



REFERENCES

Abd El-Aziz, Ferial, M.R. (1970): Studies on damping off and root rot disease of soybean and Lucerne in UAR. M.Sc. Thesis, Fac. of Agri., Alex. Univ.

Abd El-Rehim, M.A.; Michail, S.M. and Hashem, M. (1968): On the control or the infection of *Vicia faba* by *Fusarium oxysporum f. fabae* through the application of β -alanene. Flora Abstract A. Rot., **159**: 135-140.

Abdallah, S.A. (1981): Studies on hypersensitivity in French bean Ph.D. Thesis, University of London.

Abdallah, S.A. (1987): Role of phytoalexins in the differential response of soybean (*Glycine max.* L.) to infection by *Fusarium solani* f.sp. *phaseoli* at two different temperatures. 12th International congress for statistics, computer science social and Demographic Research, Cairo, Egypt. March 28 & April 2, 69-82.

Able, A.; Guest, D. and Sutherland, M. (1998): Use of a new tetrazelium-based assay to study the production of superoxide radicals by tobacco cell cultures challenged with a virulent zoospores of *Phytophthora parasitica* var *nicotianae*. Plant Physiol., **117**: 491-9.

Abo El-Gassim, E.A. (1976): Seed health testing of certain leguminous crops. M.Sc. Thesis, Fac. of Agri., Alex. Univ.

- Achenbach, L.A., Patrick, J. and Gray, L. (1996):** Use of RAPD markers as a diagnostic tool for the identification of *Fusarium solani* isolates that cause soybean sudden death syndrome. Plant dis., **80**: 1228-32.
- Agarawal, D.K. and Sarbhoy, A.K. (1978):** Physiological studies on four species of *Fusarium* pathogenic to soybean. Indian Phytopathol., **31**: 24-31.
- Andebrhan, T. (1978):** Resistance of plants to species of *Colletotrichum*. Ph.D. Thesis, University of London.
- Andebrhan, T. and Wood, R.K.S. (1980):** The effect of ultraviolet radiation on the reaction of *Phaseolus vulgaris* to species of *colletotrichum*. Physiological Plant Pathol., **17**: 105-110.
- Armstrong, G.M. and Armstrong, J.K. (1963):** Lupin, another legume host of the *Fusarium* wilt from U.S. Cotton. Netherlands J. Plant Pathol., **69(1)**: 3-75.
- Arnold, R.M. and Rahe, J.E. (1977):** Effects of 15% CO₂ on the accumulation of the Phytoalexin phaseolhin in *Phaseolus vulgaris* in response to mechanical injury and to infection by *Colletotrichum lindemuthianum*. Candian Journal of Botany, **55**: 867-871.
- Asiegbu, F.O., Daniel, G. and Johansson, M. (1994):** Defense-related reaction of seedling roots of Norway spruce to infection by *Heterobasidion annosum* (Fr.) Bref. Physiol. Mol. Plant Pathol. **45**: 1-19.

- Atkinson, M.M. (1993):** Molecular mechanisms of pathogen recognition by plants. *Adv. Plant Pathol.* **10**: 35-64.
- Atlas, Degotuzoo E. (1970):** Microorganisms isolated from normal and spotted soybean seed, their effects on the percentage of germination. *Revta Fac. of Agronomy, Vet Univ.*
- Bailey, J.A. (1982):** Physiological and biochemical events associated with expression of resistance to disease. In: *Active Defense Mechanisms in Plants*, Edited by R.K.S. Wood, 39-65. Plenum Press, New York and London.
- Bailey, J.A. and Burden, R.S. (1973):** Biochemical changes and phytoalexin accumulation in *Phaseolus vulgaris* following cellular browning caused by tobacco necrosis virus *Physiological Plant Pathol.*, **3**: 171-177.
- Bailey, J.A. and Deverall, B.J. (1971):** Formation and activity of phaseollin in the interaction between hypocotyls (*Phaseolus vulgaris*) and physiological races of *Colletotrichum lindemuthianum*. *Physiological Plant Pathol.*, **1**: 435-449.
- Bailey, J.A. and Ingham, J.L. (1971):** Phaseollin accumulation in bean (*Phaseolus vulgaris*) in response to infection by tobacco necrosis virus and the rust *Uromyces appendiculatus*. *Physiological Plant Pathol.*, **1**: 451-456.
- Bailey, J.A.; Carter, G.A. and Skipp, R.A. (1976):** The use and interpretation of bioassays for fungitoxicity of phytoalexins in agar media. *Physiological Plant Pathol.*, **8**: 189-194.

- Bailey, J.A.; Rowell, P.M. and Arnold, G.M. (1980):** The temporal relationship between host cell death, phytoalexin accumulation and fungal inhibition during hypersensitive reactions of *Phaseolus vulgaris* to *Colletotrichum lindemuthianum* *Physiological Plant Pathol.*, **17**:329-339.
- Batson, W.E. and Trevathan, E.L. (1988):** Suitability and efficacy of ground corncobs as a carrier of *Fusarium solani* spores. *Plant dis.*, **72**: 222-225.
- Bernard, R.L.; Smith, P.E.; Kaufmann, M.J. and Schmitthe, N.F. (1957):** Inheritance of resistance to *Phytophthora* root and stem in soybean. *Agronomy J.*, **49**: 391.
- Bhattacharyya, M.K. and Ward, E.W.B. (1987):** Temperature-induced susceptibility of soybeans to *Phytophthora megaspema* f.sp. *glycinea*: phenylalanine ammonia-lyase and glyceollin in the host; growth and glyceollin 1 sensitivity of the pathogen. *Physiological and Molecular Plant Pathol.*, **31**: 407-419.

- Biehn, W.L.; Kuc, J. and Williams, E.B. (1967):** Accumulation of phenols in soybean plants after inoculation with *Rhizoctonia solani* or *Macrophomina phaseoli* the incitants of root rot and damping off disease of soybean. *Phytopathol.*, **57**: 804 (abstract).
- Boller, T. (1995):** Chemopereception of microbial signals in plant cells. *Ann. Rev. Plant Physiol. Plant Mol. Bio.*, **46**:189-214.
- Bonello, P. and Blodgett, J.T. (2003):** *Pinus nigra*-*Sphaeropsis sapinea* as a model pathosysem to investigate local and systemic effects of fungal infection of pines. *Physiol. Mol. Plant Pathol.*, **63**: 249-61.
- Bonello, P.; Gordon, T.R. and Storer, A.J. (2001):** Systemic induced resistance in Monterey Pine. *Forest Pathol.*, **31**: 99- 106.
- Bowles, D.J. (1990):** Defense-related proteins in higher plants. *Annual ReviewBiochem.* **59**: 873-907.
- Bradford, M.M. (1976):** A rapid and sensitive method for the quantification of microgram quantities of protein utilizing the principle of protein-dye binding. *Analytical Biochemistry* **72**: 248-254.
- Bridge, M.A. and Klarman, W.L. (1973):** Soybean phytoalexin hydroxyphaseollin, induced by ultraviolet irradiation. *Phytopathol.*, **63**: 606-609.

- Bridge, M.A. and Klarman, W.L. (1973):** Soybean phytoalexin hydroxyphaseollin induced by U.V. irradiation. *Phytopathol.*, **63**: 606-609.
- Brisson, L.F.; Tenhaken, R. and Lamb, C. (1994):** Function of oxidative cross-linking of cell wall structural proteins in Plant dis. resistance. *Plant Cell*, **6**: 1703-12.
- Brown, J.W.S.; Ma, Y.; Bliss, F.A. and Hall, T.C. (1981a):** Genetic variation in the subunits of globulin 1 storage protein of French bean. *Theor. Appl. Genet.*, **59**: 83-88.
- Brown, J.W.S.; Osborn, T.C.; Bliss, F.A. and Hall, T.C. (1981b):** Genetic variation in the subunits of globulin-2 and albumin seed proteins of French bean. *Theor. Appl. Genet.*, **60**: 245-250.
- Burke, D.W. (1965):** Plant spacing and *Fusarium* root rot of beans. *Phytopathol.*, **55**(7): 757-759.
- Burkholder, W.H. (1916):** Some root diseases of the bean. *Phytopathol.*, **6**: 104 (Abstr.).
- Cahill, D.M. and McComb, J.A. (1992):** A comparison of changes phenylalanine ammonia-lyase activity, lignin and phenolic synthesis in the roots of *Eucalyptus calophylla* (field resistant) and *E. marginata* (susceptible) when infected with *Phytophthora cinnamomi*. *Physiological and Molecular Plant Pathol.*, **40**: 315-332.

- Cahill, D.M.; Bennett, I.J. and McComb, J.A. (1993):** Mechanisms, of resistance to *Phytophthora cinnamomi* in clonal, micropropagated *Eucalyptus marginata*. Plant Pathol., **42**: 865-872.
- Calssen, D. and Ward, E.W.B. (1985):** Temperature-induced susceptibility of soybean to *Phytophthora megasperma* f.sp. *glycinea*: production and activity of elicitors of glyceollin. Physiol. Plant Pathol., **26**: 289.
- Campbell, C.L.; Madden, L.V. and Pennypacker, S.P. (1980):** Structural characterization of bean root rot epidemics. Phytopathol., **70**: 152-155.
- Cardoso C.O.N. and Garraway, M.O. (1977):** Bioassays using phenolic compounds and phytoalexins produced in bean plants infected with *Fusarium solani* f.sp. *phaseoli* (Burk.) Syd. & Hans. Summa Phytopathologica **3**: 103-116.
- Cattan-Toupance, I.; Michalakakis, Y. and Neema, C. (1998):** Genetic structure of wild bean populations in their South-Andean Centre of Origin. Theor. Appl. Genet., **96**: 844-51.
- Chatterjee, P. (1958):** The bean root rot complex in Idaho. Phytopathol., **48**: 179-200.
- Christou, T. and Snyder, W.C. (1962):** Penetration and host-parasite relationships of *Fusarium solani* f.sp. *phaseoli* in the bean plant. Phytopathol., **52**: 219-226.

- Cohen, Y. and Kuć, J. (1981):** Systemic resistance in tobacco against blue mold by soil inoculation with *Peronospora tabacina*. *Phytopathol.*, **71**: 783-787.
- Crowell, D.N.; Maliyakal, E.J.; Russell, D. and Amasino, R.M. (1992):** Characterization of a stress-induced, developmentally regulated gene family from soybean. *Plant Mol. Biol.*, **18**: 459-66.
- Cruickshank, I.A.M. and Perrin, D.R. (1963):** Phytoalexins of the leguminosae. Phaseollin from *Phaseolus vulgaris* L. *life Science*, **2**: 680-682.
- Cruickshank, I.A.M. and Perrin, D.R. (1971):** Studies on phytoalexins: XI. The induction, antimicrobial spectrum and chemical assay of phaseollin. *Phytopathologische Zeitschrift*, **70(30)**: 209-229.
- Dai, G.H.; Nicole, M.; Martinez, C.; Bresson, E.; Danniell, J.F. and Andary, C. (1996):** Flavonoids accumulate in cell walls, middle lamellae and callose-rich papillae during an incompatible interaction between *Xanthomonas campestris* pv. *Malvacearum* (race 18) and cotton. *Physiol. Mol. Plant Pathol.*, **49**: 285-306.
- Damman, C.; Rojo, E. and Sanchezserrano, J.J. (1997):** Absciscic acid and jasmonic acid activate wound-inducible genes in potato through separate, organ-specific signal transduction pathways. *Plant J.*, **11**: 773-82.

- Dangel, J.L. (1994):** The enigmatic avirulence genes of phytopathogenic bacteria. *Curr. Top. Microbiol. Immunol.*; **192**: 99-118.
- Dangel, J.L. and Jones, J.D.G. (2001):** Plant pathogens and integrated defense response to infection. *Nature*, **411**: 826-33.
- Davis, R.J. (1964):** Disc electrophoresis 2-method of application to human serum proteins. *Ann. N.Y. Acad. Sci.* **121**: 404-427.
- De Pinto, M.C.; Paradiso, A.; Leonetti, P. and De Gara, L. (2006):** Hydrogen peroxide, nitric oxide and cytosolic ascorbate peroxidase at the crossroad between defence and cell death. *Plant J.* **48**: 784-95.
- Delaney, T.P.; Uknes, S.; Vernooij, B.; Friedrich, L.; Weymann, K.; Negrotto, D.; Graffney, T.; Gut-Rella, M.; Kessmann, H.; Ward, E. and Ryals, J. (1994):** A central role of salicylic acid in Plant dis. Resistance. *Plant Pathol.*, **266**: 1247-50.
- Delannoy, E.; Jalloul, A.; Assigbetse, K.; Marmey, P.; Geiger, J. and Lherminier, J. (2003):** Activity of class III peroxidases in the defense of cotton to bacterial blight. *Mol. Plant Microb. Interact.*, **16**: 1030-8.
- Delannoy, E.; Lyon, B.R.; Marmey, P.; Jalloul, A.; Daniel, J.F. and Montillet, J.L. (2005):** Resistance of cotton towards

Xanthomonas campestris PV-malvacearum. Annual Review Phytopathol., **43**: 63-82.

Delledonne, M.; Zeier, J.; Maroco, A. and Lamb, C. (2001): Signal interactions between nitric oxide and reactive oxygen intermediates in the plant hypersensitive disease resistance responses. Proceedings of the National Academy of Sciences of the United States of America, **98**: 13454-9.

Derbyshire, E.; Wright, D.J. and Boulter, D. (1976): Legumin and vicilin storage proteins of legume seeds. Phytochemistry, **15**: 3-24.

Dernards, M.A.; Fleming, W.D.; Llewellyn, D.B.; Priefer, R.; Yang, X.; Sabatino, A. and Plourdee, Gl. (1999): Biochemical Characterization of suberin-associated anionic peroxidase of potato. plant physiol.**121**: 135-146.

Diaz-Vivancos, P.; Rubio, M.; Mesonero, V.; Periago, P.M.; Ros-Barceló, E. and Martinez-Gómez, P. (2006): The apoplastic antioxidant system in *Prunus*: response to long-term plum pox virus infection. J. Exp. Bot., **57**: 3813-24.

Dignam, J.O.; Lebovitz, R.M. and Roeder, R.C. (1983): Accurate transcription initiation by RNA polymerase II in a soluble extract from isolated mammalian nuclei. Nucl. Acid Res. **11**: 1475-1489.

Dunleavy, J.M. and Ramarje, N.V. (1978): Peroxidase activity in roots and leaves of soybeans. Crop Science, **18**: 104-107.

- Durrant, W.E. and Dong, X. (2004):** Systemic acquired resistance. *Ann. Rev. Phytopathol.*, **42**: 185-209.
- Ebel, J.; Ayers, A.R. and Albersheim, P. (1976):** Host pathogen interactions. 12-response of suspension cultured soybean cells to the elicitor isolated from *Phytophthora megasperma* var. *sojae* a fungal pathogen of soybeans. *Plant Physiol.*, **11**: 202-204.
- El Halafawy, K.; Guirgis, A.; El Rabey, H.; El Masry, S. and M. El Hadary (2006):** Pathogenesis related proteins as a molecular marker for systemic acquired resistance in tomato. *Minufiya J. Agric. Res.* Vol. 31 (5): 1135-1149.
- El Rabey, H. (2008):** Biochemical and molecular study on some populations of the genus *Avena* L. as revealed by RAPD-PCR and seed storage protein electrophoresis (2008). *Research Journal of Cell and molecular biology* 2 (20): 52-61.
- El Rabey, H.; Abbas, N. and Osman, M. (2006):** DNA and seed protein fingerprinting of Egyptian crop plants. VI. The genetic relationships of seven maize (*Zea mays* L.) hybrids. Accepted in the second international conference on genetic engineering and its applications, 11-15 November, Sharm El Sheikh, Egypt: 145-156.
- El-Helaly, A.R.; Ibrahim, I.H.; Michail, S.H. and Abd El-Aziz, F.R. (1972):** Studies on the damping off and root rot of soybean in Egypt. *Phytopathol.*, **11**: 202-204.

- Elliston, J.; Kuć, J.; Williams, E.B. and Rahe, J.E. (1977):** Relationship of phytoalexin accumulation to local and systemic protection of bean against anthracnose. *Phytopathologische Zeitschrift*, **88**: 114-130.
- El-Wakil, M.A. (1971):** Soybean disease in UAR. M.Sc. Thesis, Fac. of Agri., Alex. Univ.
- Emara, H.M. (1987):** Studies on the mechanism of disease resistance in soybean plants. M.Sc Thesis, Zagazig University (Benha Branch).
- English, J.T.; Lady, M.; Backonyi, J.; Schoelz, J.E. and Ersek, T. (1999):** Phenotypic and molecular characterization of species hybrids derived from induced fusion of zoospores of *Phytophthora capsici* and *Phytophthora nicotianae*. *Mycol. Res.*, **103(8)**: 1003-8.
- Essenberg, M.; Pierce, M.; Hamilton, B.; Cover, E.C.; Scholes, V.E. and Richardson, P.E. (1992):** Development of fluorescent, hypersensitively necrotic cells containing phytoalexins adjacent to colonies of *Xanthomonas campestris* pv. *Malvacearum* in cotton leaves. *Physiol. Mol. Plant Pathol.*, **41**: 85-99.
- Eulgem, T. (2005):** Regulation of the Arabidopsis defense transcriptome. *Trends Plant Sci.*, **10**: 71-78.

- Fadl, F.A. and Hessien, A.M. (1978):** Root rot disease of soybean in Egypt, causal organisms and varietal resistance. Agri. Research Review, **56**: 87-93.
- Farahat, A.R.A.M. (1970):** Studies on some fungi causing root-rot to *Phaseolus vulgaris*. M.Sc. Thesis. Ain Shams University.
- Felix, G.; Duran, J.D.; Volko, S. and Boller, T. (1999):** Plants have a sensitive perception system for the most conserved domain of bacterial flagellin. Plant J., **18**: 265-76.
- Flor, H.H. (1955):** Host-parasite interaction in flax rust-Its genetics and other implications. Phytopathol., **45**: 680-685.
- Foyer, C.H. and Noctor, G. (2000):** Oxygen processing in photosynthesis: Regulation and Signalling. New Phytologist, **146**: 359-88.
- Foyer, C.H. and Noctor, G. (2003):** Redox sensing and signalling associated with reactive oxygen in chloroplasts, peroxisomes and mitochondria. Physiologia plantarum, **119**: 355-64.
- Frank, J.A. and Paxton, J.D. (1971):** An inducer of soybean phytoalexin and its Role in the resistance of soybean to *Phytophthora* rot. Phytopathol., **61**: 954-958.
- French E.R. (1963):** Effects of soil temperature and moisture on the development of *Fusarium* root rot of soybean. Phytopathol., **53**: 875-

- Friedrich, L.; Lawton, K.; Ruess, W.; Masner, P.; Specker, N. and Gut-Rella, M. (1996):** A benzothiadiazole derivative induces systemic acquired resistance in tobacco. *Plant J.* **10**: 61-70.
- Fuchs, A. and Van Andel, O.M. (editors) (1968):** Physiological and biochemical aspects of host-pathogen interactions. *Netherland Journal of Plant Pathol.*, **74 (1)**: 177-179.
- Gabriel, D.W. and Rolfe, B.G. (1990):** Working models of specific recognition in plant-microbe interactions. *Phytopathology*, **28**: 365-371.
- Gaffney, T.; Friedrich, L.; Vernooij, B.; Negrotto, D.; Nye, G.; Uknes, S.; Ward, E.; Kessmann, H. and Ryals, J. (1993):** Requirement of salicylic acid for the induction of systemic acquired resistance, **261**: 754-6.
- Gango-Padhyay, S. and Wyllie, T.D. (1974):** Peroxidase and phenoloxidase systems in relation to charcoal rot disease of soybean infected by *Macrophomina phaseoli*. *Indian Journal of Mycology and Plant Pathol.* **4(2)**: 137-139 [cited from *Review of Applied Mycology*, **55**: 4380, 1976].
- Gechev, T.; Gadjev, I.; Van Breusegem, F.; Inze, D.; Dukiandjiev, S. and Toneva, V. (2002):** Hydrogen peroxide protects tobacco from oxidative stress by inducing a set of antioxidant enzymes. *Cellular and Molecular life Science*, **59**: 708-14.

- Gorlach, J.; Volrath, S.; Knauf-Beiter, G.; Hengy, G.; Beckhove, U. and Kogel, K. (1996):** Benzothiadiazole, a novel class of inducers of systemic acquired resistance, activates gene expression and disease resistance in wheat. *Plant cell*, **8**: 629-43.
- Graham, M.Y.; Weidner, J.; Wheeler, K.; Pelow, M.J. and Graham, T.L. (2003):** Induced expression of pathogenesis-related protein genes in soybean by wounding and the *Phytophthora sojae* cell wall glucan elicitor. *Physiol. Mol. Plant Pathol.*, **63**: 141-9.
- Graham, T.L. (1991b):** Flavonoid and isoflavonoid distribution in developing soybean seedling tissue and in seed and root exudates. *Plant Physiol.*, **39**: 229-244.
- Graham, T.L. and Bonello, P. (2004):** Pathogen resistance in plants. McGraw-Hill 2004 year book of Science and technology. New York: McGraw-Hill; P.250-1.
- Graham, T.L. and Graham, M.Y. (1991):** Glyceollin elicitors induce major but distinctly different shifts in isoflavonoid metabolite in proximal and distal soybean cell population. *Mol. Plant Microbe Interact* (in press).
- Gray, Q.; Klarman, W.I. and Bridge, M. (1968):** *Can. J. Botany* **46**: 285-

- Griffey, R.T. and Leach, J.G. (1965):** The influence of age of tissue on the development of bean anthracnose lesions. *Phytopathol.*, **55**: 915-918.
- Guzmán, P.; Gilberston, R.L.; Nodari, R.; Johnson, W.C.; Temple, S.R. and Mandala, D. (1995):** Characterization of variability in the fungus *Phaeoisariopsis griseola* suggests coevolution with the common bean *Phaseous vulgaris*. *Phytopathol.*, **85**: 600-7.
- Habereder, H.; Schroder, G. and Ebel, J. (1989):** Rapid induction of phenylalanine ammonialyase and chalcone synthase mRNAs of soybean cell cultures at the onset of phytoalexin synthesis. *Planta*, **177(1)**: 58-65.
- Habib, W.F. (1979):** Studies on root rot of pulse crops M.Sc. Thesis Cario University.
- Hahlbrock, K. and Scheel, D. (1989):** Physiology and molecular biology of phenyl propanoid metabolism. *Annual Review of Plant Physiol. and Plant Molecular Biology*, **40**: 347-369.
- Hahn, M.G.; Bonhoff, A. and Grisebach, H. (1985):** Quantitative localization of the phytoalexin glyceollin I in relation to fungal hyphae in soybean roots infected with *Phytophthora megasperma* f.sp. *glycinea*. *Plant Phytophthora megasperma* f.sp. *glycinea*. *Plant Physiol.*, **77**: 591-601.

- Halliwell, B. (1978):** Lignin synthesis: the generation of hydrogen peroxide and superoxide by horseradish peroxidase and its stimulation by manganese and phenols. *Plants* **83**: 81-88.
- Hammerschmidt, R. and Nicholson, R.L. (1999):** A survey of plant defense responses to pathogens. In: Agrawal, A.A., Tuzun, S., Bent, E., editors. *Induced plant defenses against pathogens and herbivores*. St. Paul, MN: APS Press, p. 55-71.
- Hammerschmidt, R.; Nuckles, E. and Kuc, J. (1982):** Association of enhanced peroxidase activity with induced systemic resistance of cucumber to *Colletotrichum lagenarium*. *Physiol. Plant Path.* **20**: 73-82.
- Hammond-Kosack, K.E. and Jones, J.D.G. (1996):** Resistance gene dependent plant defense responses. *Plant Cell*, **8**: 1773-91.
- Han, Y.S. (1959):** Soybean disease in Taiwan. *Agri. Association China (Taiwan) Journal*, **26**: 31-38.
- Harborne, J.B. and Williams, C.A. (2000):** Advances in flavonoid research. Since 1992. *Phytochemistry*, **55**: 481-504.
- Heath, M.C. (1980):** Reactions of non-suspects to fungal pathogens, *Annual Review of Phytopathol.*, **18**: 211-236.
- Heil, M. (2001):** Induced systemic resistance (ISR) against pathogens-a promising field for ecological research perspective. *plant Ecol. Evol. Syst.*, **4**: 65-79.

- Heil, M. (2001):** The ecological concept of costs of induced systemic resistance (ISR). *Eur. J. Plant Pathol.*, **107**:137-46.
- Hoffman, L.M.; Donalson, D.D. and Herman, E.M. (1988):** A modified storage protein is synthesized, processed and degraded in the seeds of transgenic plants. *Plant Molecular Biology*, **11**: 717-729.
- Huber, D.M. (1963):** Investigations on root rot of beans caused by *Fusarium solani* f.sp. *phaseoli*. Ph.D. Thesis Michigan State University.
- Hussein, M.I. (2009):** Molecular cytogenetic characterization of some wheat cultivars. M.Sc. Thesis, Genetic Engineering and Biotechnology Research Institute, Minufiya University.
- Ingham, J.L. (1981):** Phytoalexins from the Leguminosae. In phytoalexin. Edited by Bailey, J.A. and Mansfield, J.W. pp. 21-75. Blackie and Son, Glasgow.
- Ishiguri, Y.; Tomiyama, K.; Doke, N.; Murai, A.; Katsui, N.; Yagihashi, F. and Masamune, T. (1978):** Induction of rishitin-metabolizing activity in potato tuber disks by wounding, and identification of rishitin metabolites. *Phytopathol.*, **68**: 720-725.
- Jalloul, A.; Montillet, J.L.; Assigbetse, K.; Agnel, J.P.; Delannoy, E. and Triantaphylides, C. (2002):** Lipid peroxidation in cotton: *Xanthomonas* interactions and the

role of lipoxygenases during the hypersensitive reaction. Plant J., **32**: 1-12.

Jones, A.M. and Dangel, J.L. (1996): Logjam at the Styx. Programmed Cell death in plants. Trends Plant Sci., **1**:114-9.

Jones, C.J.; Edwards, K.J.; Castaglione, S.; Winfield, M.O.; Sale, F. and Van de Wiel, C. (1997): Reproducibility of RAPD, AFLP, and SSR markers in plants by network of European laboratories. Mol. Breed, **3**: 381-90.

Keen, N.T. (1971): Hydroxyphaseollin production by soybean resistant and susceptible to *Phytophthora megasperma* var. *sojae*. Physiological Plant Pathogeny, **1**: 265-272.

Keen, N.T. (1975): Specific elicitors of plant phytoalexin production: determinants of race specificity in pathogens? Science, **187**: 74-75.

Keen, N.T. (1990): Gene-for-gene complementarity in plant-pathogen interactions. Annu. Rev. Genet., **24**: 447-63.

Keen, N.T. (2002): A century of Plant Pathol.: a retrospective view on understanding host-parasite interactions. Annu. Rev. Phytopath., **38**: 31-48.

Keen, N.T. and Legrand, M. (1980): Surface glycoproteins: evidence that they may function as the race specific phytoalexin elicitors of *Phytophthora megasperma* f.sp. *glycinea*. Physiological Plant Pathol., **17**: 175-192.

- Keen, N.T. and Paxton, J.D. (1975):** Coordinate production of hydroxyphaseollin and the yellow fluorescent compound PAK in soybean resistance to *Phytophthora megasperma* var. *Sojae*. *Phytopathol.*, **65**: 635-637.
- Keen, N.T.; Ersek, T.; Long, M.; Bruegges, B. and Holliday, M. (1981):** Inhibition of the hypersensitive reaction of soybean leaves to incompatible *Pseudomonas* sp. by blasticidins, streptomycin and elevated temperature, *Physiol. Plant. Pathol.*, **18**: 325-337.
- Keenan, J.G.; Moore, H.D.; Oshima, N. and Jenkins, L.E. (1974):** Effect of bean root rot on dryland pinto bean production in southwestern Colorado. *Plant dis. Reporter*, **58**, **10**: 890-892.
- Kerby, K. and Somerville, S. (1989):** Enhancement of specific intercellular peroxidases following inoculation of barley with *Erysiphe graminis* f.sp. *hordei*. *Physiol. Mol. Plant Pathol.* **35**: 323-337.
- Khan, A. and Soltanpour, P.N. (1978):** Factors associated with Zn chlorosis in dryland beans. *Agronomy Journal*, **70**, **6**: 1022-1026.
- Khan, M.R.I.; Gatehouse, J.A. and Boulter, D. (1980):** The seed proteins of cowpea (*Vigna unguiculata* L. Walp.). *J. Exp. Bot.*, **31**: 1599-1611.

- Kiraly, Z.; Barna, B. and Ersek, T. (1972):** Hypersensitivity as a consequence, not the cause of plant resistance to infection. *Nature*, **239**: 456-457.
- Klarman, W.L. and Sanford, J.B. (1968):** Isolation and purification of an antifungal principle from infected soybeans. *Life Science*, **7**: 1095-1103.
- Klement, Z. and Goodman, R.N. (1967):** The role of the living bacterial cell and induction time in the hypersensitive reaction of the tobacco plants. *Phytopathol.*, **57**:322-323.
- Kraft, J.M.; Burke, D.W. and Haglund, W.A. (1981):** *Fusarium* diseases of beans. Bean root rot. In: *Fusarium, Diseases, Biology and Taxonomy*, Edited by P.E. Nelson, T.A. Toussoun, and R.J. Cook, pp.142-145. The Pennsylvania state University Press.
- Kuc, J. (1995):** Phytoalexins, Stress, Metabolism and disease resistance in plants. *Ann. Rev. Phytopathol.*, **33**: 275-97.
- Kuc., J. (1982):** Induced immunity to Plant dis.. *Bio. Science*, **32**: 854-60.
- Kuhn, P.J.; Smith, D.A. and Ewing, D.F. (1977):** 5, 7, 2', 4'-Tetrahydroxy-8-(3''-hydroxy-3''-methyl-butyl) isolfavanone, a metabolite of kievitone produced by *Fusarium solani* f.sp. *Phaseoli*. *Phytochemistry*, **16**, **2**: 296-297.

- Kunkel, B.N. and Brooks, D.M. (2002):** Cross talk between signaling pathways in pathogen defense. *Curr. Opin. Plant Biol.*, **5**: 325-31.
- Kurata, H. (1960):** Studies on fungal disease of soybean in Japan. *Agri. Science (Tokyo) Bull.*, **12**:1-154.
- Kyung Sik, H.; Sheng Cheng, W.; Darvill, A. and Albersheim, P. (1997):** Fungal pathogens secrete an inhibitor protein that distinguishes isoforms of plant pathogenesis related endo- β -1,3-glucanases. *Plant J.*, **11**: 169-79.
- Laemmli, U.K. (1970):** Cleavage of structural proteins during the assembly of the head of bacteriophage T4. *Nature*, Vol., **227**: 680-686.
- Lagrimini, L.M.; Gingas, V.; Finger, F.; Rothstein, S. and Liu, T.T. (1997):** Characterization of antisense transformed plants deficient in the tobacco anionic peroxidase. *Plant Physiol.* **114**: 1187-1196.
- Lamb, C. and Dixon, R.A. (1997):** The oxidative burst in Plant dis. resistance. *Annual Review of Plant Physiol. and Plant Molecular Biology*, **48**: 251-75.
- Lamb, C.J.; Lawton, M.A.; Dron, M. and Dixon, R.A. (1989):** Signals and transduction mechanisms for activation of plant defenses against microbial attack. *Cell*. **5**: 215-24.

- Levine, A.; Tenhaken, R.; Dixon, R. and Lamb, C. (1994):** H₂O₂ from the oxidative burst orchestrates the plant hypersensitive disease resistance response. *Cell*, **79**:583-93.
- Lewis, N.G. (1999):** A 20th century roller coaster ride: A short account of lignification. *Current Opinion in Plant Biology*, **2**: 153-162.
- Lindsay, W.P.; Lamb, C.J. and Dixon, R.A. (1993):** Microbial recognition and activation of plant defense systems. *Trends Microbiol.*, **1**: 181-87.
- Ma, Y. and Bliss, F.A. (1978):** Seed proteins of common bean. *Crop Sci.*, **17**: 431-437.
- Mabrouk, M.S.M. (1984):** Control of some root rot pathogens of bean by cultural practices and chemicals. M.Sc. Thesis. Cairo University.
- Mahmoud A. Raouf El-Shafey (1988):** An induction of a mechanism of resistance french bean, M.Sc. thesis, Botany Department, Faculty of Science, Zagazig University, Benha Branch.
- Mankarios, A.T. (1981):** Cell wall degrading enzymes responsible for maceration and cellular death in *Fusarium solani* root rot of kidney bean (Giza 3). *Journal of the Indian Botanical Society*, **60**, **1**: 73-80.
- Marciano, P.; Fararon, F. and Magro, P. (1991):** Tolerance of *Sclerotinia sclerotiorum* to glyceollin I, a soybean phytoalexin. *Phytoparasitica*, **19**(2): 157-160.
- Martinez, C.; Baccou, J.C.; Bresson, E.; Baissac, Y.; Daniel, J.F. and Jalloul, A. (2000):** Salicylic acid mediated by the oxidative burst is a key molecule in local and systemic

response of cotton challenged by an avirulent race of *Xanthomonas campestris* pv. *Malvacearum*. Plant Physiol., **122**: 757-66.

Martinez, C.; Montillet, J.L.; Bresson, E.; Agnel, J.P.; Daniel, J.F. and Geiger, J.P. (1998): A poplastic peroxidase generates superoxide anions in cells of cotton cotyledons undergoing the hypersensitive reaction to *Xanthomonas campestris* pv. *Malvacearum* race 18. Mol. Plant Microb. Interact, **11**: 1038-47.

Matta, N.K.; Gatehouse, J.A. and Boulter, D. (1981a): The structure of legumin of *Vicia faba* L. a reappraisal. J. Exp. Bot., **32**: 183-197.

Matta, N.K.; Gatehouse, T.A. and Boulter, D. (1981b): Molecular and subunit heterogeneity of legumin of pisum sativum L. (Garden pea). A multidimensional gel electrophoretic study. J. Exp. Bot., **32**: 1295-1307.

Mattur, R.S.; Barnett, H.L. and Lilly, V.C. (1950): Sporulation of *Colletotrichum lindemethianum*. Phytopathol., **40**: 104-114.

Maya, M.M.; Otoy, M.M.; Mayer, J.E. and Pastor-Corrales, M.A. (1995): Marcadores moleculares RAPD confirman la diversidad y evolucion de *Phaeoisariopsis griseola* en America Latina. Fitopatol. Colomb., **19**: 1-6.

- Mellersh, D.C.; Foulds, I.V.; Higgins, V.J. and Health, M.C. (2002):** H₂O₂ plays different roles in determining penetration failure in three diverse plant-fungal interactions. *Plant J.*, **29**: 257-68.
- Meng, X. and Chen, W. (2001):** Applications of AFLP and ISSR techniques in detecting genetic diversity in the soybean brown stem rot pathogen *Phialophora gragata*. *Mycol. Res.*, **105**: 936-40.
- Mensen, R.; Hager, A. and Salzer, P. (1998):** Elicitor-induced changes of wall-bound and secreted peroxidase activities in suspension cultured spruce (*Picea abies*) cells are attenuated by auxins. *Physiol. Plant* **102**: 539-546.
- Menzies, J.G.; Bakkeren, G.; Matheson, F.; Procunier, J.D. and Woods, S. (2003):** Use of inter-simple sequence repeats and amplified length polymorphisms to analyze genetic relationships among small grain-infecting species of *Ustilago*. *Phytopathol.*, **93**: 167-75.
- Mercer, P.C. (1970):** Infection of *Phaseolus vulgaris* by *Colletotrichum lindemuthianum* and *Corticum praticola*. Ph.D. Thesis, University of London.
- Mesha, A.M. (1978):** Studies on root rot disease of soybean in ARE. M.Sc. Thesis, Fac. of Agri., Zag Univ.
- Michielse, C. B. (2009):** Profile update: *Fusarium oxysporum*. *Mol. Plant Pathol.* 2009, **10(3)**: 311-324.

- Miedaner, T.G.; Gang, A.G.; Schilling, A.G. and H.H. Geiger (1997):** Aggressiveness and mycotoxin production of populations of *Fusarium culmorum* and *Fusarium graminearum* in winter rye. Cereal Res. Com. **25**, 471-475.
- Miners, J.P. (1950):** Bean disease in southern Idaho in 1949. Plant dis. Reporter, **34**: 44-
- Mitchell, H.J.; Hall, S.A.; Stratford, H.A.; Hall, J.L. and Barber, M.S. (1999):** Differential induction of cinnamyl alcohol dehydrogenase during defensive lignification in wheat (*Triticum aestivum* L.): Characterization of the major inducible form *Planta*, **208**: 31-37.
- Moesta, P. and Grisebach, H. (1980):** Effect of biotic and abiotic elicitors on phytoalexin metabolism in soybean, Nature (London), **286**: 710-711.
- Mohr, P.G. and Cahill, D.M. (2001):** Relative roles of glyceollin, lignin and the hypersensitive response and the influence of ABA in compatible and incompatible interactions of soybeans with *Phytophthora sojae*, Physiological and Molecular Plant Pathol., **58**: 31-41.
- Moiseyev, G.P.; Beintema, J.J.; Fedoreyeva, L.I.; Yakovlev, G.E. (1994):** High sequence similarity between arabinonuclease from ginseng calluses and fungus-elicited proteins from Parsley indicates that intracellular pathogenesis-related proteins are ribonuclease *Planta*, **193**: 470-2.

- Moiseyev, G.P.; Fedoreyeva, L.I.; Zhuravlev, Y.N. and Yakovlev, G.E. (1997):** Primary structures of two ribonucleases from ginseng calluses. New Members of the PR-10 family of intracellular pathogenesis-related plant proteins. *FEBS Lett.*; **407**: 207-10.
- Molina, A.; Görlach, J.; Volrath, S. and Ryals, J. (1999):** Wheat genes encoding two types of PR-1 Proteins are pathogen inducible, but do not respond to activators of systemic acquired resistance. *Mol. Plant Microbe Interact* **12**: 53-8.
- Morris P.F.; Connolly, M.S. and St. Clair, D.A. (2000):** Genetic diversity of *Alternaria alternata* isolated from tomato in California assessed using RAPDs. *Mycol. Res.*, **104**: 286-92.
- Morris, A.J. and Smith, D.A. (1978):** Phytoalexin formation in bean hypocotyls induced by cell-free mycelial extracts of *Rhizoctonia* and *Fusarium*. *Annals of Applied Biology*, **89**: 344-347.
- Morris, S.W.; Vernooij, B.; Titatarn, S.; Starrett, M.; Thomas, S. and Wiltse, C.C. (1998):** Induced resistance responses in maize. *Mol Plant Microbe Interact*, **11**: 643-58.
- Mosolov, V.V.; Loginova, M.D.; Fedurkina, N.V. and Benken, I.I. (1976):** The biological significance of proteinase inhibitors in plants. *Plant Science Letters*, **7**: 77-80.

- Mousa, O.M. (1969):** Studies on root-rot of beans caused by *Rhizoctonia solani* kuhn. M.Sc. Thesis Cairo University.
- Muller, K.O. (1958):** Studies on phytoalexins. I. The formation and immunological significance of phytoalexin produced by *Phaseolus vulgaris* in response to infections with *Sclerotinia fructicola* and *Phytophthora infestans*. Australian Journal of Biological Sciences, **11**: 275-300.
- Muller, K.O. and Börger, H. (1940):** Experimentelle Untersuchungen Über die *Phytophthora*-Resistenz der Kartoffel. Arb. Biol. Anst. Reichsanst. (Berl.), **23**: 189-231. C.F. Phytoalexins, Edited by J.A. Bailey and J.W. Mansfield, pp. 3-4. Blackie and Son, Glasgow.
- Murch, R.S. and Paxton, J.D. (1980a):** Temperature and glyceollin accumulation in soybean. Phytopathol., Z, **97**: 282-285.
- Murch, R.S. and Paxton, J.D. (1980b):** Rhizospher anaerobiosis and glyceollin accumulation in soybean. Phtopathol. Z., **96**: 91-94.
- Murray, M.G. and Thompson, W.F. (1980):** Rapid isolation of high molecular weight plant DNA. Nucleic acid Res. **10**, **8** (19): 4321-5.
- Nair, A.R. and Showalter, A.M. (1996):** Purification and characterization of a wound-inducible cell wall cationic peroxidase from carrot roots. Biochem. Biophys. Res. Comm. **226**: 254-260.

- Nash, S.M.; Christou, T. and Snyder, W.C. (1961):** Existence of *Fusarium solani f.sp. phaseoli* as chlamydospores in soil. *Phytopathol.*, **51**: 308-312.
- Neely, R.D. (1957):** Study of *Fusarium* root rot and wilt of soybean. *Disease Abstract*, **17**: 2131-2132.
- Nei, M. and Li, W.H. (1979):** Mathematical model for studying genetic variation in terms of restriction endonucleases. *Proceedings of the National Academy of Sciences, USA*, **76**: 5269-73.
- Neill, S.; Desikan, R. and Hancock, J. (2002):** Hydrogen peroxide signalling, *Current Opinion in Plant Biology*, **5**: 388-95.
- Nicholson, R.L. and Hammerschmidt, R. (1992):** Phenolic compounds and their role in disease resistance. *Annu. Rev. Phytopathol.*, **30**: 369-89.
- Nielsen, N.C. (1985):** The structure and complexity of the IIS polypeptides in soybeans. *JAOCs.*, **12**: 1680-1686.
- Nimchuk, Z.; Eulgem, T.; Holt, B.F. and Dangl, J.L. (2003):** Recognition and response in the plant immune system. *Ann. Rev. Genet.*, **37**: 579-609.
- Nonaka, Isoyama, F.S. and Furukawa, H. (1966):** On the phytoalexin produced by the results of the interaction between soybean pods and phytopathogens. *Agriculture Bulliten sage University*, **22**: 51-63.

- Nou, W. (1939):** Studies on foot and wilt disease in leguminasea. Zeitchrift pflkrankh. Pflpath. Pfpschulz., **49**: 385-431.
- Nürnbergger, H. and Brunner, F. (2002):** Innate immunity in plants and animals: emerging parallels between the recognition of general elicitors and pathogen-associated molecular patterns. Curr. Opin. Plant Biol., **4**: 318-24.
- O'Brien, F. and Wood, R.K.S. (1973a):** Role of ammonia in infection of *Phaseolus vulgaris* by *pseudomonas* spp. Physiological Plant Pathol., **3**: 315-325.
- Partridge, J.E. and Keen, N.T. (1972):** Annual meeting abstracts (University of California, Riverside).
- Pation, H.C. (1967):** Disease of oleaginous annuals in Colombia Agr. Tropics, **23**: 532-539.
- Paxton, J.; Goodchild, D.J. and Cruickshank, I.A.M. (1974):** Phaseollin production by live bean endocarp. Physiological Plant Pathol., **4**: 167-171.
- Paxton, J.D. (1980):** A new working definition of the term "phytoalexins". Plant dis., **64**: 734-
- Paxton, J.D. and Chamberlain, D.W. (1969):** Phytoalexin production and disease resistance in soybeans as affected by age. Phytopathol., **59**: 775-777.

- Peng, F.H. and Black, L.L. (1976):** Increased proteinase inhibitor activity in response to infection of resistant tomato plants by *Phytophthora infestans*. *Phytopathol.*, **66**: 958-963.
- Perrin, D.R. (1964):** The structure of phaseollin. *Tetrahedron Letters*, **1**: 29-35.
- Pfender, W.F. and Hagedorn, D.J. (1982):** *Aphanomyces euteiches* f.sp. *phaseoli*, a causal agent of bean root rot and hypocotyl rot. *Phytopathol.*, **72**: 306-310.
- Pierre, R.E. (1971):** Phytoalexin induction in beans resistant or susceptible to *Fusarium* and *Thielaviopsis*. *Phytopathol.*, **61**: 322-327.
- Pierre, R.E. and Wilkinson, R.E. (1970):** Histopathological relationship of *Fusarium* and *Thielaviopsis* with beans. *Phytopathol.*, **60**: 821-824.
- Pietkewicy, T.A. (1959):** Some observations on the microflora of soybean seeds. *Rolnic zeitchrilt ser A. Roslinna*, **79**: 1077-1090.
- Polignano, G.B. and Lioi, L. (1985):** Genetic analysis in polypeptide subunits of phaseolin, the major storage protein of *Phaseolus vulgaris* L. *Genet. Agar.*, **39**: 211-219.
- Rabinowitch, H.D.; Privalle, C.T. and Fridovich, I. (1987):** Effects of paraquat on the green alga *Dunaliella salina*: Protection by the mimic of superoxide dismutase, desferal-Mn(IV). *Free Radic. Biol. Med.*, **3**: 125-31.

- Rathmell, W.G. and Bendall, D.S. (1971):** Phenolic compounds in relation to phytoalexin biosynthesis in hypocotyls of *Phaseolus vulgaris*. *Physiological Plant Pathol.*, **1**: 351-362.
- Reisner, A.H.; Nemes, P. and Bucholtz, C. (1975):** The use of Coomassie Brilliant Blue G250 Perchloric acid solution for Staining in electrophoresis and isoelectric focusing on polyacrylamide gels. *Analytical biochemistry*, **64(2)**: 509-516.
- Richael, C. and Gilchrist, D. (1999):** The hypersensitive response: a case of hold or fold? *Physiological and Molecular Plant Pathol.*, **55**: 5-12.
- Romero, A.; Yandell, B.S. and Bliss, F.A. (1986):** Bean arcelin.1. Inheritance of a novel seed protein of *Phaseolus vulgaris* L. and its effect on seed composition. *Theor. Appl. Genet.*, **72**: 123-128.
- Ros Barcelo, A. (1995):** Peroxidase and not laccase is the enzyme responsible for cell wall lignification in the secondary thickening of xylem vessels in *Lupinus*. *Protoplasma* **186**: 41-44.
- Saghai-Marooof, M.A.; Soliman, K.M.; Jorgensen, R.A. and Allard, R.W. (1984):** Ribosomal DNA spacer-length polymorphisms in barley: mendelian inheritance,

- chromosomal location, and population dynamics. Proc. Natl. Acad. Sci. USA, **81(24)**: 8014-8.
- Sahab, A.F. (1978):** Rihzosphere and physiological studies on the effect of some pesticides on some plant pathogens Ph.D. Thesis. Fac. Agric., Ain Shams Univ.
- Salem, A.S. (1964):** Studies on some fungi which cause root rot on French bean. M.Sc. Thesis. Ain Shams University.
- Salzer, P. and Hager, A. (1993):** Effect of auxins and ectomycorrhizal elicitors on wall bound proteins and enzymes of spruce cells. Trees struct. Funct. **8**: 49-55.
- Salzer, P.; Hebe, G. and Hager, A. (1997):** Cleavage of chitinous elicitors from the ectomycorrhizal fungus *Hebeloma crustuliniforme* by host chitinases prevents induction of K⁺ and Cl⁻ release, extracellular alkalization and H₂O₂ synthesis of *Picea abies* cells. Planta **203**: 470-479.
- Sambrook, J.; Fritsch, E.F. and Maniatis, T. (1989):** Molecular cloning: A laboratory Manual, (2nd ed). Cold Spring Harbor: Cold Spring Harbor Laboratory Press.
- Sartorato, A. (2004):** Pathogenic variability and genetic diversity of *Phaeoisariopsis griseola* isolates from to counties in the state of Goias, Brazil. J. Phytopathol., **152**: 385-90.
- Sato, N.; Kitazawa, K. and Tomiyama, K. (1971):** The role of rishitin in localizing hyphae of *Phytophthora infestans* in

infection sites at the cut surfaces of potato tubers. *Physiological Plant Pathol.*, **1**: 289-295.

Schaffrath, U.; Freydl, E. and Dudler, R. (1997): Evidence for different signaling pathway activated by inducers of acquired resistance in wheat *Mol Plant Microbe Interact*, **10**: 779-83.

Schilling, A.G. (1996): Characterization and Differentiation of the cereal pathogens *Fusarium culmorum* and *F. graminearum* by PCR-Based Molecular Markers, U.E. Grauer, Stuttgart, Germany.

Schilling, A.G.; T. Miedaner, and H.H. Geiger (1997): Molecular variation and genetic structure in field populations of *Fusarium* species causing head blight in wheat. *Cereal Res. Com.* **25**: 549-553.

Schuller, D.J.; Ban, N.; Van Huytsee, R.B.; McPherson, A. and Polous, T.L. (1996): The crystal structure of peanut peroxidase structure **4**: 311-321.

Schwochau, M.E. and Hodwiger, A1. (1969): Regulation of gene expression by actinomycin D. and other compounds which change the conformation of DNA. *Archeive Biochemistry and Biophysics*, **134**: 34-41.

Sequeira, L. (1979): "Acquisition of systemic resistance by prior inoculation". In: *Recognition and specificity in plant Host-*

Parasite interactions, Edited by J.M. Daly and I- Uritani.
Japan Scientific Societies Press, Tokyo, 231-251.

Sequeira, L. (1983): Mechanisms of induced resistance in plants.
Annual Review of Microbiology, **37**: 51-79.

Sharma, P.; Borja, D.; Stougaard, P. and Lonneborg, A. (1993):
PR-proteins accumulating in spruce roots infected with a
pathogenic *Pythium* sp. isolate include chitinases,
Chitosanases and β -1-3-glucanases. Physiol. Mol. Plant
Path. **43**: 57-67.

Sippell, D.W. and Hall, R. (1982): Effects of *Fusarium solani* f.sp.
phaseoli, *pythium ultimum* and *Fusarium oxysporum* on
yield components of white bean. Candian Journal of Plant
Pathol., **4**, **1**: 54-58.

Skipp, R.A. and Deverall, B.J. (1973): Studies on cross-protection
in the anthracnose disease of bean. Physiological Plant
Pathol., **3**: 299-314.

Smis, J.J.; Keen, N.T. and Honward, V.K. (1972):
Hydroxyphaseollin, an induced antifungal compound from
soybean. Phytoch., **11**: 827-

Smith, D.A. (1978): Observations on the fungitoxicity of the
phytoalexin kievitone. Phytopathoogy, **68**: 81-87.

- Smith, D.A. (1982):** Toxicity of phytoalexins. In: Phytoalexins, Edited by J.A. Bailey and J.W. Mansfield, pp. 218-252. Blackie and Son, Glasgow.
- Smith, D.A.; Harrer, J.M. and Cleveland, T.E. (1980):** Simultaneous detoxification of phytoalexins by *Fusarium solani* f.sp. *Phaseoli*. Phytopathol., **71**: 1212-1215.
- Smith, D.A.; Kuhn, P.J.; Bailey, J.A. and Burden, R.S. (1980):** Detoxification of phaseollidin by *Fusarium solani* f.sp. *phaseoli*. Phytochemistry, **19, 8**: 1673-1675.
- Sneath, P.H.A.; Sokal, R.R. (1973):** Numerical Taxonomy. San Francisco, CA, USA: W.H. Freeman.
- Snyder, W.C.; Nash, S.M. and Trujillo, E. E. (1959):** Multiple clonal types of *Fusarium solani* f.sp. *phaseoli* in field soil Phytopathol., **49**: 310-312.
- Southerton, S.G. and Deverall, B.J. (1990):** Histochemical and Chemical evidence for lignin accumulation during the expression of resistance to leaf rust fungi in wheat. Physiological and Molecular Plant Pathol., **36**: 483-494.
- Stahl, E.A. and Bishap, J.G. (2000):** Plant-pathogen arms races at the molecular level. Curr. Opinion Plant Biol., **3**: 299-304.
- Stakman, E.C. (1915):** Relations between *Puccinia graminis* and plants highly resistant to its attack. Journal of Agricultural Research, **4**: 193-199.

- Sticher, L.; Mauch-Mani, B. and Metraux, J.P. (1997):** Systemic acquired resistance. *Annual Review Phytopathol.*, **35**: 255-70.
- Subramanian, S.; Graham, M.Y.; Yu, O. and Graham, T.L. (2005):** RNA interference of soybean isoflavone synthase genes leads to silencing in tissues distal to the transformation site and to enhanced susceptibility to *Phytophthora sojae*. *Plant Physiol.*, **137**: 1345-53.
- Sutherland, M.W. (1991):** The generation of oxygen radicals during host plant responses to infection. *Physiol. Mol. Plant Pathol.*; **39**: 79-93.
- Takeuchi, Y.; Yoshikawa, M.; Takaba, G.; Tanaka K.; Shibata, D. and Horino, O. (1990):** Molecular cloning and ethylene induction of mRNA encoding a phytoalexin elicitor-releasing factor, β -1,3-endoglucanase in soybean. *Plant Physiol.*, **93**: 673-82.
- Tao, Y.; Xie, Z.; Chen, W.; Glazebrook, J.; Chang, H.S.; Han, B.; Zhu, T.; Zou, G. and Katagiri, F. (2003):** Quantitative nature of Arabidopsis responses during compatible and incompatible interactions with the bacterial pathogen *Pseudomonas syringae*. *Plant Cell*, **15**: 317-330.
- Thatcher, L.F.; Anderson, J.P. and Singh, K.B. (2005):** Plant defence responses: What have we learnt from Arabidopsis? *Funct. Pant Biol.*, **32**: 1-19.

- Tjamos, E.C. (1982):** Systemic induction of protection of *Verticillium* wilt in cucumbers. In: Active Defense Mechanisms in Plants, Edited by R.K.S. Wood, p.360, Plenum Press, New York and London.
- Treutter, D. (2006):** Significance of flavonoids in plant resistance: a review. Environ. Chem. Lett., **4**: 147-57.
- Tu, A.T.; J.A. Reinose and Y.Y. Hsiao (1968):** Peroxidase activity of hemeptides for horse heart cytochrome. C. Experintia, **24**: 219-221.
- Turk, V. (1999):** Proteases: New perspectives. Basel: Birkhauser Verlag.
- Uehara, K. (1958):** Phytopathological society of Japan, **23**: 225-
- Uknes, S.; Mauch-Mani, B.; Moyer, M.; Potter, S.; Williams, S. and Dicher, S. (1992):** Acquired resistance in *Arabidopsis*. Plant Cell, **4**: 645-56.
- Van Den Heuvel, J. and Glazener, J.A. (1975):** Comparative abilities of fungi pathogenic and nonpathogenic to bean (*Phaseolus vulgaris*) to metabolize phaseollin. Netherlands Journal of Plant Pathol., **81**, **4**: 125-137.
- Van Loon, L.C. and Van Strien, E.A. (1999):** The families of pathogenesis-related proteins, their activities, and comparative analysis of PR-1 Type proteins. Physiol. Mol. Plant Pathol., **55**: 85-97.

- Van Loon, L.C. and Van Strien, E.A. (1999):** The families of pathogenesis-related proteins, their activities, and comparative analysis of PR-1 type proteins. *Physiol. Mol. Plant Pathol.*, **55**: 85-97.
- Van Loon, L.C. and Van Strien, E.A. (1999):** The family of pathogenesis related proteins *physiol. Mol. Plant Pathol.*, **55**: 85-97.
- Van Loon, L.C.; Pierpoint, W.S.; Boller, T. and Conejero, V. (1994):** Recommendation for naming plant pathogenesis-related proteins. *Plant Mol. Biol. Rep.*, **12**: 245-64.
- Van Loon, L.C.; Rep. M and Pieterse, C.M.J. (2006):** Significance of inducible defense-related proteins in infected plants, *Ann. Rev. Phytopathol.*, **44**: 7.1-7.28.
- VanEtten, H.D. (1973):** Differential sensitivity of fungi to pisatin and to phaseollin. *Phytopathol.*, **63**: 1477-1482.
- VanEtten, H.D. and Smith, D.A. (1975):** Accumulation of antifungal isoflavonoids and 1a-hydroxyphaseollone, a Phaseollin metabolite, in bean tissue infected with *Fusarium solani* f.sp. *phaseoli*. *Physiological Plant Pathol.*, **5**, **3**: 225-237.
- VanEtten, H.D. and Stein, J.I. (1978):** Differential response of *Fusarium solani* isolates to pisatin and phaseollin. *Phytopathol.*, **68**: 1276-1283.

- Vardaniya, L.Y.A. (1971):** Disease of soybean in Abkhazia Zashrilt Rast Mosk **16**: 40-41.
- Vernooij, B.; Friedrich, L.; Ahl-Goy, P.; Staub, T.; Kessmann, H. and Ryals, J. (1995):** 2,6-Dichloroisonicotinic acid-induced resistance to pathogens without the accumulation of salicylic acid Mol. Plant Microbe Interact, **8**: 228-34.
- Veronese, P.; Ruiz, M.T.; Coca, M.A.; Hernandez-Lopez, A.; Lee, H. and Ibeas, J.I. (2003):** In defense against pathogens. Both plant sentinels and foot soldiers need to know the enemy plant physiol., **131**: 1580-90.
- Wade, M. and Albersheim, P. (1979):** Race specific molecules that protect soybeans from *Phytophthora megasperma* var. *sojae*. Proceeding National Academic of Science USA, **76**: 4433-4437.
- Wagara, I.N.; Mwang'ombe, A.W.; Kimenju, J.W.; Buruchara, R.A.; Jamnadass, R. and Majiwa, P.A.O. (2004):** Genetic diversity of *Phaeoisariopsis griseola* in Kenya as revealed by AFLP and group-specific primers J. Phytopathol., **152**: 235-42.
- Walter, M.H.; Liu, J.W.; Grand, C.; Lamb, C.J.; Hess, D. (1990):** Bean pathogenesis-related (PR) proteins deduced from elicitor-induced transcripts are members of a ubiquitous new class of proteins including pollen allergens. Mol. Gen Genet., **222**: 353-60.

- Walton, J.D. (1997):** Biochemical Plant Pathol. In: Dey P.M., Harborne, J.B., editors. Plant Biochemistry San Diego: Academic Press, p.487-502.
- Ward, E.W.B.; Lazarovits, G.; Unwin, C.H. and Buzell, R.I. (1979):** Hypocotyl reactions and glyceollin production of soybean cultivars inoculated with zoospores of races of *Phytophthora megasperma* var. *sojae*. Phytopathol., **79**: 951-955.
- Ward, E.W.B.; Lazarovits, G.; Unwin, C.H. and Buzzell, R.I. (1979):** Hypocotyl reactions and glyceollin in soybeans inoculated with zoospores of *Phytophthora megasperma* var. *Sojae*. Phytopathol., **69**: 951-955.
- Ward, H.M. (1905):** Recent researches on the parasitism of fungi. Annals of Botany, **19**:1-54.
- Warren, H.L. and Kommedahl, T. (1973):** *Fusarium* species in roots and soil associated with monoculture of soybean in Minnesota. Plant dis. Reporter, **59**: 912-914.
- Weber, K. and Osborn, M. (1969):** The reliability of molecular weight determination by dodecyl sulfate polyacrylamide gel electrophoresis. Biol. Chem. J. **244 (16)**: 4406-4412.
- Welinder, K.G. (1992):** Superfamily of plant, fungal and bacterial peroxidases. Curr. Opin. Struct. Biol. **2**: 388-393.

- Wietor-Orlandi, E.A. and Smith, D.A. (1985):** Metabolism of the phytoalexin, Phaseollinisoflavan, by *Fusarium solani* f.sp. *phaseoli*. *Physiological Plant Pathology*, **27**: 197-207.
- Williams, J.; M. Hanafey; J. Rafalski and S. Tingey (1990):** DNA polymorphisms by arbitrary primers are useful as genetic markers. *Nucleic Acids Res.* **18**: 6531-6535.
- Wu, L.; Lin Y.S. and Chui, K.Y. (1964):** Seed borne disease of soybean in Taiwan, II. Survey of seed-borne pathogens from soybean seeds. *Bot. Bull. Acad. Sin Taupe*, **5**: 105-112.
- Yoshikawa, M. (1983):** Macromolecules, recognition, and the triggering of resistance. In: *Biochemical Plant Pathol.*, Edited by J.A. Callow, pp. 267-298. John Wiley & Sons Ltd.
- Yoshikawa, M.; Masago, H. and Keen, N.T. (1977):** Activated synthesis of poly(A)-containing messenger RNA in soybean hypocotyls inoculated with *Phytophthora megasperma* var. *Sajae*. *Physiol. Plant Pathol.*, **10**: 125-138.
- Yoshikawa, M.; Yamauchi, K. and Masago, H. (1978):** Glyceollin: its role in restricting fungal growth in resistant soybean hypocotyls infected with *Phytophthora megasperma* var. *sojae*. *Physiological Plant Pathol.*, **12**: 73-82.
- Yoshikawa, M.; Yamauchi, K. and Masago, H. (1979):** Biosynthesis and biodegradation of glyceollin by soybean

hypocotyls infected with *Phytophthora megasperina* var. *sojae*. *Physiol. Plant Pathol.*, **14**: 157-169.

Youssef, Y.A.; Mankarios, A.T. and Abo Shadi, M.R. (1975): Tissue degrading enzymes in *Fusarium* root rot of kidney bean. *Egyptian Journal of Phytopathol.*, **7**: 33-38.

Zhang, Y. and Smith, D.A. (1983): Concurrent metabolism of the phytoalexins phaseollin, Kievitone and Phaseollinisoflavan by *Fusarium solani* f.sp. *phaseoli*. *Physiol. Plant Pathol.*, **23**: 89-100.