

8. BIBLIOGRAPHY

- ✓ Abeles, A.L. and Abeles, F.B., (1972) Biochemical pathway of stress induced ethylene. *Plant Physiol.* 50 : 496-498.
- ✓ Abeles, F.B. (1973), *Ethylene in Plant Biology*. Academic Press, New York.
- ✓ Ali, A. and Fletcher, R.A. (1970) Hormonal regulation of apical dominance in soybeans. *Can. J. Bot.* 48: 1989-1994.
- ✓ Ammirato, P.V. (1986) Control and expression of morphogenesis in culture. In : *Plant Tissue Culture and its agricultural Applications*. Withers, L.A. and Alderson, F.G. (eds), Butterworths, London, pp.23-45.
- ✓ Anker, L. (1975) Auxin - synthesis inhibition by abscisic acid, and its reversal by gibberellic acid. *Acta. Bot. Neerl.* 24: 339-347.
- ✓ Antoniwi, J.E., Coss, G., White, R.F., Willems, G.L. and Volten-Doting, L.V. (1983) Pathogenesis-related proteins in plants and tissues of Nicotiana tabacum transformed by Agrobacterium tumefaciens. *Plant Mol. Biol.* 2 : 317-320.
- ✓ Apelbaum, A., Ickson, I., Burgoon, A.C. and Lieberman, M. (1982) Inhibition by polyamines of macromolecular synthesis and its implication for ethylene production and senescence processes. *Plant Physiol.* 70: 1221-1223.
- ✓ Von Arnold, S. (1987) Effect of sucrose on starch accumulation in and adventitious bud formation on embryos of Picea abies. *Ann. Bot.* 59 : 15-22.
- ✓ Ashton, F.M. (1976) Mobilization of storage proteins of seeds. *Annu. Rev. Plant. Physiol.* 27: 95-117.

Askerlund, P., Larsson, C., Widell, S. and Moller, I.M. (1987)
NAD(P)H oxidase and peroxidase activities in purified
plasma membranes from cauliflower inflorescence.

Physiol. Plant. 71 : 9-19.

*

Avers, C. J. (1958) Histochemical localization of enzyme activity
in the root epidermis of Phaeum parentae. Amer. J. Bot.
47 : 609-613.

Backs-Husemann, D. and Reinert, H. (1970) Embryobildung durch
isolierte einzelzellen aus gewegekulturen von Daucus
carota. Protoplasma 70 : 49-60.

Bagni, N., Torrigiani, P. and Barbieri, P. (1981) Effects of
various inhibitors of polyamine synthesis on the growth
of Helianthus tuberosus. Med. Biol. 59 : 403-409.

Balasisha, D. and Subramonian, N. (1983) Role of phenolics in
auxin induced rhizogenesis and isoperoxidases in Cacao
(Theobroma cacao L.) stem cuttings. Ind. J. Exp. Biol.
21 : 65-68.

Bandurski, R.S. and Schulze, A. (1977). Concentration of indole-
3-acetic acid and its derivatives in plants. Plant
Physiol. 60: 211-213.

Barendse, G.W.M. (1983) Hormonal regulation of enzyme system and
activity. In : Aspects of Physiology and Biochemistry of
Plant Hormones. Purohit, S.S. (ed), Kalyani Publishers,
New Delhi, pp. 1-68.

Barlow, P.W. (1982) Root development. In : The Molecular Biology
of Plant Development. Smith, H. and Grierson, D. (eds),

*Aung, L.H. and Byrne, J.M. (1978) Hormones and young leaves
control development of cotyledonary buds in tomato
seedlings. Plant Physiol. 62: 276-279.

Blackwell Scientific Publications, Oxford, pp.185-222.

Bassuk, N.L., Hunter, L.D. and Howard, B.H. (1981) The apparent involvement of polyphenol oxidase and phloridzin in the production of apple rooting cofactors. *J. Hort. Sci.*

56 : 313-322.

Beals, C.M. (1923) An histological study of regeneration phenomena in plants. *Ann. Missouri Bot. Gard.* 10:369-384.

Bearder, J.R. (1980) Plant hormones and other growth substances—their background, structures and occurrence. In *Hormonal Regulation of Development. I. Molecular Aspects of Plant Hormones*. MacMillan, J. (ed), Springer-Verlag, Berlin, pp. 9-112.

Bellandi, D.M. and Dorffling, K. (1974) Effect of abscisic acid and other plant hormones on growth of apical and lateral buds of seedlings. *Physiol. Plant.* 32 : 369-372.

Bentrup, F.W. (1977) Electrical events during apex regeneration in Acetabularia mediterranea. In : *Progress in Acetabularia Research*. Woodcock, C.L.F. (ed), Academic Press, New York, pp. 249-254.

Ben-Yehoshna, S. and Aloni, B. (1974) Effect of water stress on ethylene production by detached leaves of Valencia orange (Citrus sinensis Osbeck). *Plant Physiol.* 53 : 863-865.

Berger, R.G., Drawert, F., Kinzkofer, A., Kunz, C. and Radola, B.J. (1985) Proteins and peroxidase in callus and suspension cultures of apple. *Plant Physiol.* 77:211-214.

- Bernier, G., Kinet, J.M., Jacquard, A., Havelange, A. and Bodson, M. (1977) Cytokinin as a possible component of the floral stimulus in Sinapis alba. Plant Physiol. 60 : 282-285.
- Berrie, A.M.M. (1984) Germination and dormancy. In : Advanced Plant Physiology. Wilkins, M.B (ed), Pitman Publishing Limited, London, pp. 440-468.
- Beyer, E.M. Jr. (1972) Auxin transport: a new synthetic inhibitor Plant Physiol. 50 : 322-327.
- Bhojwani, S.S. and Razdan, M.K. (1983) Plant Tissue Culture: Theory and Practice. Elsevier Scientific Publishing Co., Amsterdam.
- Bingham, J. (1981) The achievements of conventional plant breeding. Phil. Trans. Royal Soc. London B, 292 : 441-454.
- Biro, R. L. and Jaffe, MS. (1984) Thigmomorphogenesis : Ethylene evolution and its role in the changes observed in mechanically perturbed bean plants. Physiol. Plant. 62 : 289-296.
- Blake, T. J., Pharis, R.P. and Reid, D.M. (1980) Ethylene, gibberellin, auxin and the apical control of branch angle in conifer, Cupressus arizonica. Planta 148 : 64-68.
- Boller, T. Cheri, A., Mauch, F., and Vogelli, U. (1983) Chitinase in bean leaves : Induction by ethylene, purification, properties and possible function. Plants 157 : 22-31.

- Bonga, J.M. (1982) Vegetative propagation in relation to juvenility, maturity and rejuvenation. In : Tissue Culture in Forestry. Bonga, J.M. and Durzan, D.T. (eds), Martinus Nijhoff/Dr.W. Junk Publishers, The Hague, pp. 387-412.
- Bonner, J.A. (1965) In : Plant Biochemistry. Bonner, J.A. and Varner, J.E. (eds), Academic Press, New York, pp. 850-866.
- Booth, A., Moorby, J., Davies, C.R., Jones, H. and Wareing, P.F. (1962) Effects of indolyl-3-acetic acid on the movement of nutrients within plants. *Nature* 194 : 204-205.
- Boulay, M. (1987) In vitro propagation of tree species. In : Plant Cell and Tissue Culture. Green, C.E., Somers, D.A., Hackett, W.P. and Biesboer, D.D. (eds), Alan, R. Liss, Inc., New York, pp. 367-382.
- Boyer, N., De Jaegher, G., Bon, M.C., Gaspar, T. (1986) Cobalt inhibition of thigmomorphogenesis in Bryonia dioica : possible role and mechanism of ethylene production. *Physiol. Plant.* 67 : 552-556.
- _____, Desbiez, M.O., Hofinger, M. and Gaspar, T. (1983) Effect of Lithium on thigmomorphogenesis in Bryonia dioica. Ethylene production and sensitivity. *Plant Physiol.* 72 : 522-525.
- _____, Gaspar, T. and Lamond, M. (1979) Modifications des isoperoxydases et de l'allongement des entrenœuds de Bryone a la suite d'irritations mecaniques. *Z. Pflanzenphysiol.* 93 : 459-470.
- Bradford, M.M. (1976) A rapid and sensitive method of quantification of microgram quantities of protein utilizing
fic

the principle of protein dye binding. Anal. Biochem.
72 : 248-254.

Brain, P.W. and Hemming, H.G. (1955) The effect of gibberellic acid on shoot growth of pea seedlings. Physiol. Plant. 8 : 669-681.

Brennan, T., Rychter, A. and Frenkel, C. (1979) Activity of enzymes involved in the turnover of hydrogen peroxide during fruit senescence. Bot. Gaz. 140: 384-388.

Bright, S., Jarrett, V., Nelson, R., Creissen, G., Karp, A., Franklin, J., Norbury, P., Kueh, J., Rognes, S. and Miflin, B. (1983) Modification of agronomic traits using in vitro technology. In : Plant Biotechnology, Mantell, S.H. and Smith, H. (eds), Cambridge University Press, Cambridge, pp 251-265.

Broglio, K.E., Gaynor, J.J., Durand-Tardif, M. and Broglio, R. (1985) Regulation of chitinase gene expression by ethylene. In : Biotechnology in Plant Science- Relevance to Agriculture in the Eighties. Zaitlin, M., Day, P. and Hollaender, A. (eds), Academic Press, Inc., Orlando, pp. 247-258.

Brooks, J.L. (1986) Oxidase reactions of tomato anionic peroxidase. Plant Physiol. 80: 130-133.

Brossard-Chriqui, D. and Iskander, S. (1980) Particularites ultrastructurales-de-l'amylogenese provoquee in vitro dans les explants foliaires du Datura innoxia Mill. Jour. Ultrastruct. Res. 18: 428-443.

- Brown, B.T., Johansen, O. and Sasse, W.H.F. (1972) New inhibitors of auxin transport. *Experientia* 28 : 1290-1291.
- Brown, D.C.W. and Atanassov, A. (1985) Role of genetic background in somatic embryogenesis in *Medicago*. *Plant Cell Tissue Organ Culture* 4: 111-122.
- Bryant, S.D. and Lane, F. (1979) Indole-3-acetic acid oxidase from peas I. occurrence and distribution of peroxidative and nonperoxidative forms. *Plant Physiol.* 63: 696-699.
- Burg, S.P. (1973) Ethylene in plant growth. *Proc. Nat. Acad. Sci. (USA)* 70: 591-597.
- _____ and Burg, E.A. (1966) The interaction between auxin and ethylene and its role in Plant Growth. *Proc. Natl. Acad. Sci. (USA)* 55: 262-269.
- _____ and _____ (1967) Molecular requirements for the biological activity of ethylene. *Plant Physiol.* 42: 144-152.
- Burgess, J. (1985) *An Introduction to Plant Cell Development*. Cambridge University Press, Cambridge.
- Burrell, M.M., Temple, S. and Ooms, G. (1986). Changes in translatable Poly(A)RNA from differentiated potato tissues transformed with shoot inducing Ti T_L -DNA of *Agrobacterium tumefaciens*. *Plant Mol. Biol.* 6 : 213-220.
- Burton, K. (1956). A study of the conditions and mechanism of the diphenylamine reaction for the colorimetric estimation of deoxyribonucleic acid. *Biochem. J.* 62: 315-323.

- Butt, V.S. (1979) Oxidase in aromatic metabolism. Recent Adv. Phytochem. 12 : 433-456.
- Byrne, H. and Setterfield, G. (1977) Activation of ribosomal and messenger RNA synthesis in excised Jerusalem artichoke tuber slices. *Planta* 136 : 203-210.
- Callow, J.A., Callow, M.E. and Woolhouse, H.W. (1972) In vitro protein synthesis, ribosomal RNA synthesis and poly-ribosomes in senescing leaves of *Perilla*. *Cell Differentiation* 1 : 79-90.
- _____ and Woolhouse, H.W. (1973) Changes in nucleic acid metabolism in regreening leaves of *Perilla*. *J. Exp. Bot.* 24 : 285-294.
- Canut, H., Alibert, G. and Boudet, A.M. (1985) Hydrolysis of intracellular proteins in vacuoles isolated from *Acer pseudoplatanus* L. Cells. *Plant Physiol.* 79 : 1090 - 1093.
- Carlberg, I., Soderhall, K., Glimelius, K. and Eriksson, T. (1984) Protease activities in non-embryogenic and embryogenic carrot cell strains during callus growth and embryo formation. *Physiol. Plant* 62 : 458-464.
- Cassella, A.C. and Tamma, L. (1986) Ethylene and ethane release during tobacco protoplast isolation and protoplast survival potential in vitro. *Physiol. Plant.* 66 : 303-308.
- _____ and Tamma, L. (1987) Survival and division in protoplasts from tobacco (*Nicotiana tabacum*) depends on the physiological state of the individual donor plant. *Physiol. Plant.* 69 : 317-322.

Catchpole, A.H. and Hillman, J.R. (1976) The involvement of ethylene in the coiled-sprout disorder of potato.

Ann. App. Biol. 83 : 413-423.

Cella, R., Sala, F. and Street, H.E. (1976) Studies on the growth in culture of plant cells, XIX: Changes in the levels of free and membrane bound polysomes during the growth of Acer pseudoplatanus cells in batch suspension culture.

J. Exp. Bot. 27 : 263-276.

Chaleff, R.S. (1981) Genetics of Higher Plants : Application of Cell Culture. Cambridge University Press, Cambridge.

Chalmers, D.J. (1984). Position as a factor in growth and development effects. In : Hormonal Regulation of Development. III. Role of Environmental Factors. Pharis, R.P. and Reid, D.M. (eds), Springer-Verlag, Berlin, pp. 169-192.

Ende Van den, B. and Jerie, P.H. (1976) The effect of (2-chloroethyl) phosphonic acid on the sink strength of developing peach (Prunus persica L.) fruit. Planta 131 : 203-205.

Chalutz, E. (1973) Ethylene-induced phenylalanine ammonia-lyase activity in carrot roots. Plant Physiol. 51 : 1033-1036.

Chang, C.W. (1963) Incorporation of phosphorus-32 into nucleic acids during embryonic development of barley. Nature 198 : 1167-1169.

Chang, Y.P. and Jacobs, W.P. (1973) The regulation of abscission and IAA by senescence factor and abscisic acid. Am. J. Bot. 60 : 10-16.

- Cherry, J.H. (1962) Nucleic acid determination in storage tissues of higher plants. *Plant Physiol.* 37 : 670-678.
- Choi, J.H., Liu, L.S. Borkird, C. and Sung, Z.R. (1987) Cloning of genes developmentally regulated during plant embryogenesis. *Proc. Natl. Acad. Sci. (USA)* 84 : 1906-1910.
- Christianson, M.L. and Warnick, D.A. (1983) Competence and determination in the process of in vitro shoot organogenesis. *Developmental Biol.* 95 : 288-293.
- Chu, C.C. (1982) Haploids in plant improvement. In : *Plant Improvement and Somatic Cell Genetics*. Vasil, I.K., Scowcroft, W.R. and Frey, K.J. (eds), Academic Press, New York, pp. 129-158.
- della-Cioppa, G., Bauer, S.C., Klein, B.K., Shah, D.M., Fraley, R.T. and Kishore, G.M. (1986) Translocation of the precursor of 5-enolpyruvylshikimate-3-phosphate synthase into chloroplasts of higher plants in vitro. *Proc. Natl. Acad. Sci. (USA)* 83 : 6873-6877.
- _____, _____, Taylor, M.L., Rochester, D.E., Klein, B.K., Shah, D.M. Fraley, R.T. and Kishore, G.M. (1987) Targeting a herbicide-resistant enzyme from *Escherichia coli* to chloroplasts of higher plants. *Bio/Techno.* 5 : 579-584.
- * Cloutier, Y. (1983) Changes in the electrophoretic patterns of the soluble proteins of winter wheat and rye following cold acclimation and dessication stress. *Plant Physiol.* 71 : 400-403.
- Clare, M.V. and Collin, H.A. (1974) The production of plantlets from tissue cultures of bussels sprout (*Brassica oleracea* L. var *gemmifera* D.C.) *Ann.Bot.* 38 : 1067-1076.

Cocking, E.C. (1983a) Hybrid and cybrid production via protoplast fusion. In : Genetic Engineering : Applications to Agriculture. Beltsville Symposium 7, Ownes, L.D. (ed), Granada, London, pp. 257-268.

_____ (1983b) Genetic transformation through somatic hybridisation. In : Plant Biotechnology. Mantell, S.H. and Smith, H. (eds), Cambridge University Press, Cambridge, pp. 241-250.

_____ (1985) Somatic hybridisation : implications for agriculture. In : Biotechnology in Plant Science- Relevance to Agriculture in the Eighties. Zaitlin, M., Day, P. and Hollaender, A. (eds), Academic Press, Inc., Orlando, pp. 101-113.

_____ (1986) Tissue culture revolution. In : Plant Tissue Culture and its Agricultural Applications. Withers, L.A. and Alderson, P.G. (eds), Butterworths, London, pp. 3-20.

Cohen, A.S., Popovic, R.B. and Zalik, S. (1979) Effects of polyamines on chlorophyll and protein content photochemical activity and chloroplast ultrastructure of barley leaf discs during senescence. Plant Physiol. 64 : 717-720.

Coleman, W.K. and Thorpe, T.A. (1985) Polarity. In : Hormonal Regulation of Development. III. Role of Environmental factors. Pharis, R.P. and Reid, D.M. (eds), Springer-Verlag, Berlin, pp. 116-138.

- Cesari, L., Facciotti, D., Hiatt, W.R., Thompson, G., Rose, R.E. and Stalker, D.M. (1985) Expression in plants of a mutant aro A gene from Salmonella typhimurium confers tolerance to glyphosate. Nature 317 : 741-744.
- Cooke, R.J., Grego, S., Oliver, J., and Davies, D.D. (1979a) The effect of deuterium oxide on protein turnover in Lemna minor. Planta 146 : 229-236.
- _____, Oliver, J. and Davies, D.D. (1979b) stress and protein turnover in Lemna minor. Plant Physiol. 64 : 1109-1113.
- _____, Grego, S., Roberts, K. and Davies, D.D. (1980a) The mechanism of deuterium oxide induced protein degradation in Lemna minor. Planta 148: 374-380.
- _____, Roberts, K. and Davies, D.D. (1980 b) The mechanism of stress-induced protein degradation in Lemna minor. Plant Physiol. 66: 1119-1122.
- Cooper, P. and Ho, T.H.D. (1987) Intracellular localization of heat shock protein in Maize. Plant Physiol. 84:1193-1203.
- Cornejo-Martin, M.J., Mingo-Castel, A.M. and Primo-Millo E. (1979) Organ redifferentiation in rice callus : effects of ethylene, CO₂ and cytokinins. Z. Pflanzenphysiol. 94: 117-123.
- Couot-Gastelier, J. (1978) Etude de quelques modalites de la croissance des bourgeons axillaires de la fève Vicia faba L. liberes de la contrainte apicale. Z. Pflanzenphysiol. 88 : 189-206.

- _____ (1979) Acitite mitotique et croissance des
bourgeois axillaires provoques par la decapitation
de jeunes plants de fève (Vicia faba). Can. J. Bot.
57: 2478-2488.
- ✓ Creasy, L.L. (1987) The role of enzyme inactivation in the
regulation of synthetic pathways : a case history,
Physiol. Plant. 71: 389-392.
- ✓ Cross, A.F., Creemers-Molenaar, T., Van Den Ende, G., Kemp, A.
and Barendse, G.W.M. (1985) Tissue age as an endogenous
factor controlling in vitro bud formation on explants.
from the inflorescence of Nicotiana tabacum L. J. Exp.
Bot. 36 : 1771-1779.
- ✓ Crouzillat, D., Desbiez, M.O., Pensl, C.L. and Gaspar, T. (1985).
Lithium, aminoethoxyvinylglycine and cobalt reversal
of the cotyledonary pricking induced growth inhibition
of Bidens pilosa hypocotyl in relation to ethylene
production and peroxidases. Plant Sci. Lett. 40: 7-11.
- ✓ Cutter, E.G. (1972) A morphogeneticist's view of correlative
inhibition in the shoot. In : Advances in Experimental
Medicine and Biology. Vol. 18 . Miller, M.W. and
Kuehnert, C.L. (eds), Plenum Press, New York, pp.51-73.
- Dalling, M.J., Boland, G. and Wilson, J.H. (1976) Relation
between acid proteinase activity and redistribution of
nitrogen during grain development in wheat. Aust. J.
Plant. Physiol. _____ : 724-730.

Dandekar, A.M., Gupta, P.K., Durzan, D.J. and Knauf, V. (1987).

Transformation and foreign gene expression in micro-propagated Douglas-fir (*Pseudotsuga menziesii*). *Bio/Techno.* 5 : 587-590.

Darbyshire, B. (1971 a) The effect of water stress on indoleacetic acid oxidase in pea plants. *Plant Physiol.* 47: 65-67.

_____ (1971 b) Changes in indoleacetic acid oxidase activity associated with plant water potential. *Physiol Plants* 25: 80-84.

Dashek, W.V., Erickson, S.S., Hayward, D.M., Lindbeck, G and Mills, R.R. (1979) Peroxidase in cytoplasm and cell wall of germinating lily pollen. *Bot. Gaz.* 140: 261-265.

Datko, A.H. and MacLachlan, G.A. (1968) Indoleacetic acid and the synthesis of glucanases and pectic enzymes. *Plant Physiol.* 43: 735-742.

Davies, C.R. and Wareing, P.F. (1965) Auxin-directed transport of radio-phosphorus in stems. *Planta* 65: 139-156.

Davies, D.D. (1982) Physiological aspects of protein turnover. In : *Encyclopedia of Plant Physiology, New Series, Vol. 14A Nucleic Acids and Proteins in Plants. I.* Boulter, D. and Parthier, B. (eds), Springer, Berlin. pp. 189-228.

Dean, C. and Leech, R.M. (1982) Genome expression during normal leaf development. *Plant Physiol.* 69: 904-910.

De Greef, J.A., Van Hoof, R. and Caubergs, R. (1977). Light induced changes in auxin metabolism during hook

opening of etiolated bean seedlings. Biochem. Soc. Transact. 5: 1049-1051.

Degroote, D. and Muir, R.M. (1977) Physiologic auxin in relation to leaf development. Plant Physiol. 59 : 11 (Supplement).

De Leo, P. and Sacher, J.A. (1970) Control of ribonuclease and acid phosphatase by auxin and abscisic acid during senescence of Rhoe discolor leaf sections. Plant Physiol. 46: 806-811.

De haize, E., Loneragan, J.E. and Webb, J. (1985) Development of three copper metalloenzymes in clover leaves. Plant Physiol. 78: 4-7.

Desai, H.V. and Mehta, A.R. (1985) Changes in polyamine levels during shoot formation, root formation and callus induction in cultured Passiflora leaf discs. J. Plant Physiol. 119 : 45-53.

Des Frances, C.L. Thiellement, H. and De Vienne, D. (1985) Analysis of leaf proteins by two dimensional gel electrophoresis. Plant . Physiol. 78 : 178-182.

De Vries, S.C., Springer, J., Wessels, J.G.H. (1982). Diversity of abundant mRNA sequences and patterns of protein synthesis in etiolated and greened pea seedlings. Planta 156: 129-135.

_____, Harmsen, M.C. Kuiper, M.T.R., Dons, H.J.M. and Wessels, J.G.M (1983) Molecular cloning of pea mRNAs encoding shoot-specific polypeptide and light induced

polypeptides. *Plant Mol. Biol.* 2 : 295-303.

De Wilde, R.C. (1971) Practical application of (2-chloroethyl) phosphonic acid in agricultural production. *Hort. Sci.* 6: 364-370.

Dhindsa, R.S., Tsai, C.D. and Lalonde, L. (1986) Protein changes during oat leaf senescence. *Plant Physiol.* 80: 32 (supplement).

_____, Dong, G., and Lalonde, L. (1987) Altered gene expression during auxin induced root development from excised mug bean seedlings. *Plant Physiol.* 84: 1148-1153.

Dice, J. F. and Goldbag, A.L. (1975) A statistical analysis of the relationship between degradative rates and molecular weights of proteins. *Arch. Biochem. Biophys.* 170: 213-219.

Digby, J. and Wareing, P.F. (1966) The relationship between endogenous hormone levels in the plant and seasonal aspects of cambial activity. *Ann. Bot.* 30: 607-622.

Dix, P.J. (1985) Cell line selection. In : *Plant Cell Culture Technology*, Yeoman, M. (ed). Blackwell Scientific, Oxford, pp.141-199.

Dore, J. (1965) Physiology of regeneration in cozymophytes. *Encyclopedia of Plant Physiology. New Series* 15: 1-91.

Dostal, R. (1926) Über die wachstumsregulierende wirkung des laubblattes. *Acta. Soc. Sci. Nat. Moravicae* 5: 83-209.

_____ and Maskova, U.J. (1949) Omorfozesi pupenu na listech Bryophyllum crenatum. *Acta Acad. Sci. Nat. moravo-silesiaca* 21: 1-39.

- Dove, L. D. (1971) Short term responses and chemical control of ribonuclease activity in tomato leaflets. *New Phytol.* 70 : 397-401.
- Downs, R.J. and Borthwick, H.A. (1956) Effect of photoperiod on growth of trees. *Bot. Gaz.* 117 : 310-326.
- Druart, P., Kevera, C., Boxus, P. and Gaspar, T. (1982) In vitro promotion of root formation by apple shoots through darkness effect on endogenous phenols and peroxidases. *Z. Pflanzenphysiol.* 108 : 429-436.
- Duke, S.O. and Vaughn, K. (1982) Lack of involvement of polyphenol oxidase in ortho-hydroxylation of phenolic compounds in mung bean seedlings. *Physiol. Plant.* 54 : 318-385.
- Dunwell, J.M. (1981) Influence of genotype and environment on growth of barley embryos in vitro. *Ann. Bot.* 48 : 535-542.
- _____ (1986) Pollen, ovule and embryo culture as tools in plant breeding. In : *Plant Tissue Culture and its Agricultural Applications*. Withers, L.A. and Alderson, P.G. (eds), Butterworths, London. pp. 375-404.
- Dure, L. III and Chlan, C. (1981) Developmental Biochemistry of cottonseed embryogenesis and germination. XII. Purification and properties of principal storage proteins. *Plant Physiol.* 68 : 180-186.
- _____ and Galau, G. (1981) Developmental biochemistry of cottonseed embryogenesis and germination. XIII. Regulation of biosynthesis of principal storage proteins. *Plant Physiol.* 68 : 187-194.

- During, H. and Bachmann, O. (1975) Abscissic acid analysis in Vitis vinifera in the period of endogenous bud dormancy by high pressure liquid chromatography. *Physiol. Plant.* 34 : 201-203.
- Dividi, R.S. and Naylor, J.M. (1986) Influence of apical dominance on the nuclear proteins in cells of the lateral bud meristem in Tradescantia paludosa. *Can. J. Bot.* 46 : 289-298.
- Liechholtz, D.A., Robitaille, H.A. and Herrmann, K.M. (1983). Protein changes during the stratification of Malus domestica Bozkh. seed. *Plant Physiol.* 72 : 750-753.
- Elliott, M.C. (1977) Auxins and the regulations of root growth. In : *Plant Growth Regulation*. Pilet, P.E. (ed), Springer-Verlag, Berlin, pp. 100-108.
- Epstein, E. and Lavee, S. (1975) Uptake and fate of IAA in apple callus tissue using IAA-1-¹⁴C : *Plant Cell Physiol.* 16: 553-561.
- _____ and Lavee, S. (1977). Uptake, translocation and metabolism of IAA in the olive (Olea europea).
I. Uptake and translocations of (1-¹⁴C)IAA in detached 'Manzanilla' olive leaves. *J. Exp. Bot.* 28: 619-628.
- Epstein L. and Lampert D.T.A. (1984) An intramolecular linkage involving isodityrosine in extension. *Phytochemistry* 23: 1241-1246.
- Erickson, R.O. and Michelini, E.J. (1957) The pastechron index. *Am. J. Bot.* 44 : 297-305.

- Evans, D.A., Flick, C.E. and Jensen, R.A. (1981) Incorporation of disease resistance into sexually incompatible somatic hybrids of the genus Nicotiana. Science 213 : 907-909.
- Evans, I.M., Croy, R.R.D., Hutchinson, P., Boulter, D., Payne, P.I. and Gordon, M.E. (1979) Cell free synthesis of some storage protein subunits by polyribosomes and RNA isolated from developing seeds of pea. Planta 144: 455-462.
- Evans, M.L. (1984) Functions of hormones at the cellular level of organization. In : Hormonal Regulation of Development II. The Functions of Hormones from the Level of the Cell to the whole Plant. Scott, T.K., (eds) Springer-Verlag, Berlin, pp 23-79.
- Everett, N.P., Robinson, K.E.P. and Mascarenhas, D. (1987) Genetic engineering of sunflower (Helianthus annuus L.) Bio/Techno. 5 : 1201-1204.
- Fahn, A (1982) Plant Anatomy. 3rd Edition, Pergamon Press, Oxford.
- Farkas, G.L. (1982) Ribonucleases and ribonucleic acid breakdown. In : Encyclopedia of Plant Physiology New Series Vol 14B, Nucleic acids and Proteins in Plants, II Partier, B and Boulter, D (eds), Springer-Verlag, Berlin, pp 224-262.
- Fassuliotis, G. and Nelson, B.V. (1986) Conversion in vitro of Cucumis metuligerus and C. metuligerus X C. anguria

embryos In : Plant Tissue Culture and its Agricultural Applications Withers, D.A. and Alderson, P.G. (eds) Butterworths, London, pp.419-426.

✓ Feldman, L.J. and Gildow, V. (1984) Effects of light on protein patterns in gravitropically stimulated root caps of corn. *Plant Physiol.* 74: 208-212.

✓ Feller, U.K., Soong, T.T. and Hageman, R.H. (1977). Leaf proteolytic activities and senescence during grain development of field-grown corn (Zea mays L.). *Plant. Physiol.* 59: 290-294.

✓ Fernandez-Muniz, B. and Sanchez-Tames, R. (1982) Seasonal patterns of growth regulators in tubers of yellow nutsedge (Cyperus esculentus). *Weed Sci.* 30: 83-86.

✓ Fitt R.D. (1986) Growth substance sensitivity: The need for clearer ideas, precise terms and purposeful experiments *Physiol. Plant.* 67 : 267-272.

✓ Fitt, R.D., (1986) Growth substance sensitivity: The need for clearer ideas, precise terms and purposeful experiments. *Physiol Plant.* 67: 267-272. ←

Fisher, D.B. and Jensen, W.A. (1972). Nuclear and cytoplasmic DNA synthesis in cotton embryos : A correlated light and electron microscope autoradiographic study. *Histochemistry* 32: 1-22.

✓ Fletcher, G.M. and Dale, J.E. (1974). Growth of tiller buds in barley : effects of shade treatment and mineral nutrition. *Ann. Bot.* 38: 63-76.

Flick, C.E. (1983) Isolation of mutants from cell cultures. In: Handbook of Plant Cell Culture. Vol.I, Evans, D.A., Sharp, W.R., Ammirato, P.V. and Yamada, Y. (eds), Macmillan, New York, pp.393-441.

Flurkey, W.H. (1986) Polyphenoloxidase in higher plants: immunological detection and analysis of in vitro translation products. Plant Physiol. 86: 614-618.

Fosket, D.E. (1968). Cell division and the differentiation of wood-vessel members in cultured stem segments of Coleus. Proc. Natl. Acad. Sci (USA) 59: 1089-1096.

_____ (1981). Protein synthesis during the transition from the resting to the growing state in suspension cultures of Paul's Scarlet rose cells. Physiol. Plant. 53: 146-152.

Fraley, R.T., Rogers, S.G. and Horsch, R.B. (1986) Genetic transformation in higher plants. CRC critical Rev. Plant Sci. 4 : 1-46.

Frenkel, C. (1972). Involvement of peroxidase and indole-3-acetic acid oxidase isozymes from pear, tomato and blueberry fruit in ripening. Plant Physiol. 49:757-763.

_____ (1975) Oxidative turnover of auxins in relation to the onset of ripening in bartlett pear. Plant Physiol. 55 : 480-484.

_____ and Haered, N.F. (1973) Initiation of ripening in bartlett pear with an autiauxin alpha (p-chlorophenoxy) isobutyric acid. Plant Physiol. 52: 380-384.

Fuchs, Y. and Lieberman, M. (1968). Effects of kinetin, IAA and gibberellin in ethylene production, and their interactions in growth of seedlings. *Plant Physiol.* 43: 2029-2036.

Galston, A.W. and Hillman, W.S. (1961) The degradation of auxin. In : *Encyclopedia of plant physiology*. Vol. 14, Ruhland, W. (ed), Springer, Berlin, pp. 647-670.

_____ and McCune, D.C. (1961) An analysis of gibberellin-auxin interaction and its possible metabolic basis. In : *Plant Growth Regulation*. Klein, R.M. (ed), Iowa State Press, Ames, pp. 611-624.

Gamborg, O.L., Shyluk, J.P. and Shahin, E.A. (1981) Isolation, fusion and culture of plant protoplasts. In : *Plant Tissue-Methods and Applications in Agriculture*. Thorpe, T.A. (ed), Academic Press, New York, pp. 115-153.

Gasper, T., Bastin, M. and Leyh, C. (1964) *Bull. Soc. Royale Sci. Liege* 12: 844-852. Cited from Mehta (1980).

_____, Dubucq, N. and Antoszewski, R. (1975) Auxin and isoperoxidase in strawberry petiole extracts. *Biol. Plant.* 17: 23-30.

_____, Penel, C.L., Castillo, F.J. and Greppin, H. (1985) A two-step control of basic and acidic peroxidase and its significance for growth and development. *Physiol. Plant.* 64: 418-423.

Goebel, K. (1900). *Organography of plants especially of the Archegoniatae and Spermatophyta. Part I. General organography*. Clarendon Press, Oxford.

Goebel, K. (1902) Regeneration in Plants, Bull. Torrey Bot. Club 30: 197-205.

Goldberg, R.B. (1980) Structural gene expression in higher plants. In : Genome organization and Expression in plants. Leaver, C. (ed), NAW Advanced Study Institute, Plenum Press, New York, pp 117-126.

Goldberg, R.B. (1986) Regulation of plant gene expression Philos. Trans. Royal Soc. London B. 314: 343-354. ←

_____, Hoschek, G., Tam, S.H., Ditta, G.S. and Breidenbach, R.W. (1981) Abundance, diversity and regulation of mRNA sequence sets in soybean embryogenesis. Dev. Biol. 83: 201-217.

Goldberg, R., Catesson, A.M. and Czaninski, Y. (1983) Some properties of syringaldazine oxidase, a peroxidase specifically involved in the lignification processes. Z. Pflanzenphysiol. 110: 265-277.

_____, Liberman, M., Mathieu, C., Fierron, M. and Catesson, A.M. (1987) Development of epidermal cell wall peroxidases along the mung bean hypocotyl : Possible involvement in the cell wall stiffening process. J. Exp. Bot. 38: 1378-1390.

Goldsmith, M.H.M. (1977) The polar transport of auxin. Annu. Rev. Plant. Physiol. 28: 439-478.

_____, Cataldo, D.A., Kam, J., Erenreman, T. and Trip, P. (1974) The rapid and non-polar transport of auxin in the phloem of intact Coleus plants. Planta 116: 301-317.

Goldsmith, M.H.M., Goldsmith, T.H. and Martin, M.H. (1981).

Mathematical analysis of the chemosmotic polar diffusion of auxin through plant tissues. *Proc. Natl. Acad. Sci. (USA)*. 78: 976-980.

Gordon, S.A. and Weber, R.P. (1951) Colorimetric estimation of Indoleacetic acid. *Plant Physiol.* 26: 192-195.

Gortner, W.A., Kent, M.T. and Sutherland, G.K. (1958) Ferulic and p-coumaric acid in pineapple tissue ^mmodifiers of pineapple indoleacetic acid oxidase. *Nature* 191: 630-631. ←

Gotz, O. (1953). Über die Brutknospenentwicklung der gattung *Bryophyllum* in langtag und kurztag. *Z. Bot.* 41: 445-482.

Gove, J.P. and Hoyle, M.C. (1975) The isozymic similarity of indoleacetic acid oxidase to peroxidase in birch and horseradish. *Plant Physiol.* 56: 684-687.

Grierson, D. and Smith, H. (1982) Molecular biology and Plant development prospects and constraints. In: *The Molecular Biology of Plant Development*. Smith, H. and Grierson, D. (eds), Blackwell Scientific Publications, Oxford, pp.1-4.

Grierson, D., Maunders, M.J., Slater, A., Ray, J., Bird, C.R., Schuch, W., Orth, M.J., Tucker, G. and Knapp, J.E. (1986) Gene expression during tomato ripening. *Philos. Trans. Royal Soc. London B* 314: 399-410.

Griffin, B. and Stonier, T. (1975) Studies on auxin protectors XII : auxin protectors and polyphenol oxidase in developing coffee fruits.

Physiol. Plant. 33 : 157 - 160. ←

- Guha, S. and Maheshwari, S.C. (1964) In vitro production of embryos from anthers of Datura. Nature 204 : 497.
- Guinn, G. (1976)a Nutritional stress and ethylene evolution by young cotton bolls. Crop. Sci. 16: 89-91.
- _____ (1976)b Water deficit and ethylene evolution by young cotton bolls. Plant Physiol. 57: 403-405.
- _____ and Brummett, D.L. (1987) Concentrations of abscisic acid and indoleacetic acid in cotton fruits and their abscission zones in relation to fruit retention. Plant Physiol. 83: 199-202.
- Gupta, S. and Maheshwari, S.C. (1970) Growth of flowering of Lemna paucicostata II - Role of growth regulators. Plant Cell Physiol. 11 : 97-106.
- Hahlbrock, K., Betz, B., Gardiner, S.E., Kreuzaler, F., Matern, U., Ragg, H., Schafer, E. and Schnöder, J. (1978) Enzyme inductions in cultured cells. In : Frontiers of Plant Tissue Culture. Thorpe, T.A. (ed), International Association for Plant Tissue Culture, Univ. of Calgary, Alberta, pp. 317-324.
- Haissig, B.E. (1974) Metabolism during adventitious root primordium initiation and development. New Zealand J. Forest Sci. 4 : 324-337.
- _____ (1985) Metabolic processes in adventitious rooting of cuttings. In : New Root formation in Plants and Cuttings. Jackson, M.B. (ed), Martinus Nijhoff, The Hague, pp. 212-232.

- Haldane, J.B.S. (1932). The time of action of genes and its bearing on some evolutionary problems. *Am. Nat.* 66: 5-24.
- Hall, M.A. (1976) Hormones and differentiation in plants. In : *Developmental Biology of Plants and Animals*. Graham, C.F., Wareing, P.F. (eds), Blackwell Scientific Publications, Oxford, pp. 216-231.
- Hall, S.M. and Hillman, J.R. (1975) Correlative inhibition of lateral bud growth in Phaseolus vulgaris L. Timing of bud growth following decapitation. *Planta* 123: 137-143.
- Hall, W.C., Truchelut, E.B. Leinweber, C.L. and Herrero, F.A. (1957) Ethylene production by the cotton plant and its effects under experimental and field conditions. *Physiol. Plant.* 10: 306-317.
- Halliwel, B. (1975) Hydroxylation of p-coumaric acid by illuminated chloroplasts. *Eur. J. Biochem.* 55: 355-360.
- Halperin, W. (1986) Attainment and retention of morphogenetic capacity in vitro. In : *Cell Culture and Somatic Cell Genetics of Plants*. Vasil, I.K. (ed), Academic Press, Inc., Orlando, pp. 3-47.
- Hamilton, R.H., Meyer, H.E., Burke, R.E., Feung, C.S. and Mumma, R.O. (1976) Metabolism of indole-3-acetic acid. II. Oxindole pathway in Parthenocissus tricuspidata crown-gall tissue cultures. *Plant Physiol.* 58: 77-81.
- Hanson, A.D. and Kende, H. (1976) Biosynthesis of wood ethylene in morning glory flower tissue. *Plant Physiol.* 57: 538-541.

- Hanson, M.R. (1984). Cell culture and recombinant DNA methods for understanding and improving salt tolerance of plants. In : Salinity Tolerance in plants-Strategies for Crop Improvement. Staples, R.C. and Toermiessen, G.H. (eds), John Wiley and Sons, New York, pp. 335-359.
- Harborne, J.B. (1984) Phytochemical Methods A guide to modern techniques of plant analysis 2nd edition, Chapman and Hall Ltd., London.
- Hari, V. (1981) A method for the 2-dimensional electrophoresis of leaf proteins. Anal. Biochem. 113 : 332-335.
- Hartree, E.F. (1972) Determination of protein : a modification of Lowry method that gives a linear photometric response. Anal. Biochem. 48 : 422-426.
- Hartung, W. and Fufer, C. (1981) Abscissic acid and apical dominance in Phaseolus coccineus L., the role of tissue age. Ann. Bot. 47 : 371-375.
- _____ and Steigerwald, F. (1977) Abscissic acid and apical dominance in Phaseolus coccineus L. Planta 134 : 295-299.
- Hasegawa, P.M., M Yasuda, T. and Cheng, T.Y. (1979) Analysis of newly synthesized proteins during differentiation of cultured Douglas - Fir cotyledons. Physiol. Plant. 46 : 211-217.
- Hatch, A.H. and Powell, L.E. (1971) Hormone directed transport of certain organic compounds in Malus sylvestris seedlings. J. Am. Soc. Hortic. Sci. 96 : 399-400.

Hazell, P. and Murray, D.R. (1982) Peroxidase isoenzymes and leaf senescence in sunflower, Helianthus annuus L.

Z. Pflanzenphysiol. 108: 87-92.

Heide, O.M. (1965) Effects of 6-benzylamino-purine and 1-naphthaleneacetic acid on the epiphyllous bud formation in Bryophyllum. Planta 67: 281-296.

Hejnowicz, A. and Tmiaszewski, M. (1969) Growth regulators and wood formation in Pinus silvestris. Physiol. Plant. 22: 984-992.

Henson, I.E. and Wareing, P.F. (1977) Changes in the levels of endogenous cytokinins and indole-3-acetic acid during epiphyllous bud formation in Bryophyllum diageomontianum. New Phytol. 79: 225-232.

Heppler, P.K. and Palevitz, B.A. (1974) Microtubules and microfilaments. Annu. Rev. Plant Physiol. 25: 309-362.

* Heuser, C.W. and Apps, D.A. (1976) In vitro plantlet formation from flower petal explants of Hamamelis cv. Chipper Cherry. Can. J. Bot. 54 : 616-618.

Heyser, J.W. and Moft, R.L. (1980) The relationship between the production of phenolic compounds and the decline in growth of loblolly pine cultures. Plant. Physiol. 65: 90 (Supplement).

Hicks, G.S. (1980). Patterns of organ development in plant tissue culture and the problem of organ determination. Bot. Rev. 46: 1-23.

Higgins, T.J.V., Zwar, J.A. and Jacobsen, J.V. (1976) Gibberellic acid enhances the level of translatable

* _____ and Wayne, R.O. (1985) Calcium and plant development. Annu. Rev. Plant Physiol. 36 : 397-439.

RNA for amylase in barley aleurone layers. *Nature* 260: 166-169.

✓ Hill, G.F. (1967) Morphogenesis in stem callus of Convolvulus arvensis. *Ann. Bot.* 31: 437-446.

✓ Hillman, J.R. (1970) The hormonal regulation of bud outgrowth in Phaseolus vulgaris L. *Planta* 90: 222-229.

✓  _____ (1984) Apical dominance In : *Advanced Plant Physiology*. Wilkins M.B. (ed), Pitman Publishing Ltd., London pp. 127-144.

✓ _____, Math, V.B. and Medlow, G.C. (1977) Apical dominance and the levels of indole acetic acid in Phaseolus lateral buds. *Planta* 134 : 191-193.

✓ Hillson, D.T. and Lamotte, C.E. (1977) In vitro formation and development of floral buds on tobacco stem explants. Effects of kinetin and other factors. *Plant Physiol* 60: 881-884.

✓ Ho, T.H.D. (1979). Hormonal control of gene expression. In : *Physiological Genetics*. Scandalios, J.G. (ed), Academic Press, New York, pp. 110-139.

✓ Holder, N. (1979) Positional information and pattern formation in plant morphogenesis and a mechanism for the involvement of plant hormones. *J. Theor. Biol.* 77: 195-212.

✓ Horgan, R. (1984) cytokinins. In : *Advanced Plant Physiology* Wilkins, M.B. (ed), Pitman Publishing Ltd, London pp.53-75.

✓ Horsch, R., Fraley, R., Rogers, S., Fry, J., Klee, H., Shah, D., McCormick, S., Niedermeyer, J. and Hoffmann, N. (1987).

Agrobacterium-mediated transformation of Plants. In :
Plant Tissue and Cell Culture. Green, C.F., Somers, D.A.,
 Hackett, W.P. and Biesboer, D.D. (eds), Alan R. Liss, Inc.,
 New York, pp. 317-330.

Howe, D.F. and Rieseberg, L.H. (1983) Hormonal regulation of
 epiphyllous bud release and development in Bryophyllum
calycinum. Am. J. Bot. 70: 912-915.

Howe, M.D. (1931). A morphological study of the notches of
Bryophyllum calycinum. Am. J. Bot. 18: 387-390.

Hoyle, M.C. (1977). High resolution of peroxidase- indoleacetic
 acid oxidase isoenzymes from horseradish by isoelectric
 focusing. Plant Physiol. 60: 787-793.

Hu, C.Y. and Sussex, I.M. (1971) In vitro development of
 embryos on cotyledons of Ilex aquifolium. Phytomorph.
21: 103-107.

Huckaby, C.S. and Miller, J.H. (1984) Spore germination and
 rhizoid differentiation in Onoclea sensibilis. Plant
 Physiol. 74: 656-662.

Huffaker, R.C. (1982) Biochemistry Physiology of leaf proteins.
 In : Encyclopedia of plant physiology, New series, Vol.
 14A, Nucleic Acids and proteins 1: Structure, Biochemistry
 and physiology of proteins. Boulter, D and Pathier, B.
 (eds), Springer-Verlag, Berlin, pp. 370-400.

_____ and Peterson, L.W. (1974) Protein turnover
 in plants and possible means of its regulation. Annu.
 Rev. Plant Physiol. 25: 363-392.

- ✓ Hume, B. and Lovell, P. (1983) Role of aminocyclopropane-1-carboxylic acid in ethylene release by distal tissues following localized application of ethephon in cucurbita pepo *Physiol. Plant.* 58: 101-106.
- 2a
✓ Husoin, S.M. and Linck, A.J. (1966) Relationship of apical dominance to the nutrient accumulation pattern in Pisum sativum var. Alaska. *Physiol. Plant.* 19: 992-1010.
- ✓ Mussey, G. (1975) Totipotency in tissue explants and callus of some members of the Liliaceae, Iridaceae and Amaryllidaceae. *J. Exp. Bot.* 26 : 253-262.
- ✓ Iino, M., Yu, R.S.T. and Carr, D.J. (1980) Improved procedure for the estimation of nanogram quantities of indole-3-acetic acid in plant extracts using the indole-3-pyrone fluorescence method. *Plant. Physiol.* 66: 1099-1105.
- ✓ Imaseki, H., Kondo, K. and Watanabe, A. (1975) Mechanism of cytokinin action on auxin induced ethylene production. *Plant Cell Physiol.* 16: 777-787.
- ✓ Iabert, M.P. and Wilson, L.A. (1972) Effects of chlorogenic and caffeic acids on IAA oxidase preparation from sweet potato roots. *Phytochem.* 11: 2671-2676.
- ✓ Jackson, D.I. and Field, R.J. (1972) Light and hormone interaction in apical dominance in Phaseolus vulgaris L. *Ann. Bot.* 36: 525-532.
- ✓ Jacobs, W.P. (1984) Functions of hormones at tissue level of organization. In : *Hormonal Regulation of Development. II. The Functions of Hormones from the Level of the Cell*

to the whole Plant. Scott, T.K. (ed), Springer-Verlag, Berlin pp.149-171.

Jacobs, K.F. and Case, D.B. (1965) Auxin transport, gibberellin and apical dominance. *Science* 148 : 1729-1731.

Jacobson, H.J. (1984)a Biochemical mechanisms of plant hormone activity, in : Handbook of Plant Cell Culture, Vol. I. Evans, D.A., Sharp, W.R., Ammirato, F.V., and Yamada, Y. (eds) Macmillan Publishing Co., New York, pp. 695-672.

_____ (1984)b Two different soluble cytoplasmic auxin-binding sites in etiolated pea epicotyls. *Plant Cell Physiol.* 25: 867-873.

_____, Hajek, K., Mayerbacher, R. and Herber, S. (1987) Soluble auxin-binding : Is there a correlation between growth stage dependent high affinity auxin-binding and auxin competence ? In : Plant Hormone Receptors, NATO ASI Series, Vol.10, Klamt D (ed). Springer-Verlag, Berlin, pp 63-69.

Jacobson, J.V. (1977) Regulation of ribonucleic acid metabolism by plant hormones. *Annu. Rev. Plant. Physiol.* 28: 537-564.

Jaffe, L.F. (1978) Localization in the developing Fucus egg. and general role of localizing currents. *Adv. Morpho.* 7 : 295-328.

_____ (1980) Control of plant development by steady ionic currents. In : Plant Membrane Transport-Current Conceptual Issues. Spanswick, R.M., Lucas, W.J. and

Dainty, J., (eds), Elsevier/North-Holland Biomedical Press, Amsterdam, pp. 381-388.

Jain, M.L., Kadkade, P.G. and Vantluyse, P. (1969). The effect of growth regulatory chemicals on abscission and IAA-oxidizing enzyme system of dwarf bean seedlings. *Physiol. Plant.* 22: 1033-1042.

Jameel, S., Reddy, V.M., Rhodes, W.G. and McFadden, B.A. (1984) Gel electrophoretic profiles of proteinases in dark-germinated flax seeds. *Plant Physiol.* 76: 730-734.

James, E. (1983) Lo-temperature preservation of living cells. In : *Plant Biotechnology*. Martell, S.H. and Smith, H. (eds) Cambridge University Press, Cambridge, pp. 163-186.

Janssen, M.G.H (1970) Inhibitors of pea root indoleacetic oxidase, *Acta Bot. Neerl.* 19 : 108-111.

Jasdanwala, R.T., Singh, Y.D. and Chonoy, J.J. (1977) Auxin metabolism in developing cotton hairs, *J. Exp. Bot.* 28: 1111-1116.

Jasrai, Y.T., Bhatt, P.N. and Mehta, A.R. (1985) Changes in DNA and protein contents during embryogenesis in Raphanus sativus var Caudatus Linn. *Nucleus* 28: 49-52.

Jasrai, Y.T., Bhatt, P.N. and Mehta, A.R. (1987) Changes in contents of macromolecules during epiphyllous bud regeneration in Kalanchoe mortagei. *Cell Chromo. Res.* 10: 27-33. ←

Jensen, W.A. (1962) *Botanical Histochemistry : Principles and Practice*. W.H. Freeman and Company, San Francisco.

- Jindal, K.K. and Hemberg, T. (1976) Influence of gibberellic acid on growth and endogenous auxin level in epicotyl and hypocotyl tissues of normal and dwarf bean plants. *Physiol. Plant.* 38: 78-82.
- Kahl, G. and Weilgat, B. (1976) Regulation of transcriptional activity in rounded potato tuber tissues. *Physiol. Veg.* 14: 725-738.
- Kamalay, J.C. and Goldberg, R.B. (1980) Regulation of structural gene expression in tobacco. *Cell* 19: 935-946.
- Kamat, M.G. and Rao, P.S. (1978) Vegetative multiplication of eggplants (Solanum melongena) using tissue culture techniques. *Plant Sci. Lett.* 13: 57-65.
- Kang, B.G. (1979) Epinasty. In : Physiology of movements. Encyclopedia of Plant Physiology. Vol. VII, Haupt, W. and Feinleib, M.E. (eds), Springer, Berlin, pp.645-667.
- _____, Newcomb, W. and Burg, S.P. (1971). Mechanism of auxin induced ethylene production. *Plant Physiol.* 47: 504-509.
- Kanwar, K. and Nanda, K.K. (1986). IAA oxidase in Impatiens balsamina affected by GA₃ and tannic acid. *Ann. Bot.* 57: 339-344.
- Karpoff, A.J. (1982). Hormones and early in vitro development of epiphyllous propagules on Bryophyllum calycinum *Am. J. Bot.* 69: 348-355.

- Kartha, K.K. (1987) Advances in the cryopreservation technology of plant cells and organs. In : Plant Tissue and cell culture. Green, C.E., Somers, D.A., Hackett, W.P. and Biesboer, D.D. (eds), Alan R. Liss, Inc., New York, pp. 447-458.
- _____, Gamborg, O.L., Shyluk, J.P. and Constabel, F. (1976) Morphogenetic investigations on in vitro leaf culture of tomato (Lycopersicon esculentum (Mill) cv. Starfire) and high frequency plant regeneration. Z. Pflanzenphysiol. 77: 292-301.
- Kasamo, K. and Yamaki, T. (1974) Effects of auxin on Mg^{++} activated and - inhibited ATPases from mung bean hypocotyls. Plant Cell Physiol. 15: 965-970.
- Katsumi, M. and Kazama, H. (1974). Interrelationship between auxin and gibberellin in the elongation of cucumber hypocotyl sections. In : Plant Growth Substances, 1973 Horikawa, Tokyo, pp. 845-812.
- Kaufman, P.B., Petering, L.B. and Adams, P.A. (1969) Regulation of growth and cellular differentiation in developing Avena internodes by gibberellic acid and indole-3-acetic acid. Am. J. Bot. 56: 918-927.
- Kaur-Sawhney, R. and Galston, A.W. (1979) Interaction of polyamines and light on biochemical processes involved in leaf senescence. Plant Cell Environ. 2 : 189-196.
- Kaur-Sawhney, R. and Galston, A.W. (1987) Polyamines. In : Plant Hormones and their Role in Plant. Growth and Development. Davies, P.J. (ed), Martinus Nijhoff Publishers. Dordrecht. pp. 149-158.

- ✓ Keffeli, V.I. and Kutacek, M. (1977) Phenolic substances and their possible role in plant growth regulation, In : Plant Growth Regulation, Pilet, P.E. (ed), Springer, Berlin, 181-188.
- ✓ Keller, W.A., Arnison, P.G. and Cardy, B.J (1987) Haploids from gametophytic cells-Recent developments and future prospects. In : Plant Tissue and Cell Culture. Green, C.E., Somers, D.A., Hackett, W.P. and Biesboer, D.D. (eds). Allan R. Liss, Inc., New York, pp.223-242.
- * Kogl, F. and Elema, J. (1960) Wirkungsbeziehungen zwischen indol-3-essigsäure und gibberellinsäure. Naturwissen. 47: 90-94.
- ✓ Kopecky, F., Sebanek, J. and Blazkova, J. (1975) Time course of the changes in the level of endogenous growth regulators during the stratification of the seeds of the "Panenske ceske" apple. Biol. Plant. 17: 81-87.
- Kothari, I.L. and Shah, J.J. (1974) Structure and organization of shoot apex of Allium sativum L. Israel J. Bot. 23: 216-222.
- ✓ Koukkari, W.L. and Warde, S.B. (1985) Polythms and their relations to hormones. In : Hormonal Regulation of Development III. Role of Environmental Factors. Pharis, R.P. and Reid, D.M.(eds), Springer-Verlag, Berlin, pp. 37-78.
- ✓ Kroner, E. (1955) Experimentelle beitrage zum photoperiodismus der vegetativen vermehrung der getting Kalanchoe. Flora (Jena) 142: 400-465.
- * Kochba, J. and Spiegel-Roy, P. (1973) Effect of culture media on embryoid formation from ovular callus of 'Shamouti' orange (Citrus sinensis). Z. Pflanzenphysiol. 69 : 156-162.

- Ku, H.S., Suge, H., Rappaport, L. and Pratt, H.K. (1970).
 Stimulation of rice coleoptile growth by ethylene.
Planta 90: 333-339.
- Kuraishi, S. and Muir, R.M. (1963) Mode of action of growth
 retarding chemicals. *Plant. Physiol.* 38: 19-24.
- Kuse, G. (1953). Effect of triiodobenzoic acid on the growth
 of lateral bud and on tropism of petiole. *Mem. Coll.*
Sci. Kyoto B, 20: 207-215.
- Lam, T.H. and Street, H.E. (1977) The effects of selected
 aryloxyalkane carboxylic acids on the growth and levels
 of soluble phenols in cultured cells of *Rosa damascena*.
Z. Pflanzenphysiol. 84: 121-128.
- Lamattina, L., Anchoverri, V., Conde, R.D. and Lezica, R. P.
 (1987) Qualification of the Kinetin effect of protein
 Synthesis and degradation in senescing wheat leaves.
Plant Physiol. 83: 497-499.
- Lamport, D.T.A (1986) Roles for peroxidases in cell wall
 genesis. In: *Molecular and Physiological Aspects of*
Plant Peroxidases. Gasper, T., Greppin, H. and Penel, C.
 (eds), Geneva, pp. 199-208.
- Lang, A. (1974) Inductive phenomena in plant development. In :
Basic Mechanisms in Plant Morphogenesis. Brookhaven
Symp. Biol 25: 125-144.
- Lanker, T., King, T.G., Arnold, S.W. and Flurkey, W.H. (1987)
 Active, inactive and in vitro synthesized forms of
 polyphenoloxidase during leaf development. *Physiol.*
Plant 69: 323-329.

Laskowski, M. (1955). In : Methods in Enzymology, Vol.II

Colowick, S.P. and Kaplan, N.O.(eds), Academic Press,
New York, pp. 26-36.

Lau, O.L. and Yang, S.F. (1976) Stimulation of ethylene

Production in the mung bean hypocotyls by cupric ion,
calcium ion and kinetin. Plant Physiol. 57: 88-92.

Lauriere, C. (1983) Enzyme and leaf senescence. Physiol. Veg.

21: 1159-1177.

Lazar, M.D., Schaeffer, G.W., Baenziger, P.S. (1984) Cultivar

and cultivar X environment effects on the development
of callus and polyploid plants from anther cultures of
wheat. Theor. Appl. Genet. 67: 273-277.

Lee, J.A. (1984) Cotton as a world crop. In: Cotton-Agronomy

monograph 24, Kohel, R.J. and Lewis, C.F. (eds), Amer.
Soc. of Agronomy, Madison, pp.1-25.

Lee, P.K.W., Kessler, B. and Thimann, K.V. (1974) The effect

of hadacidin on bud development and its implications
for apical dominance. Physiol. Plant. 31: 11-14.

Lee, T.T. (1971) Cytokinin - controlled indoleacetic acid

oxidase isoenzymes in tobacco callus cultures. Plant
Physiol. 57: 181-185.

_____ (1972) Changes in indoleacetic acid oxidase

isoenzymes in tobacco tissues after treatment with
2,4-dichlorophenoxyacetic acid. Plant Physiol. 49:
957-960.

Lee, T.T. (1974) Cytokinin control in subcellular localization of indoleacetic acid oxidase and peroxidase. *Phytochem.* 43: 2445-2453.

_____ and Skoog, F. (1965) Effects of hydroxybenzoic acids on indoleacetic acid inactivation by tobacco callus extracts. *Physiol. Plant.* 18: 577-585.

Legocki, R.P., and Verma, D.P.S. (1980) Identification of nodule specific host proteins (nodulins) involved in the development of Rhizobium - Legume symbiosis. *Cell* 20: 153-163.

Lehninger, A.L. (1975) *Biochemistry : The molecular basis of cell structure and function*. Worth Publishers Inc., New York.

Leopold, A.C., Brown, K.M. and Emerson, F.H. (1972) Ethylene in the wood of stressed trees. *Hort. Sci.* 7: 175.

_____ and Kriedemann, P.E. (1975). *Plant Growth and development* 2nd Edition, McGraw-Hill, New York.

_____ and Nooden, L.D. (1984) Hormonal regulatory systems in plants. In : *Hormonal Regulation of Development. II. The functions of hormones from the level of the cell to the whole plant*. Scott, T.K. (ed), Springer-Verlag, Berlin, pp. 4-22.

Letham, D.S. (1978) Naturally occurring plant growth regulators other than the principle hormones of higher plants. In : *Phytohormones and Related Compounds : A Comprehensive Treatise*. Vol. I. Letham, D.S., Goodwin, P.B. and Higgins, T.J.V. (eds), Elsevier/North-Holland Biomedical Press, Amsterdam, pp. 349-417.

- Levy, D., Kedar, N. and Karacinke, R. (1973) Effect of ethephon on bulbing of onion under non-inductive photoperiod. Hort Sci. 8: 228-229.
- Lieberman, M. (1979)a Biosynthesis and action of ethylene Annu. Rev. Plant. Physiol. 30: 533-591.
- _____ (1979)b Role of ethylene in Plant growth, development and senescence. In : Plant Growth Substances, Mandava, N.B. (ed), American Chemical Society, Washington DC., pp. 115-134.
- _____, Baker, J.E. and Slegner, M. (1977) Influence of plant hormones on ethylene production in apple, tomato and avocado slices during maturation and senescence. Plant Physiol. 60: 214-217.
- Link, G., Coen, D.M. and Bogorad, L. (1979) Differential expression of the gene for the large subunit of RDP carboxylase in maize leaf cell types. Cell 15: 725-731.
- Little, C.H.A. (1970) Apical dominance in long shoots of white pine (Pinus strobus). Can. J. Bot. 48: 239-253.
- _____ (1975) Inhibition of cambial activity in Abies balsamea by internal water stress : role of abscisic acid. Can. J. Bot. 53: 3041-3050.
- Loeb, J. (1915). Rules and mechanism of inhibition and correlation in the regeneration of Bryophyllum calycinum. Bot. Gaz. 60: 249-276.
- Loeb, J. (1917) Influence of the leaf upon root formation and geotropic curvature in the stem of Bryophyllum

calycinum and the possibility of a hormone theory of these processes. Bot. Gaz. 63: 25-50.

- ✓ Loeb, J. (1918). Chemical basis of correlation, I. Production of equal masses of shoots by equal masses of sister leaves in Bryophyllum calycinum. Bot. Gaz. 65: 150-174.
- ✓ Lorz, H., Junker, B., Schell, J. and Dela Pena, A. (1987) Gene transfer in Cereals. In : Plant Tissue and Cell Culture. Green, C.E., Somers, D.A. Hackett, W.P. and Biesboer, D.D. (eds), Alan, R. Liss, Inc., New York, pp. 303-316.
- ✓ Loveys, B.R. and Wareing, P.F. (1971) The hormonal control of wheat leaf unrolling. Planta 98: 117-127.
- ✓ Lyne, R.L., Bennett, R.I. and Hunter, C.P. (1986) Embryoid and plant production from cultured barley anthers. In: Plant Tissue Culture and its Agricultural Applications. Withers, L.A. and Alderson, P.G. (eds), Butterworths, London, pp. 405-411.
- ✓ Machackova, J. and Zerkal, Z. (1976) Comparison of the effect of some phenolic compounds on wheat coleoptile section growth with their effect on IAA oxidase activity. Biol. Plant. 18: 147-151.
- ✓ Maddock, S.E. (1985) Cell culture, somatic embryogenesis and plant regeneration in wheat, barley, oats, rye and triticale. In: Cereal Tissue and Cell Culture. Bright, S.W.J. and Jones, M.G.K. (eds), Martinus Nijhoff/ Dr.W.Junk Publishers, Dordrecht, pp.131-174.

- ✓ Maheshwari, P. (1950) An introduction to the Embryology of Angiosperms. Mc-Graw Hill Book Co. Inc., New York.
- ✓ Maheshwari, S.C., Rashid, A. and Tyagi, A.K. (1982) Haploids from pollen grains-retrospect and prospect. Am. J. Bot. 69: 865-879.
- ✓ Maliga, P. (1984) Isolation and characterization of mutants in plant cell culture. Annu. Rev. Plant. Physiol. 35: 519-542. <
- ✓ Malik, N.S.A. and Berrie, A.M.M. (1977) Changes in leaf protein of peas (Pisum sativum L.) during development on defoliated plants. Plant. Physiol. 52: 331-334.
- ✓ Mallikarjuna, N., Sastri, D.C. and Moir, J.P. (1986) Culture of ovules and embryos from an incompatible cross in the genus Arachis. In : Plant tissue Culture and its Agricultural Applications. Withers, L.A. and Alderson, P.G. (eds), Butterworths, London, pp.427-430.
- ✓ Mapelli, S. and Lombardi, L. (1982) A comparative auxin and cytokinin study in normal and Torosa-2 mutant tomato plants. Plant Cell Physiol. 23: 751-757.
- ✓ Marinos, N.G. (1967) Multi functional plastids in the meristematic region of potato tuber buds. J. Ultrastruct. Res. 17: 91-113.
- ✓ Martin, C. and Thimann, K.V. (1972) The role of protein synthesis in the senescence of leaves. I.: The formation of protease. Plant Physiol. 49: 64-71.

Martineau, B. and Taylor, W.C. (1985) Photosynthetic gene expression and cellular differentiation in developing maize leaves. *Plant Physiol.* 78: 399-404.

Mato, M.C. and Vicitex, A.M. (1986) Changes in auxin protectors and IAA oxidases during the rooting of chestnut shoots in vitro. *Physiol. Plant.* 66 : 491-494.

Matsuoka, M. and Ohashi, Y. (1986) Induction of pathogenesis-related proteins in tobacco leaves. *Plant Physiol.* 80: 505-510.

Matkers, G.L. and Scandalios, J.G. (1986) Changes in plant gene expression during stress. *Develop. Genet.* 7 : 167-175.

Matthysse, A.G. and Scott, T.K. (1984) Functions of hormones at the whole plant level of organisation. In : *Hormonal Regulation of Development. II. The Functions of Hormones from the level of the Cell to the whole Plant.* Scott, T.K. (ed), Springer-Verlag, Berlin, pp. 219-243.

Mayer, A.M. (1987) Polyphenol oxidases in plants - recent progress. *Phytochem.* 26: 11-20.

Mayer, A.M. and Poljakoff-Mayber, A. (1982) *The germination of seeds*, 3rd edition, Pergamon Press, Oxford.

Mayfield, S.P. and Taylor, W.C. (1984) The appearance of photosynthetic proteins in developing maize leaves. *Planta* 161: 481-486.

Mazia, D., Brewar, P.A. and Alfert, M. (1953) A cytochemical staining and measurement of protein with mercuric bromophenol blue. *Biol. Bull.* 104: 57-67.

- McCready, C.C., Osbrenne, D.J. and Black, M.K. (1965) Promotion by kinetin of the polar transport of two auxins. *Nature* 208: 1065-1067.
- ✓ McDonald, M.R. (1985)⁵ Ribonuclease, In : *Methods in Enzymology* Vol.2, Colowick, S.P. and Caplan, No. (eds), Academic Press, New York, pp 427-36. ←
- ✓ McIntyre, G.I. (1968) Nutritional control of the correlative inhibition between lateral shoots in the flax seedlings (*Linum usitatissimum*) *Can. J. Bot.* 46: 147-155.
- ✓ _____ (1971) Apical dominance in the rhizome of *Agrophylon rapens*. Some factors affecting the degree of dominance in isolated rhizomes. *Can. J. Bot.* 49: 99-109.
- ✓ _____ (1973) Environmental control of apical dominance in *Phaseolus vulgaris*. *Can. J. Bot.* 51 : 293-299.
- ✓ _____ and Larmour, S.D. (1975) The correlative inhibition of bud and shoot growth in flax. Anatomical changes associated with the release of lateral buds from inhibition. *Can. J. Bot.*
- ✓ McMichael, B.L., Jordan, W.R. and Powell, R.D. (1972) An effect of water stress on ethylene production by intact cotton petioles. *Plant Physiol.* 49: 658-660.
- Megha, B.M. and Laloraya, M.M. (1977) Effect of abscisic acid on growth, IAA oxidase, peroxidase and ascorbate oxidizing systems in *Trigonella foenum-graecum* L. seedlings. *Biochem. Physiol. Pflanz.* 171: 269-277.

- Megha, B.M. and Laloraya, M. (1978) Effect of ethrol on dark growth, IAA oxidase, peroxidase and ascorbate oxidizing system in Trigonella foenum-graecum L. seedlings. Biochem. Physiol. Pflanz. 173: 229-237.
- Mehrlich, P.F. (1931). Factors affecting growth from the foliar meristems of Bryophyllum calycinum. Bot. Gaz. 92: 113-140.
- Mehta, A.R. (1980) Some physiological aspects of morphogenesis in tissues grown in culture, In : 12th Philip, R. White, Memorial lecture delivered in 67th Session of Indian Science Congress, Calcutta.
- Meinke, D.W. (1986) Embryo lethal mutants and Seed development. In : Oxford Surveys of Plant Molecular and Cell Biology. Vol.3, Miflin, B.J. (ed), Oxford University Press, Oxford pp. 122-165.
- Meinke, D.W. and Sussex, I.M. (1979) Embryo-lethal mutants of Anabidopsis thaliana : model system for genetic analysis of plant embryo development. Dev. Biol. 72: 50- 61.
- Mesnard, J.M., Lebeurier, G., Lacroute, F. and Hirth, L. (1985) Use of labelled cDNA as probe to study differences in messenger RNAs abundance in the leaves and in the pods of Arabidopsis thaliana. Plant Sci. 40: 185-191.
- Meyer, G. (1953) Über photoperiodische beeinflussbarkeit der Brutpflanzen bildung bei Bryophyllum tubiflorum. Z. Bot. 41: 247-256.

Meyer, H.V. and Siehl, B. (1981) Activation of latent phenolase during spinach leaf senescence.

Phytochem. 20: 955-959.

Michniewicz, M. and Kamienska, A. (1965) Flower formation induced by kinetin and vitamin E treatment in long-day plant (Arabidopsis thaliana) grown in short day. Naturwiss. 52 : 623.

Mikkonen, A. (1986) Activities of some peptidases and proteinases in germinating kidney bean, Phaseolus vulgaris. Physiol. Plant 68 : 282-286.

Milborrow, B.V. (1965) The effects of synthetic α -gormin (abscisin II) on the growth of the oat mesocotyl. Planta 20 : 155-171.

_____ (1978) The stability of conjugated abscisic acid during wilting. J. Exp. Bot. 29: 1059-1066.

Misra, S. and Bewley, J.D. (1985) The messenger RNA population in the embryonic axes of Phaseolus vulgaris during development and following germination J. Exp. Bot. 36 : 1644-1652.

Mohan Ram, H.Y. (1963) In vitro modification of regeneration in foliar embryos of Bryophyllum calycinum Salisb. In : Plant Tissue and Organ Culture. A Symposium, Maheshwari P and Rangaswamy, N.S. (eds), International Soc. Plant Morphologists, Delhi, pp. 159-167.

✓ Mohan Ram, H.Y. (1980) Dynamic aspects of root development.

Act. Bot. Indica 8 : 115-128.

✓ Mohapatra, S.S., Poole, R.J. and Dhindsa, R.S. (1987)a

Cold acclimation, freezing resistance and protein synthesis in alfalfa (Medicago sativa L. cv Saranac).

J. Exp. Bot. 38 : 1697-1703.

✓ _____, _____ and _____ (1987)b Changes

in protein patterns and translatable messenger RNA populations during cold acclimation of alfalfa.

Plant Physiol. 84 : 1172-1176.

✓ Noncousin, C. and Gaspar, T. (1983) Peroxidase as a marker

for rooting improvement of Cynara scolymus L.

cultured in vitro. Biochem. Physiol. Pflanz. 178: 263-271.

✓ Moore, P.D. (1978) Adaptation to waterlogged environments.

Nature 271: 209.

✓ Moore, T.C. (1969) Comparative rate of biosynthesis of

indoleacetic acid from tryptophan in cell free

extracts of different parts of Pisum sativum plants.

Phytochem. 8 : 1109-1120.

Morgan, P.W. (1976). Effects on ethylene physiology, In :

Herbicides physiology, biochemistry, ecology, Audus,

L.J. (ed), 2nd edition, Academic Press, London,

pp. 255-280.

✓ _____ and Durham, J.I. (1983) Strategies for extracting

purifying and assaying auxins from plant tissues.

Bot. Gas. 144: 20-31.

✓ Morris, D.A. and Kadir, G.O. (1972) Pathways of auxin transport in the intact pea seedling (Pisum sativum L.) Planta 107 : 171-182.

✓ _____, _____, Barry, A.J. (1973) Auxin transport in intact pea seedlings (Pisum sativum L.) the inhibition of transport by 2,3,5-triodobenzoic acid. Planta 110: 173-182.

✓ Mothes, K. and Engelbrecht, L. (1961) Kinetin-induced directed transport of substances in excised leaves in the dark. Phytochem. 1 : 58-62.

✓ Fuhitch, M.J. and Fletcher, J.S. (1985) Influence of culture age and spermidine treatment on the accumulation of phenolic compounds in suspension cultures. Plant Physiol. 78: 25-28.

✓ Murashige, T. (1974) Plant propagation through tissue culture. Annu. Rev. Plant Physiol. 25: 135-165.

✓ Nag, K.K. and Johri, B.M. (1969) Organogenesis and chromosomal constitution in embryo callus of Nuytsia floribunda. Phytomorph. 19: 405-408.

✓ Nagao, M.A. and Rubinstein, B. (1976) Early events associated with lateral bud growth of Pisum sativum L. Bot. Gaz. 137: 39-44.

✓ Nagl, W. (1972) Selective inhibition of cell cycle stages in the Allium root meristem by colchicine and growth regulators Am. J. Bot. 59: 346-351.

Nair, T.V.R., Grover, M.L. and Abrol, Y.P. (1978). Nitrogen metabolism of the upper three leaf blades of wheat at different soil nitrogen levels. *Plant Physiol.* 42 : 293-300.

Nakajima, R. and Yamazaki, I. (1979). The mechanism of indole-3-acetic acid oxidation by horseradish peroxidases. *J. Biol. Chem.* 254 : 872-878.

Nanda, K.K. and Jain, M.K. (1972). Mode of action of IAA and GA₃ on root and shoot growth of epiphyllous buds of *Bryophyllum tubiflorum*. *J. Exp. Bot.* 23 : 890-986.

Nanda, K.K., Furohit, A.N. and Kaura, N. ⁽¹⁹⁸⁰⁾ Effect of morphaction, gibberellic acid, and auxin on growth and development of *Bryophyllum tubiflorum*. *Physiol. Plant.* 23 : 591-598.

_____, _____ and Prabha, A. (1968) Mode of action of morphaction on epiphyllous buds of *Bryophyllum tubiflorum*. *Ind. J. Plant Physiol.* 11 : 20-26.

Nash, D.T. and Davies, M.E. (1972). Some aspects of growth and metabolism of Paul's Scarlet rose cell suspension. *J. Exp. Bot.* 23 : 75-91.

Nato, A., Mathiew, Y. and Brangeon, J. (1981). Heterophic tobacco cell cultures during greening. II. Physiological and biochemical aspects. *Physiol. Plant.* 53 : 335-341. Physiological events occurring during the early stages of development in actively dividing higher plant systems are not well understood (documented).

Nave, E.B. and Sawhney, V.K. (1986) Enzymatic changes in postmeiotic anther development in Petunia hybrida. I. anther ontogeny and isozyme analyses. J. Plant. Physiol. 125: 451-465.

Naylor, A.W. (1984). Functions of hormones at the organ level of organization, In : Hormonal Regulation of Development II. The Functions of Hormones from the Level of the Cell to the whole Plant. Scott, T.K.(ed) Springer-Verlag, Berlin, pp. 172-218.

Naylor, E. (1932). The morphology of regeneration in Bryophyllum calycinum. Am. J. Bot. 19 : 32-40.

Naylor, J.M. (1958). Control of nuclear processes by auxin in axillary buds of Tradescantia paludosa. Can. J. Bot. 36 : 221-232.

Necchi, A., Pogna, D.E. and Napelli, S. (1987) Early and late heat shock proteins in wheat and other cereal species. Plant Physiol. 84 : 1378-1384.

Negrutiu, I., Jacobs, M. and Cattoir-Reynaerts, A. (1984). Progress in cellular engineering of Plants : biochemical and genetic assessment of selectable markers from cultured cells. Plant Mol. Biol. 3 : 289-302.

Nikolaeva, M.G. (1977) Factors controlling the seed dormancy patterns. In : The Physiology and Biochemistry of seed dormancy and Germination, Khan, A.A. (ed), North Holland, Amsterdam, pp. 51-74.

- ✓ Nitsch, J.P. and Nitsch, P. (1959). Modification du metabolisme des auxines par l'acide gibberellique. Bull. Soc. France Physiol. Veg. 5 : 20-23.
- ✓ Nomura, K. and Komamine, A. (1986) Molecular mechanisms of somatic embryogenesis. Oxford Surveys of Plant molecular Cell Biol. 3 : 456-466.
- ✓ Nonhebel, H.M. (1982) Metabolism of indole-3-acetic acid in seedlings of Zea mays L. Ph.D. Thesis. University of Glasgow. Cited from Hillman (1984).
- ✓ Nooden, L.D. and Weber, J.A. (1978) Environmental and hormonal control of dormancy in terminal buds of plants. In : Dormancy and Developmental Arrest- Clutter, M.E. (ed), Academic Press, New York, pp. 42-62.
- ✓ North, M.J. (1982) Comparative biochemistry of the proteolyases of eucaryotic microorganisms. Microbiol. Rev. 46 : 308-340.
- ✓ Novak, J. and Galston, W.W. (1971) Studies on auxin protector substances, IAA oxidase and peroxidase in cotyledons of Pharbitis nil. Plant Cell Physiol. 12 : 931-940.
- ✓ Nover, L. (1982) Molecular basis of cell differentiation In : Cell differentiation-molecular basis and problems. Nover, L., Luckner, M. and Parthier, B. (eds), Springer-Verlag, Berlin, pp. 99-254.
- ✓ Obhildalova, L., Slaby, K. and Sebanek, J. (1979). The polarity of endogenous regulatory substances in Bryophyllum crenatum leaves and stems. Biol. Plant 21 : 22-26.

✓ Ogawa, Y. and King, R.W. (1979) Indirect action of benzyladenine and other chemicals on flowering of Pharbitis nil chois. Plant Physiol. 63 : 643-649. ←

✓ _____ and _____ (1980). Flowering in seedling of Pharbitis nil induced by benzyladenine applied under a non-inductive day length. Plant Cell Physiol. 21 : 1109-1116.

✓ Ohya, (1983). In : Handbook of Plant Cell Culture - Techniques of propagation and breeding. Evans, D.A., Sharp, W.R., Ammirato, P.V. and Yamada, Y. (eds) Macmillan Publishing Co., New York, pp. 501-519.

Onofeghara, F.A. and Koroma, S.A. (1974) Histochemical localization of enzymes in the cucurbitaceae : Acid Phosphatase. Ann. Bot. 38 : 477-483.

Osborne, D.J. (1962). The effects of kinetin on protein and acid metabolism in Xanthium leaves during senescence. Plant. Physiol. 37 : 595-610.

_____ and Mullins, M.C. (1969), Auxin, ethylene and kinetin in a carrier-protein model system for the polar transport of auxins in petiole segments of Phaseolus vulgaris. New Phytol. New Phytol. 68 : 977-991.

✓ Oughan, H.J., Jones, T.W.A. and Evans, M.L.L. (1987). Leaf development in Lolium temulentum L. : Progressive changes in soluble polypeptide complement and iso-enzymes. Exp. Bot. 38 : 1689-1696.

- Overbeek, J.V. (1938) Auxin distribution in seedlings and its bearing on the problem of bud inhibition. Bot. Gaz. 100 : 133-166.
- Ow, D.W., Wook, K.V., Deluca, M., Dewet, J.R., Helinski, D.R. and Howell, S.R. (1986) Transient and stable expression of the firefly luciferase gene in plant cells and transgenic plants. Science 234 : 856-859.
- Ozias-Akins, P. and Lorz, H. (1984) Progress and limitations in the culture of cereal protoplasts. Trends in Biotechno 2 : 119-123.
- Palmer, J.H. (1972) Roles of ethylene and indole-3-acetic acid in petiole epinasty in Helianthus annuus and the modifying influence of gibberellic acid. J. Exp. Bot. 23 : 733-743.
- _____ (1965) Temperature sensitivity of the latent phase in ethylene induced elongation Plant Physiol. 55 : 581-582.
- Pang, P.P. and Meyerowitz, E.M. (1987). Arabidopsis thaliana: a model system for plant molecular Biology. Bio/Techno. 5 : 1177-1181.
- Panigrahi, B.M. and Audus, L.J. (1966) Apical dominance in Vicia faba. Ann. Bot. 30 : 457-473.
- Pareek, L.K. and Chandra, N. (1978) Somatic embryogenesis in leaf callus from cauliflower (Brassica oleracea var. Botrytis). Plant Sci. Lett. 11 : 311-316.

- Pasternak, C.A. (1970) The Biochemistry of differentiation.
Wiley Interscience Publishers, New York.
- Patel, K.R. and Berlyn, G.P. (1983) Cytochemical investigations on multiple bud formation in tissue cultures of Pinus coulteri. Can. J. Bot. 61 : 575-585.
- _____, Shekhawat, M.S., Berlyn, G.P. and Thorpe, T.A. (1984) Isolation and culture of protoplasts from cotyledons of Pinus coulteri D. Don. Plant Cell Tissue Organ Cult. 3 : 85-90.
- _____, and Thorpe, T.A. (1984) Histochemical examination of shoot initiation in cultured cotyledon explants of radiata pine. Bot. Gaz. 145 : 312-322.
- Patrick, J.W. (1982) Hormonal control of assimilate transport. In : Plant Growth Substances. Wareing, P.F. (ed), Academic Press, London, pp. 669-678.
- Perani, L., Radke, S., Wilke-Douglas, M. and Bossert, M. (1986). Gene transfer methods for crop improvement : introduction of foreign DNA into plants. Physiol. Plant. 68 : 566-570.
- Perry, T.O. (1971) Dormancy of trees in winter. Science 171 : 29-36.
- Peterson, C.A. and Fletcher, R.A. (1973) Apical dominance is not due to a lack of functional xylem and phloem in inhibited buds. J. Exp. Bot. 24 : 97-103.

Parent, J.G., Houge, R. and Alain, A. (1985) Glycoproteins, enzymatic activities and b proteins in intercellular fluid extracts from hyper sensitive Nicotiana species infected with TMV. Can. Jour. Bot. 63 : 928-931.

Peterson, C.A. and Fletcher, R.A. (1975) Lateral bud growth on excised stem segments : effect of the stem. Can. J. Bot. 53 : 243-248.

_____, Kleinkopf, G.E. and Huffaker, R.C. (1973) Evidence for lack of turnover of ribulose 1,5-diphosphate carboxylase in barley leaves. Plant Physiol. 51 : 1042-1045.P

Phillips, I.D.J. (1968) Nitrogen, Phosphorus and potassium distribution in relation to apical dominance in dwarf bean (Phaseolus vulgaris, cv. Canadian Wonder). J. Exp. Bot. 19 : 617-627.

_____, (1975) Apical dominance. Annu. Rev. Plant Physiol. 26 : 341-367.

Phipps, J. (1965) La plante adulte de tabac : mise en evidence et repartition du systeme auxin-oxydase. C.R. Acad. Sci. 261 : 3864-3867.

Pierard, D., Jacquard, A., Bernier, G. and Salmon, J. (1980) Appearance and disappearance of proteins in the shoot apical meristem of Sinapis alba in transition to flowering. Planta 150 : 397-405.

Pierpoint, W.S. (1986) The pathogenesis related proteins of tobacco leaves. Phytochem. 25 : 1595-1601.

Pilet, P.E., (1965) Polar transport of radioactivity from C^{14} labelled IAA in stems of Lens culinaris. Physiol. Plant. 18 : 667-702.

Pilet, P.E. and Braun, R. (1970) Ribonuclease activity and auxin effects in the lens root. *Physiol. Plant.* 23: 245-250.

Plummer, T.H. and Leopold, A.C. (1957) Chemical treatment for bud formation in Saintpaulia. *Proc. Am. Soc. Hort. Sci.* 70 : 442-444.

Poethog, R.S. (1984) Patterns and problems in angiosperm leaf morphogenesis. In : *Pattern Formation-A Primer in Developmental Biology*. Malacinski, G.M. and Bryant, B.V. (eds), Macmillan Publishing Company, New York, pp. 413-432.

* Potrykus, I., Paszkowski, J., Saul, M.W., Negrutiu, I. and Shillito, R.D. (1987) Direct gene transfer to plants : facts and future. In : *Plant Tissue and Cell Culture* Green, C.E. and Somers, D.A., Hackett, W.P. and Biesboer, D.D. (eds), Alan R. Liss, Inc., New York, pp. 289-302.

Prasad, T.K. and Cline, M.G. (1985a) Shoot inversion-induced ethylene in Pharbitis nil induces the release of apical dominance by restricting shoot elongation. *Plant Sci.* 38 : 163-172.

_____ and _____ (1985b) Mechanical perturbation-induced ethylene releases apical dominance in Pharbitis nil by restricting shoot growth. *Plant Sci.* 41 : 217-222.

Pratt, H.K., and Goeschl, J.D. (1969) Physiological roles of ethylene in plants. *Annu. Rev. Plant Physiol.* 20 : 541-584.

* Poovaiah, B.W., McFadden, J.J. and Reddy, A.S.N. (1987) The role of calcium ions in gravity signal perception and transduction. *Physiol. Plant.* 71 : 401-407.

_____ and Reddy, A.S.N. (1987) Calcium messenger system in plants. *CRC Critical Rev. Plant Sci.* 6 : 47-103.

- Prochazka, S. and Jacobs, W.P. (1984) Transport of benzyladenine and gibberellin A₁ from roots in relation to the dominance between the axillary buds of pea (Pisum sativum L.) cotyledons. Plant Physiol. 76 : 224-227.
- Purohit, A.N. and Nanda, K.K. (1971) Interaction of gibberellic acid and photoperiod in the development of epiphyllous buds in Bryophyllum tubiflorum. Biol. Plant. 13 : 356-360.
- _____ and Prabha, A. (1969) Effect of some growth substances and antimetabolites on elongation of the first internode in epiphyllous buds of Bryophyllum tubiflorum Harv. Bot. Gaz. 130 : 102-106.
- Quatrano, R.S. (1972) An ultrastructural study of the determined site of rhizoid formation in Fucus zygotes. Exp. Cell. Res. 70 : 1-12.
- _____ (1978) Development of cell polarity. Annu. Rev. Plant Physiol. 29 : 487-510.
- Raa, J. (1971), Indole-3-acetic acid levels and the role of indole-3-acetic acid oxidase in the normal root and club root of cabbage. Physiol. Plant. 25: 130-134.
- Racusen, D. and Foote, M. (1970) An endopeptidase of bean leaves. Can J. Bot. 48: 1017-1021.
- Raghavan, V. (1976) Experimental embryogenesis in vascular plants. Academic Press, London.

✓ Ragster, L.V. and Chrispeels, M.J. (1979) Azocell-digesting proteinases in soybean leaves. *Plant Physiol.* 64: 857-862.

Ramagopa, S. (1987) Molecular biology of salinity stress: preliminary studies and perspectives. In : Tailoring Genes for Crop Improvement. Bruening, G. Harada, J., Kosuge, T. and Hollaender, A. (eds), Plenum Publishing Corporation, pp. 111-119.

✓ Ramagopal, S. Huang, B. and Marcus, A. (1977) Modulation of protein synthesis during the growth cycle of a culture of scarlet rose. *J. Cell Physiol.* 93: 319-330.

✓ Rama Rao, N., Naithani, S.C. and Singh, Y.D. (1982) Physiological and biochemical changes associated with cottonfibre development. II. Auxin oxidizing system. *Physiol Plant* 55: 204-208.

✓ Rangaswamy, N.S. (1959) Morphogenetic response of Citrus ovules to growth adjuvants in culture. *Nature* 183: 735-736.

✓ Raquin, C. (1982) Genetic control of embryo production and embryo quality in anther culture of Petunia. *Theor. Appl. Genet.* 63: 151-154.

✓ Raven, J.A. (1975) Transport of indoleacetic acid in plant cells in relation to pH and electrical potential gradients, and its significance for polar IAA transport. *New Phytol.* 74: 163-172.

✓ _____ and Rubery, P.H. (1982) Coordination of development: hormone receptors, hormone action and hormone transport.

In : The Molecular Biology of Plant Development Smith, H. and Grierson, D. (eds), Blackwell, Oxford, pp.28-47.

Rawal, S.K. and Mehta, A.R. (1982) Changes in enzyme activity and isoperoxidases in haploid tobacco callus during organogenesis. *Plant Sci. Lett.* 24: 67-77.

* Redei, G.P. (1982) *Genetics*, Macmillan Publishing Co. Inc., New York.

Reed, E. (1923) Hypothesis of formative stuffs as applied to Bryophyllum calycinum. *Bot. Gaz.* 75: 113-142.

Reinert, J. (1959) Über die Kontrolle der Morphogenese und die Induktion von Adventivembryonen an Gewebekulturen aus Karotten *Planta* 58: 318-33.

Resende, F. (1959). Über die Brutknospen-Entwicklung bei Bryophyllum und ihre Vererbung. *Ber. dtsh. bot. Ges.* 72: 3-10.

Reynolds, T. (1978) Comparative effects of aliphatic compounds on inhibition of lettuce fruit germination. *Ann. Bot.* 41: 637-648.

Richard, J. and Job, D. (1974) Reaction mechanisms of indole-3-acetate degradation by peroxidases stopped-flow and low-temperature spectroscopic study. *Eur. J. Biochem.* 44: 359-374.

_____, Mazza, G. and Williams, R.J.P. (1972) Oxidation-reduction potentials and ionization states of two turnip peroxidases. *Eur. J. Biochem.* 28: 566-578.

_____, Teissere, M., Azou, Y. and Penon, P. (1976)

Hormonal control of ribonucleic acid and protein synthesis

* Reddy, A.S.N., McFadden, J.J., Friedmann, M. and Poovaiah, B.W. (1987). Signal transduction in plants: evidence for the involvement of calcium and turnover of inositol phospholipids. *Biochem. Biophys. Res. Comm.* 149: 334-339.

in plants. *J. Microscopic Biol. Cellu.* 26: 139-150.

Robert, M.L., Taylor, H.F. and Wain, R.L. (1976) The effect of 3,5-diiodo-4 hydroxybenzoic acid on the oxidation of IAA and auxin-induced ethylene production by cress root segments. *Planta.* 129: 53-57.

Roberts, L.W. (1976) Cyto differentiation in plants : Xylogenesis as a model system. Cambridge University Press, Cambridge.

Robertson, A.J., Gusta, L.V., Reaney, M.J.T. and Ishikawa, M. (1987) Protein synthesis in Bromegrass (Bromus inermis leys) cultured cells during the induction of frost tolerance by abscisic acid or low temperature. *Plant Physiol.* 84: 1331-1336.

Rodriguez, A. and Saucuez-Tames, R. (1986) Dormancy and seasonal changes of plant growth regulators in hazel buds. *Physiol Plant.* 66: 288-292.

Rogers, S.G. O'Connell, K., Horach, R.B. and Fraley, R.T. (1985) Investigation of factors involved in foreign protein expression in transformed plants. In: *Biotechnology in plant Science Relevance to Agriculture in Eighties*. Zaitlin, M., Dayp, P. and Hollaender, A. (eds), Academic Press Inc., Orlando, pp 219-226.

Rohn, M and Werner, D. (1987) Isolation of root hairs from seedlings of Pisum sativum : Identification of root hair specific protein by in situ labelling. *Physiol. Plant.* 69: 129-136.

✓ Ross, J.J. (1986) The relationship between apical dominance, internode length and flowering in Lathyrus odoratus L. Ann. Bot. 57: 191-199.

✓ _____ and Murfet, I.C. (1985) Flowering and branching in Lathyrus odoratus L. environmental and genetic effects. Ann. Bot. 55: 715-726.

✓ _____ and _____ (1985 b) A comparison of the flowering and branching control systems in Lathyrus odoratus L. and Pisum sativum L. Ann. Bot. 56: 847-856.

✓ Ross, M.K., Thorpe, T.A. and Costerton, J.M. (1973) Ultrastructural aspects of shoot initiation in tobacco callus cultures. Am. J. Bot. 60: 788-795.

✓ Roux, S.J., Wayne, R.O. and Datta, N. (1986) Role of calcium ions in phytochrome responses : an update. Physiol Plant. 66: 344-348.

Rouxel, M.F., Billard, J.P. and Boucaud, J. (1987) Effect of NaCl salinity in vivo and in vitro on ribonuclease activity in the halophyte Suaeda maritima. Physiol. Plant. 69: 330-336.

✓ Rubery, P.H. and Shelldrake, A.R. (1974) Carrier-mediated auxin transport. Planta 118 : 101-121.

✓ Rubinstein, B. and Nagao, M.A. (1976) Lateral bud outgrowth and its control by the apex. Bot. Rev. 42: 83-113.

✓ Runkova, L.V., Lis, E.K., Tomaszewski, M. and Antoszewski, R. (1972) Function of phenolic substances in the degradation system of IAA in Strawberries. Biol. Plant. 14: 71-81.

- ✓ Ryan, C.A. (1973). Proteolytic enzymes and their inhibitors in plants. *Annu. Rev. Plant Physiol.* 24: 173-196.
- ✓ _____ and Walker-Simmons, M. (1981) Plant proteinases. In : *The Biochemistry of Plants Vol.6*, Stumpf, P.K. and Conn, E.E. (eds), Academic Press Inc., New York, pp. 321-350.
- ✓ Sabater, B. (1984) Hormonal regulation of senescence. In : *Hormonal Regulation of Plant Growth and Development. Vol. I*, Furohit, S.S. (ed), Agro Botanical Publishers, India, pp. 169-217.
- ✓ Sachs, T. (1978) Patterned differentiation in plants. *Differentiation* 11: 65-73.
- ✓ _____ and Thimann, K.V. (1964) Release of lateral buds from apical dominance. *Nature* 201: 939-940.
- ✓ Sacher, J.A., Engstrom, D. and Broomfield, D. (1979) Ethylene regulation of wound induced ribonuclease in turnip root tissue, *Planta* 144: 413-418.
- ✓ Sadik, S. and Ozbun, J.L. (1967) Histochemical changes in the shoot tip of cauliflower during floral induction. *Can. J. Bot.* 45: 955-959.
- Sagee, O., Goren, R. and Riey, J. (1980) Abscission of citrus leaf explants: Interrelationships of abscisic acid, ethylene, and hydrolytic enzymes. *Plant Physiol.* 66: 750-753.
- Sakai, S. and Imaseki, H. (1971) Auxin-induced ethylene production by mungbean hypocotyl segments. *Plant Cell Physiol* 12: 349-359.

Salerno, D.C. and Brenner, M.L. (1983) Apical dominance : IAA mobility in the tomato isogenic lines Craigella and Blind. Plant Physiol. 72 : 27 (Supplement).

Sanchez de Jimenez, E. and Fernandez, L. (1983) Biochemical parameters to assess cell differentiation of Bouvardia ternifolia Schlecht callus. Planta 158: 377-383.

Sanchez-Martinez, D., Puigdomench, P., and Pages, M. (1986) Regulation of gene expression in developing Zea mays embryos. Plant Physiol 82: 543-549.

Sanders, I.O., Smith, A.R. and Hall, M.A. (1986) Ethylene metabolism and action. Physiol. Plant. 66: 723-726.

Sastry, K.S.K. and Huir, R.M. (1965) Effects of gibberellic acid on utilization of auxin precursors by apical segments of the Avena coleoptile. Plant Physiol. 40: 294-298.

Saunders, P. (1978) Phytohormones and bud dormancy. In: Phytohormones and Related Compounds - A comprehensive Treatise. Vol.II, Letham, D.S., Goodwin, P.B. and Biggins, T.J.V. (eds), Elsevier/North Holland, Amsterdam, pp. 423-446.

Sawhney, V.K., Chen, K. and Sussex, I.M. (1985) Soluble proteins of the mature floral organs of tomato (Lycopersicon esculentum Mill.). J. Plant Physiol. 121: 265-271.

Scandalios, J.C. (1974) Isozymes in development and differentiation. Ann. Rev. Plant Physiol. 25: 225-258.

_____ (1983) Molecular varieties of isozymes and their role in studies of gene regulation and expression

during eukaryote development. In : Isozymes - Current topics in Biological and Medical Research. Vol. 9, Gene Expression and Development. Rattazzi, M.C., Scandalios, J.G. and Whitt, G.S. (eds), Alan, R. Liss, Inc., New York, pp. 1-31.

Scandalios, J.G. and Sorenson, J.C. (1977) Isozymes in Plant tissue culture. In : Plant Cell, Tissue and Organ Culture. Reinert, J. and Bajaj, Y.P.S. (eds), Springer-Verlag, Berlin, pp. 719-730.

Schaeffer, G.W. and Sharpe, Jr. F.T. (1970) Cytidine methylation in buds released from dormancy with 6-benzylamino purine. Biochem. Biophys. Res. Comm. 38: 312-318.

✓ Schneider, E.A. and Wightman, F. (1974) Metabolism of auxin in higher plants. Ann. Rev. Plant Physiol. 25: 487-513.

✓ _____ and _____ (1978) Auxins. In : Phytohormones and related compounds - A comprehensive Treatise. The Biochemistry of Phytohormones and related compounds, Vol.I. Letham, D.S., Goodwin, P.B., Higgins, T.J.V. (eds), Elsevier, Amsterdam, pp. 29-105.

Schraudolf, H. and Reinert, J. (1959) Interaction of plant growth regulators in regeneration processes. Nature 184: 465-466.

✓ Schreier, P.H., Kuntz, M., Lipphardt, S., Lorz, H., Baker, B., Simons, A., Brujju, F., Schell, J., Bohnert, H.J., Reiss, B. and Wassmann, C.C. (1985) New development in

plant transformation technology : its application to cellular organelles, cereals and dicotyledonous crop plants. In : Biotechnology in Plant Science-Relevance to Agriculture in the Eighties. Zaitlin, M., Day, P., Molhender, A. (eds), Academic Press, Inc, Orlando, pp. 237-246.

Schroder, J., De Greve, H., Hernalsteens, J.P., Leemaus, J., Van Montagu, M., Otten, L., Schroder, G., Willmitzer, L. and Schell, J. (1983) Ti Plasmid mediated gene transfer to higher plant cells. In : Plant Biotechnology. Mantell, S.H. and Smith, H. (eds), Cambridge University Press, Cambridge, pp. 313-326.

Scott, T.K. and Briggs, W.R. (1960) Auxin relationships in the Alaska pea (Pisum sativum) Am. J. Bot. 47 : 492-499.

Sebanek, J., Kopecky, F. and Slaby, K. (1978) Endogenous gibberellins and auxins in the stem of Bryophyllum crenatum in relationship to its polarity. Biol. Plant. 20: 138-141.

_____ and Slaby, K. (1982) Correlative effects of root and basal part of stem upon the content of cytokinins in leaves of Bryophyllum crenatum. Biochem. Physiol. Pflanzen. 177: 441-444.

Sembdner, G., Gross, D., Liebisch, H.W. and Schneider, G. (1980) Biosynthesis and metabolism of plant hormones. In : Hormonal Regulation of Development . I- Molecular Aspects of Plant Hormones. MacMillan, J. (ed).,

Springer-Verlag, Berlin, pp. 281-444.

Sen, S.P. (1984) The molecular basis of hormone action,
In : Hormonal Regulation of Plant Growth and
Development. Vol. I, Purchit, S.S. (ed), Agro
Botanical Publishers, India, pp. 1-40.

Sengupta, C. and Raghavan, V. (1980) Somatic embryogenesis
in carrot cell suspension I : Pattern of protein and
nucleic acid synthesis. J. Exp. Bot. 31: 247-258.

Sengupta-Gopalan, C., Reichert, N.A., Barker, R.F., Hall, T.C.
and Kemp, J.C. (1985) Developmentally regulated
expression of phaseolin, a bean protein, in tobacco
seed. Proc. Natl. Acad. Sci. (U.S.A) 82: 3320

Sequeira, L. and Minco, L. (1966) Partial purification and
kinetics of indole acetic acid oxidase from tobacco
roots. Plant Physiol. 41: 1200-1203.

Seth, A.K., Wareing, P.F. (1967) Hormone - directed transport
of metabolites and its possible role in plant
senescence. J. Exp. Bot. 18: 65-77.

Setterfield, G. (1963) Growth regulation in excized slices
of Jerusalem artichoke Tuber Tissue. Symp. Soc. Exp.
Biol. 17: 98-126.

Shah, D.M., Horsch, R.B., Klee, H.J., Kishore, G.N., Winter,
J.A., Tumer, N.E., Hironaka, C.M., Sanders, P.R.,
Gasser, C.S., Aykent, S., Siegel, N.R., Rogers, S.R.
and Fraley, R.T. (1986) Engineering Herbicide tolerance
in transgenic plants. Science 233: 478-481.

- Shah, J.J. and Raju, E.C. (1975) Ontogeny of the shoot apex of Zingiber officinale. Norw. J. Bot. 22: 227-236.
- Shah, J.J. and Vasudeva Rao, P.H.V. (1977) Development of Sympodial and thorny shoot axis of Carissa congesta Wight Bot. Gaz. 38: 248-254.
- Shah, J.J. and Unnikrishnan, K. (1969) The shoot apex and the ontogeny of axillary buds in Cuminum cyminum L. Aust. J. Bot. 17: 241-253.
- Shannon, L.M., Kay, E. and Lew, J.Y. (1966) Peroxidase isoenzymes from horseradish roots. I. Isolation and Physical properties. J. Biol. Chem. 241: 2166-2172.
- Sharpe, F.T. Jr. and Schaeffer, G.W. (1970) Methylpurine inhibition and benzyladenine stimulation of axillary bud growth. Am. J. Bot. 57: 629-632.
- Sheldrake, A.R. (1973). The production of hormones in higher plants. Biol. Rev. 48: 509-595.
- Shimokawa, K. (1984) Physiology and biochemistry of ethylene. In : Hormonal Regulation of Plant Growth and Development. Purohit, S.S. (ed), Agro Botanical Publishers, India, pp. 279-306.
- Simpson, S.F. and Torrey, J.G. (1977) Hormonal control of deoxyribonucleic acid and protein synthesis in per root cortical explants. Plant Physiol. 59: 4-9.
- Sironval, C. (1956) Action of day length upon the formation of adventitious buds in Bryophyllum tubiflorum Harv. Nature. 178: 1357-1358.

- Skoog, F. and Miller, C.O. (1957) Chemical regulation of growth and organ formation in plant tissues cultured in vitro Symp. Soc. Exp. Biol. 11: 118-131.
- _____ and Thimann, K.V. (1934) Further experiments on the inhibition of the development of lateral buds by growth hormone Proc. Nat. Acad. Sci. (USA) 20: 480-485.
- Smith, D.M. and Montgomery, M.W. (1985) Improved methods for the extraction of polyphenol oxidase from d'Anjou pears. Phytochem. 24: 901-904.
- Smith, T.A. (1985) Polyamines. Annu. Rev. Plant. Physiol. 36: 117-143.
- Snow, R. (1940) A hormone for correlative inhibition. New Phytol. 39 : 177-184.
- Sonokin, H.P. and Thimann, K.V. (1964) The histological basis for inhibition of axillary buds in Ficus sativum and the effects of auxin and kinetin on xylem development. Protoplasma 59: 326-349.
- Sparkuhl, J., Gare, R.L. and Setterfield, G. (1976) Metabolism of free and membrane bound ribosomes during aging of Jerusalem artichoke tuber slices. Planta 129: 97-104.
- Srivastava, R.A.K. (1986) Polyphenol oxidase activity in the development of acquired aroma in tea (Thea sinensis var. Assamica L.) Curr. Sci. 55: 284-287.
- Stafford, H.A. (1974) The _____ metabolism of aromatic compounds. Annu. Rev. Plant Physiol. 25 : 459

- Stafford, H.A. and Galston, A.W. (1970) Polyphenol oxidase isozymes in tobacco pitch culture. *Plant Physiol.* 46: 763-767.
- Starling, R.J., Newbury, H.J. and Callow, J.A. (1986) Putative auxin receptors in tobacco callus. In : *Plant Tissue Culture and its Agricultural Applications*. Withers, C.A. and Alderson, P.G. (eds), Butterworths, London, pp. 47-54.
- Stebbins, G.L. (1974) Evolution of morphogenetic pallens. In : *Basic Mechanisms in Plant Morphogenesis*. Brookhaven Symp. Biol. 25: 227-243.
- Steward, F.C., Mapes, M.O. and Mears, K. (1958). Growth and organized development of cultured cells II. Organization in cultures from freely suspended cells. *Am. J. Bot.* 45: 705-708.
- Stiles, J.I. Jr. and Davies, P.J. (1976) Qualitative analysis by isoelectric focusing of the protein content of Pharbitis nil apices and cotyledons during floral induction. *Plant Cell Physiol.* 17: 855-857.
- Stoddart, J.L. and Venis, M.A. (1980) Molecular and subcellular aspects of hormone action. In : *Hormonal Regulation of Development I. Molecular aspects of Plant Hormones* MacMillan, J. (ed), Springer-Verlag, Berlin, pp. 445-510.
- Stoessl, A. and Venis, M.A. (1970) Determination of sub-microgram levels of indole-3-acetic acid. *Anal. Biochem.* 34: 344-351.

Stonier, T. and Yang, H.M. (1971) Studies on auxin protectors.

X. Protector levels and lignification in sunflower crown gall tissue. *Physiol. Plant.* 25: 474-481.

_____ and _____ (1973) Studies on auxin protectors, XI. inhibition of peroxidase catalyzed oxidation of glutathione by auxin protectors and o-dihydroxyphenols. *Plant. Physiol.* 51: 311-395.

_____ and Yoneda, Y. (1967) Stem internode elongation in the Japanese morning glory (*Pharbitis nil* Choisy) in relation to an inhibitor system of auxin destruction *Physiol. Plant.* 20: 13-19.

Storey, R.D. and Wagner, F.W. (1986) Plant Proteases : need for uniformity. *Phytochem.* 25: 2701-2709.

Street, H.E. (1966) The physiology of root growth. *Annu. Rev. Plant Physiol.* 72: 1-18.

* Sung S.M., Mutschler, M.A., Bliss, F.A. and Hall, T.C. (1978) Protein Synthesis and accumulation in bean cotyledons during growth. *Plant Physiol.* 61 : 918-923.

Sung, Z.R. and Okimoto, R. (1981) Embryonic proteins in somatic embryos of carrot. *Proc. Natl. Acad. Sci. (USA)* 78: 3683-3687.

_____ and Okimoto, R. (1983) Coordinated gene expression during somatic embryogenesis in carrots.

Proc. Natl. Acad. Sci. (USA) 89: 2661-2665.

* Sun, S.M., Mutschler, M.A., Bliss, F.A. and Hall, T.C. (1978) Protein synthesis and accumulation in bean cotyledons during growth. *Plant Physiol.* 61 : 918-923.

- Sussex, I. (1985) Graft Chimeras and the analysis of positional differentiation in plants. In: Current Communications in Molecular Biology : Plant Cell/Cell Interactions. Sussex, I., Ellingboe, Crouch, M. and Malmberg, R. (eds), Cold Spring Harbor Laboratory, New York, pp. 47-51.
- Swain, T. and Hillis, W.E. (1959) The phenolic constituent of Prunus domestica L. The quantitative analysis of phenolic constituents. J. Sci. Food. Agric. 10: 63-68.
- Taiz, L. (1984) Plant Cell expansion : regulation of cell wall mechanical properties. Annu. Rev. Plant. Physiol. 35: 585-657.
- Talwar, G., Dendsay, J.P.S. and Gupta, V.K. (1985) Kinetic properties of IAA oxidase from mung bean cotyledons Phytochem. 24: 673-676.
- Tamas, I.A. (1987) Hormonal regulation of apical dominance. In : Plant Hormones and their role in Plant Growth and Development Davies, P.J. (ed), Martinus Nijhoff Publishers, Dordrecht, pp. 393-410.
- _____, Davies, P.J., Mazur, B.K., Campbell, L.B. (1985) Correlative effects of fruits on plant development. In: World Soybean Research Conference III. Proceedings, Shibles, R. (ed), Westview Press, Boulder, pp. 858-865.
- _____, Angles, C.J., Kaplan, S.L., Ozbun, J.L. and Wallace, D.H. (1981) Role of indoleacetic acid and abscisic acid in the correlative control by fruits of

axillary bud development and leaf senescence. *Plant Physiol.* 68: 476-481.

✓ Tanimoto, S. and Harada, H. (1984) Hormonal regulation of flowering. In : *Hormonal Regulation of Plant Growth and Development*. Vol. I, Purchit, S.S. (ed), Agro Botanical Publishers (India), Bikaner, pp. 41-93.

Taylor, J.S., Blake, T.J., and Pharis, R.P. (1982) The role of plant hormones and carbohydrate in the growth and survival of coppiced Eucalyptus seedlings. *Physiol. Plant.* 55: 421-430.

✓ Taylor, J.A. and Mackender, R.O. (1977) Plastid development in the first leaf of Arena sativa L. *Plant Physiol.* 59: 5-10.

— Thaker, V.S., Saroop, S., Vaishnav, P.P. and Singh, Y.D. (1986) Role of peroxidase and esterase activities during cotton fiber development. *J. Plant. Growth Regul.* 5: 17-27.

✓ Theologis, A. (1986) Rapid gene regulation by auxin. *Annu. Rev. Plant. Physiol.* 37: 407-438.

✓ Thimann, K.V. (1972) The natural plant hormones. In : *Plant Physiology - A Treatise* Vol. VI b, Steward, F.C. (ed), Academic Press, New York, pp. 1-359.

✓ ———, Saechs, T., and Mathur, K.N. (1971) The mechanism of apical dominance in Coleus. *Physiol. Plant.* 24: 68-72.

✓ ——— and Skoog, F. (1933) Studies on the growth hormone of plants. III. The inhibiting action of growth substance on bud development. *Proc. Natl. Acad. Sci. (USA)* 19: 714-716.

- Thimann, K.V. and Skoog, F. (1934) On the inhibition of bud development and other functions of growth substance in Vicia faba. Proc. Royal Soc. London B, 114: 317-339.
- Thomas, H. (1978) Enzymes of nitrogen metabolism in detached leaves of Lolium temulentum during senescence. Planta 142: 161-169.
- Thorpe, T.A. (1978). Physiological and biochemical aspects of organogenesis in vitro. In : Frontiers of Plant Tissue Culture. Thorpe, T.A. (ed), Int. Assos. for Plant Tissue Culture, Univ. of Calgary, Alberta, pp. 49-58.
- _____ (1979) In : Propagation of Higher Plants through Tissue Culture : A Bridge Between Research and Application. Hughes, K.W., Henke, R. and Constantin, M. (eds), US Tech. Inf. Serv., Springfield, Virginia, pp. 87-101.
- _____ (1980) Organogenesis in vitro : Structural, Physiological and biochemical aspects. In: Perspectives in Plant Cell and Tissue Culture, Vasil, I.K. (ed), International Review of Cytology, supplement IIA, Academic Press, New York, pp 71-111.
- Thorpe, T.A. and Biondi, S. (1981) Regulation of Plant Organogenesis. In : Advances in Cell Culture Vol. I. Marm-Grosch, K. (ed), Academic Press, New York, pp- 213-239.
- _____ and Gaspar, T. (1978) Isoperoxidases in epidermal layers of tobacco and changes during organ formation in vitro. Physiol. Plant. 44 : 388-394.

- ✓ Thorpe, T.A., Joy R.W. and Leung, D.W.M. (1986) Starch turnover in shoot-forming tobacco callus. *Physiol. Plant.* 66: 58-62. ←
- ✓ _____ and Meier, D.D. (1974) Carbohydrate availability and shoot formation in tobacco callus cultures. *Physiol. Plant* 30: 77-81.
- ✓ _____ and Murashige, T. (1970) Some histochemical changes underlying shoot initiation in tobacco callus cultures. *Can. J. Bot.* 48: 277-285.
- ✓ Tillberg, E. and Pinfield, N.J. (1981) The dynamics of indole-3-acetic acid in *Acer platanoides* seeds during stratification and germination. *Physiol. Plant* 53: 34-38.
- ✓ Tobin, R.S., Yun, K.B. and Naylor, J.M. (1974) Nuclear proteins of quiescent and histotically active cells in shoot meristems of *Tradescantia paludosa*. *Can. J. Bot.* 52: 2049-2053. ←
- ✓ 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. (1961) Kinetin as a trigger for mitosis in mature endomitotic plant Cells. *Exp. Cell. Res.* 23: 281-299.
- ✓ Tran Thanh Van, K. (1973)a In vitro control of de novo flower, bud, root and callus differentiation from excised epidermal tissues. *Nature* 246: 44-45.
- ✓ _____ (1973)b Direct flower neoformation from superficial tissue of small explant of *Nicotiana tabacum*

L. Planta 115: 87-92.

Tran Thanh Van, K. (1981) Control of morphogenesis. Annu. Rev. Plant Physiol. 32: 291-311.

_____ and Trinh, T.M. (1986) Fundamental and applied aspects of differentiation in vitro and in vivo. In : Handbooks of plant Cell Culture Vol.4, Techniques and Application. Evans, D.A., Sharp, W.R. and Ammirato, P.V. (eds), Macmillan Publishing Co., New York, pp. 316-335.

Trebal, J.P., Beopoulos, W. and Esnault, R. (1979) Ribonuclease activities in bean roots. Phytochem. 19: 1635-1637.

Trewavas, A.J. (1976) Plant growth substances. In : Molecular Aspects of Gene Expression in Plants. Bryant, J.A. (ed) Academic Press, London, pp. 249-299.

_____ (1981) How do Plant growth substances work? Plant Cell Environ. 4 : 203-228.

_____ (1982)a Growth substance sensitivity: the limiting factor in plant development. Physiol. Plant. 55: 60-72.

_____ (1982)b Possible control points in plant development. In : The Molecular Biology of Plant Development Smith, H. and Grierson, D. (eds), Blackwell Scientific Publications, Oxford, pp.7-27.

_____ (1983) Is plant development regulated by changes in the concentration of growth substances or by changes in the sensitivity to growth substances? Trends Biochem. Sci. 7 : 354-357.

- ✓ Trewavas, A.J. and Cleland, R.E. (1983) Is plant development regulated by changes in the sensitivity the growth substances Trends Biochem. Sci. 8: 354-357.
- ✓ Tucker, D.J. (1977) Hormonal regulation of lateral bud outgrowth in the tomato. Plant Sci. Lett. 8: 105-111
- ✓ _____ (1978) Apical dominance in the tomato : the possible roles of auxin and abscisic acid. Plant Sci. Lett. 12: 273-278.
- ✓ _____ (1979) Axillary bud development in the tomato. Ann. Bot. 43: 393-395.
- ✓ _____ and Mansfield, T.A. (1973) Apical dominance in Xanthium strumarium - A discussion in relation to current hypotheses of correlative inhibition. J. Exp. Bot. 24: 731-740.
- ✓ Turing, A.N. (1952) The chemical basis of morphogenesis. Phil. Trans. Royal Soc. London B. 237: 37-72.
- ✓ Usciat, M. Codaccioni, M., Rautureau, C. and Guern, J. (1972) Early cytological and biochemical events induced by a 6-benzylaminopurine application on inhibited axillary buds of Cicer arietinum plants. J. Exp. Bot. 23 : 1009-1020.
- ✓ Vaillant, V., Buffard, D. and Eshault, R. (1983) Changes in the polyadenylated messenger RNA population during differentiation of Vicia faba root cells. Cell Differentiation 13: 201-208.
- ✓ Van Aatrijk, J., Blom-Sarnhoorn, C.J. and Bruinsma, J. (1986) A role for ethylene biosynthesis in adventitious

- bud formation on bulb-scale tissue of Lilium speciosum. In: Plant Tissue Culture and its Agricultural Applications. Withers, L.A. and Alderson, P.G. (eds), Butterworths, London, pp. 55-61.
- ✓ Van Atrijk, J., Blom-Barnhoorn, G.J. and Bruinsma, J. (1985) ←
 Adventitious bud formation from bulb-scale explants of Lilium speciosum Thunb. in vitro - Production of ethane and Ethylene. J. Plant. Physiol. 117 : 411-422.
- ✓ Van der Laan, P.A. (1934) Der Einfluß von Aethylen auf die Wuchstoffbildung bei Avena und Vicia. Rec. Trav. Bot. Neerl. 31: 691-742.
- ✓ Van der Mast, C.A. (1970) The inhibiting effect of caffeic acid on the enzymatic degradation of IAA is exerted via the non-IAA degrading peroxidases. Acta Bot. Neerl. 19: 659-664.
- ✓ Vansuyt, G. and Zinsou, C. (1986) Accumulation of agmatine in Chayote (Sechium edule) deares during development. Physiol. Plant. 67: 592-597.
- ✓ Varder, Y. and Aearer, P. (1957) Auxin in relation to the development of epiphyllous buds in Bryophyllum. Phytom 8 : 109-118.
- ✓ Varner, J.E. and Ho, T.H.D., (1976) Hormones. In : Plant Biochemistry Bonner, J. and Varner, J.E. (eds), Academic Press, London, pp. 713-770.
- ✓ Vartanian, N., Damerval, C. and De Vienne, D. (1987) Drought-induced changes in protein patterns of Brassica napus

var. *Oleifera* roots. *Plant Physiol.* 84: 989-992.

✓ Vasil, I.K. (1985) Somatic embryogenesis and its consequences in the Gramineae. In : *Tissue Culture in Forestry and Agriculture*. Henk, R.R., Hughes, K.W., Constantin, M.J. and Hollaender, A. (eds), Plenum Press, New York, pp. 31-47.

✓ Venkataraman, R., Seth, P.N. and Maheshwari, S.C. (1970) Studies on the growth and flowering of a shoot day plant, *Wolffia microscopica*. I. General aspect and induction of flowering by cytokinins. *Z. Pflanzenphysiol.* 62: 316-327.

✓ Verma, D.P.S. and Marcus A. (1974) Activation of protein synthesis upon dilution of an *Arachis* cell culture from the stationary phase. *Plant Physiol.* 53: 83-87.

✓ _____, Nash, D.T. and Schulman, H.M. (1974) Isolation and *in vitro* translation of soybean leghaemoglobin mRNA. *Nature* 251: 74-77.

✓ Vince-Prus, D. (1985) Photoperiod and hormones. In : *Hormonal Regulation of Development III. Role of Environmental Factors*. Pharis, R.P. and Reid, D.M. (eds), Springer-Verlag, Berlin, pp. 308-364.

✓ Viro, M. and Kloppstech, K. (1980) Differential expression of the genes for ribulose 1,5-bisphosphate carboxylase and light harvesting chlorophyll a/b protein in the developing barley leaf. *Planta* 150: 41-45.

Wakhloo, J.L. (1970) Role of mineral nutrients and growth regulators in the apical dominance in Solanum sisymbirifolium. Planta 91: 190-194.

Walker, D.B. and Bruck, D.K. (1985) The control of positional cell differentiation in plants. In : Current Communications in Molecular Biology : Plant Cell/Cell Interactions. Sussex, I., Ellingboe, C.M. and Malmberg, R. (eds), Cold Spring Harbor Laboratory, New York, pp. 53-56.

Wample, R.L. and Reid, D.M. (1979) The role of endogenous auxins and ethylene in the formation of adventitious roots and hypocotyl hypertrophy in flooded sunflower plants (Helianthus/annua). Physiol. Plant 45: 219-226.

Wardlaw, I.F. and ^MPortimer, D.C. (1970) Carbohydrate movement in pea plants in relation to axillary bud growth and vascular development. Can. J. Bot. 48: 229-237.

Wareing, P.F. (1971) Some aspects of differentiation in plants. In : Control Mechanisms of Growth and Differentiation. Davies, D.D. and Ballis, M.J. (eds), Cambridge University Press, London, pp. 323-344.

_____ (1977) Growth substances and integration in the whole plant. Symp. Soc. Exp. Biol. 31: 337-365.

_____ (1982)a Determination and related aspects of plant development. In : The Molecular Biology of Plant Development. Smith, H. and Grierson, D. (eds), Blackwell Scientific Publications, Oxford, pp. 517-541.

Wareing, P.F. (1982) b Hormonal control of stolon and tuber development, especially in the potato plant. In : Plant Growth Substances. Wareing, P.F. (ed), Academic Press, London, pp. 181-195.

_____ and Phillips, I.D.J. (1982) Growth and differentiation in plants. Pergamon Press, Oxford.

_____ and Saunders, P.F. (1971) Hormones and dormancy. Annu. Rev. Plant. Physiol. 22: 261-283.

Heir, E.H., Riezman, H., Grienemberger, J.M., Becker, H.M. and Leaver, C.J. (1980) Regulation of glyoxysomal enzymes during germination of cucumber. Eur. J. Biochem. 112: 469-477.

Kent, F.W. (1938) Specific factors other than auxin affecting growth and root formation. Plant Physiol. 13: 55-80.

_____ (1939) Some experiments on bud growth. Am. J. Bot. 26: 109-117.

Senzel, G., Bolik, N., Deimling, S., Debnath, S.C. Foroughi-Wehr, B. and Schuchmann, R. (1987) Breeding for disease resistant crop plants by cell culture techniques. In : Plant Tissue and Cell Culture. Green, C.E. Somers, D.A., Hackett, H.P. and Biesboer, D.D. (eds), Alan R. Liss, Inc., New York, pp. 343-358.

Westcott, J.R. (1983) Micropropagation of virus free potatoes. In : Plant Tissue Culture in Relation to Biotechnology. Cassells, A.C. and Kavanagh, J.A. (eds), Royal Irish Academy, Dublin, pp. 61-65.

- Wernicke, W. and Milkovits, L. (1987) π Effect of auxin on the mitotic cell cycle in cultured leaf segments at different stages of development in wheat. *Physiol. Plant* 69 : 16-22.
- Weston, G.D. Farrimond, D.A. and Elliot, M.C. (1978) Effects of 2,4-dichlorophenoxyacetic acid, indol-3yl--acetic acid and kinetin on activity of auxin-destroying enzymes of sycamore cell suspension cultures. *Experientia* 34: 468-469.
- White, J.C. and Hillman, J.R. (1972) On the use of morphactin and triiodobenzoic acid in apical dominance studies. *Planta* 107: 257-260.
- Wilke-Douglas, M., Perani, L., Radke, S. and Bossert, M. (1986) The application of recombinant DNA technology toward crop improvement. *Physiol. Plant* 68: 560-565.
- Willis, J.C. (1973) A dictionary of the flowering plants and ferns. Cambridge University Press, Cambridge.
- Winfree, A.T. (1973) Scroll-shaped waves of chemical activity in three dimensions. *Science* 181: 937-939.
- Winton, L. (1968) Plantlets from aspen tissue culture. *Science* 160: 1234-1235.
- Withers, L.A. (1985) Cryopreservation of cultured cells and meristems. In : *Cell Culture and Somatic Cell Genetics of Plants*. Vol.2, Vasil, I.K. (ed), Academic Press, New York, pp 253-316.

- Withers, L.A. (1986) In vitro approaches to the conservation of plant genetic resources. In : Plant Tissue Culture and its Agricultural Applications, Withers, L.A. and Alderson, P.G. (eds), Butterworths, London 261-276.
- Wittenbach, V.A. (1978) Breakdown of ribulose biphosphate carboxylase and change in proteolytic activity during indeed senescence of wheat seedlings. Plant Physiol. 62: 604-608.
- Wodzicki, T.J., and Wodzicki, A.B. (1981) Modulation of the oscillatory systems involved in polar transport of auxin by other phytohormones. Physiol. Plant. 53:176-180.
- Wolf, F.T., Tilford, R.H. and Martinex, M.L. (1976) Effects of phenolic acids and their derivatives upon the growth of Avena coleoptiles. Z. Pflanzenphysiol. 80: 243-250.
- Wolpert, L. (1971) Positional information and pattern formation. In : Current Topics of Developmental Biology. Vol. 6, Moscone, A.A. and Monroy, A. (eds), Academic Press, London, pp. 183-224.
- _____ (1981) Positional information and pattern formation. Philos. Trans. Royal Soc. London B. 295: 441-450.
- _____, Hicklin, J. and Hornbruch, A. (1971) Positional information and pattern regulation in regeneration of Hydra. In : Control Mechanisms of Growth and Differentiation. Davies, D.D. and Balls, M. (eds), Cambridge Univ. Press, Cambridge, pp. 391-415.

- ✓ Wolter, K.E. and Gordon, J.C. (1975) Peroxidases as indicators of growth and differentiation in aspen callus cultures. *Physiol. Plant.* 33: 219-223.
- ✓ Wong, P.P., Kuo, T. and Ryan, C.A. (1975) Growth-dependent accumulation and utilization of proteinase inhibitor I in tobacco callus tissues. *Biochem. Biophys. Res. Comm.* 63: 121-125.
- ✓ Wood, B.W. (1983) Changes in indoleacetic acid, abscisic acid gibberellins and cytokinins during budbreak in pecan. *J. Am. Soc. Hort. Sci.* 108: 333-338.
- ✓ Woodrow, L. and Grodzinski, B (1987) Ethylene evolution from bracts and leaves of Poinsettia, Euphorbia pulcherrima Willd. *J. Exp. Bot.* 38: 2024-2032.
- ✓ Woolley, D.J. and Wareing, P.F (1972) The interaction between growth promoters in apical dominance. I hormonal interaction, movement and metabolism of a cytokinin in sortless cuttings. *New Phytol.* 71 : 781-793.
- ✓ Wright, M. (1974) The effect of chilling on ethylene production, membrane permeability and water loss of leaves of Phaseolus vulgaris. *Planta* 120: 63-69.
- ✓ Wright, S.T.C. (1977) The relationship between leaf water potential (leaf) and the levels of abscisic acid and ethylene in excised wheat leaves. *Planta* 134: 183-189.
- ✓ _____ and Aung, L.H. (1975) Effects of applied gibberellins on the growth of Japanese holly. *Hort Sci.* 10: 181-182.

- Wien, N.V., Volvardy, J., Erdei, S. and Farkas, G.L. (1972)
Hormonal control of nuclease level in Avena leaf
tissues. In : Nucleic Acids and Proteins in Higher
Plants. Vol. XIII, Symp. Biol. Hung., Farkas, G.L.
(ed) Academic Kiado, Budapest, pp.293-297.
- Yang, S.F. and Pratt, H.K. (1978) The physiology of ethylene
in wounded plant tissues. In : Biochemistry of Wounded
Plant Tissues. Kahl, G. (ed), Walter de Gruyter and
Co., Berlin, pp. 595-622.
- _____ and Hoffman, N.E. (1984) Ethylene
biosynthesis and its regulation in higher plants.
Annu. Rev. Plant. Physiol. 35 : 155 -
- Yarbrough, J.A. (1932) Anatomical and developmental studies
of the foliar embryos of Bryophyllum calycinum. Am. J.
Bot. 19: 443-453.
- Yasuda, T., Hasegawa, P.M. and Cheng, T.Y. (1980) Effect of
auxin and cytokinin on newly synthesized proteins
of cultured Douglas fir cotyledons.
Physiol. Plant. 48 : 83-87.
- Yazgan, M. and Vardar, Y. (1977) Studies on the effects of
auxin-kinetin applications on the epiphyllous budding
of Bryophyllum diageomontianum Berg. Z. Pflanzenphysiol.
84 : 203-211.
- Yeang, H.Y. and Hillman, J.R. (1981)a Control of lateral
bud growth in Phaseolus vulgaris L. by ethylene in
the apical shoot. J. Exp. Bot. 32: 395-404.

Yeang, H.Y. and Hillman, J.R. (1981)b Internodal extension in the first trifoliate by axillary bud of Phaseolus vulgaris L. following shoot decapitation. Ann. Bot. 48: 25-32.

_____ and _____ (1982) Lateral bud growth in Phaseolus vulgaris L. and the levels of ethylene in the bud and adjacent tissue. J. Exp. Bot. 33: 111-117.

Yeoman, M.M. (1986) The present development and future of plant cell and tissue culture in agriculture, forestry and horticulture. In : Plant Tissue Culture and its Agricultural Applications. Withers, L.A. and Alderson, P.G. (eds), Butterworths, London, pp. 489-500.

Yoneda, Y and Stonier, T. (1967) Distribution of three auxin protector substances in seeds and shoots of the Japanese morning glory (Pharbitis nil) Plant Physiol. 42: 1017-1020.

Yoo, B.Y. and Jensen, W.A. (1966) Changes in nucleic acid content and distribution during cotton embryogenesis. Exp. Cell Res. 42: 447-459.

Yoshi, H. and Imaseki, H. (1981) Biosynthesis of auxin-induced ethylene. Effects of indole-3-acetic acid, benzyladenine and abscisic acid on the endogenous levels of 1-amino cyclopropane-1-carboxylic acid (ACC) and ACC synthetase. Plant Cell Physiol. 22: 369-379.

Yu, Y.B. and Yang, S.F. (1979) Auxin-induced ethylene production and its inhibition by aminoethoxyvinylglycine

and cobalt ion. Plant Physiol. 64: 1074-1077.

✓ Zurfluh, L.L. and Guilfoyle, T.J. (1982) Auxin induced changes in the population of translatable messenger RNA in elongating sections of soybean hypocotyl. Plant Physiol. 69: 332-337.

✓ _____ and _____ (1980) Auxin-induced changes in the patterns of protein synthesis in soybean hypocotyl. Proc. Natl. Acad. Sci. (USA) 77: 357-361.

✓ Zeroni, M. and Hall, M.A. (1980) Molecular effects of hormone treatment on tissue. In : Hormonal Regulation of Development I. Molecular Aspects of Plant Hormones. MacMillan, J. (ed), Springer-Verlag, Berlin, pp 511-586.