Curriculum Vitae

Dr. RAJADURAI GOTHANDARAMAN
Ph.D. in Entomology
Research Associate
Department of Plant Biotechnology
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Tamil Nadu Agricultural University
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Profile

A versatile and professional graduate with wide ranging experience in a variety of techniques related to Agricultural Entomology, self-motivated, hardworking with keen to pursue a challenging career predominantly in the field of Agriculture, with zeal to learn new technologies that exploit my abilities to the maximum, while providing me exposure, sufficient responsibilities, independence of thought, share knowledge and an opportunity to learn in an environment, which promotes innovation.

Education and Qualification

Sl. No.	Course	Institution	Percentage of Marks/ OGPA	Year of Passing
1.	Ph.D. in Entomology	Agricultural College and Research Institute, Tamil Nadu Agricultural University (TNAU), Coimbatore, India	88.90	2018
2.	M.Sc. (Ag) in Agricultural Entomology	PAJANCOA&RI, Tamil Nadu Agricultural University (TNAU), Karaikal, India.	84.90	2013
3.	B.Sc. (Agriculture)	Faculty of Agriculture, Annamalai University, Chidambaram, India.	80.50	2011

ASRB National Eligibility Test : Qualified with 59 % in Agricultural Entomology

Fellowships/ Awards

- ✓ Prof. S. Robin Memorial Award for the best **Ph.D. thesis** research in the field of **Rice Molecular Biology** during the 2019 University convocation by Tamil Nadu Agricultural University
- ✓ **Best poster presentation** award in **Bioconcorrenza 2020** conducted by CPMB&B, TNAU
- ✓ **Best Brief Oral** presentation award for **Scientists** at the Golden Jubilee International Conference in 2021, organized by CPPS, TNAU, Coimbatore
- ✓ **Best PhD thesis award – 2022** in the International Conference organized by the Society for Biotic and Environmental Research (SBER)
- ✓ **SAAI-Outstanding Doctoral Thesis Award 2023** in the national seminar **CRMPTSA 2023** organized by the College of Agriculture, Tripura
- ✓ **Best Brief Oral** presentation award in the International Conference on OHPGPR 2025 organized by CPPS, TNAU, Coimbatore
- ✓ **Student Senior Research Fellowship** from the Department of Plant Biotechnology, CPMB&B, Tamil Nadu Agricultural University **for pursuing a Doctoral degree**

Research Experience

Research Associate (February 2020 to till date)

Project title : Cloning and characterization of novel biocidal protein genes from indigenous isolates of *Bacillus thuringiensis*

Institution : Bt laboratory, Department of Plant Biotechnology, Centre for Plant Molecular Biology & Biotechnology, TNAU, Coimbatore, India.

Supervisors :

1. **Dr. S. Mohankumar,** Professor (Entomology), Department of Plant Biotechnology, Centre for Plant Molecular Biology & Biotechnology, TNAU, Coimbatore, India.
2. **Dr. E. Kokiladevi,** Professor and Head, Department of Plant Biotechnology, Centre for Plant Molecular Biology & Biotechnology, TNAU, Coimbatore, India.
3. **Dr. V. Balasubramani,** Professor (Entomology), and Controller of Examinations, TNAU, Coimbatore, India

Responsibilities held:

- Identification and characterization of novel biocidal protein genes from more than 200 indigenous isolates of *Bacillus thuringiensis*
- Gene profiling through PCR and protein profiling through SDS-PAGE
- Cloning and characterization of *Bt* genes from effective *Bt* isolates
- Insect culturing *Plutella xylostella*, *Spodoptera litura*, *Spodoptera frugiperda*, *Helicoverpa armigera*, and *Aphis craccivora*
- Insect bioassay with *Bt* proteins against a different group of insects
- *Bt*-based formulation development (liquid and nano formulations)
- Whole genome sequencing of *B. thuringiensis* and analysis through bioinformatic tools

- Cloning, expression, and validation of *Bt* genes
- Involved in *Bt* lab infrastructure development and overall lab maintenance

Senior Research Fellow (October 2018 to February 2020)

Project Title : ICAR – Network project on transgenics in crops : Brown plant hopper and false smut resistance in rice

Institution : Transformation laboratory, Department of Plant Biotechnology, Centre for Plant Molecular Biology & Biotechnology, TNAU, Coimbatore, India.

Supervisor :

Dr. D. Sudhakar, Professor (Biotechnology), Department of Plant Biotechnology, Centre for Plant Molecular Biology & Biotechnology, TNAU, Coimbatore, India.

Responsibilities held:

- Generated 82 putative transgenic rice events through *Agrobacterium*-mediated transformation of *indica* rice with RNAi technology targeting *CHS1* gene
- Maintenance of transgenic rice events in transgenic greenhouse
- Molecular and biochemical analysis of putative transgenic rice lines by GUS histochemical analysis, PCR, Southern blotting, and Real-time PCR
- Progeny advancement and screening of advanced generations of plants
- Testing the efficacy of transgenic rice lines against Brown plant hoppers
- Maintenance of laboratory and transgenic greenhouse
- Developed about 100 genome-edited rice lines through CRISPR/cas9 technology targeting rice Tungro disease
- Genome-edited plants were analyzed using green leaf hoppers (Tugro disease vector)
- Maintained insect cultures of brown plant hoppers and green leaf hoppers

Doctoral Thesis (August 2015 to June 2018)

Thesis title : Genetic engineering of rice against major lepidopteran pests

Institution : Transformation laboratory, Department of Plant Biotechnology, Centre for Plant Molecular Biology & Biotechnology, TNAU, Coimbatore, India.

Supervisors:

1. **Dr. N. Natarajan,** Professor (retired), Department of Agricultural Entomology, Centre for Plant Protection Studies, TNAU, Coimbatore, India.
2. **Dr. D. Sudhakar,** Professor, Department of Plant Biotechnology, Centre for Plant Molecular Biology & Biotechnology, TNAU, Coimbatore, India.

Responsibilities held:

- Generated about 220 transgenic rice events through *Agrobacterium*-mediated transformation of *indica* rice with a novel chimeric *cry2AX1* gene **(**developed by using the sequences of *cry2Aa* and *cry2Ac)*
- Maintenance of transgenic rice events in transgenic greenhouse
- Molecular and biochemical analysis of putative transgenic rice lines by GUS histochemical analysis, PCR, ELISA, Southern blotting
- Identification of Marker-free transgenic rice in T_1 generation through segregation analysis

- Progeny advancement and screening of advanced generations of plants
- Testing the efficacy of transgenic rice lines with *cry2AX1* gene against target insect pests (Rice leaf folder and yellow stem borer)
- Maintenance of laboratory and transgenic greenhouse

Senior Research Fellow (November 2013 to August 2014)

Project Title : Bioefficacy, Phytotoxicity, and effect on Natural enemies for Thiamethoxam 70 WS (as seed treatment) against insect pests of rice, corn, and sunflower
Institution : Department of Agricultural Entomology, Centre for Plant Protection Studies, TNAU, Coimbatore, India.
Supervisor : Dr. M. R. Srinivasan, Professor, Department of Agricultural Entomology, Centre for Plant Protection Studies, Tamil Nadu Agricultural University, Coimbatore, India.

Responsibilities held:

- Evaluated Thiamethoxam 70 WS (as seed treatment) against insect pests of rice and their effect on natural enemies with two different field trials.
- **Actively involved in Apiculture unit maintenance with Indian bees, Italian bees, little bees, and stingless bees' colonies**
- Assisted in the monthly one-day beekeeping training program (for 1 year)
- Prepared project report for all three trials (rice, corn, and sunflower)
- Assisted in conducting national-level symposium

Master's Thesis:

Project Title: Screening and management of rice stem borer in the coastal region of Karaikal, U.T. of Puducherry
Institution : Department of Agricultural Entomology, PAJANCOA&RI, Karaikal, U.T. of Puducherry, India.
Supervisor : **Dr. K. Kumar,** Professor, Department of Agricultural Entomology, PAJANCOA&RI, Karaikal, U.T. of Puducherry, India.

Responsibilities held:

- Screened 193 rice entries against yellow stem borer under field conditions
- Biochemical analysis of resistant rice entries to check the biochemical parameter responsible for the resistance.
- Conducted two different field trials with different modules to find the best management practices against yellow stem borer

Publications:

Research articles

Publications with impact factor

- **Rajadurai, G.**, Balasubramani, V., Raghu, R., Kokiladevi, E., and Mohankumar, S. (2025). Screening of native *Bacillus thuringiensis* isolates for activity against four

species of lepidopteran insect pests. *Biologia* (2025). https://doi.org/10.1007/s11756-025-01945-0. **(IF – 1.4)**

- Mohanty, P., **Rajadurai, G.,** Mohankumar, S., Balakrishnan, N., Raghu, R., Balasubramani V., and Sivakumar, U. (2025). Interactions between insecticidal cry toxins and their receptors. Curr Genet 71:9. https://doi.org/10.1007/s00294-025-01312-1 (**IF – 1.8**)
- **Rajadurai, G.,** Kalaivani, A., Sudhakar, D. Varanavasiappan, S., Kumar, K.K., Balakrishnan, N., Udayasuriyan, V., and Natarajan, N. (2024). Marker-free transgenic *Bt* rice engineered for resistance to yellow stem borer and leaffolder. Cereal Research Communications (2024). https://doi.org/10.1007/s42976-024-00604-5. (**IF: 1.6**)
- Vignesh, S., **Rajadurai, G.,** Raghu, R., Balakrishnan, N., Jayakanthan, M., Mohankumar, S. (2024). Potential applications of *Bacillus thuringiensis* Berliner in agriculture, medicine and environment. Plant Sci. Today, 11(sp4):01-20. https://doi.org/10.14719/pst.3977. (**IF – 0.7**)
- Anandakumar, S., Ranjith, S., Senthamilselvi, D., **Rajadurai, G.,** and Sivakumar, K. 2024. Foliar Application of Humic Acid on Growth and Biomass Improvement of Bok Choy and Red Leaf Lettuce. Plant Sci. Today, 11(2) : 2435. https://doi.org/10.14719/pst.2435. (**IF – 0.7**).
- Eniya, A., Balasubramani, V., Murugan, M., Raveendran, M., Pugalendhi, L., Raghu, R., **Rajadurai, G.,** and Kokiladevi, E. 2024. Characterization and Evaluation of Native *Bacillus thuringiensis* Isolate T121 Toxic to *Henosepilachna vigintioctopunctata* (Coleoptera: Coccinellidae)1. Journal of Entomological Science, 60(2). https://doi.org/10.18474/JES24-14. (IF – 0.7).
- **Rajadurai, G.,** Sudhakar, D., Varanavasiappan, S., Balakrishnan, N., Udayasuriyan, V., and Natarajan, N. 2023. Adult oviposition preference and larval performance of *Cnaphalocrocis medinalis* Guenee (Pyralidae: Lepidoptera) on transgenic Bt rice. *Int J Trop Insect Sci*. 43: 1037-48. https://doi.org/10.1007/s42690-023-01026-2. (**IF: 1.2**)
- **Rajadurai, G.**, Balasubramani, V., Tamilnayagan, T., Kokiladevi, E., and Mohankumar, S. 2022. Molecular characterization and toxicity evaluation of indigenous *Bacillus thuringiensis* isolates against key lepidopteran insect pests. *Egyptian Journal of Biological Pest Control*, 32: 143. https://doi.org/10.1186/s41938-022-00639-y. (**IF : 2.4**)
- Yaiphabi Kumam, **Rajadurai, G.,** Kumar, K. K., Varanavasiappan, S., Malireddy K. Reddy, Krishnaveni, D., Satendra Kumar Mangrauthia, Raveendran, M., Arul, L., Kokiladevi, E. and Sudhakar, D. 2022. Genome editing of indica rice ASD16 for imparting resistance against rice tungro disease. *Journal of Plant Biochemistry and Biotechnology*,31: 880-893. https://doi.org/10.1007/s13562-021-00765-y (**IF : 1.9**)

Publications without impact factor

- Sharmitha, T., Balasubramani, V., Elaiyabharathi, T., Raveendran, M., Pugalendhi, L., and **Rajadurai, G**. 2024. Toxicity of *Bacillus thuringiensis* Isolates to the Cucurbit Fruit Fly *Zeugodacus cucurbitae*. Indian Journal of Entomology, 87(1):195–198. https://doi.org/10.55446/IJE.2024.2469
- Eniya, A., Balasubramani, V., Murugan, M., Raveendran, M., Pugalendhi, L., Nirmala, R.C., Raghu, R., and **Rajadurai, G.** 2024. In silico Analysis and Molecular Docking

of Cry3Aa Toxin with Coleopteran Specific Midgut Receptor of ADAM10/APN Receptors. Agricultural Science Digest, 44(6): 1140-1146. https://doi.org/10.18805/ag.D-5955.

- Mary Roshni, A., **Rajadurai, G.,** Sheela, V., Kokiladevi, E., Uma, D., Raveendran, M. and Mohankumar, S. 2024. Effect of elicitors and serotonin on polyphagous pest *Spodoptera litura* (Fab.). Biochem. Cell. Arch. 24, 959-963. DOI: https://doi.org/10.51470/bca.2024.24.1.959.
- Berryish Metha, C., **Rajadurai, G.,** Raghu, R., Jayakanthan, M., Kokiladevi, E., Murugan, M., and Balasubramani, V. 2023. Molecular Characterization and Nematicidal Activity of Indigenous *Bacillus thuringiensis* isolate T210. Biological Forum – An International Journal, 15(9): 274-281.
- Thilagarajan, R.R., Balakrishnan, N., **Rajadurai, G**., Sheela Venugopal, Raghu, R., and Kokiladevi, E. 2023. Characterization of indigenous *Bacillus thuringiensis* (Bt) isolates and screening for lepidopteran toxic insecticidal genes. The Pharma Innovation Journal, SP-12(9): 1691-1694.
- Babithaa, S., Kokiladevi, E., Balasubramani, V., **Rajadurai, G.,** Balachandar, D. and Mohankumar, S. 2022. Monitoring of target site mutation in insecticide binding receptors in *Spodoptera frugiperda* population of different locations in Tamil Nadu. The Pharma Innovation Journal, SP-11(5) : 844-853.
- Karuppaiyan, T., Balasubramani, V., Murugan, M., Raveendran, M., **Rajadurai, G.,** and Kokiladevi, E. 2022. Characterization and Evaluation of Indigenous Bacillus thuringiensis Isolate T352 against Fall Armyworm, *Spodoptera frugiperda* (J.E. Smith). Int J Plant Soil Sci, 34(21): 729-736. https://doi.org/10.9734/IJPSS/2022/v34i2131325.
- Yaiphabi Kumam, **Rajadurai, G.,** Kumar, K. K., Varanavasiappan, S., Raveendran, M., Manonmani, S., Gopalakrishnan, C., Arul, L., Kokiladevi, E. and Sudhakar, D. 2021. Adenine Base Editor Creates Novel Substitution Mutations in *eIF4G* Gene of Rice. *Madras Agric. J.,* https://doi.org/10.29321/MAJ.10.000548.
- Yaiphabi Kumam, **Rajadurai, G.,** Kumar, K. K., Varanavasiappan, S., Raveendran, M., Manonmani, S., Gopalakrishnan, C., Arul, L., Kokiladevi, E. and Sudhakar, D. 2021. Characterization of Substitution Mutations of eIF4G Gene Generated through Adenine Base Editors in Rice. *Madras Agric. 108(7-9): 307-312.* https://doi.org/10.29321/MAJ.10.000544.
- Maheesha, M., Balasubramani, V., Murugan, M., Raveendran, M., **Rajadurai, G.,** Tamilnayagan, T., Kokiladevi, E. and Sathiah, N. 2021. Characterization of indigenous *Bacillus thuringiensis* isolate T350 toxic to fall armyworm, *Spodoptera frugiperda*. The *Pharma Innovation Journal*, SP-10(12): 1809-1812.
- Maheesha, M., Balasubramani, V., Murugan, M., Raveendran, M., **Rajadurai, G.,** Tamilnayagan, T., Kokiladevi, E. and Sathiah, N. 2021. Characterization of native *Bacillus thuringiensis* isolates toxicity to fall armyworm, *Spodoptera frugiperda* (J.E. Smith). Journal of Biological Control 35(3) : 171 – 180. https://doi.org/10.18311/jbc/2021/28812.
- **Rajadurai, G.,** S. Varanavasiyappan, N. Balakrishnan, V. Udayasuriyan, D. Sudhakar and Natarajan, N. 2018. Development of Transgenic *indica* Rice with a Chimeric *cry2AX1* Gene against Leaffolder, *Cnaphalocrocis medinalis* (Guenee). *Int. J. Curr. Microbiol. App. Sci.* 7(07): 3242-3253.

- **Rajadurai, G.,** A. Kalaivani, S. Varanavasiyappan, N. Balakrishnan, V. Udayasuriyan, D. Sudhakar and N. Natarajan. 2018. Generation of insect resistant marker-free transgenic rice with a novel *cry2AX1* gene. Electronic Journal of Plant Breeding, 9 (2) : 723-732.
- **Rajadurai, G.** and K. Kumar. 2017. Evaluation of 193 rice entries against yellow stem borer, *Scirpophaga incertulas*. *Journal of Entomological Research,* 41(2): 133-144.
- **Rajadurai, G.** and K. Kumar, 2014. Impact of different modules on spiders in rice (*Oryza sativa* L.) ecosystem. *Journal of Biopesticides,* 7(Supp.): 10-15.
- Chakraborty, A., Kumar, K. and **Rajadurai, G.** 2014. Biodiversity of Insect Fauna in Okra (*Abelmoschus esculentus* (L.) Moench) Ecosystem. *Trends in Biosciences,* 7(16): 2206-2211.

Short notes:

- **Rajadurai, G.** and K. Kumar. 2017. Field evaluation of different modules against yellow stem borer, *Scirpophaga incertulas* and its effect on natural enemies in rice. *Entomon*, 42(3): 259-262.

List of Books / manuals published

- **Rajadurai, G.** 2024. Refreshing Guide on Entomology. Elite Publishing House. p. 124. ISBN : 978-93-5899-247-2; 978-93-5899-100-0 (PB).
- **Rajadurai, G.** and Vellaikumar, S. 2023. Laboratory manual: Basic Concepts in Laboratory Techniques. CPMB&B, TNAU, Coimbatore. p.119.
- **Rajadurai, G.** and K. Kumar. 2019. Biodiversity of Hymenopteran parasitoids. Lambert Academic Publisher. p. 121. ISBN : 978-613-9-45932-2.
- **Rajadurai, G.** and K. Kumar. 2014. Screening of rice entries against yellow stem borer. Lambert Academic Publisher. p. 76. ISBN : 978-3-659- 557 18-7.

Book chapter:

- **Rajadurai, G.,** and Mohankumar, S. 2025. Molecular approaches for Understanding Metabolic Pathways Development in insect Plant interaction and Deciphering Candidate Genes. In: Sree Rangasamy, S.R., Sivakumar Subbarayan (eds) next Generation Plant Breeding. Professional Prints New York, USA, pp. 683-766. (ISBN: 978-1-966695-28-8; eISBN: 978-1-966695-29-5).
- **Rajadurai, G.,** Varanavasiappan, S., Arul, L., Kokiladevi, E., and Kumar, K.K. 2024. Biofortification of Rice: Enhancing Nutritional Value by Genetic Manipulation. In: Tiwari, S., Singh, B. (eds) Harnessing Crop Biofortification for Sustainable Agriculture. Springer, Singapore. https://doi.org/10.1007/978-981-97-3438-2_6
- **Rajadurai, G.,** Varanavasiappan, S., Arul, L., Kokiladevi, E. and Kumar, K. K. 2023. Chapter 11. Insect Pest Management in Rice Through Genetic Engineering. In: Tiwari, S., Koul, B. (eds) Insect Pest Management in Rice Through Genetic Engineering. Springer Nature Singapore Pte Ltd., p. 31. https://doi.org/10.1007/978-981-99-5034-8_11.

- Parthasarathy, S., **Rajadurai, G.**, Thiribhuvanamala, G., and Imtiyaz, A.M. 2022. Diseases, Pests, and Disorders in Plum. Diagnosis and Management. In: Handbook of Plum Fruit (1st Edition). *CRC press*, p. 364. https://doi.org/10.1201/9781003205449.
- **Rajadurai, G.,** Tamilnayagan, T. and Nithya, P. R. 2020. The Recent Occurrence of Transboundary Insect Pests in India and Their Consequences. Pp – 459 -473. (ISBN : : 978-93-5437-486-9).
- Srinivasan, M. R., M. Kishan Tej, R. Aruna and **G. Rajadurai**. 2015. Impact of pesticides on honey bees and pollinators. In: Pesticide application in agro ecosystem – its dynamics and implications. TNAU press, Tamil Nadu Agricultural University, Coimbatore, India. Pp- 243-248. (ISBN: 978-93- 83799-26-8).

List of Book chapter published in Tamil

- **Rajadurai, G.,** Tamilnayagan, T., Balasubramani, V., Kokiladevi, E. and Mohankumar, S. 2020. *Bacillus thuringiensis* in biological pest management (in tamil). In: Velan Uyirnutpaviyal. *Agricultural scientific tamil society*, pp 36 – 41. (ISBN: 978-93-91853-00-6).
- **Rajadurai, G.** and K. Kumar. 2017. Field evaluation of different modules against yellow stem borer (in tamil). In: Poochiyiyal, 1st Edition. *Laser park publishing house*, Pp 337 – 340. (ISBN : 978-93-87314-06-1).

Popular articles:

- **Gothandaraman Rajadurai**. 2023. The sweetest friend : Honey bees. Bio. Res. Today, 5(9):706-709.
- **Gothandaraman Rajadurai**, Selvaraj Anandakumar, Rajasekaran Raghu. 2023. Pest management through RNAi approach. Bio. Res. Today, 5(9):700-702.
- **Rajadurai Gothandaraman**. 2023. Newer synthetic sex pheromone formulations and their application in IPM. Bio. Res. Today, 5(9):692-696.
- Selvaraj Anandakumar **and Gothandaraman Rajadurai**. 2023. Biological Control of Plant Parasitic-Nematodes by Plant Growth Promoting-Rhizobacteria. Plant Health Arch., 1(1) : 05-07.
- **Gothandaraman Rajadurai**, Selvaraj Anandakumar, Rajasekaran Raghu. 2023. *Bacillus thuringiensis* in Pest Management. Plant Health Archives, 1(1): 11-13.
- **Rajadurai Gothandaraman,** Anandakumar Selvaraj, and Umapathi Muniyappan. 2022. Entomopathogenic Microorganisms in Insect Pest Management. Biotica Research Today 4(12):827-829.
- **Rajadurai Gothandaraman**, Manivannan Annadurai, and Tamilnayagan Thangavel. 2022. Mechano-Communication in Insect Behaviour. Biotica Research Today 4(12):853-856.
- **Rajadurai Gothandaraman.** 2022. Genome editing system for insect pest management. *Biotica Research Today*, 4(8): 567 – 569.
- Nandhakumar, N., **Rajadurai, G.** and A. Manivannan. 2018. Role of growth retardants in fruit crops. *eSS Newsletter,* pp 3 - 10.

- Nandhakumar, N., **Rajadurai, G.** and A. Manivannan. 2018. Pre-Requirements for Flowering in Temperate Fruit Crops. *eSS Newsletter*, pp 11 - 15.
- **Rajadurai, G.,** A. Manivannan and N. Nandhakumar. 2017. Integrated Pest management for tomato pin worm, *Tuta absoluta*. *eSS Newsletter*, pp 11-17.
- Nandhakumar, N., **Rajadurai, G.** and A. Manivannan. 2017. Instrumentation Techniques for Post Harvest Studies. *eSS Newsletter*, pp 21 – 26.

NCBI GenBank submissions

S. No.	Details	Authors	Accession number and submission date	Year of release
1.	Whole genome shotgun sequence of *Bacillus thuringiensis* strain T407	**Rajadurai, G.,** Jayakanthan, M., Mohankumar, S., Balasubramani, V., Kokiladevi, E., Balakrishnan, N., Sudhakar, D., Raghu, R., Raveendran, M. and Senthil, N.	Accession number : JAQZZO000000000 Submitted on 27.01.2023	2024
2.	Whole genome shotgun sequence of *Bacillus thuringiensis* strain T210	Balasubramani, V., **Rajadurai, G.,** Jayakanthan, M., Mohankumar, S., Kokiladevi, E., Balakrishnan, N., Sudhakar, D., Raghu, R., Raveendran, M., Senthil, N. and Berryish Metha, C.	Accession number : JARACM000000000 Submitted on 16.02.2023	2024
3.	Whole genome shotgun sequence of *Bacillus thuringiensis* strain T381	**Rajadurai, G.,** Jayakanthan, M., Mohankumar, S., Balasubramani, V., Kokiladevi, E., Balakrishnan, N., Sudhakar, D., Raghu, R., Raveendran, M. and Senthil, N.	Accession number : JAWJKS000000000 Submitted on 16.10.2023	2025
4.	Whole genome shotgun sequence of *Bacillus thuringiensis* strain T28	**Rajadurai, G.,** Jayakanthan, M., Mohankumar, S., Balasubramani, V., Kokiladevi, E., Balakrishnan, N.,	Accession number : JAXAFN000000000 Submitted on 18.11.2023	2025

		Sudhakar, D., Raghu, R., Raveendran, M. and Senthil, N.		
5.	Whole genome shotgun sequence of *Bacillus thuringiensis* strain T356	**Rajadurai, G.,** Jayakanthan, M., Mohankumar, S., Balasubramani, V., Kokiladevi, E., Balakrishnan, N., Sudhakar, D., Raghu, R., Raveendran, M. and Senthil, N.	Accession number : JAXAFN000000000 Submitted on 18.11.2023	2025
6.	Whole genome shotgun sequence of *Bacillus thuringiensis* strain T419	Vignesh, S., **Rajadurai, G.,** Jayakanthan, M., Mohankumar, S., Balasubramani, V., Kokiladevi, E., Balakrishnan, N., Sudhakar, D., Raghu, R., Raveendran, M. and Senthil, N.	Accession number : JBHGBQ000000000	2025
7.	Whole genome shotgun sequence of *Bacillus thuringiensis* strain T30	Vignesh, S., **Rajadurai, G.,** Jayakanthan, M., Mohankumar, S., Balasubramani, V., Kokiladevi, E., Balakrishnan, N., Sudhakar, D., Raghu, R., Raveendran, M. and Senthil, N.	Accession number: JBINJT000000000	2025
8.	Whole genome shotgun sequence of *Bacillus thuringiensis* strain T377	Vignesh, S., **Rajadurai, G.,** Jayakanthan, M., Mohankumar, S., Balasubramani, V., Kokiladevi, E., Balakrishnan, N., Sudhakar, D., Raghu, R., Raveendran, M. and Senthil, N.	Accession number : JBICBZ000000000	2025
9.	Whole genome shotgun sequence of *Bacillus thuringiensis* strain T384	Vignesh, S., **Rajadurai, G.,** Jayakanthan, M., Mohankumar, S.,	Accession number : JBICCA000000000	2025

		Balasubramani, V., Kokiladevi, E., Balakrishnan, N., Sudhakar, D., Raghu, R., Raveendran, M. and Senthil, N.		
10.	Whole genome shotgun sequence of *Bacillus thuringiensis* strain T388	**Rajadurai, G.,** Jayakanthan, M., Mohankumar, S., Balasubramani, V., Kokiladevi, E., Balakrishnan, N., Sudhakar, D., Raghu, R., Raveendran, M. and Senthil, N.	Accession number : JBICCB000000000	2025
11.	Whole genome shotgun sequence of *Bacillus thuringiensis* strain CPMB4-2	**Rajadurai, G.,** Jayakanthan, M., Mohankumar, S., Balasubramani, V., Kokiladevi, E., Balakrishnan, N., Sudhakar, D., Raghu, R., Raveendran, M. and Senthil, N.	Accession number : JBIMPN000000000	2025
12.	Whole genome shotgun sequence of *Bacillus thuringiensis* strain CPMB5-1	**Rajadurai, G.,** Jayakanthan, M., Mohankumar, S., Balasubramani, V., Kokiladevi, E., Balakrishnan, N., Sudhakar, D., Raghu, R., Raveendran, M. and Senthil, N.	Accession number : JBINJV000000000	2025
13.	Whole genome shotgun sequence of *Bacillus thuringiensis* strain CPMB8-10	**Rajadurai, G.,** Jayakanthan, M., Mohankumar, S., Balasubramani, V., Kokiladevi, E., Balakrishnan, N., Sudhakar, D., Raghu, R., Raveendran, M. and Senthil, N.	Accession number : JBINJU000000000	2025
14.	Whole genome shotgun sequence of *Bacillus thuringiensis* strain T121	**Rajadurai, G.,** Eniya, A., Balasubramani, V., Jayakanthan, M., Mohankumar, S.,	Accession number : JBJDRT000000000	2025

		Kokiladevi, E., Raghu, R., Balakrishnan, N., Sudhakar, D., Raveendran, M. and Senthil, N.		
15.	Whole genome shotgun sequence of *Bacillus thuringiensis* strain T409	**Rajadurai, G.,** Jayakanthan, M., Mohankumar, S., Balasubramani, V., Kokiladevi, E., Balakrishnan, N., Sudhakar, D., Raghu, R., Raveendran, M. and Senthil, N.	JBJGVY000000000	2025
16.	GenBank submission of *Bacillus thuringiensis* strain 407 Vip3A (vip3A) gene, clone_1, complete cds.	**Rajadurai, G.,** Balasubramani, V., Mohankumar, S., Raghu, R. and Kokiladevi, E.	Accession number : OR658998 Submitted on 06.10.2023	2023
17.	GenBank submission of *Bacillus thuringiensis* strain T407_vip3A gene_Clone 2 in pET28, complete cds.	**Rajadurai, G.,** Balasubramani, V., Mohankumar, S., Raghu, R. and Kokiladevi, E.	Accession number : OR658997 Submitted on 06.10.2023	2023
18.	GenBank submission of *Bacillus thuringiensis* strain T60 Cry4Ba (*cry4Ba*) gene, complete cds	Sharmitha,T., Balasubramani,V., Raveendran,M., Kokiladevi,E. and Rajadurai,G.	PQ230998	2024
19.	GenBank submission of *Bacillus thuringiensis* strain T210 Cry14-like gene sequence, complete cds.	Berryish Metha, C., Rajadurai, G., Balasubramani, V., Mohankumar, S., Raghu, R. and Kokiladevi, E.	PQ724123	2025
20.	GenBank submission of *Bacillus thuringiensis* strain T210 Cry21-like gene sequence, complete cds.	Berryish Metha, C., Rajadurai, G., Balasubramani, V., Mohankumar, S., Raghu, R. and Kokiladevi, E.	PQ724124	2025

Patents/Copyrights registered

1. Ardhendu Chakraborty, Manoj Singh Sachan, Swarnali Bhattacharya and **Rajadurai, G.** 2024. AI based insect detection and notification device (Indian design no. 422462-001). The Patent Office, Government of India. https://search.ipindia.gov.in/DesignApplicationStatus/DesignEregister/index
2. Vignesh S., Mohankumar S., **Rajadurai G.**, Raghu R., Balakrishnan N., and Jayakanthan M. 2024. Microbial Pesticidal Protein Database (ROC No. SW-19770/2024). Copyright office, Government of India. (Registered)
3. Pravukalyan M., Mohankumar S., Murugan M., Balakrishnan N., Raghu R., Sivakumar U., **Rajadurai G.**, Vignesh S., Pawan K.D. 2024. Midgut Binding Receptors of Bt Toxin of Lepidoptera Database (Diary No. 32059/2024-CO/SW). Copyright office, Government of India. (Submitted)

Teaching/research guidance

- **Assisted in guiding project** entitled "Characterization of native Isolates of *Bacillus thuringiensis*", for **nine B. Tech (Biotechnology) students** under Student READY — Project Formulation, Execution, and Presentation Programme, BTB 403 (0+10).

- **Handled** the "PGS504- Basic concepts in laboratory techniques (0+1)" course for M.Sc. Molecular Biology and Biotechnology, and M.Sc. Bioinformatics students during the academic year 2022-23, 2023-24, and 2024-25.

Additional responsibilities

- Worked as **Residential Tutor** at Student's Hostel, Tamil Nadu Agricultural University, Coimbatore from **09.05.2019 to till date**

- Assisted in **organizing a national-level symposium** on Emerging Trends in Eco-friendly Insect Pest Management at the Department of Agricultural Entomology, TNAU, Coimbatore

- Assisted in the conduct of the **TNAU Inter collegiate tournament and Sports meet 2019-20** at TNAU, Coimbatore

- **Organizing committee member** for conducting Bio-entrepreneurship ecosystem at TNAU held on November 07 and 08, 2022.

- **Organizing committee member** for conducting a workshop on gene editing in agriculture: opportunities and enabling policies organized by TNAU and BCIL held on November 29, 2022.

- **Acting as specialty editor** (Agricultural Entomology) journal of current opinion in crop science.

- **Organizing committee member** for conducting Agri Pitchfest 2023 : innovate to change the future of food and agriculture organized by BIRAC E- YUVA, TNAU, Coimbatore on 20th December 2023.

- **Organizing committee member** for conducting Agri-tech Startup Business meet 2025 during 8 -12 February 2025, by Biotech Council for Establishment of Centre of Excellence in Biotechnology (COXBIT), CPMB&B, TNAU, Coimbatore.

Conference/ Symposium/Workshops

- ✓ Participated in the two days' workshop on " **Entrepreneurship development programme for farm graduates in Agri-business**" organized by department of Agricultural Economics, Faculty of Agriculture, Annamalai University held at Puducherry on 1st and 2nd November, 2010.
- ✓ Participated in the two days Training of "**Field Functionaries and Extension Workers"** organized by Regional Centre of Organic Farming, Bengaluru held at the PAJANCOA & RI, Karaikal, U.T. Puducherry on 25th – 26th September 2012.
- ✓ Participated and presented in the 4th Biopesticide International Conference - "**BIOCICON 2013**" held at Palayamkottai, Tamil Nadu, India from 28th – 30th November 2013.
- ✓ Participated and presented papers in the national Symposium on "**Emerging Trends in Ecofriendly Insect Pest Management**" held at Tamil Nadu Agricultural University, Coimbatore during 22nd – 24th January 2014.
- ✓ Participated in the National Symposium on "**Recent Advances in Molecular Biology**" held at Tamil Nadu Agricultural University, Coimbatore during 4th-5th March 2014.
- ✓ Participated in the National conference on " **Emerging challenges and opportunities in biotic and abiotic stress management**" organized by Society for scientific development in agriculture and technology, Meerut, Uttar Pradesh, India held during 13th and 14th December 2014 at Directorate of Rice Research, Rajendranagar, Hyderabad, Andra Pradesh, India.
- ✓ Participated and presented in the National level Technical Symposium on "**Bioconcorrenza'17 and PG biotechnology seminar**" during March 1st and 2nd, 2017 held at Tamil Nadu Agricultural University, Coimbatore, India.
- ✓ Participated in the National seminar on "**Enterprising mushroom biotechnology**" sponsored by UGC-SAP-DRS held at Department of Plant Pathology, Tamil Nadu Agricultural University, Coimbatore, India on 16th March 2017.
- ✓ Participated in the "**State level biosafety capacity building workshop**" organized by Tamil Nadu Agricultural University and Biotech Consortium India Limited held on March 23, 2018 at Tamil Nadu Agricultural University, Coimbatore, India.
- ✓ Participated in the "**Endeavours in biotechnology research and career prospects – Alumnus perpective** " organized by CPMB&B, Tamil Nadu Agricultural University held during 21st and 22nd December 2018 at Tamil Nadu Agricultural University, Coimbatore, India.
- ✓ Participated in the two day Indo-UK workshop on **"Plant Biologics and Immunodiagnostics – IV"** Organized by Plant genetic engineering laboratory,

Department of Biotechnology, Bharathiar University, Coimbatore held on 3rd and 4th November 2019.

- ✓ Participated and presented in the international seminar on **"Transboundary Pest Management"** held between March 4th and 5th , 2020 held at Department of Agricultural Entomology, Tamil Nadu Agricultural University, Coimbatore, India.
- ✓ Participated and presented in the National level Technical Symposium on **"Bioconcorrenza 2020 & PG biotechnology seminar"** during March 13th and 14th , 2020 held at Tamil Nadu Agricultural University, Coimbatore, India.
- ✓ Participated and presented in the **6th National Conference On Agricultural Scientific Tamil** held during 21 and 22nd December 2020.
- ✓ Participated and presented in the International Plant Physiology Virtual Symposium on "**Physiological Interventions for Climate Smart Agriculture (IPPVS 2021)**" held on 11th and 12th March 2021.
- ✓ Participated in International Workshop on **Advance Statistical Data Analysis Using SPSS** organized by Science Tech Institute, Lucknow, UP India from 21 to 27th September 2021.
- ✓ Participated in **Writeshop 2.0** by Madras Agricultural Students' Union held on 30th September 2021 at Tamil Nadu Agricultural University, Coimbatore, India.
- ✓ Participated in Ag'Omics 2021 : A Global Conference on "Agricultural Genomics - Progress and Prospects" organized by CPMB&B, TNAU, held from 1 to 3rd October 2021.
- ✓ Participated and presented in the International Conference on "**Global Perspectives in Crop Protection for Food Security" (GPCP 2021)"** held during 8-10th December 2021 at Tamil Nadu Agricultural University, Coimbatore, India.
- ✓ Participated in the National level Technical Seminar - **Bioconcorrenza 2022** held on 1st March 2022 at Tamil Nadu Agricultural University, Coimbatore, India.
- ✓ Participated in the Training programme on **virtual workshop : computational genomics** organized by TNAU and NCBS from 8 to 12th June 2022.
- ✓ Participated in the workshop on **Data analysis using R software** organized by the Centre for e-learning and Kerala Agricultural University from 21 to 25th June 2022.
- ✓ Participated in the Workshop on "**HPLC : Principles and applications in plant metabolomics**" organized by CPMB&B, TNAU on 14th and 15th July 2022.
- ✓ Participated in the **International Symposium on Plant Biotechnology (ISPB 2022)** held on 1st November 2022 at Madurai Kamarajar University, Madurai.
- ✓ Participated in the Workshop on **Gene Editing in Agriculture : Opportunities and Enabling Policies** organized by TNAU and BCIL on 29th November 2022.
- ✓ Participated in the National level Technical Seminar - **Bioconcorrenza 2024 "Genes to scenes : Crafting a sustainable future"** held on 29th February 2024 at Tamil Nadu Agricultural University, Coimbatore, India.
- ✓ Participated in the **National Conference on Integration of Multi-omics Approaches for Crop Improvement** held on 4th & 5th March, 2024 organized by CPMB&B, TNAU, Coimbatore.
- ✓ Participated in one day **seminar** on "**Genome Editing of Crop Plants**" held on 31.05.2024 organized by CoEB, TNAU, Coimbatore and M/s. Eppendorf India Pvt Ltd., Chennai at CPMB&B, TNAU, Coimbatore.
- ✓ Participated and presented research paper in the **International Conference on OHPGPR 2025** organized by CPPS, TNAU, Coimbatore held during February 19-21, 2025.

Membership in Scientific Society

- Life member of Madras Agricultural Students' Union (MASU), Coimbatore
- Life member of Agricultural Scientific Tamil Society, New Delhi
- Life member of the Society for Advancement of Agricultural Innovations (SAAI)
- Life member of the Society for Biotic and Environmental Research (SBER)

Research Areas of Interests:

- ✓ Insect Pest management in agricultural and horticultural ecosystem
- ✓ Host Plant Resistance study
- ✓ Insect – Host plant interaction
- ✓ Genome editing
- ✓ Plant genetic transformation
- ✓ Pest management through *Bt* protein and genes
- ✓ Plant-pollinators interaction
- ✓ Apiculture
- ✓ Bio pesticide formulation and evaluation

Experience in laboratory techniques

Entomological techniques

- ✓ Insect rearing and mass multiplication
- ✓ Insect behavioural studies
- ✓ *In vitro* and *in vivo* plant/insect bioassay
- ✓ Image analyzer (Leica), and compound microscope
- ✓ Beekeeping
- ✓ Field and laboratory experiments for bio-efficacy studies
- ✓ Isolation and characterization of *Bacillus thuringiensis*

Molecular biology techniques

- ✓ Isolation of nucleic acid (DNA, RNA and plasmids)
- ✓ PCR, Gene cloning, and bacterial transformation
- ✓ Gene expression in plants and *E. coli*
- ✓ Genome editing
- ✓ Southern Blotting
- ✓ Agarose Gel electrophoresis and SDS-PAGE
- ✓ ELISA
- ✓ Handling and operating molecular biology work-related instruments

Plant genetic engineering

- ✓ Plant Tissue Culture

- ✓ *Agrobacterium*-mediated genetic transformation of rice and tobacco
- ✓ Genome editing in rice
- ✓ Screening of transgenic plants by PCR, ELISA and Histochemical analysis (GUS staining)
- ✓ Tail PCR, Real time PCR and Southern blot hybridization

Bio-informatics proficiency

- ✓ Next Generation sequence analysis through various bioinformatic tools
- ✓ Sanger sequence alignment and analysis using various bioinformatic tools
- ✓ Molecular docking
- ✓ NCBI data retrieval and analysis
- ✓ Primer designing and basic knowledge of biological databases

Computer Skills

- ✓ Known to work on Operating Systems like Windows and Linux
- ✓ **Microsoft Office** – MS Word, MS PowerPoint, MS Excel, MS Publisher
- ✓ Statistical tools - AGRES, SPSS, R software, LeOra Polo plus and IRRISTAT

Personal skills

- ✓ Good team player, Well-organized, Capability to interpret and analyze experimental results, Dedicated and Effective stress management, Good communication in English
- ✓ Hardworking and exploring recent advances in plant sciences
- ✓ Dedication to work for crop improvement to support global agriculture and ensure food security
- ✓ Organized and handled practical sessions for undergraduate and postgraduate students
- ✓ Enthusiasm to write popular articles on blogs and support public understanding of science

DECLARATION

Hereby, I assure that the information furnished above is true to the best of my knowledge. If I get an opportunity to work in your concern, I assure that I shall discharge my duties to the fullest satisfaction of my employer and to the best of my ability.

Thanking you,

Yours sincerely
Sd/-
(Rajadurai, G.)

Contact Information of referees

Reference 1	**Dr. D. Sudhakar, Ph. D.,** Professor (Retired) Department of Plant Biotechnology Centre for Plant Molecular Biology and Biotechnology Tamil Nadu Agricultural University Coimbatore – 641 003, Tamil Nadu, India. **Contact No.** +91-9442624342 **E-mail:** dsudhakar@hotmail.com
Reference 2	**Dr. V. Balasubramani, Ph.D.,** Professor (Entomology) and Controller of Examinations Tamil Nadu Agricultural University Coimbatore – 641 003, Tamil Nadu, India. **Contact No.** +91-9751507200 **E-mail:** balasubramani.v@gmail.com
Reference 3	**Dr. S. Mohankumar** Professor (Entomology) Department of Plant Biotechnology Centre for Plant Molecular Biology and Biotechnology Tamil Nadu Agricultural University Coimbatore – 641 003, Tamil Nadu, India. **Contact No.** +91-9442224572 **E-mail:** smktnau@gmail.com
Reference 4	**Dr. E. Kokiladevi, Ph.D.,** Professor and Head Department of Plant Biotechnology Centre for Plant Molecular Biology and Biotechnology Tamil Nadu Agricultural University Coimbatore – 641 003, Tamil Nadu, India. **Contact No.** +91-9626357303 **E-mail:** cmkokila@yahoo.com
Reference 5	**Dr. N. Natarajan, Ph.D.,** Professor (Retired) Department of Agricultural Entomology Centre for Plant Protection Studies Tamil Nadu Agricultural University Coimbatore – 641 003, Tamil Nadu, India. **Contact No**. +91-9442001661**.** **E-mail:** natarajan_tnau@yahoo.com