

Biographical Sketch

Madan Kumar Bhattacharyya

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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

2015-present	Faculty Scholar	Plant Sciences Institute, ISU
2014-present	Professor	Department of Agronomy, ISU
2003-2014	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
2015-2018	PSI Faculty Scholar

TEACHING EXPERIENCE

Bhattacharyya taught Plant Genetics (Agron527) and teaches Applied Molecular Genetics & Biotechnology (Agron524) courses to graduate students.

EDITORIAL BOARD MEMBER/ASSOCIATE EDITOR

- Editorial Advisors - BMC Plant Biology, 2017 -
- Review Editorial Board - Agricultural Biol. Chemistry, Frontiers in Chemistry, 2014 –
- Associate Editor - BMC Genomics, 2010 -
- Associate Editor - BMC Plant Biology, 2009 - 2017
- Editorial Board member - Molecular Biotechnology, 2008 – 2017

PANEL MEMBER

USDA-ARS Plant Genetic Resources, Genomics, and Genetic Improvement National Program. Plant Metabolism and Pathways Panel Member. January 19, 2018.

NSF Panel Member, Physiological and Structural Systems Cluster, April 30 – May 1, 2015

Plant Health and Production and Plant Products, USDA-NIFA FY2014 – contacted by panel manager to serve the panel; but declined because of conflict of interest.

Biol. of Plant Microbe-Assoc. NRICGP-USDA, FY2000

Plant Genome program NRICGP-USDA, FY1997

PATENT AWARDS AND INVENTIONS

Patents Awarded

Bhattacharyya, M.K. (2007) “*RpsI-k* Gene Family, Nucleotide Sequences, and Proteins.” U.S. Patent No. 7,256,323 - Issued 8/14/2007.

Bhattacharyya, M.K. (2010) “*RpsI-k* Nucleotide Sequence and Proteins.” Patent number 7,696,410 - Issued 4/13/2010.

Bhattacharyya, M.K. (2011) “Metacaspase II in Engineering Soybean for Disease Resistance.” Patent number 7,943,825 - Issued 5/17/2011.

Bhattacharyya, M.K., Li, S. (2012) "Compositions and Methods for Enhancing Disease Resistance in Plants." US Patent 8,173,794 - Issued 5/8/2012.

Bhattacharyya, M.K., and Sumit R. (2018) “Identification and Application Arabidopsis Nonhost Resistance Gene(s) in Creating Disease Resistant Soybean Cultivars.” U.S. Patent 10045499 – Issued 8/14/2018

Patent Application Pending

Bhattacharyya, M.K., and Sumit R. (2016) Glycine Max Resistance Gene(s) and Use Thereof to Engineer Plants with Broad-Spectrum Resistance to Fungal Pathogens and Pests U.S. Appl. No. 14/989,606 – Filled 01/06/2016

Bhattacharyya, M.K., Singh P. and Kambakam S. (2016) Arabidopsis Nonhost Resistance Gene(s) and Use Thereof to Engineer SDS Resistant Plants U.S. Appl. No. 14/989,634 – Filled 01/06/2016

Bhattacharyya, M.K., and Wang B. (2016) Identification of Peptides Binding to FvTox1 Involved in SDS Disease Resistance in Soybean. U.S. Appl. No. 62/430,047 – Filled 12/05/2016

Germplasm

Cianzio, S.R., Lundeen, P., Rivera-Velez, N., Gebhart., G. K., Molen, Van Der and **Bhattacharyya, M.K.** Soybean Germplasm Line AR10SDS (formerly identified as AR03-163008) ISURF #03624.

Cianzio, S.R., Gebhart, G., Rivera-Velez, N., Lundeen, P., and **Bhattacharyya, M.K.** Soybean Variety IAR3001 Phyto/SCN Experimental Designation A95-684043BC Rps8. ISURF # 03712.

Cianzio, S.R., Lundeen, P., Rivera-Velez, N., Gebhart., G. K., Molen, Van Der and **Bhattacharyya, M.K.** Soybean Germplasm Line AR11SDS/SCN ISURF (number to be assigned)

CURRENT GRANT AWARDS

2013 **Bhattacharyya M.K.** and 14 PIs. Transgenic Approaches in Managing Sudden Death Syndrome in Soybean. USDA, NIFA FY 2013 – 2018. \$5,358,680. For Bhattacharyya M.K., \$1,991,651.

2016 **Bhattacharyya M.K.** Predictive phenomics for developing climate resilient crop plants. PSI Faculty Fellow; PSI 2016-2018 -\$225,000.

- 2017 **Bhattacharyya M.K.** Evaluation of the *Phytophthora* resistance *Rps12* gene for its utility and identification of tightly linked molecular markers for its selection. Iowa Soybean Association 2017-2018 - \$97,996.
- 2017 **Bhattacharyya M.K.** Evaluation of the joint effect of Arabidopsis PSS30 and soybean GmDS1 genes in providing SCN and SDS resistance in soybean. United Soybean Board 2017-2018 - \$119,120.

PUBLICATIONS

(Recent and selected publications from 1990 through 2013; * indicates corresponding author)

- Ngaki, N.N., Sahoo, D., Wang, B., **Bhattacharyya, M.K.*** (2018) Overexpression of a putative receptor-like plasma membrane protein generates broad-spectrum immunity in soybean. *Plant Biotechnology J. Submitted*
- Kambakam, S., Sahu, B.B., Sumit, R., Swaminathan, S., Ngaki, M.N., Singh, P., Kandel, D.R., Rajesh, M.K., **Bhattacharyya, M.K.*** (2018) Folate regulates plant immunity. *Proc. Natl. Acad. Sci. USA, under revision*
- Swaminathan, S., Abeysekara, N.S, Knight, J.M., Liu, M., Dong, J., Hudson, M.E., **Bhattacharyya, M.K.**, Cianzio, S.R. (2018) Mapping of new quantitative trait loci for sudden death syndrome and soybean cyst nematode resistance in two soybean population. *Theor. Appl. Genet. in press.*
- Wang, B., Sumit, R., Sahu, B.B., Ngaki, M., Srivastava, S.K., Yang, Y., Swaminathan, S. **Bhattacharyya, M.K.*** (2018) An Arabidopsis glycine-rich plasma membrane protein enhances disease resistance in soybean. *Plant Physiology*, 176:865–878. Online in 2017.
- Sandhu, D., Baumbach, J., Ghosh, J., Johnson, C., Srivastava, S.K., Baumert, E., Cina, T., Grant, D., Palmer, R., **Bhattacharyya, M.K.*** (2017) The endogenous transposable element *Tgm9* is suitable for generating knockout mutants for functional analyses of soybean genes and genetic improvement in soybean. *PloS One*, 12(8):e0180732.
- Heinrich, J., Qiao, X., Baumbach, J., Xie, J., Dong, L., **Bhattacharyya, M.K.*** (2017) Microfluidic device enabled quantitative time-lapse microscopic-photography for phenotyping vegetative and reproductive phases in *Fusarium virguliforme*, which is pathogenic to soybean. *Scientific Reports* 7:44365.
- Sahoo, D., Abeysekara, N., Cianzio, S., and Robertson, A.E., **Bhattacharyya, M.K.*** (2017) A novel *Phytophthora* resistance gene, *Rps12* mapped tightly to the *Rps4/6* region in soybean. *PLoS One*, 12:e0169950.
- Sahu, B.B., Baumbach, J., Singh, P., Srivastava, S.K., Yi, X., and **Bhattacharyya, M.K.*** (2017) Investigation of the *Fusarium virguliforme* transcriptomes induced during infection of soybean roots suggests that enzymes with hydrolytic activities could play a major role in root necrosis. *PLoS One*, 12:e0169963.
- Abdelsamad, N.A., Baumbach, J. and **Bhattacharyya, M.K.**, Leandro, L.F. (2017) Soybean Sudden Death Syndrome Caused by *Fusarium virguliforme* is Impaired by Prolonged Flooding and Anaerobic Conditions. *Plant Disease*, 101:712-719.
- Ngaki, N.N., Wang, B., Sahu, B.B., Srivastava, S., Farooqi, M.S., Kambakam, S., Swaminathan S., **Bhattacharyya, M.K.*** (2016) Transcriptomic Study of the soybean-*Fusarium virguliforme* interaction revealed a novel ankyrin-repeat containing defense gene, expression of whose during infection led to enhanced resistance to the fungal pathogen in transgenic soybean plants. *PloS One*, 11:e0163106.
- Huang, X.*, Das, A., Sahu, B.B., Srivastava, S.K., Leandro, L.F., O'Donnell, K., and **Bhattacharyya, M.K.** (2016) Identification of highly variable supernumerary chromosome segments in an asexual pathogen. *PLoS One* 11(6): e0158183.
- Abeysekara, N., Matthiesen, R.L., Cianzio, S., **Bhattacharyya, M.K.**, and Robertson, A.E.* (2016) Novel sources of partial resistance against *Phytophthora sojae* in PI 399036. *Crop Sci.* 56:1–14.

- Xu, Z., Jiang, H., Sahu, B.B., Kambakam, S., Singh, P., Wang, X., Wang, Q., **Bhattacharyya, M.K.**, and Dong, L.* (2016) Humidity assay for plant-pathogen interactions in miniature controlled discrete humidity environments with good throughput. *Biomicrofluidics* **10**, 034108.
- Liu, M., Li S., Swaminathan, S., Sahu, B.B., Leandro, L.F., Cardinal, A.J., **Bhattacharyya, M.K.**, Song, Q., Walker, D.R., Cianzio, S.R.* (2016) Identification of a soybean rust resistance gene in PI 567104B. *Theor Appl Genet.* 129: 863-877.
- Baumbach, J., Pudake R.N., Johnson, C., Ollhoff, A., Palmer, R.G., **Bhattacharyya, M.K.*** and Sandhu, D.* (2016) Transposon tagging of a male-sterility, female-sterility gene, *St8*, revealed that the meiotic MER3 DNA helicase activity is essential for fertility in soybean. *PLoS One* **11**(3): e0150482.
- Zhang, B., Wang, B., Morales, A.W., Scudder, J., **Bhattacharyya, M.K.**, and Ye, J.Y.* (2016) Study of the interactions of *Fusarium virguliforme* toxin FvTox1 with synthetic peptides by molecular simulations and a label-free biosensor. *Analytical Chemistry*, **88**: 3024–3030
- Cianzio, S.R., Lundeen, P. **Bhattacharyya, M.K.**, Swaminathan, S., Gebhart, G., and Rivera-Velez, N. (2016) Registration of AR11SDS soybean germplasm resistant to sudden death syndrome, soybean cyst nematode and with adequate iron deficiency chlorosis. *Journal of Plant Registrations* **10**:177–188.
- Abeysekara, N.S., Desai, N., Guo, L., and **Bhattacharyya, M.K.*** (2015) The Plant immunity inducer pipercolic acid accumulates in the xylem sap and leaves of soybean seedlings following *Fusarium virguliforme* infection. *Plant Science* **243**:105–114.
- Swaminathan, S., Abeysekara N.S., Liu, M, Cianzio, C.R. and **Bhattacharyya, M.K.*** (2015) Quantitative trait loci underlying host responses of soybean to *Fusarium virguliforme* toxins that cause foliar sudden death syndrome. *Theor Appl Genet.* 129:495-506.
- Wang, B., Swaminathan, S., and **Bhattacharyya, M.K.*** (2015) Identification of *Fusarium virguliforme* FvTox1-interacting synthetic peptides for enhancing foliar sudden death syndrome resistance in soybean. *PLoS ONE* **10**: e0145156.
- Abeysekara, N.S., and **Bhattacharyya, M.K.*** (2014) Analyses of the xylem sap proteomes identified candidate *Fusarium virguliforme* proteinacious toxins. *PLoS One.* **9**:e93667.
- Srivastava, S.K., Brar, H.K., Fakhoury, A.M., Bluhm, B.H., Huang, X., and **Bhattacharyya, M.K.*** (2014) The genome sequence of the fungal pathogen *Fusarium virguliforme* that causes sudden death syndrome in soybean. *PLoS One* **9**:e81832.
- Hughes, T.J.*, O'Donnel, K., Rooney, A.P., Sink, S., Scandiani, M.M., Luque, A., **Bhattacharyya, M.K.**, and Huang, X. (2014) Genetic architecture and evolution of the mating type locus in fusaria that cause soybean sudden death syndrome and bean root rot. *Mycologia*, **106**:686-697.
- Ott, A., Yang, Y., **Bhattacharyya, M.K.**, Horner, H.T., Palmer, R.G., and Sandhu, S. (2013) Molecular mapping of *D1*, *D2* and *ms5* revealed linkage between the cotyledon color locus *D2* and the male-sterile locus *ms5* in soybean. *Plants*, **2**:441-454.
- Pudake, R.N., Sahu, B.B., Swaminathan, S., Leandro, L.F., and **Bhattacharyya, M.K.*** (2013) Investigation of the *Fusarium virguliforme* *fytox1* mutants revealed that the FvTox1 toxin is involved in foliar sudden death syndrome development in soybean. *Current Genetics*, **59**:107-117.
- Geiser, D.M.*, Aoki, T., Bacon, C.W., Baker, S.E., **Bhattacharyya, M.K.** et al. (2012) One Fungus, One Name: Defining the genus *Fusarium* in a scientifically robust way that preserves longstanding use. *Phytopathology*, **103**:400-408
- Sumit, R., Sahu, B.B., Xu, M., Sandhu, D., and **Bhattacharyya, M.K.*** (2012) Arabidopsis nonhost resistance gene *PSSI* confers immunity against an oomycete and a fungal pathogen but not a bacterial pathogen that cause diseases in soybean. *BMC Plant Biology*, **12**:62. (**Highly Accessed**)
- Brar, H.K. and **Bhattacharyya, M.K.*** (2012) Expression of a single-chain variable-fragment antibody against a *Fusarium virguliforme* toxin peptide enhances tolerance to sudden death syndrome in transgenic soybean plants. *Mol Plant Microbe Interact.* **25**:817-824. (**Front Cover Article**)

- Sahu, B.B., Sumit, R., and **Bhattacharyya, M.K.*** (2012) Sequence based polymorphic (SBP) marker technology for targeted genomic regions: its application in generating a molecular map of the *Arabidopsis thaliana* genome. *BMC Genomics*, 13:20 (**Highly Accessed**)
- Yang, H., Qiao, X., **Bhattacharyya, M.K.**, and Dong, L.* (2011) Microfluidic droplet encapsulation of highly motile single zoospores for phenotypic screening of an antioomycete chemical. *Biomicrofluidics*, 5: 044103.
- Brar H.K., Swaminathan S., and **Bhattacharyya M.K.*** (2011) The *Fusarium virguliforme* toxin FvTox1 causes foliar sudden death syndrome-like symptoms in soybean. *Mol. Plant-Microbe Interact.*, 24: 1179-1188.
- Schmutz, J., Cannon, S.B., Schlueter, J., Ma, J., Hyten, D., Song, Q., Mitros, T., Nelson, W., May, G.D., Gill, N., Peto, M., Goodstein, D., Thelen, J.J., Cheng, J., Sakurai, T., Umezawa, T., Du, J., **Bhattacharyya, M.K.**, Sandhu, D., Grant, D., Joshi, T., Libault, M., Zhang, X-C., Xu, D., Futrell-Griggs, M., Abernathy, B., Hellsten, U., Berry, K., Grimwood, J., Wing, R.A., Cregan, P., Stacey, G., Specht, J., Rokhsar, D. Shoemaker, R.C, and Jackson S.A.* (2010) Genome sequence of the paleopolyploid soybean (*Glycine max* (L.) Merr.). *Nature*, 463:178-83.
- Xu, M., Brar, H., Grosic, S., Palmer, R., and **Bhattacharyya, M.K.*** (2010) Excision of an active CACTA-like transposable element from *DFR2* led to variegated flowers in soybean. *Genetics*, 184:53-63.
- Sandhu, D., Tasma, M.I., Frasc, R. and **Bhattacharyya, M.K.*** (2009) Systemic Acquired Resistance in Soybean is regulated by Two Proteins, Orthologous to Arabidopsis NPR1-*Phytophthora sojae* interaction. *BMC Plant Biology*, 9:105. (**Highly Accessed**)
- Narayanan, N.N., Grosic, S., Tasma, I.M., Grant, D., Shoemaker, R., and **Bhattacharyya, M.K.*** (2009) Identification of candidate signaling genes including regulators of chromosome condensation 1 protein family differentially expressed in the soybean-*Phytophthora sojae* interaction. *Theor Appl Genet.*, 118:399-412.
- Tasma, I.M., Brendel, V., Whitham S.A., and **Bhattacharyya, M.K.*** (2008) Expression and Evolution of the Phosphoinositide-specific Phospholipase C Gene Family in *Arabidopsis thaliana*. *Plant Physiology and Biochemistry*, 46:627-637.
- Gao, H., and **Bhattacharyya M.K.*** (2008) The soybean-*Phytophthora* resistance locus Rps1-k encompasses coiled coil-nucleotide binding-leucine rich repeat-like genes and repetitive sequences. *BMC Plant Biol.*, 8:29.
- Palmer, R. G., Sandhu, D., Curran, D. K. and **Bhattacharyya, M. K.** (2008) Molecular mapping of 36 Soybean male-sterile, female-sterile mutants. *Theor Appl Genet.*, 117:711-719.
- Sandhu, D., Alt, J.L., Scherder, C.W., Fehr, W.R. and **Bhattacharyya, M.K.*** (2007) Enhanced oleic acid content in the soybean mutant M23 is associated with the deletion in the Fad2-1a gene encoding a fatty acid desaturase. *J. Amer. Oil Chem Soc.*, 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. (**Front Cover Article**)
- Bhattacharyya, M.K.***, Narayanan, N. N., Gao, H., Salimath, S.S., Santra, D., Ellison, L., Kasuga, T., Liu, Y., Espinosa, B., Marek, L.F., Shoemaker, R.C., 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.
- W-M. Chou, T. Shigaki, C. Dammann, Y-Q. Liu, **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.
- Shigaki, 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.
- 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. **(Front Cover)**
- 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. **(Front Cover Article)**
- 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.
- 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. **(Front Cover Article)**

INVITED PRESENTATIONS (from 2011 to 2018)

- Bhattacharyya, M.K. (2018) What have we learned about the plant adaptation to cold-stress by studying the model plant *Arabidopsis thaliana*? International Conference on “Climate Change, Biodiversity and Sustainable Agriculture (ICCBSA-2018). Assam Agricultural University, Jorhat-13, Assam, India. December 13-16, 2018.
- Bhattacharyya, M.K. (2018) The endogenous transposable element *Tgm9* is suitable for generating knockout mutants for functional analyses of soybean genes. Conference on Molecular Breeding and Green Agriculture in 21 Century. Changchun, China. July 23, 2018.
- Bhattacharyya, M.K. (2018) Engineering soybean for enhanced broad-spectrum disease and pest resistances. Conference on Molecular Breeding and Green Agriculture in 21 Century. Changchun, China. July 22, 2018.
- Bhattacharyya, M.K. (2018) Arabidopsis Nonhost Resistance Genes for Enhancing Disease Resistance in Soybean. State Key Laboratory of Plant Physiology and Biochemistry, College of Biological Sciences, China Agricultural University, Beijing, China. July 20, 2018.

- Bhattacharyya, M.K. (2018) Isolation and Utilization of Arabidopsis Nonhost Resistance Genes in Enhancing Disease Resistance In Soybean. 70th Annual Meeting, Indian Phytopathological Society and National symposium on 'Plant Health Management: Embracing Eco-Sustainable Paradigm'. Assam Agricultural University, Jorhat-13, Assam, India. February 15-17, 2018.
- Bhattacharyya, M.K. (2018) Isolation and Utilization of Arabidopsis Nonhost Resistance Genes in Enhancing Disease Resistance In Soybean. 70th Annual Meeting, Indian Phytopathological Society and National symposium on 'Plant Health Management: Embracing Eco-Sustainable Paradigm' (Feb. 15-17,2018) Assam Agricultural University, Jorhat-13, Assam, India.
- Bhattacharyya, M.K. (2017) Arabidopsis nonhost resistance genes for enhancing disease resistance in soybean. Horticultural Research Station, Assam Agricultural University, Kahikuchi, Guwahati, Assam, India, December 8, 2017.
- Bhattacharyya, M.K. (2017) Arabidopsis nonhost resistance genes for enhancing disease resistance in soybean. ISMPP International Conference on "Plant Health for Human Welfare" Department of Botany, University of Rajasthan, Jaipur, Rajasthan, November 1-4, 2017.
- Bhattacharyya, M.K. (2017) Folate in Plant Immunity. The society TASARD, India-2017 was organized at A P Shinde Auditorium, NASC complex, New Delhi during February 20-22, 2017, on the topic "Advancement for Sustainable Agriculture and Rural Development (TASARD-India-2017)"
- Bhattacharyya, M.K. (2017) Overexpression of a plasma membrane protein enhances resistance to multiple pathogen and pests in soybean. National Symposium on Molecular Insect Science, Assam Agricultural University, Jorhat, India, February 6-8, 2017.
- Bhattacharyya, M.K. (2016) Expression of a receptor-like protein enhances resistance of soybean to multiple pathogen and pests including soybean cyst nematodes. APS organized 2016 Soybean Cyst Nematode Conference. December 13-15, 2016, Coral Gables, Florida.
- Bhattacharyya, M.K. (2016) Identification and application of Arabidopsis nonhost immunity genes in enhancing disease resistance in soybean. International Symposium, Central Plantation Crops Research Institute, Kerela, December 10-12, 2016.
- Bhattacharyya, M.K. (2016) Towards identification of adaptation genes for generating climate resilient crop plants. International Conference on Climate Change Adaptation and Biodiversity: Ecological Sustainability and Resource Management for Livelihood Security, Andaman Science Association, Port Blair, Andaman & Nicobar Islands, India, 8-10, December, 2016.
- Bhattacharyya, M.K. (2016) Folic acid in plant health. College of Veterinary, Assam Agricultural University, Khanapara, Assam, India, December 6, 2016.
- Bhattacharyya, M.K. (2016) Folic acid in plant health. ICAR-NRC Plant Biotechnology, New Delhi, India, December 2, 2016.
- Bhattacharyya, M.K. (2016) Novel transgenic approaches in enhancing SDS resistance in soybean. Plant Pathology & Microbiology Department, Iowa State University, March 1, 2016.
- Bhattacharyya, M.K. (2016) Novel biotech. approaches in fighting sudden death syndrome in soybean. 2016 Soybean Breeders' & Pathologists' Workshop. St. Louis, MO, 22-24 February 2016.
- Bhattacharyya, M.K. (2016) The *Tgm9*-Induced Indexed Insertional Mutant Collection to Conduct Community-Based Reverse Genetic Studies in Soybean. Transposable Elements Workshop. Plant & Animal Genome XXIII, Town & Country Convention Center, San Diego, CA, January 8-13, 2016.
- Bhattacharyya, M.K. (2016) Identification of Defense-related Proteins in the Root Necrotic Mutant *rm1* in Soybean. Proteomics Workshop. Plant & Animal Genome XXIII, Town & Country Convention Center, San Diego, CA, January 8-13, 2016.
- Bhattacharyya, M.K. (2015) Transgenic approaches in managing diseases in soybean. Agri-Biotechnology Summit, Hyderabad, India, October 19-21, 2015.
- Bhattacharyya, M.K. (2015) Transgenic approaches in managing diseases in soybean. 2nd International Conference on Frontiers in Biological Sciences (InCoFIBS-2015), 22-24 January, 2015, Rourkela, Odisha, India.

- Bhattacharyya, M.K. (2015) "Arabidopsis nonhost resistance for enhancing disease resistance in soybean." Plant Interactions with Pests and Pathogens Workshop. Plant & Animal Genome XXIII, Town & Country Convention Center, San Diego, CA, January 10-14, 2015.
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- Bhattacharyya, M.K. (2014) Novel management approaches: managing diseases in soybean. IIT, Guwahati, February 17, 2014.
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