiation in tobacco callus cultures. *Am. J. Bot.* 60: 788-795.
- Rücker, W. and Radola, B. 1971. Isoelectric patterns of peroxidase isoenzymes from tobacco tissue cultures. *Planta* 99: 192-198.
- Sacher, J.A. and Glasziou, K.T. 1962. Regulation of invertase levels in sugar cane by an auxin and carbohydrate mediated control system. *Biochem. Biophys. Res. Commun.* 8: 280-282.
- Sacher, J.A., Hatch, M.D. and Glasziou, K.T. 1963. The regulation of invertase synthesis in sugar cane by an auxin- and sugar-mediated control system. *Physiol. Plant.* 16: 836-842.
- Sadik, S. and Ozbun, J.L. 1967. Histochemical changes in the shoot tip of cauliflower during floral induction. *Can. J. Bot.* 45: 955-959.
- Saka, H. and Maeda, E. 1973. Characteristics and varietal differences of α -amylase isozymes in rice callus tissues (in Japanese). *Proc. Crop Sci. Soc. Japan.* 42: 307-314.
- Saka, H. and Maeda, E. 1974. Changes in some hydrolytic enzymes associated with the redifferentiation of shoots in rice callus tissues (in Japanese). *Proc. Crop Sci. Soc. Japan.* 43: 207-218.
- Scala, J. and Semersky, F. 1971. An induced fructose 1,6-diphosphate from cultured cells of Acer pseudoplatanus. *Phytochemistry* 10: 567-570.

- Schenk, R.U. and Hildebrandt, A.C. 1972. Medium and techniques for induction and growth of monocotyledonous and dicotyledonous plant cell cultures. *Can. J. Bot.* 50: 199-204.
- Schönherr, O.T., Wanka, F. and Kuyper, C.M.A. 1970. Periodic change of deoxyribonuclease activity in synchronous cultures of Chlorella. *Biochim. Biophys. Act.* 224:74-79.
- Schraudolf, H. and Reinert, J. 1959. Interactions of plant growth regulators in regeneration processes. *Nature* 184: 465-466.
- Scott, K.J., Daly, J. and Smith, H.H. 1964. Effects of indole-acetic acid and kinetin on activities of enzymes of the hexose monophosphate shunt in tissue cultures of Nicotiana. *Plant Physiol.* 39: 709-712.
- Seyer, P., Marty, D., Lescure, A.M. and Péaud-Lenoël, C. 1975. Effect of cytokinin on chloroplast cyclic differentiation in cultured tobacco cells. *Cell Differentiation* 4: 187-197.
- Shah, R.R. and Mehta, A.R. 1978. Effect of carbohydrates on growth, formation of phenolic compounds and related enzymes in callus cultures of Crotalaria. *Ind. J. Exp. Biol.* 16: 768-770.
- Shailaja Rama Rao. 1978. The effect of nitrogen sources on the biogenesis of phenolic compounds in Arachis hypogaea L. tissue cultures. Ph. D. Thesis. The M.S.University of Baroda, Baroda, India.
- Shannon, J.C. and Dougherty, C.T. 1972. Movement of ¹⁴C labelled assimilates into kernels of Zea mays L. II. Invertase activity of the pedicel and placental-chalazal tissues. *Plant Physiol.* 49: 203-206.

- Shimizu, T., Clibton, A., Komamine, A. and Fowler, M.W. 1977. Changes in metabolite levels during growth of Acer pseudoplatanus (Sycamore) cells in batch suspension culture. *Physiol. Plant.* 40: 125-129.
- Simard, A. 1971. Initiation of DNA synthesis by kinetin and experimental factors in tobacco pith tissues in vitro. *Can. J. Bot.* 49: 1541-1549.
- Simpkins, I., Collin, H.A. and Street, H.E. 1970. The growth of Acer pseudoplatanus cells in a synthetic liquid medium : Response to the carbohydrate, nitrogenous, and growth hormone constituents. *Physiol. Plant.* 23: 385-396.
- Skoog, F. 1944. Growth and organ formation in tobacco tissue cultures. *Am. J. Bot.* 31: 19-24.
- Skoog, F., Hamzi, H.Q., Szweykowska, A.M., Leonard, M.J., Carraway, K.L., Fujii, T., Helgeson, J.P. and Leepky, R.N. 1967. Cytokinins : structure/Activity relationships. *Phytochem.* 6: 1169-1192.
- Skoog, F. and Miller, C.O. 1957. Chemical regulation of growth and organ formation in plant tissues cultured in vitro. *Symp. Soc. Expt. Biol.* 11: 118-131.
- Smith, R. H. and Price, H.J. 1978. Gossypium species in culture. A paper presented at the Fourth Annual College of Biological Sciences Colloquium : Plant Cell and Tissue Culture - Principles and Applications. pp. 21-22.
- Sommer, H.E., Brown, C.L. and Kormanik, P.P. 1975. Differentiation of plantlets in longleaf pine (Pinus palustris, Mill.) tissue cultured in vitro. *Bot. Gaz.* 136: 196-200.

- Somogyi, M. 1952. Notes on sugar determination. *J. Biol. Chem.* 195: 19-23.
- Srivastava, B.I.S. 1968. Acceleration of senescence and of the increase of chromatin-associated nucleases in excised barley leaves by abscisin II and its reversal by kinetin. *Biochim. Biophys. Acta.* 169: 534-536.
- Stafford, H.A. 1974. The metabolism of aromatic compounds. *Ann. Rev. Plant Physiol.* 25: 459-486.
- Steinhart, C.E., Standifer, L.G. and Skoog, F. 1961. Nutrient requirement for in vitro growth of spruce tissue. *Am. J. Bot.* 48: 465-472.
- Steward, F.C. and Bidwell, R.G.H. 1966. Storage pools and turnover systems in growing and non-growing cells : Experiments with ¹⁴C-sucrose, ¹⁴C-glutamine and ¹⁴C-asparagine. *J. Exp. Bot.* 17: 726-741.
- Steward, F.C., Kent, A.E. and Mapes, M.O. 1967. Growth and organization in cultured cells : Sequential and synergistic effects of growth regulating substances. *Ann. N.Y. Acad. Sci.* 144: 326-334.
- Steward, F.C., Mapes, M.O. and Ammirato, P.V. 1969. Growth and morphogenesis in tissue and free cell cultures. In: F.C. Steward, ed., "Plant Physiology : A Treatise". Vol. 5 B. pp. 329-376. Academic Press, New York.
- Steward, F.C., Mapes, M.O. and Mears, K. 1958. Growth and organised development of cultured cells. II. Organization in cultures grown from freely suspended cells. *Am. J. Bot.* 45: 705-708.
- Steward, F.C., Mapes, M.O., Mears, K., Kent, A.E. and Holstein, R.D. 1964. Growth and development of cultured plant cells. *Science.* 143: 20-27.

- Straus, J. 1962. Invertase in cell walls of plant tissue cultures. *Plant Physiol.* (Lancaster) 37: 342-348.
- Straus, J. and Campbell, W.A. 1963. Release of enzymes by plant tissue cultures. *Life Sci.* 1: 50-62.
- Straus, J. and La Rue, C.D. 1954. Maize endosperm tissue grown in vitro. I. Cultural requirements. *Amer. J. Bot.* 41: 687-694.
- Street, H.E. 1966. Physiology of root growth. *Annual Review of Plant Physiology* 17: 315-344.
- Street, H.E. 1969. Growth in organised and unorganised systems. Knowledge gained by culture of organs and tissue explants. *Treatise of plant physiology*. Ed., F.C. Steward, Vol. 5B, Chapter 6, 2-224. Academic Press, London.
- Street, H.E. 1973. Plant cell cultures : their potential for metabolic studies. In: B.V. Milborrow ed., "Biosynthesis and its control in plants". pp. 93-125. Academic Press, London. New York.
- Street, H.E. 1977. Applications of cell suspension cultures. In: J. Reinert and Y.P.S. Bajaj, eds., "Applied and Fundamental Aspects of Plant Cell, Tissue, and Organ Culture". pp. 649-667. Springer-Verlag, Berlin, Heidelberg, New York.
- Street, H.E. and Cockbarn, W. 1972. *Plant Metabolism*. 2nd edition. ELBS Pergamon Press, Oxford.
- Street, H.E., Collin, H.A., Short, K. and Simpkins, I. 1968. Hormonal control of cell division and expansion in suspension cultures of Acer pseudoplatanus L. The action of kinetin. In : F. Wightman and G. Setterfield. eds., "Biochemistry and Physiology of Plant Growth Substances". pp. 489-504. Runge Press Ltd., Ottawa, Canada.

Street, H.E. and Withers, L.A. 1974. The anatomy of embryogenesis. In : H.E. Street, ed. "Tissue Culture and Plant Science". pp. 71-100. Academic press, New York, London.

Stuart, R. and Street, H.E. 1971. Studies on the growth in culture of plant cells. X. Further studies on the conditioning of culture media by suspensions of Acer pseudoplatanus L. cells. J. Expt. Bot. 22: 107-117.

Subbaiah, K.V., Mehta, A.R. and Shah, R.R. 1974. Studies on polyphenol content in tissue cultures of Datura and Cassia grown on defined medium. In: The 3rd Intern. Cong. Plant Tissue and Cell Culture. Univ. Leicester, U.K. Abst. No. 181.

Sunderland, N. and Dunwell, J.M. 1974. Pathways in pollen Embryogenesis. In: H.E. Street, ed., "Tissue Culture and Plant Science". pp. 141-167. Proceedings of the 3rd International Congress of Plant Tissue and Cell Culture. Academic Press, London, New York.

Takeuchi, Y. and Komamine, A. 1978. Changes in the composition of cell wall polysaccharides of suspension-cultured Vinca rosea cells during culture. Physiol. Plant. 42: 21-28.

Taylor, A.O., Slack, C.R. and McPherson, H.G. 1974. Plants under climatic stress. VI. Chilling and light effects on photosynthetic enzymes of sorghum and maize. Plant Physiol. 54(5): 696-701.

Thimann, K.V., Tomaszewski, M. and Porter, W.L. 1962. Growth promoting activity of caffeic acid. Nature 193 : 1203.

- Thomas, E. and Wernicke, W. 1978. Morphogenesis in herbaceous crop plants. In: T.A. Thorpe, ed., "Frontiers of Plant Tissue Culture 1978". pp. 403-410. Published by the International Association for Plant Tissue Culture 1978. The Book Store, University of Calgary, Alberta T2 N1N4, Canada.
- Thorpe, T.A. 1977. Carbohydrate metabolism and shoot formation in tobacco callus. Meded. Fac. Landbouwwet. Rijksuniv. Gent. 42: 1681-1689.
- Thorpe, T.A. 1978. Regulation of organogenesis in vitro. In : Karen Hughes ed., "Propagation of Higher Plants through tissue culture : A Bridge Between Research and Application". pp. 87-100. The University of Tennessee Symposium Proceedings. Knoxville, Tennessee. U.S.A.
- Thorpe, T.A. and Gaspar, T. 1978. Changes in isoperoxidases during shoot formation in tobacco callus. In Vitro 14: 522-526.
- Thorpe, T.A. and Laishley, E.J. 1973. Glucose oxidation during shoot initiation in tobacco callus cultures. J. Exp. Bot. 24: 1082-1089.
- Thorpe, T.A. and Laishley, E.J. 1974. Carbohydrate oxidation during Nicotiana tabacum callus growth. Phytochem. 13 : 1323-1328.
- Thorpe, T.A. and Meier, D.D. 1972. Starch metabolism, respiration and shoot formation in tobacco callus cultures. Physiol. Plant. 27: 365-369.
- Thorpe, T.A. and Meier, D.D. 1973. Sucrose metabolism during tobacco callus growth. Phytochem. 12: 493-497.
- Thorpe, T.A. and Meier, D.D. 1974 a. Starch metabolism in shoot-forming tobacco callus. J. Exp. Bot. 25: 288-294.

- Thorpe, T.A. and Meier, D.D. 1974 b. Carbohydrate availability and shoot formation in tobacco callus cultures. *Physiol. Plant.* 30: 77-81.
- Thorpe, T.A. and Murashige, T. 1970. Some histochemical changes underlying shoot initiation, in tobacco callus cultures. *Can. J. Bot.* 48: 277-285.
- Ting, I.P. and Dugger, W.M. 1965. Separation and detection of organic acids on silica gel. *Analyt. Biochem.* 12: 571-578.
- Tomaszewski, M. and Thimann, K.V. 1966. Interactions of phenolic acids, metallic ions and chelating agents on auxin induced growth. *Plant Physiol.* 41: 1443-1454.
- Torrey, J.G. 1975. Tracheary element formation from single isolated cells in culture. *Physiol. Plant.* 35: 158-165.
- Tran Thanh Van, K. 1977. Regulation of morphogenesis. In: W. Barz, E. Reinhard and M.H. Zenk, eds., "Plant Tissue Culture and its Bio-technological Application". pp. 367-385. Springer-Verlag, Berlin, Heidelberg, New York.
- Tran Thanh Van, K. and Trinh, H. 1978. Morphogenesis in thin cell layers : Concept, methodology and results. In : T. A. Thorpe, ed., "Frontiers of Plant Tissue Culture 1978". pp. 37-48. Published by the International Association for Plant Tissue Culture 1978. The Book Store, University of Calgary, Alberta T2N1N4, Canada.
- Tran Thanh Van, M., Chlyah, H. and Chlyah, A. 1974. Regulation of organogenesis in thin layers of epidermal and sub-epidermal cells. In: H.E. Street, ed., "Tissue Culture and Plant Science". pp. 101-139, Academic Press, London.

- Travis, R.L., Jordan, W.R. and Hubbaker, R.C. 1969.
Evidence for an inactivating system of nitrate reductase
in Hordeum vulgare L. during darkness that requires
protein synthesis. *Plant Physiol.* 44: 1150-1156.
- Trip, P., Krotkov, G. and Nelson, C.D. 1964. Metabolism of
mannitol in higher plants. *Am. J. Bot.* 51: 828-835.
- Tripplett, E.L., Steens-Lievens, A. and Baltus, E. 1965.
Rates of synthesis of acid phosphates in nucleate and
enucleate Acetabularia fragments. *Expl. Cell. Res.* 38:
366-378.
- Tulecke, W., Taggart, R. and Colavito, L. 1965. Continuous
cultures of higher plant cells in liquid media. *Contr.
Boyce Thompson Inst. Pl. Res.* 23: 33-46.
- Ueda, Y., Ishiyama, H., Fukui, M. and Nishi, A. 1974.
Invertase in cultured Daucus carota cells. *Phytochem.*
13: 383-387.
- Vajranabhaiah, S. N. and Mehta, A.R. 1976. Studies on
nucleic acid metabolism in suspension cultures of
Cucumis melo L. *Ann. Bot.* 40: 339-346.
- Vajranabhaiah, S.N. and Mehta, A.R. 1977. Effects of
kinetin on growth and nucleic acid metabolism in
suspension cultures of Cucumis melo L. *Ann. Bot.*
41: 483-491.
- Van Overbeek, J. 1966. Plant hormones and regulators.
Science 152: 721-731.
- Varner, J.E. 1964. Gibberellic acid controlled synthesis of
 α -amylase in barley endosperm. *Plant Physiol.* 39:
413-415.

- Varner, J.E. and Chandra, G.R. 1964. Hormonal control of enzyme synthesis in barley endosperm. proc. Nat. Acac. Sci. 52: 100-106.
- Varner, J.E., Ram Chandra, G. and Chrispeels, M.J. 1965. Gibberellic acid controlled synthesis of α -amylase in barley endosperm. J. Cell Comp. Physiol. (Suppl.) 66: 55-68.
- Verma, D.C. and Dougall, D.K. 1977. Influence of carbohydrates on quantitative aspects of growth and embryo formation in wild carrot suspension cultures. Plant Physiol. 59: 81: 85.
- Wang, T.L. 1978. Cytokinins and cell suspension cultures. IV. Int. Cong. Plant Tiss. Cell Cult. Calgary, Canada (Abstr.) 1311.
- Wardlaw, C.W. 1968. Morphogenesis in plants. Methuen and Co. Ltd., London, U.K.
- Wareing, P.F. 1971. Some aspects of differentiation in plants. in : D. Davies and M. Balls, Eds., "Control Mechanisms of Growth and Differentiation". pp. 323-344. Symp. Soc. Exp. Biol. XXV. Cambridge, U.K.
- Wareing, P.E. and Phillips, I.D.J. 1978. The control of growth and differentiation in plants. William Clowes and Sons Limited, London.
- Watanabe, R. and Stutz, R.E. 1960. Effect of gibberellic acid and photoperiod on indoleacetic acid oxidase in Lupinus albus L. Plant Physiol. 35: 359-361.
- Wedding, R.T., Hausch, C. and Fukuto, T. 1967. Inhibition of MDH by phenols and the influence of ring substituents on their inhibitory effectiveness. Arch. Biochem. Biophys. 121: 9-21.

- Weston, G.D. and Street, H.E. 1968. Sugar absorption and sucrose inversion by excised tomato roots. Ann. Bot. (Lond.). 32: 521-529.
- Wetmore, R.H., De Maggio, A.E. and Rier, J.P. 1964. Contemporary outlook on the differentiation of vascular tissues. Phytomorphology 14: 203-217.
- White, P.R. 1934. Potentially unlimited growth of excised tomato root tips in a liquid medium. Plant Physiol. 2: 585.
- White, P.R. 1939. Potentially unlimited growth of excised plant callus in an artificial nutrient. Am. J. Bot. 26 : 59.
- White, P.R. 1951. Nutritional requirements of isolated plant tissues and organs. Ann. Rev. Plant Physiol. 2:231-234.
- Wiggans, S.C. 1954. Growth and organ formation in callus tissues derived from Daucus carota. Am. J. Bot. 41: 321-326.
- Williamson, J.R. and Corkey, B.E. 1969. Assays of intermediates of the citric acid cycle and related compounds by fluorometric enzyme methods. In: Lowenstein, J.M. ed., "Methods in Enzymology", Vol. XIII. Citric Acid Cycle". pp. 473-476. Academic Press, New York and London.
- Wilson, S.B. 1971. Studies of the growth in culture of plant cells. XII. Properties of mitochondria isolated from batch cultures of Acer pseudoplatanus cells. J. Exp. Bot. 22: 725-734.
- Wochok, Z.S. and Sluis, C.J. 1980. In vitro propagation and establishment of wax currant (Ribes inebrians). J. Hort. Science. 55: 355-357.

- Wolter, K.E. and Gordon, J.C. 1975. Peroxidases as indicators of growth and differentiation in Aspen callus cultures. *Physiol. Plant.* 33: 219-223.
- Wolter, K.E. and Skoog, F. 1966. Nutritional requirements of Fraxinus callus cultures. *Am. J. Bot.* 53: 263-269.
- Wong, W.J.L. and ap Rees, T. 1971. Carbohydrate oxidation in stele and cortex isolated from roots of Pisum sativum. *Biochim. Biophys. Acta* 252: 296-304.
- Wright, K. and Northcote, D.H. 1972. Induced root differentiation in sycamore callus. *J. Cell Sci.* 11: 319-337.
- Yamada, T., Nakagawa, H., Sinoto, Y. 1967. Studies on the differentiation in cultured cells. 1. Embryogenesis in three strains of Solanum callus. *Botany Mag. Tokyo* 80: 68-74.
- Yatazawa, M., Furuhashi, K. and Shimizu, M. 1967. Growth of callus tissue from rice-root in vitro. *Plant & Cell Physiol.* 8: 363-373.
- Yemm, E.W. and Willis, A.J. 1954. The estimation of carbohydrates in plant extracts by anthrone. *Biochem. J.* 57: 508-514.
- Yeoman, M.M. 1973. Tissue (callus) cultures - Techniques. In: H. E. Street, ed., "Botanical Monographs". Vol. 11. "Plant Tissue and Cell Culture". pp. 31-58. Blackwell, Scientific Publications. Oxford, London, Edinburgh, Melbourne.
- Yomo, J. 1960. Studies on the α -amylase activating substance. IV. On the amylase activating action of gibberellin. *Hakko Kyokaishi*. 18: 600-602.

- Yomo, H. and Varner, J.E. 1971. Hormonal control of a secretory tissue. In: A. A. Moscona and A. Monroy eds., "Current Topics in Developmental Biology". Vol. 6, pp. 111-144. Academic Press, New York and London.
- Zetsche, K. 1966. Regulation der UDP-Glucose 4-Epimerase Synthese in Kernhaltigen und Kernlosen Acetabularien. Biochim. Biophys. Acta. 124: 332-338.
- Ziegler, H. 1975. Nature of transported substances. In: M.H. Zimmerman and J.A. Millburn eds., "Encyclopedia of Plant Physiology. New Series, Vol. I. Transport in Plants". pp. 59-100. Springer-Verlag. Berlin, Heidelberg, New York.
- Zimmermann, U. 1977. Cell turgor pressure regulation and turgor pressure-mediated transport processes. In Integration of Activity in the Higher Plant. S.E.B. Symp. XXXI (D.H. Jennings, ed.), pp. 117-154. University Press, Cambridge.
- Zimmermann, U. 1978. Physics of turgor and osmoregulation. Ann. Rev. Plant Physiol. 29: 121-148.

* Original not referred to..