BIODATA

Name:	**Dr. Madhusudhan.K.N**
Designation:	Scientist-C
Education qualification:	M.Sc. in Sericulture M.Phil in Seed Technology (Agri.) Ph. D. in Biotechnology
Subject specialization:	Sericulture, Plant Pathology, Microbiology, Biotechnolgy
Office Address :	Bivoltine Breeding Lab, CSRTI, CSB, Mysore
Mobile:	+91-8092249809 ; +91-9986616223
e-mail:	madhu31us@gmail.com
Ph.D. Thesis Title:	Defense Mechanisms against tobamoviruses Infecting tomato and bell pepper.

Research Publications from Ph.D. thesis:

1. **Madhusudhan, K.N.,** Prakash, H.S. and Shetty, H.S. 2009. Changes in antioxidant enzymes, endogenous hydrogen peroxide, endogenous salicylic acid concentration and oxidative stress in compatible and incompatible host-tobamovirus interaction. Journal of plant interactions. 4(3):157–166.
2. **Madhusudhan, K.N.,** Deepak, S.A., Prakash, H.S., Ganesh, K.A., Jwa, N.S., Randeep, R. 2008. Acibenzolar-S-Methyl (ASM) induced resistance against tobamoviruses involves induction of RNA dependent RNA polymerase (RdRp) and Alternative Oxidase (AOX) genes. Journal of Crop Science and Biotechnology. 11 (2): 127-134.
3. **Madhusudhan, K.N.,**Sivakumar, D. and Prakash, H.S. 2010. Pectin methylesterase estimation in plant-tobamovirus interaction and comparative modelling, active site prediction and Docking between the proteins involved in the movement of tobamoviruses. Journal of Computational Intelligence in Bioinformatics. 3(2): 163-174.
4. **Madhusudhan, K.N.,** Vinayarani, G., Deepak, S.A., Niranjana, S.R., Prakash, H.S., Singh, G.P., Sinha, A.K. and Prasad, B.C. 2011. Antiviral activity of plant extracts and other inducers against tobamoviruses infection in bell pepper and tomato plants.International Journal of Plant Pathology. 2(1): 35-42.
5. **Madhusudhan, K.N.,**Nalini, M.S., Prakash, H.S. and Shetty, H.S. 2005. Effect of inducers against Tobamovirus infection in tomato and bell pepper. International Journal of Botany. 1(1): 59-61.

Recent Publications

1. **Madhusudhan, K.N.,** Meghana, P.B., Vinaya Rani G., Moorthy, S.M., Mary-Josepha, A.V., Kishorekumar, C.M., Prakash, H.S. and Sivaprasad, V. 2017. Extraction and Characterization of Chitin and Chitosan from *Aspergillus Niger*, Synthesis of Silver-Chitosan Nanocomposites and Evaluation of Their Antimicrobial Potential. Journal of advances in Biotechnology. 6(3): 939-945.

2. **Madhusudhan, K.N.,** Laltlankimi, Moorthy, S.M., Naqvi, A.H., Gupta, V.P., Sahay, A.and Sivaprasad, V. 2017. Impact of varying different abiotic factors on the survivability of tasar silkworm in outdoor rearing fields. Journal of Entomology and Zoology Studies. 5(6): 957-963.

3. **Madhusudhan, K.N.,** Chakrapani, Gupta, V.P., Naqvi, A.H. and AlokSahay. 2016. Studies on transmission rate of pebrine (Nosemamylitta) to healthy tropical tasar silkworm (A*nthereaemylitta*D.) from secondary source of contamination in silkworm rearing plots. Journal of Biological & Scientific Opinion.4 (3): 75 – 79.

4. **Madhusudhan, K.N.,** Aakash, K., Gupta,V.P., Naqvi, A.H., Singh, G.P. and Sinha, A.K.. 2016. Development of Slide agglutination method for detection of *Nosemamylitta* in tasar silkworm using polyclonal antibody produced against proteins of pebrine spores. International Journal of Phamaceutics and Drug Analysis. 4(5): 212-216.

5. **Madhusudhan, K.N.,** Nisha-Kachhap, A.K. Sinha, Singh, G.P., Gupta, V.P., Naqvi, A.H. and AlokSahay. 2015. Inhibition of bacterial pathogens of tropical tasar silkworm (A*nthereaemylitta*d.) by using foliose lichens isolated from sal plant (*Shorearobusta*). International journal of pharmaceutics & drug analysis. 3(9):282 – 287.

6. **Madhusudhan, K.N.,** Chakrapani, Gupta,V.P., Naqvi, A.H., Singh, G.P. and AlokSahay. 2015. Studies on the Pathogenicity of Pebrine Spores Isolated from Ichneumon Fly (*XanthopimplaPedator)* Infesting Tropical Tasar Silkworm on Healthy Silkworm Larvae. International Journal of Scientific Research in Science and Technology. (1)4:164-166.

7. **Madhusudhan, K.N.,** Niti Singh, Kamaraj, S., Naqvi, A.H., Gupta, V.P., Singh, G.P and AlokSahay. 2015. Impact of leaf quality on the rearing performance of pebrinized larva of tropical tasar silkworm (*Antheraeamylitta*D). International Journal of Research in Pure and Applied Microbiology. 5(2):8-10.

8. **Madhusudhan, K.N.,** Minz, Prerana, Sinha, A.K., Deka, M., Yadav, H., Kiran Kumar, K.P., Gargi, Gupta, V.P., Naqvi, A.H. and AlokSahay. 2014. Screening of Rhizobacterium, *Burkholderia*for Biocontrol of Bacterial Pathogens of Tropical Tasar Silkworm, *AntheraeaMylitta*D. And Induction of Growth in Silkworm Host Plant, *TerminaliaArjuna*. Journal of Chemical, Biological and Physical Sciences. 5(1):450-456.

9. **Madhusudhan, K.N.,** Aakash, K., Mohitkumar, Tiwari, M.D., Sinha, A.K., Kirankumar, K.P. Sinha, M.K.andJaishankar, C. 2014. Identification of suitable stains for easy identification of pebrine spores infecting tropical tasar silkworm (*Antherea mylitta*D.).Indian Journal of Biotechnology and Biochemistry. 1(2):87-90.

10. **Madhusudhan, K.N.,** Siva Kumar, D., Mohitkumar, Sinha, A.K., Kirankumar, K.P. Reddy, P.M.M., Sinha, M.K.andJaishankar, C. 2014. Homology modeling and Active site prediction of RNA binding protein of *Anthereamylitta* Cytoplasmic polyhedrosis (AmCPV) infecting tropical tasar silkworm. Indian Journal of Biotechnology and Biochemistry. 1(2):91-96.

11. Vinayarani, G., **Madhusudhan, K.N.,** Deepak, S.A., Niranjana, S.R. and Prakash, H.S. 2011. Detection of mixed infection of tabomoviruses in tomato and bell pepper by using RT-PCR and Duplex RT-PCR. International journal of Plant Pathology. 2(2):89-95.

12. Lokesh. G.,Putkho Paul Pao, **K.N. Madhusudhan,** P.K. Kar, A.K. Srivastava, M.K. Sinha, R. Manohar Reddy, P.M. Muniswamy Reddy and B.C. Prasad (2012). Study of Phenotypic Variability in Silk Gland Characters in Three Ecoraces of Tropical Silkworm *Antheraeamylitta*Drury. Asian Journal of Animal and Veterinary Advances. 7(1):80-84.

Research Supervision

No. of students guided: (Project work)	**25 numbers** (M.Sc. in Biotechnology, Microbiology and Agriculture biochemistry)

NCBI Depositions

KY97144: *Acinetobacter baumannii*16S ribosomal RNA gene, partial sequence (Mulberry leaf)

KY971448: *Pseudomanas oryzihabitans*16S ribosomal RNA gene, partial sequence (Mulberry leaf)

KY971454: *Acinetobacterbaumannii* 16S ribosomal RNA gene, partial sequence (Silkworm Midgut)

KY996477: *Stenotrophomonas pavanii*16S ribosomal RNA gene, partial sequence (Mulberry leaf)

MF040156: *Acinetobacter baumannii* 16S ribosomal RNA gene, partial sequence (Silkworm Excreta)

MF040157: *Acinetobacterjunii*16S ribosomal RNA gene, partial sequence (Mulberry leaf)

KU247946: *Choanephoran infundibulifera* ITS region gene, Partial sequence (Antimicrobial endophytic fungi from *T. arjuna* bark tissue)

KU247947: *Poitrasia circinans*, ITS region gene, Partial sequence (Antimicrobial endophytic fungi from *T. arjuna* bark tissue)

JX006081: *Bacillus* sp. MadhuTT103 16S ribosomal RNA gene, partial sequence

GU213293: Tomatomosaic virus isolate Karnataka movement protein gene, partial cds

GU213294: Tobacco mosaic virus isolate Karnataka nonfunctional movement protein gene, partial cds.

EU408340: *Solanum lycopersicum* cultivar PKM-1 actin mRNA, partial cds

EU408341: *Solanum lycopersicum* cultivar PKM-1 alternative oxidase mRNA, partial cds

EU408342: *Solanum lycopersicum* cultivar PKM-1 RNA-dependent RNA polymerase mRNA, partial cds.

Protein Data Bank (PDB) Deposition

Homology modeled structures of movement proteins of Tobacco Mosaic Virus (TMV) and Tomato Mosaic Virus (ToMV) were deposited in Protein Data Bank (PDB) with ids **2IP5** and **2IP8**.