

CURRICULUMVITAE

D. IMMANUAL GILWAX PRABHU, M.Sc, Ph.D.



ADDRESS FOR COMMUNICATION

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EDUCATION

Ph.D. (Biotechnology)	Bharathidasan University, Tiruchirappalli, India	March, 2014	Commended
M.Sc. (Immunol. & Microbiol.)	Madurai Kamaraj University, Madurai, India	April, 2006	First class
B.Sc. (Microbiology)	Madurai Kamaraj University, Madurai, India	April, 2004	First class

PROFESSIONAL EXPERIENCE

Research Scientist Department of Toxicology & Genetic Toxicology	Bioscience Research Foundation, Thiruvallur, Tamil Nadu, India	May, 2015 – Nov., 2015
Scientist – B Silkworm Breeding and Genetics (Biotechnology)	Central Tasar Research and Training Institute, Central Silk Board, Govt. of India, Ranchi, Jharkhand, India	Nov., 2015 – June, 2019
Scientist – C Silkworm Breeding and Genetics (Biotechnology)	Central Tasar Research and Training Institute, Central Silk Board, Govt. of India, Ranchi, Jharkhand, India	June, 2019 – Till date

AWARDS AND HONOURS RECEIVED

- Awarded Senior Research Fellow - 2010 (Senior Research Fellowship by Council of Scientific and Industrial Research) Government of India.
- Awarded Junior Research Fellow - 2009 in a project funded by the Department of Biotechnology, Government of India.
- Awarded Project Assistant - 2008 in a project funded by the Defence Research and Development Organization, Government of India.
- Best oral presentation award – 2017, National Symposium on “Recent Trends in Bio-Polymers” organized by Indian Institute of Natural Resins and Gums (IINRG), ICAR, Namkum, Ranchi, on 17 & 18th February 2017.

RESEARCH PUBLICATIONS

1. **Prabhu, D. I. G.**, R. S. Pandian and P. T. Vasan. (2007). Pathogenicity, antibiotic susceptibility and genetic similarity of environmental and clinical isolates of *Vibrio cholerae*. *Indian Journal of Experimental Biology*. (45) 817-823.
2. Vennison S.J, A. Vanniarajan, S. G. Sankar, P. T. Vasan and **D. I. G. Prabhu** (2007). Bacterial gene transfer in soil from a hospital environment. *Global Journal of Biotechnology*. 2(1)34-36.
3. Vasan, P. T, **D I. G. Prabhu** and R. S. Pandian (2008). Vector competence of *Musca domestica* Linn. with reference to the virulent strains of *Salmonella typhi* in bus stands and markets at Madurai, Tamil Nadu. *Current Biotica*. 2(2) 154-160.
4. Vasan, P. T, **D I. G. Prabhu** and R. S. Pandian (2008) Transmission of enteric pathogens by *Musca*

- domestica* in and around hospital environment. *Current Biotica*. 2(3) 359-364.
5. Anand, A.P, S. J. Vennison, S.G. Sankar, **D. I. G. Prabhu**, P.T. Vasana, T.Raghuraman and C.J. Geoffrey (2010). Isolation and characterization of bacteria from the gut of *Bombyx mori* that degrade cellulose, xylan, pectin and starch and their impact on digestion. *Journal of Insect science*. 10: 1–9.
 6. Vasana, P.T, P.S. Piriya, **D.I.G. Prabhu** and S.J. Vennison (2011). Cellulosic ethanol production by *Zymomonas mobilis* harboring an endoglucanase gene from *Enterobacter cloacae*. *Bioresource Technology*. 102: 2585 – 2589.
 7. Selvan, B.K, M. Revathi, P.S. Piriya, P.T. Vasana, **D.I.G. Prabhu** and S.J. Vennison (2013). Biodiesel production from marine cyanobacteria cultured in plate and tubular photobioreactors. *Indian Journal of Experimental Biology*. 51: 262 – 268.
 8. **Prabhu, D I. G**, S. G. Sankar, P. T. Vasana, P. S. Piriya, B. K. Selvan and S. J. Vennison (2013). Molecular characterization of mosquitocidal *B. sphaericus* isolated from Tamil Nadu, India. *Acta Tropica*. 127: 158-164.
 9. Venkatesh, S, D. E. Yazhini, **D.I.G. Prabhu** and S.J. Vennison (2014). Cloning and Expression of Cellulase Gene from *Trichoderma reesei* in to *Escherichia coli*. *Journal of Pure and Applied Microbiology*. 8(3): 2513 – 2518.
 10. Kamaraj, S., T. Pandiaraj, **D. I. G. Prabhu**, S. Kumari and A. K. Sinha (2017). Effect of soya protein enriched fortified feed of tasar silkworm and economical cocoon characters. *International Journal of Advance Biological Sciences*. 7(1): 61 – 64.
 11. Kamaraj, S., T. Pandiaraj, **D. I. G. Prabhu**, N. Vishwakarma and A. K. Sinha (2017). Comparative study on performance of tasar silkworm, *Antheraea mylitta*, drury under chawki garden and direct rearing method. *International Journal of Advance Biological Sciences*. 6(4): 2421 – 2425.
 12. Manjappa, **I. G. Prabhu**, N. Kumar and A.K. Sinha. 2018. Molecular Diversity of *Azotobacter* sp. Isolates from Rhizosphere of Tropical Tasar Silkworm Host Plants. *International Journal of Current Microbiology and Applied Sciences*. 7(7): 2800 – 2806.
 13. Baig, M.M., **I. G. Prabhu**, A. K. Rout, J. P. Pandey¹, K. B. Jena¹, V. Mittal, R. Ranjan, G. P. Singh and A. K. Sinha. 2018. Termite Diversity in Tasar Ecosystem of Jharkhand: A First Report. *Multilogic in Science*. 8: 117 – 119.
 14. Baig, M.M., T. Pandiaraj, A. K. Rout, Manjappa, **I. G. Prabhu**, C. Sinku, G. P. Singh and A. K. Sinha. 2018. Evaluation of Nutrient Status in Termite Mounds and Adjacent Soils Associated with Tasar Sericulture Ecosystem. *Journal of Entomology and Zoology Studies*. 6(5): 206 – 210.
 15. Kumar, N., **I. G. Prabhu**, Manjappa, A. K. Sinha and Alok Sahay. 2018. Development of RAPD-SCAR markers for the identification of *Antheraea mylitta* with high shell weight. *Journal of Entomology and Zoology Studies*. 6(6): 828 – 833.
 16. **Prabhu, I. G.**, S. J. Vennison, P. T. Vasana and E. Kathiresan. 2018. Genetic characterization of native *Bacillus thuringiensis* strains isolated from Tamil Nadu, India. *Biosci. Biotech. Res. Comm*. 11(4): 587-594.
 17. **Prabhu, I. G.**, M. Bakshi, Manjappa, M. M. Baig, P. P. Srivastava, Lokesh, N. Kumar and Alok Sahay. 2018. Differential Expression of Heat Shock Proteins during Heat Stress in Tropical Tasar Silkworm, *Antheraea mylitta*. *Int. J. Curr. Microbiol. App. Sci*. 7(12): 2451-2457.

MEMBERSHIP IN SOCIETIES

- Biotech Research Society, India (BRSI).
- Royal Society, United Kingdom.
- Science Advisory Board

TRAINING PROGRAMME

- Participated in seven days training programme on “DNA-Barcoding and Bioinformatics Applications in Entomology” organized by National Bureau of Agricultural Insects Resources (NBAIR), Bengaluru, from 25th February to 03rd March, 2019.

- Participated in one day National workshop on “Recent Advance in Molecular Biology Techniques” organized by CTR&TI, Ranchi and Himedia on 17th March, 2018.
- Participated in one day National Workshop on “By-products Utilization in Tasar Silk Industry” organized by Central Tasar Research and Training Institute, Ranchi on 7th October 2017.
- Exposure study programme on grainage activities and rearing performance, organized by CTR&TI, Ranchi at BSMTC, Kathikund for 21 days (05/07/2016 – 25/07/2016).
- Foundation training for newly inducted Scientist, organized by Central Silk Board at Banglore, Mysore and Ladohigarh for 16 days (22/02/2016 – 08/02/2016).
- Participated in one day National workshop on “Promotion of large scale tasar based livelihood under Mahila Kisan Sashaktikaran Pariyojana (MKSP)” held at CTR&TI, Ranchi on 29th August, 2018.
- Participated in two days National workshop on “Communication and Presentation Skills” held at CTR&TI, Ranchi on 10th and 11th September, 2018.
- State level workshop on Protein Purification (January 2007) conducted by GE Healthcare, Amershan, Chennai.
- Laboratory Training Programme for three weeks (June 2005) in the Department of serology & Molecular biology at Center for Research in Medical Entomology (CRME), Madurai.
- Intensive Practical Training course in Biotechnology for one week (May 2005) in The Biocentre of Oncophyta Labs & Shanmugam Foundation, Madurai.
- Laboratory Training Programme for one week (June 2003) in the Department of Microbiology in Meenakshi Mission Hospital & Research Center, Madurai.
- Laboratory Training Programme for three weeks (May 2003) in the Quality control Department in Pepsi Co India Private Limited, Paravai, Madurai.
- State level workshop on Instrumental Technology in Biotechnology (January 2003) conducted by Department of Biotechnology DG Vaishnav College, Arumbakkam, Chennai.

NATIONAL/INTERNATIONAL SEMINAR/SYMBOSIA ATTENDED/PAPERS PRESENTED

PAPERS PRESENTED

- Participated in three days National conference on “Harmony with Nature in Context of Biodiversity Conservation & Ecosystem Management (Harmony 2018)” organized by St. Xavier’s college, Ranchi and National Environmentalists Association, India on 28th to 30th October, 2018 and presented a research paper entitled, “Effect of High Temperature Induced Stress on Biochemical Profile of Tropical Tasar Silkworm, *Antheraea mylitta*”.
- Participated in two day International Conference on “Emerging Technologies, Systems and Applications” organized by Jharkhand Rai University, Ranchi on 21st and 22nd April, 2018 and presented a research paper entitled, “Sequence Characterized Amplified Region (SCAR) Markers Based Rapid Identification of Thermo-tolerant lines of *Antheraea mylitta*”.
- Participated in three days International Workshop on “8th International Conference on Wild Silk Moths” organized by Central Silk Board in Guwahati, Assam on 22nd to 24th January 2018 and presented a research paper entitled, “Development and Significance of RAPD-SCAR Markers Associated with Thermo-tolerance in Tropical Tasar Silkworm (*Antheraea mylitta*)”.
- Participated in National Symposium on “Recent Trends in Bio-Polymers” organized Indian Institute of Natural Resins and Gums, Namkum, Ranchi, on 17 & 18th February 2017 and presented a research paper entitled, “Heat induced changes in total protein, carbohydrate and heat stable esterase levels in the hemolymph of tropical tasar silkworm, *Antheraea mylitta* Drury”.
- Participated in the 2 day seminar on “Anaerobic digestion and renewable energy through microbes, held during January 13th -15th, 2009 organized by BITS_PILANI, Goa Campus and presented paper on “Cloning of Cellulase gene from a natural isolate of cellulolytic bacterium *Erwinia caratovora*”.
- Participated in the 3 day International seminar on “3rd International Congress on Bioprocesses in Food Industries (ICBF) 2008 & 5th Convention of Biotech Research Society of India(BRSI) 2008 organized by Osmania University, Hyderabad and Presented paper on “Development of Transgenic

Bacillus sphaericus for effective control of Dengue and Chikungunya vectors”.

- Participated in the 3 day Bangalore International exhibition and conference on Biotechnology (BIEC) held during 24th to 26th April, 2008 organized by the Vision Group of Bangalore, lead by Biocon, and Presented paper on “Antibiotic susceptibility of Environmental and Clinical Isolates of *Vibrio cholerae*”.
- Participated in the 4 day International seminar on “New Horizons in Biotechnology” held during 26th-30th November, 2007 organized by The Biotech Research Society (BRSI) and National Institute for Interdisciplinary Science and Technology (CSIR), Trivandrum, and Presented paper on “Ethanol production by *Erwinia carotovora* using plant and fruit wastes”.
- Participated in the 3 day International seminar on “Bioresources in the Development of Medicine” held during 20th-22nd September, 2007 organized by the Indian Association of Biomedical Scientists and National Facility For Marine Cyanobacteria (NFMC), Tiruchirappalli, and Presented paper on “Cellulose, xylan, pectin and starch degrading symbiotic bacteria isolated from the digestive tract of *Bombyx mori*”.
- Participated in the 2 day International conference on “Medical Arthropodology ” held during 1st & 2nd September, 2007 organized by the Centre for Research in Medical Entomology (Indian Council of Medical Research), Madurai and Presented paper on “Molecular diagnosis of dengue virus infections”.
- Participated in the 3 day International symposium on “Vectors and Vector borne diseases” held during 13th -15th October, 2006 organized by the Centre for Research in Medical Entomology (Indian Council of Medical Research) , Madurai and Presented paper on “Vector competence of *Musca domestica* with reference to the transmission of susceptible and resistance strains of *Vibrio cholerae*”.
- Participated in the 2 day regional seminar on “Mosquitoes, Microbes and Man” held during 30th and 31st January, 2006 organized by the PG Departments of Zoology and Immunology and Microbiology, The American College, Madurai and Presented paper on Prevalence and susceptibility status of *Vibrio cholerae* isolates.
- Participated and presented the following papers in the National seminar on Rural Biotechnology for sustainable development held at The Gandhigram Rural Institute, Gandhigram, Tamil Nadu during 19th February 2004.
 - Comparative efficacy of recommended antibiotics against the pathogens isolated from houseflies.
 - Existence of biodiversity in the microbial flora isolated from houseflies.
 - Ambient and Anthropogenic factors in enhancement of vector competence of houseflies.
 - Antibiotic activities of selected medicinal plants against oral and enteric pathogens isolated from houseflies

SEMINAR PARTICIPATED

- Participated in International seminar on Chromosome to Genome conducted by Centre for Cellular and Molecular Biology, Hyderabad on 3rd to 5th July 2007.
- Participated in International seminar on RNAi conducted by Indian Centre for Genetic Engineering and Biotechnology, Delhi on 26th and 27th November 2006.
- Participated in International seminar on HIV AND ISSUES conducted by IISC, Bangalore, March 2006.
- Participated in regional seminar on Vaccine production conducted by Y.U.P.Rao, Resource Person, Deputy Director, Pasteur Institute of India, Coonoor, organized by The American College, Madurai on 20th and 21st February 2004.
- Participated in Seminar on Emerging Trends in Basic Applied Biology, conducted by Dr. V. Samuel Raj Visiting Scientist Department of Microbiology, University of Pennsylvania, Philadelphia, U.S.A organized by The American College, Madurai, on 17th September 2004.

FACULTY DEVELOPMENT PROGRAMME

1. Participated in one week Faculty Development Programme on Emerging Trends in Biotechnology from 19-08-2013 to 25-08-2013, organized by the Department of Biotechnology, Bharathidasan Institute of Technology, Anna University, Tiruchirappalli-620024.
2. Participated in Faculty Development Programme, organized by Central Tasar Research and Training Institute, Ranchi for four days (17/02/2017 – 22/02/2017)

LIST OF RESEARCH PROJECTS

#	Title of the project	Funding agency	Duration From - To	Total approved cost of the project (Rs. In L)
1.	[ARP 4713] Isolation of thermo-tolerant line(s) of tasar silkworm <i>Antheraea mylitta</i> Drury through Molecular studies. (PI)	CSB	2016-2018	17.00
2.	[AIT 4727 (2)] Genetic characterization of tropical tasar silkworm, <i>A. mylitta</i> through single nucleotide polymorphism based molecular Barcode. (PI)	DBT	2018-2021	120.46
3.	[AIT 04002 SI] Selection of Stable Thermo-tolerant Line(s) of Tropical Tasar Silkworm <i>Antheraea mylitta</i> Through Developed SCAR markers. (PI)	CSB	2019-2022	19.00
4.	[AIE 04004 CN] Study on Existence of Tropical Tasar Silkworm Eco-races and their subsist places with the help of Geospatial Technology. (PI)	CSB	2020-2023	69.89
5.	[AIT 4727 (1)] Sequencing of Whole-Genome of Tasar Silkworm, <i>Antheraea mylitta</i> . (Co-I)	DBT	2018-2021	93.41
6.	[APS 04003 SI] Studies on the reproductive potential of Tasar Silkworm, <i>Antheraea mylitta</i> D with special reference to nutritional and mechanical indices. (Co-I)	CSB	2020-2023	13.50