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EDUCATION

1987	Ph.D., Plant Sciences	University of Western Ontario	Canada
1978	M.Sc., Olericulture	Punjab Agricultural University	India
1975	B.Sc., (Ag.)	Assam Agricultural University	India

PROFESSIONAL EXPERIENCE

2003-present	Associate Professor	Department of Agronomy, ISU
2000-2003	Assistant Professor	Department of Agronomy, ISU
1997-2000	Associate Scientist	Noble Foundation
1996-2000	Adjunct Assistant Professor	Oklahoma State University
1991-1996	Assistant Scientist	Noble Foundation
1990-1991	Postdoctoral Fellow	Noble Foundation
1987-1990	Higher Scientific Officer	John Innes Institute
1983-1987	Graduate Assistant	University of Western Ontario
1980-1982	Assistant Professor	Assam Agricultural University
1978-1980	Senior Research Assistant	Assam Agricultural University

HONORS AND AWARDS

1971-1975	Indian Council of Agricultural Research Scholarship
1975	University Gold Medal for obtaining first position in B.Sc. (Ag.)
1975-1978	IDA Fellowship
1983-1987	Canadian Commonwealth Scholarship
1983	Ruth Horner Arnold Fellowship

TEACHING EXPERIENCE:

Bhattacharyya has been teaching the Plant Genetics (Agron527) course offered to graduate students for the last six years. He has also participated in the student seminar course MCDB698, offered in the MCDB program.

GRANT AWARDS

2007-2010	Bhattacharyya, M.K. "Fighting the Sudden Death Syndrome in Soybean" North Central Soybean Research Program. \$92,427.
2006-2008	Bhattacharyya, M.K. "Arabidopsis Nonhost Resistance for Creating Novel Soybean Germplasms with Durable and Broad-Spectrum Phytophthora Resistance." Consortium for Plant Biotechnology Research. \$100,000.
2006-2007	Bhattacharyya, M.K., Cannon, S., and Roe, B. as co-PIs. "Deep Sequencing in Microfabricated High-density Picolitre Reactors for

- Determining the Global Transcript Profiles of Soybean Following *Phytophthora sojae* Infection.” Plant Sciences Institute, ISU. \$10,000.
- 2006 Bhattacharyya, M.K. Foreign travel grant, ISU. To present an invited talk entitled “Toward Understanding the Molecular Basis of the Soybean-*Phytophthora sojae* Interaction” in the 3rd International Conference on Legume Genomics & Genetics, Brisbane, Australia April 9-13 2006. \$1,226.
- 2004-2008 “Nonhost Resistance for Engineering Disease Resistance in Soybean.” Bhattacharyya M.K. Iowa Soybean Promotion Board. Award amount \$131,280.
- 2003-2006 “Genetic Improvement of Soybean for Disease Resistance.” Bhattacharyya M.K. and Cianzio S. Iowa Soybean Promotion Board. Award amount \$202,455. For Bhattacharyya award amount \$166,315.
- 2003-2005 “Soybean Molecular Marker Facility” Bhattacharyya, M.K., Cianzio, S., Fehr Iowa Soybean Promotion Board. For Bhattacharyya, award amount \$63,794.
- 2002-2007 “Application of Biotechnology to Control Soybean Death Syndrome.” Lightfoot et al. United Soybean Board. For Bhattacharyya, award amount \$124,125.
- 2003-2005 “Structure-Function Analyses Of The Phytophthora Resistance Gene Rps1-k-2 Relating To Cell Death.” Bhattacharyya M.K. Plant Sciences Institute. Award amount \$58,285.00.
- 2001-2004 “Signal Transduction in the Expression of Disease Resistance in Soybean.” Bhattacharyya, M.K. Plant Genetic Mechanisms, NRICG-USDA, (Award# 2001-01734). Award amount \$160,000.
- 2001-2004 “Establishment of a Soybean Molecular Marker Laboratory.” Bhattacharyya, M.K., Cianzio, S., Fehr, W. and Shoemaker, R.C. Iowa Soybean Promotion Board, FY2001. Award amount \$95,000.
- 2001-2004 “Establishment of a Soybean Molecular Marker Laboratory.” Bhattacharyya, M.K., Cianzio, S., Fehr, W. and Shoemaker, R.C. PSI. Award amount \$55,000.
- 2001-2004 “Construction of a Soybean Yeast Artificial Chromosome Library.” Bhattacharyya, M.K. Iowa Soybean Promotion Board. Award amount \$150,000.

PATENT AWARDS AND INVENTIONS

Bhattacharyya, M.K. “*Rps1-k* Gene Family, Nucleotide Sequences, and Proteins.” U.S. Patent No. 7,256,323.

Bhattacharyya, M.K. "Metacaspase II in Engineering Soybean for Disease Resistance." ISURF docket number 03397.

Bhattacharyya, M.K., Xu, M. and Palmer, R. "Application of an Endogenous Transposable Element in Cloning Soybean Genes." ISURF docket number 03526

PUBLICATIONS

- Sandhu, D., Alt, J.L., Fehr, W.F., and **Bhattacharyya, M.K.** (2007) Enhanced oleic acid content in the soybean mutant M23 is associated with the deletion in the *Fad2-1b* gene encoding a fatty acid desaturase. *Journal of the American Oil Chemists' Society* 84:229-235.
- Cao, Z., Zhang, J., Li, Y., Xu, X., Liu, G., **Bhattacharyya, M.K.**, Yang, H., and Ren, D. (2007) Preparation of polyclonal antibody specific for AtPLC4, an Arabidopsis phosphatidylinositol-specific phospholipase C in rabbits. *Protein Expression and Purification* 52:306-312.
- Ji, J., Scott, M.P., and **Bhattacharyya, M.K.** (2006) Light is essential for degradation of ribulose-1,5-biphosphate carboxylase-oxygenase large subunit during sudden death syndrome development in soybean. *Plant Biology* 8:597-605.
- Gao, H., Narayanan, N., Ellison, L., and **Bhattacharyya, M.K.** (2005) Two classes of highly similar coiled coil-nucleotide binding-leucine rich repeat genes isolated from the *Rps1-k* locus encode *Phytophthora* resistance in soybean. *Mol. Plant-Microbe Interact.* 18:1035-1045.
- Bhattacharyya, M.K.**, Narayanan, N.N., Gao, H., Santra, D.K., Salimath, S.S., Kasuga, T., Liu, Y., Espinosa, B., Ellison, L., Marek, L., Shoemaker, R., Gijzen, M., and Buzzell, R.I. (2005) Identification of a large cluster of coiled coil-nucleotide binding site-leucine rich repeat-type genes from the *Rps1* region containing *Phytophthora* resistance genes in soybean. *Theor. Appl. Genet.* 111:75-86.
- Sandhu, D., Schallock K.G., Rivera-Velez, N., Lundeen, P., Cianzio, S., and **Bhattacharyya, M.K.** (2005) Soybean *Phytophthora* resistance gene *Rps8* maps closely to the *Rps3* region. *J. Heredity* 96:536-541.
- Sandhu, D., Gao, H., Cianzio, S., and **Bhattacharyya, M.K.** (2004) Deletion of a disease resistance nucleotide-binding-site leucine-rich-repeat-like sequence is associated with the loss of the *Phytophthora* resistance gene *Rps4* in soybean. *Genetics* 168:2157-167.
- Chou, W-M., Shigaki, T., Dammann, C., Liu, Y-Q., and **Bhattacharyya, M.K.** (2004) Inhibition of phosphoinositide-specific phospholipase C results in the induction of pathogenesis-related genes in soybean. *Plant Biology* 6:664-672.
- Xu, X., Cao, Z., Liu, G., **Bhattacharyya, M.K.**, and Ren, D. (2004) Cloning and expression of *AtPLC6*, a gene encoding a phosphatidylinositol-specific phospholipase C in *Arabidopsis thaliana*. *Chinese Science Bulletin* 49:567-573.
- Santra, D. K., Sandhu, D., Tai, T., and **Bhattacharyya, M.K.** (2003) Construction and characterization of a soybean yeast artificial chromosome library and identification of clones for the *Rps6* region. *Funct. Integr. Genomics* 3:153-159.
- Sigaki, T., and **Bhattacharyya, M.K.** (2002) Nutrients induce an increase in inositol 1,4,5-trisphosphate in soybean cells: Implication for the involvement of phosphoinositide-specific phospholipase C in DNA synthesis. *Plant Biology* 4:53-61.
- MacGregor, T, **Bhattacharyya, M.**, Tyler, B., Bhat, R, Schmitthenner, A.F., and Gijzen, M. (2002) Genetic and physical mapping of *Avr1a* in *Phytophthora sojae*. *Genetics* 160:949-959.
- Liu, Y., Dammann, C., and **Bhattacharyya, M.K.** (2001) The matrix metalloproteinase gene *GmMMP2* is activated in response to pathogenic infections in soybean. *Plant Physiol.* 127:1788-1797.

- Shigaki, T., and **Bhattacharyya, M.K.** (2000) Phosphate induces rapid H₂O₂ generation in soybean suspension cells. *Plant Biology* 2:149-151.
- Shigaki, T., and **Bhattacharyya, M.K.** (2000) Decreased inositol 1,4,5-trisphosphate content in pathogen-challenged soybean cells. *Mol. Plant-Microbe Interact.* 13:563-567.
- Shigaki, T., and **Bhattacharyya, M.K.** (1999) Color coding the cell death status of plant suspension cells. *BioTechniques* 26:1060-1062.
- Salimath, S.S., and **Bhattacharyya, M.K.** (1999) Generation of a soybean BAC library, and identification of DNA sequences tightly linked to the *Rps1-k* disease resistance gene. *Mol. Plant-Microbe Interact.* 98:712-720.
- Bhattacharyya, M.K.**, Gonzales, R. A., Kraft, M., and Buzzell R.I. (1997) A copia-like retrotransposon *Tgmr* closely linked to the *Rps1-k* allele that confers race specific resistance of soybean to *Phytophthora sojae*. *Plant Mol. Biol.* 34:255-264.
- Kasuga, T., Salimath, S.S., Shi, J., Gijzen, M., Buzzell, R., and **Bhattacharyya, M.K.** (1997) High resolution genetic and physical mapping of molecular markers linked to the *Phytophthora* resistance gene *Rps1-k* in soybean. *Mol. Plant-Microbe Interact.* 10:1035-1044.
- Korth, K.L., Stermer, B.A., **Bhattacharyya, M.K.**, and Dixon, R.A. (1997) HMG-CoA reductase gene families that differentially accumulate transcripts in potato tubers are developmentally expressed in floral tissues. *Plant Mol. Biol.* 33:545-551.
- Shi, J., Gonzales, R.A., and **Bhattacharyya, M.K.** (1996) Identification and characterization of an S-Adenosyl-L-methionine: D²⁴-Sterol-C-methyltransferase cDNA from soybean. *J. Biol. Chem.* 27:9384-9389.
- Gijzen, M., MacGregor, T., **Bhattacharyya, M.**, and Buzzell, R. (1996) Temperature induced susceptibility of soybean isolines carrying different *Rps* genes. *Physiol. Mol. Plant Pathol.* 48:209-215.
- Shi, J., and **Bhattacharyya, M.K.** (1996) A novel plasma membrane-bound thioredoxin from soybean. *Plant Mol. Biol.* 32:653-662.
- Shi, J., Dixon, R.A., Gonzales, R.A., Kjellbom, P., and **Bhattacharyya, M.K.** (1995) Identification of cDNA clones encoding valosin-containing protein and other plant plasma membrane-associated proteins by a general immunoscreening strategy. *Proc. Natl. Acad. Sci. USA* 92:4457-4461.
- Shi, J., Gonzales, R.A., and **Bhattacharyya, M.K.** (1995) Characterization of a plasma membrane associated phosphoinositide-specific phospholipase C from soybean. *Plant J.* 8:381-390.
- Bhattacharyya, M.K.**, Paiva, N.L., Dixon, R.A., Korth, K.L., and Stermer, B. A. (1995) Features of the *hmg1* subfamily of genes encoding HMG-CoA reductase in potato. *Plant Mol. Biol.* 28:1-15.
- Burton, R.A., Bewley, J. D., Smith, A.M., **Bhattacharyya, M.K.**, Tatge, H., Ring, S., Bull, V., Hamilton, W.D.O., and Martin, C. (1995) Starch branching enzymes belonging to distinct enzyme families are differentially expressed during pea embryo development. *Plant J.* 7:3-15.
- Bhattacharyya, M.K.**, Stermer, B.A., and Dixon, R.A. (1994) Reduced variation in transgene expression from a binary vector with selectable markers at the right and left T-DNA borders. *Plant J.* 6:957-968.

- Dry, I., Smith, A.M., Edwards, A., **Bhattacharyya, M.**, Dunn, P., and Martin, C. (1992) Characterization of cDNAs encoding two isoforms of granule-bound starch synthase which show differential expression in developing storage organs. *Plant J.* 2:193-202.
- Bhattacharyya, M.K.**, Smith, A.M., Noel Ellis, T.H., Hedley, C., and Martin, C. (1990) The wrinkled-seed character of pea described by Mendel is caused by a transposon-like insertion in a gene encoding starch-branching enzyme. *Cell* 6:115-122.
- Ward, E.W.B., Cahill, D.M., and **Bhattacharyya, M.K.** (1989) Early cytological differences between compatible and incompatible interactions of soybeans with *Phytophthora megasperma* f. sp. *glycinea*. *Physiol. Mol. Plant Pathol.* 34:267-283.
- Ward, E.W.B., Cahill, D.M., and **Bhattacharyya, M.K.** (1989) Abscisic acid suppression of phenylalanine ammonia-lyase activity and mRNA and resistance of soybeans to *Phytophthora megasperma* f. sp. *glycinea*. *Plant Physiol.* 91:23-27.
- Bhattacharyya, M.K.**, and Ward, E.W.B. (1988) Phenylalanine ammonia-lyase activity in soybean hypocotyls and leaves following infection with *Phytophthora megasperma* f. sp. *glycinea*. *Can. J. Bot.* 66:18-23.
- Bhattacharyya, M.K.**, and Ward, E.W.B. (1987) Biosynthesis and metabolism of glyceollin I in soybean hypocotyls following wounding or inoculation with *Phytophthora megasperma* f. sp. *glycinea*. *Physiol. Mol. Plant Pathol.* 31:387-405.
- Bhattacharyya, M.K.**, and Ward, E.W.B. (1987) Temperature-induced susceptibility of soybeans to *Phytophthora megasperma* f. sp. *glycinea*: phenylalanine ammonia-lyase and glyceollin in the host; growth and glyceollin I sensitivity of the pathogen. *Physiol. Mol. Plant Pathol.* 31:407-419.
- Bhattacharyya, M.K.**, and Ward, E.W.B. (1986) Expression of gene-specific and age-related resistance and the accumulation of glyceollin in soybean leaves infected with *Phytophthora megasperma* f. sp. *glycinea*. *Physiol. Mol. Plant Pathol.* 29:105-113.
- Bhattacharyya, M.K.**, and Ward, E.W.B. (1986) Resistance, susceptibility and accumulation of glyceollin I-III in soybeans inoculated with *Phytophthora megasperma* f. sp. *glycinea*. *Physiol. Mol. Plant Pathol.* 29:227-237.
- Bhattacharyya, M.K.**, and Ward, E.W.B. (1985) Differential sensitivity of *Phytophthora megasperma* f. sp. *glycinea* isolates to glyceollin isomers. *Physiol. Plant Pathol.* 27:299-310.
- Bhattacharyya, M.K.**, Surjan, S., and Nandpuri, K.S. (1981) Path-coefficient and discriminant function in tomato. *JASS 2 & 3*:7-10.
- Saikia, A.K., Phukan, P.N., and **Bhattacharyya, M.K.** (1980) Reaction of tomato cultivars to root knot nematode. *J. Res. Assam Agril. Univ.* 1:217-218.

(b) Manuscripts Under Preparation, Revision Or Submitted:

- Gao, H., Baskett J., Yu, L., and **Bhattacharyya, M.K.** (2007) A type II metacaspase is required *Rps1-k*-mediated race-specific *Phytophthora* resistance in soybean. Revision.
- Narayanan, N.N., Tasma, I.M., Grant, D., Shoemaker, R., and **Bhattacharyya, M.K.** (2007) Identification of regulatory genes for active defense responses induced immediately following *Phytophthora sojae* infection in soybean. Revision.
- Xu, M., Palmer, R.G. and **Bhattacharyya, M.K.** (2007) Insertion of an active transposable element of the CACTA family in the dihydroflavonol-4-reductase 2 gene led to variegation in petal color in *Glycine max*. Revision.

- Brar, H., and **Bhattacharyya, M.K.** (2007) A novel *Fusarium virguliformae* protein is involved in the development of sudden death syndrome in soybean. Revision.
- Gao, H., and **Bhattacharyya, M.K.** (2007) The *Phytophthora* resistance locus *Rps1-k* is composed primarily of repetitive sequences and two coiled coil-nucleotide binding-leucine rich repeat-type disease resistance genes in soybean. *BMC Plant Biology*, resubmitted.
- Sandhu, D., Tasma, I.M., and **Bhattacharyya, M.K.** (2007) Soybean *NPRI* homologues complement the *npr1* mutant in Arabidopsis. *Theor. Appl. Genet.*, resubmitted.
- Tasma, I.M., Brendel, V., Whitham S.A., and **Bhattacharyya, M.K.** (2007) Transcriptional regulation of the *Arabidopsis thaliana* phosphoinositide-specific phospholipase C gene family in response to environmental stimuli. *Plant Physiology and Biochemistry*. Submitted.
- Ramusubramanian, S., and **Bhattacharyya, M.K.** (2008) Phosphoproteomics of the soybean-*Phytophthora sojae* interaction: identification of defense proteins that are phosphorylated following infection. Under Preparation.
- Palmer, R., and **Bhattacharyya, M.K.** (2008) Evidence suggesting possible roles of somatic crossing over and gene conversion in expansion of a microsatellite sequence in soybean. Under Preparation.
- Sandhu, D., Nelson, R., MacMil, S., Wiley, G., Roe, B., Shoemaker, R.C., Cannon, S., and **Bhattacharyya, M.K.** (2008). Pyrosequencing in global transcript analyses of the soybean-*Phytophthora sojae* interaction. Under Preparation.

INVITED PRESENTATIONS

Invited International Presentations:

- Bhattacharyya M.K. (2007) "Phytophthora resistance in soybean." Legumes Workshop, Plant & Animal Genome XV Conference; Town & Country Hotel, San Diego, CA, January 13-17, 2007.
- Bhattacharyya M.K. (2007) "Pyrosequencing in microfabricated high-density colitre reactors for investigating the transcriptomes of the the soybean-*Phytophthora sojae* interaction." Functional Genomics: Methodologies Workshop, Plant & Animal Genome XV Conference; Town & Country Hotel, San Diego, CA, January 13-17, 2007.
- Bhattacharyya M.K. (2007) "Quantitative phosphoproteomics of the soybean-*Phytophthora sojae* interaction." Proteomics Workshop, Plant & Animal Genome XV Conference; Town & Country Hotel, San Diego, CA, January 13-17, 2007.
- Bhattacharyya M.K. (2006) "Toward understanding the molecular basis of the soybean-*Phytophthora sojae* interaction." Third International Conference on Legume Genomics & Genetics, Brisbane, Australia April 9-13, 2006.
- Bhattacharyya M.K. (2006) "Phosphoproteomic approaches: In studying the soybean-*Phytophthora sojae* interaction." Plant & Animal Genome XIV Conference; Town & Country Hotel, San Diego, CA, January 15-19, 2006.
- Bhattacharyya, M. K., Sandhu, D., Gao, H., Narayanan, N. N., Ji, J., and Tasma, M. I. (2003) "Recognition and signal transduction in disease resistance: mechanisms and application."

- UMS Biotechnology. Symposium II. Universiti Malaysia Sabah, Kota Kinabalu, Malaysia. December 3-5, 2003. **Keynote Speaker.**
- Bhattacharyya, M.K. (2003) "Towards understanding resistance and susceptibility in soybean." Southern Crop Protection and Food Research Centre, 1391 Sandford St., London, ON N5V 4T3, Canada. July 22, 2003.
- Bhattacharyya, M.K. (2003) "Application of a cloned *Phytophthora* resistance gene *Rps1-k* for discovering candidate genes for the expression of defense responses in soybean." Functional Genomics: Methodologies Workshop, Plant and Animal Genome XI Conference. Town & Country Hotel, San Diego, CA, January 11 - 15, 2003.
- Bhattacharyya, M.K. (1999) "Phosphoinositide-specific phospholipase C is induced by nutrients MS and down-regulated by infection in soybean cell suspensions." School of Life Sciences, JNU, India, 1999.
- Bhattacharyya, M.K., Esnosa, B.G., Kasuga, T., Liu, Y., Salimath, S.S., Gijzen, M., Poisa, V., and Buzzell, R.I. (1999) "Towards understanding the recognition and signal transduction processes in the soybean-*Phytophthora sojae* interaction." Symposium on Plant Signal Transduction, ICGEB, New Delhi, October 4-6, 1999.
- Bhattacharyya, M.K. (1997) "High resolution and high density genetic mapng of AFLP markers that co-segregates with the *Rps1-k*." Department of Plant Molecular Biology, Delhi University South Campus, New Delhi, 1997.
- Bhattacharyya, M.K. (1996) "Progress towards positional cloning of the *Phytophthora* resistance gene *Rps1-k*." Department of Plant Sciences, UWO, London, Ontario, 1996.
- Bhattacharyya, M.K. (1996) "High resolution genetic and physical mapng of the *Rps1-k* locus in soybean." Agriculture Canada, Harrow, Ontario, Canada, 1996.
- Bhattacharyya, M.K. (1996) "Toward cloning of the *Phytophthora* resistance gene *Rps1-k*." Department of Botany, Univ. of Toronto, 1996.
- Bhattacharyya, M.K. (1993) "Identification of markers linked to the *Rps1-k* gene." London Research Centre, Agriculture Canada, London, Ontario, 1993.
- Bhattacharyya, M.K., Paiva, N.L. Stermer, B.A., and Dixon, R.A. (1991) "HMG-CoA reductase of potato is encoded by a multigene family." Third International Congress of Plant Molecular Biology, Tucson, 1991.

Invited National Presentations:

- Bhattacharyya M.K. (2006) "Characterization of *Rps1-k-2*-interactors." Soy2006, Cellular and Molecular Biology of the Soybean Conference, Lincoln, NE, August 8-11, 2006.
- Bhattacharyya, M.K. (2006) "Cloning and characterization of a type II metacaspase gene, *GmMcII*." Mendel Biotechnology, Inc., Hayward, CA. June 19, 2006.
- Bhattacharyya M.K. (2005) "Phytophthora resistance in soybean." Department of Plant Pathology, Kansas State University, May 12, 2005.
- Bhattacharyya, M.K. (2004) "Towards understanding the mechanism of Phytophthora resistance in soybean." Soy2004, Cellular and Molecular Biology of the Soybean Conference, Columbia, MO, August 8-11, 2004.
- Bhattacharyya, M.K. (2002) "Application of *Rps1-k* in develong possible broad-spectrum resistance in soybean." The *Phytophthora sojae* meeting. Wooster, OH. September 26-27, 2002.
- Bhattacharyya M.K., Narayanan N. N., Gao H., Santra D. Ellison L, Kasuga, T., Salimath S.S., Liu Y., Esnosa B., Marek L.F., Shoemaker R.C., Gijzen M., and Buzzell R.I. (2002)

- “The *Rps1-k* locus carries multiple functional *Phytophthora* disease resistance genes in soybean.” Soy2002, 9th Biennial conference of the Cellular and Molecular Biology of the Soybean. Urbana-Champaign, Illinois, August 11-14, 2002.
- Bhattacharyya, M.K. (2002) “*Rps1-k* is comprised of multiple functional *Phytophthora* resistance genes.” *Phytophthora* Molecular Genetics Workshop, Milwaukee, Wisconsin, Aug.1-2, 2002.
- Bhattacharyya, M.K. (2002) “Progress toward isolation of *Rps1-k*.” Iowa Soybean Promotion Board. Des Moines, Iowa, March 2, 2002.
- Bhattacharyya, M.K. (1999) “Progress towards cloning the soybean disease resistance gene *Rps1-k*.” Department of Botany, Oklahoma State University, Oklahoma, 1999.
- Shigaki T., Dammann, C., and Bhattacharyya, M.K. (1999) “Toward understanding the possible role of phosphoinositide-specific phospholipase C in plants.” The 88th Annual Technical Meeting of OAS, Oklahoma City University, November 13, 1999.
- Dammann C., and Bhattacharyya, M.K. (1999) “A new gene from soybean with similarity to G-protein coupled receptors.” 75th annual ASPP meeting, 1999. (Dr. Dammann from ’s lab offered the talk).
- Bhattacharyya, M.K. (1999) “Towards positional cloning of the *Phytophthora* resistance gene *Rps1-k* in soybean.” The 1999 OARDC Annual Conference, OSU, Columbus, OH. **Keynote Speaker.**
- Bhattacharyya, M.K. (1999) “Possible role of phosphoinositide-specific phospholipase C in DNA replication in soybean.” Department of Botany and Microbiology, University of Oklahoma, 1999.
- Bhattacharyya, M.K. (1998) “Towards cloning the soybean disease resistance gene *Rps1-k*.” Noble Foundation Plant Biology 10 year Symposium, Noble Foundation, Ardmore, Oklahoma, October 7-10, 1998.
- Bhattacharyya, M.K., Salimath, S.S., Esnosa, B.G., Kasuga, T., Liu, Y., Marek, L., Shoemaker, R.C., Gijzen, M., and Buzzell, R. I. (1998) “Soybean-*Phytophthora sojae*, a model plant-fungal interaction: Progress towards map-based cloning of the disease resistance gene *Rps1-k*.” 7th Biennial Conference on Molecular and Cellular Biology of the Soybean and 8th Gatlinburg Symposium. Knoxville, Tennessee, July 26-29, 1998.
- Bhattacharyya, M.K. (1997) “Towards cloning *Rps1-k*.” Application of biotechnology for the control of soybean diseases, meeting held in September 13- 14, 1997, St. Louis, Missouri, 1997.
- Bhattacharyya, M.K. (1996) “Progress towards cloning *Rps1-k*.” Application of biotechnology for the control of soybean diseases, meeting held in October 5-6, 1996, Iowa State University, Ames, IA, 1996.
- Bhattacharyya, M.K. (1996) “Progress towards map-based cloning the *Phytophthora* resistance gene *Rps1-k*.” USDA-ARS, Beltsville, Maryland, 1996.
- Bhattacharyya, M.K. (1996) “Towards map-based cloning of *Rps1-k* that confers resistance to *Phytophthora sojae* in soybean.” Hawaiian Sugar Plantation Association, Honolulu, Hawaii, 1996.
- Bhattacharyya, M.K. (1996) “Characterization of soybean -PLC1.” Department of Plant Molecular Physiology, University of Hawaii, Honolulu, Hawaii, 1996.
- Bhattacharyya, M.K. (1996) “Cloning and characterization of soybean -PLC1.” Department of Botany, Oklahoma State University, Oklahoma, 1995.

- Bhattacharyya, M.K. (1995) "Isolation of RAPD and AFLP markers that are linked to *Rps1-k*." 'Workshop on soybean pathology,' April 22, 1995, Iowa State University, Ames, IA.
- Bhattacharyya, M.K. (1994) "Reduced variation in transgene expression from a binary vector with selectable markers at the right and left T-DNA borders." Monsanto, St. Louis, Missouri, 1994.

Presentations at ISU:

- Bhattacharyya, M.K. (2006) "Pyrosequencing in Microfabricated Highdensity colitre Reactors: The Method and its Possible Applications." IPPM Fall Seminar series, October 25, 2006.
- Bhattacharyya, M.K. (2006) "Isolation of signaling genes for *Phytophthora* resistance in soybean." IG Faculty seminar, October 30, 2006.
- Brar, H. and Bhattacharyya, M.K. (2006) "Purification of a phytotoxin that causes sudden death syndrome in soybean." CPRES. October 13, 2006. (Presented by Ms. Brar).
- Bhattacharyya, M.K. (2005) "Immunity, resistance and susceptibility." CPRES. October 13, 2005.
- Bhattacharyya, M.K. (2005) "Phytophthora resistance in soybean and *Arabidopsis*." IG Faculty seminar, August 22, 2005.
- Sandhu, D., and Bhattacharyya, M.K. (2004) "Deletion of a disease resistance NBS-LRR-like sequence is associated with the loss of the *Phytophthora* resistance gene *Rps4* in soybean." CPRES Seminars Fall 2004. (Presented by Dr. Sandhu).
- Bhattacharyya, M.K. (2004) "Nonhost disease resistance." MCDB & IG Students Orientation Seminar Molecular Biology Building 1420. August, 2003.
- Ji, J., and Bhattacharyya, M.K. (2003) "Proteomics approach in studying sudden death syndrome in soybean." CPRES Seminars Fall 2003. (Presented by Ms. Junli Ji).
- Bhattacharyya, M.K. (2003) "Resistance and susceptibility in soybean." IG Faculty seminar, October 6, 2003.
- Bhattacharyya, M.K. (2003) "Characterization of the phosphoinositide signal pathway." IG Retreat. McFarland Park, September 20, 2003.
- Bhattacharyya, M.K. (2003) "*AtPLC* gene family." MCDB & IG Students Orientation Seminar Molecular Biology Building 1420. August 19, 2003.
- Bhattacharyya, M.K. (2003) "Towards Understanding the Functions of the Phosphoinositide Signal Pathway." IPPM Retreat, Reiman Gardens, August 20, 2003.
- Bhattacharyya, M.K. (2002) "Cloning of the *Rps1-k* gene family." CPRES. Fall, 2002.
- Bhattacharyya, M.K. (2002) "Cloning of the *Rps1-k* gene family." Interdepartmental Plant Physiology Major Retreat, ISU. August 24, 2002.
- Bhattacharyya, M.K. (2001) "Molecular approaches towards improving disease resistance in soybeans." Agronomy Department, ISU, September 20, 2001.
- Bhattacharyya, M.K. (2001) "Towards molecular cloning of *Phytophthora* resistance genes in soybean." BCB 691 Faculty Seminar, ISU.
- Bhattacharyya, M.K. (2000) "Towards understanding the molecular-basis of the soybean-*Phytophthora sojae* interaction." Department of Plant Pathology, ISU. October 24, 2000.
- Bhattacharyya, M.K. (2000) "Towards molecular characterization of the *Phytophthora* disease resistance genes at the *Rps1-k* region in soybean." IG Faculty Seminar, Fall 2000.

Other Oral Presentations:

- Bhattacharyya, M.K. (2006) Toward Generating SDS Resistant Transgenic Soybean Lines, SDS meeting organized by NCSRP, November Carbondale, IL
- Bhattacharyya, M.K. (2005) "Proteomics Approach for SDS." USB-Biotechnology to control SDS. Chicago, April 18-19, 2005.
- Bhattacharyya, M.K. (2003) "Proteomics Approach for SDS." USB-Biotechnology to control SDS. Chicago, August 25, 2003.
- Bhattacharyya, M.K. (2003) "Proteomics Approach for SDS. USB-Biotechnology to control SDS." St. Louis, February 19, 2003.
- Sandhu D., Gao H., Cianzio S., and Bhattacharyya M.K. (2002) "Instability of a resistance gene-like sequence caused by mitotic recombination in soybean." Soy2002, 9th Biennial conference of the Cellular and Molecular Biology of the Soybean. Urbana-Champaign, Illinois, August 11-14, 2002. (Presented by Dr. Sandhu)
- Bhattacharyya, M.K., and Ward, E.W.B. (1984) Differential accumulation of glyceollin isomers in the soybean-*Phytophthora megasperma* f.sp. *glycinea* interaction. Joint Meeting of the American Phytopathological Society and Canadian Phytopathological Society, Guelph, Ontario, Canada, 1984.

STUDENTS AND POSTDOCTORAL SCIENTISTS

Ms. Shan Li , Graduate Student (2007 -)

Mr. James Baskett, Graduate Student (2007 -)

Mr. Rishi Summit , Graduate Student (2006 -)

Ms. Hargeet Brar, Graduate Student (2004 -)

Ms. Lu Yu Graduate Student (2006-2007)

Dr. Hongyu Gao Graduate Student (2000-2006)

Ms. Junli Ji, Graduate Student (2001-2004)

Dr. T. MacGregor, Graduate Student (1994-1995)

Ms. Sehiza Grosic, Undergraduate Student (2005-2007)

Ms. Maggie Amdahl, undergraduate research assistant (2006)

Ms. Erin Lyon Undergraduate Student (2005-2006)

Ms. Katie G. Schallock, Undergraduate Student (2004-2005)

Mr. R. Peter Hunsinger, Undergraduate Student (2001-2002)

Mr. Kirby D. Childs, Undergraduate Student (1995-1998)

Ms. Courtney Allen, High School Student (1996-1998)

Dr. Min Xu, Postdoctoral Scientist (2005 - 2007)

Dr. Saravanan Ramusubramaniam, Assistant Scientist (2004 - 2006)

Dr. Naraynan N. Narayanan, Postdoctoral Scientist (2001 - 2004)

Dr. Devinder Sandhu, Assistant Scientist (2001 - 2005)

Dr. Made I. Tasma, Postdoctoral Scientist (2001 - 2004)

Dr. Dipak Santra, Postdoctoral Scientist (October 2000 - 2002)

Dr. Gua-Qing Tang, Postdoctoral Scientist (1999 - 2000)
 Dr. Dongtao Ren, Postdoctoral Scientist (1999 - 2000)
 Dr. Wing-Ming Chou, Postdoctoral Scientist (1999 - 2000)
 Dr. Yongqing Liu, Postdoctoral Scientist (1998 - 2000)
 Dr. Christian Dammann, Postdoctoral Scientist (1997 - 2000)
 Dr. Toshiro Shigaki, Postdoctoral Scientist (1996 - 1999)
 Dr. Jian Zhang, Postdoctoral Scientist (1996-1998)
 Dr. Sanmukhaswami S. Salimath, Postdoctoral Scientist (1995-1999)
 Dr. Takao Kasuga, Postdoctoral Scientist (1995–1997)
 Dr. Gupalkrishnan Subramanian, Postdoctoral Scientist (1995–1996)
 Dr. Jinrui Shi, Postdoctoral Scientist (1992-1996)

Dr. Devinder Sandhu, Visiting Scientist (2006)
 Dr. Artem E. Men, Visiting Scientist (1996)

MANUSCRIPT AND GRANT REVIEWING

Reviewed for the following journals:

BMC Genomics, Canadian J. Plant Sci., Crop Science, FEBS Letters, Genetics, Genetics and Molecular Biology, Genome , J. Experimental Botany, Journal of Heredity, Journal of Plant Physiology, J. Proteomics Research, Molecular Biotechnology, Molecular Genetics and Genomics, Molecular Plant-Microbe Interactions, Phytopathology, Physiological & Molecular Plant Pathology, Planta, Plant Breeding, Plant and Cell Physiology, Plant Journal, Plant Molecular Biology, Plant Physiology, Plant Physiology and Biochemistry, Seed Technology, Theoretical and Applied Genetics, and Transgenic Research..

Reviewed grant proposals for the following programs:

Georgia NSF 2006; Consortium for Plant Biotechnology Research 2006; Plant Genetic Mechanisms, NRICG-USDA, FY2006; Plant Genome Research Project, NSF FY2004; Biol. of Plant Microbe-Asso. NRICGP-USDA, FY2004; Plant Responses to Environment NRICGP-USDA, FY2003; MCB Metabolic Biochemistry, NSF, FY2003; MCB Signal transduction and Regulation, NSF FY2002; Plant Genetic Mechanisms, NRICG-USDA, FY2002; Biol. of Plant Microbe-Asso. NRICGP-USDA, FY2002; Plant Genetic Mechanisms, NRICG-USDA, FY2001; Plant Genome Program, NRICG-USDA, FY1999; Plant Genome Research Project, NSF, 1999; Plant Growth and Development, NRICG-USDA, FY1999; FWF grant agency, Vienna, Austria FY 1998; Plant Genome Program, NRICG-USDA, FY1998; NC Biotechnology Centre, 1998; Plant Pathology Program, NRICG-USDA, FY1997; FWF grant agency, Vienna, Austria FY 1997; Plant Genome Program, NRICG-USDA, FY1996; BARD, 1996.

Panel member of the following program:

Plant Genome program NRICGP-USDA, FY1997. Biology of Plant Microbe-Association Panel NRICGP-USDA, FY2000

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