

CURRICULUM VITAE

Name : **Dr Mallikarjuna Gadwala**

Designation : Scientist-B

Qualification : M. Sc, Ph. D

Subject Specialization : Sericulture (Silkworm Immunity and Pathology)

Date of birth : 01-07-1980

Mobile No. : +91 9036653213

Email ID : gspmalli@gspmail.com

Office Address : **Dr Mallikarjuna Gadwala**
Scientist-B
Silkworm Pathology Section
Central Sericulture Research and Training Institute,
Central Silk Board
Srirampura, Manadawadi Road
Mysore-570008
Karnataka



Academic qualification

Degree	University / College	Subjects	Year of Passing
B. Sc	SriKrishna Devaraya University, Anantapur, Andhra Pradesh	Botany, Zoology, Chemistry	2001
B. Ed	SriKrishna Devaraya University, Anantapur, Andhra Pradesh	Biology	2005
M. Sc	SriKrishna Devaraya University, Anantapur, Andhra Pradesh	Sericulture	2007
Ph. D	Karnatak University, Dharwad, Karnataka	Sericulture	2014

Academic Research Experience

I have completed my Ph.D. in sericulture with silkworm immunity and pathology as specialization from Karnataka University, Dharwad, Karnataka. I have gained rich experience in insect (Silkworm *Bombyx mori* L) immunity and pathology. During my doctoral research I was trained in insect biochemistry especially haemolymph protein study. I used Two-Dimensional gel electrophoresis for characterization of total haemolymph proteins their *pI* values and Molecular weights. I could successfully complete screening of antibacterial proteins from silkworm *Bombyx mori* by using different proteomics and spectroscopic methods. I have intensive experiences in molecular biology and protein chemistry.

In addition, I am familiar with molecular techniques including, Protein purification (Gel filtration, ion exchange), Protein Characterization, SDS-PAGE, 2-DE, PCR, Blotting techniques, ELISA, RAPD analysis, Tissue Culture, Embryo culture.

Research Work Experience

Insects are one of the successful animals on the planet they survive in all kinds of environments and can be found in all geographic climates. The Success of their survival can be attributed to the unique immune system of the insects. Unlike higher animals insects don't have the capacity to produce antibodies but instead rely on production of inducible antibacterial proteins which protects them from infections. I have studied the insect model silkworm for induced expression of novel antibacterial proteins by using Two-dimensional electrophoresis which is a high resolution proteomic technique. We have found that insects produce stress proteins which also act as antimicrobial proteins for fighting infections and our study has paved way to realize the insights of insect immune capacity to survive infections.

I have worked as a Senior Research Fellow in Biotechnology Department, University of Agriculture Sciences on *Bt* cotton research. Cry1Ac, Cry2Ab these are the most important *Bt* proteins against the cotton pest such as pink bollworm and other bollworms. I could successfully screen cotton in different generation like F₁, BCF₁ and BC₂F₁. For *Bt* conformation we used molecular techniques such as PCR, ELISA analysis and RAPD analysis.

Presently I am working on pebrine causative agent *Nosema bombycis* and different microsporidia spores identification and characterization by using molecular techniques.

Expertise:

- Electrophoresis techniques
- Two-Dimensional Gel Electrophoresis
- Protein purification
- PCR
- ELISA
- Microbiology Techniques

International/National conferences / workshops /meeting/training attended

- **Foundation training Program for Newly Inducted Scientist-B in CSB.** Held at CSB Bengaluru, CSRTI Mysuru, CMERTI Lohdoigarh. On 29.02.2016 to 15.03.2016.
- Training programme on “**Orientation training on seed officers and analysts**”. Held at CSR&TI, Mysuru from 19th to 20th November, 2015.
- National workshop on “**Innovative technologies and best practices in sericulture**” at CSR&TI, Mysuru, on 17th & 18th November, 2015.
- **International Conference on Advance in bio polymer drug delivery systems (2014).** Held at Creative Educational Society's College of Pharmacy, Kurnool, Andhra Pradesh. On 30th to 31st January 2014.
- **National workshop on application of Bioinformatics Tools in Biological Science (2013).** Held at P.G. Dept of Biotechnology & Microbiology, Karnatak University. Dharwad, Karnataka. On 30th March 2013.
- **National Conference on Biodiversity & Biotechnology for Sustainable Development (2011).** Held at P.G. Dept of Botany, Karnatak University. Dharwad, Karnataka. On 21st to 22nd March 2011.

- **International Conference on Genomics & Proteomics (2011).** Held at School of Biotechnology NIT Calicut, Kerala, 14th to 16 July, 2011.
- **One day workshop on Intellectual Property Rights (2011).** Held at Planning and Development Section, Karnatak University, Dharwad. On 29th June, 2011.
- **Role of real time PCR in the Diagnosis of Infectious Diseases (2011).** Held at S.S. Institute of Medical Sciences & Research Centre. Davangere on 30th April 2011.
- **State level workshop on using SPSS for Research and Data Analysis (2010).** Held at Kousali Institute of Management Studies, Karnatak University, Dharwad. On 21st November 2010.
- **Seminar on Capillary Electrophoresis PA 800 Plus A new tool in protein characterization and Small Molecule Analysis (2010).** Held at Beckman Coulter, Hyderabad. On 16th July 2010.
- **Awareness Training Programme on Biodiversity related issues and People's Biodiversity Register (2009).** Held at Dept of Applied Genetics, Karnatak University, Dharwad. On 25th May 2009.
- **National Seminar on Scenario of Seri biotechnological Research in India (2008).** Held at Dept of Sericulture, Sri Padmavathi Mahila Visvavidyalayam, Tirupati, Andhra Pradesh, 28th to 30th Aug, 2008.
- **International Colloquium on Nanotechnology (2008).** Held at S.D.M College of Engineering & Technology Dharwad, Karnataka, on 8th and 9th July, 2008.
- **International Conference on Trends in Seri biotechnology (2008).** Held at Dept of Sericulture, Sri Krishna Devaraya University, Anantapur. A.P, on 27th to 29th March, 2008.

Awards received

- I was awarded the **Project Fellow Fellowship (2009-2012)** by University Grants Commission, New Delhi, India.
- I was awarded the **Senior Research Fellow (2014-2015)** by University of Agricultural Sciences, Dharwad, Karnataka, India.
- I was awarded the **Senior Research Fellow (2015)** by University of Agricultural Sciences, Dharwad, Karnataka, India

Research publications

Publications	Numbers
Full length Research Papers	: 07
Research Short notes	: ---
Books	: ---
Book chapters	: ---
Research abstracts	: 05
Popular articles	: ---
TV / Radio Programmes	: ---

List most important recent five publications

- ❖ **Mallikarjuna G**, Neetha NK , Manjunatha B and. Shyam kumar V. Functional proteins in silkworm *bombyx mori l* haemolymph: A mini review. *Indian journal of Science and Technology*. 2016 (accepted)
- ❖ Vootla SK, Lu MX, Kari N, **Gadwala M**, Lu Q. Rapid detection of infectious flacherie virus of the silkworm, *Bombyx mori*, using RT-PCR and nested PCR. *Journal of Insect Science* 2013. 13:120. Available online: <http://www.insectscience.org/13.120>
- ❖ **Mallikarjuna Gadwala**, Neetha N. Kari, Narayan Muger and Shyam Kumar V.* Effective solubilization procedure for analysis of silkworm haemolymph proteins by two-dimensional gel electrophoresis. *Applied Biochemistry and Biotechnology*. 2013. 169:1459–1466.
- ❖ **Mallikarjuna Gadwala**, Neetha N. Kari and Shyam Kumar V.* Protein precipitation strategies for Two dimensional electrophoretic analysis of silkworm (*B.Mori*) haemolymph proteins. *Global Journal of Applied Agricultural Research*. 2012. 2(1): 39-43.
- ❖ M. K. Suparna, **G. Mallikarjun**, S. S. Ingalhalli, V. Shyam kumar and a. A. Hooli. Role of antibacterial proteins in different silkworm Strains against flacherie. *The Bioscan*. 2011. 6(3): 365-369.
- ❖ Joy Harris Hoskeri, Krishna Venkatarangaiah., Santhosh Kondajji Hanumanthappa1, Shyam Kumar Vootla, **Mallikarjuna Gadwala**. CNS depressant activity of extracts from *Flaveria trinervia* Spring C. Mohr. *Phytopharmacology* 2011, 1(4) 100-107.
- ❖ Yanwen Wang, V. Shyam kumar, Neetha Kari and **Mallikarjun Gadwala**. Optimization of the conditions for RAPD analysis of Enterococci isolated from Silkworm *Bombyx mori*. *Current Biotica*. 2009. 3(2): 127-134.