

K. B. REBIJITH

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Nationality: Indian



EDUCATION

Dec 2010 – Oct 2015 **Doctor of Philosophy** **Biotechnology (Molecular Entomology)** **Supervisor: Dr. R. Asokan**
Department of Biotechnology, ICAR- Indian Institute of Horticultural Research, Bangalore, India

Thesis Title: Molecular approaches in identification, diversity and management of important insect vectors, *Thrips palmi* Karny (Thysanoptera) and *Aphis gossypii* Glover (Hemiptera)

BEST PH.D. THESIS IN ENTOMOLOGY – ‘AR WALLACE AWARD’ - 2016, from **ROYAL ENTOMOLOGICAL SOCIETY**, London, United Kingdom (http://www.royensoc.co.uk/about/latest_news.htm).

Jun 2006 – Aug 2008 **Master of Science** **Biotechnology** **Supervisor: Dr. A. Shankaravadivoo**
Bharathiar University, Hindustan College of Arts and Science, Coimbatore, India

Thesis Title: Cloning of Full-length vegetative insecticidal crystal protein gene (*vip3A*) from *Bacillus thuringiensis*

May 2002 – Apr 2006 **Bachelor of Science** **Biotechnology**
Mahatma Gandhi University, Al-Azhar College of Arts and Science, Kottayam, India

Jan 2008 – May 2008 **Post Graduate Diploma (Part-time) in Bioinformatics**
Infi-Tech Global Private Limited, Coimbatore, India

RESEARCH EXPERIENCE

Senior Scientist (Molecular Entomology) **PHEL - Entomology** **Dec 2017 – Till date**
Ministry for Primary Industries (MPI), Auckland, New Zealand

Postdoctoral Research Associate **Dept. of Physiology, Development and Neuroscience** **Mar 2016 – May 2017**
University of Cambridge, United Kingdom **Supervisor: Dr. T. J. Wardill**

Project Title: Understanding neural integration of colour and motion cues to advance vision research and crop protection

Using advanced genetics, specialized animal models, behavioral assays and two-photon brain activity imaging I aimed to understand the neural basis for colour discrimination in flies and the neural computation that lead to this perception.

- Rearing and maintenance of *D. suzukii* and many transgenic insect lines
- Transgene Assembly using Assembly PCR, Gibson Cloning and Golden Gate Cloning approaches
- Designed and developed transgenic plasmid constructs for *PiggyBac* mediated insect transgenesis
- Assembling a pipeline for two-photon brain activity imaging for colour discrimination in flies
- Sequencing of Rhodopsin (Rh-1 to Rh-6) from various strains of *Drosophila* species and transgenic flies

Research Associate **Bio-pesticide Laboratory, ICAR-IIHR, Bangalore, India** **Feb 2015 – Feb 2016**

- Insecticide Resistance studies on *Bemisia tabaci* Gennadius
- Kairomone studies on Sweet potato plants and its effects on Sweet Potato Weevil, *Cylas formicarius* (Fabricius)
- Next Generation Sequencing (Illumina-MiSeq) and sequence analysis for the discovery of small RNAs from various insect pests
- Developed bioinformatics pipeline for *in silico* identification and characterization of microRNAs from animals, insects and plants
- Validation of microRNAs using Stem-loop RT PCR, Real-Time Quantitative PCR and Northern Blot
- Artificial microRNA mediated gene silencing in *Spodoptera litura*
- DNA Barcoding of Tea Mosquito Bugs, Assassin Bugs and Mealybugs
- Molecular diversity studies on various sap-sucking insect pests viz. Mealybugs, Psyllids, Leafhoppers, etc.

Senior Research Fellow **Bio-pesticide Laboratory, ICAR-IIHR, Bangalore, India** **Jul 2009 – Feb 2015**

- Conducted field Surveys (2009-2015), collected and taxonomically identified insect pests of horticultural crops viz. Thrips, Aphids, Whiteflies, Fruit flies, Tea mosquito bugs, etc.
- Prepared slides, preserved insect specimen vouchers in ethanol for National (ICAR-IARI, PUSA) and IIHR reference collection
- Team Member of ‘Out Reach Program on Sucking Pests – Quarantine Insects in India’

PUBLICATIONS

Research Papers

2017

1. **K. B. Rebijith**, R. Asokan, H. Ranjitha Hande, Sunil Joshi, Siddharthan Surveswaran, V. V. Ramamurthy and N. K. Krishna Kumar. 2017. Reconstructing the macroevolutionary pattern of aphids (Hemiptera: Aphididae) employing nuclear and mitochondrial DNA sequences. *Biological Journal of the Linnean Society*. DOI: 10.1093/biolinnean/blx020
2. N. C. Naveen, Rahul Chaubey, Dinesh Kumar, **K. B. Rebijith**, Raman Rajagopal, Subrahmanyam Bhattiprolu and Subramanian Sabtharishi. 2017. Insecticide resistance status in the whitefly, *Bemisia tabaci* genetic groups Asia-I, Asia II-1 and Asia II-7 on the Indian subcontinent. *Nature Scientific Reports*, 7: 40634. DOI:10.1038/srep40634
3. B. N. Chaitanya, R. Asokan, T. Sita, **K. B. Rebijith**, P. Ram Kumar and N. K. Krishna Kumar. Silencing of JHEH and EcR Genes of *Plutella xylostella* (Lepidoptera: Plutellidae) Through Double Stranded RNA Oral Delivery. *Journal of Asia-Pacific Entomology*. <https://doi.org/10.1016/j.aspen.2017.03.020>

2016

4. **K. B. Rebijith**, R. Asokan, H. Ranjitha Hande and N. K. Krishna Kumar. 2016. The first report of miRNAs from a thysanopteran insect, *Thrips palmi* Karny using high-throughput sequencing. *Plos One*, 11(9): e0163635. DOI:10.1371/journal.pone.0163635
5. **K. B. Rebijith**, R. Asokan, H. H. Ranjitha, N. K. Krishna Kumar, V. Krishna, J. Vinutha and N. Bakthavatsalam. 2016. RNA interference of odorant binding protein 2 (OBP2) of the cotton aphid, *Aphis gossypii* (Glover), resulted in altered electrophysiological responses. *Applied Biochemistry and Biotechnology*, DOI: 10.1007/s12010-015-1869-7
6. B. N. Chaitanya, R. Asokan, **K. B. Rebijith**, N. K. Krishna Kumar and P. Ram Kumar. 2016. Molecular identification and diversity of Asian Citrus Psyllids using mtCOI gene sequences. *Pest Management in Horticultural Ecosystems*, 22 (1): 51-57.
7. K. Pradeepa, V. Krishna, Venkatesh, K Santosh, R Shimoga and **K. B. Rebijith**. 2016. Wound healing activity of *Delonix elata* stem bark extract and its isolated constituent quercetin-3-rhamnopyranosyl-(1-6) glucopyranoside in rats. *Journal of Pharmaceutical Analysis*, 6(6): 389-395. <http://dx.doi.org/10.1016/j.jpha.2016.05.001>

2015

8. **K. B. Rebijith**, R. Asokan, H. H. Ranjitha, B. S. Rajendra Prasad, V. Krishna and N. K. Krishna Kumar. 2015. Diet delivered dsRNAs for Juvenile hormone binding protein and Vacuolar ATPase-H implied their potential in the management of the melon aphid, *Aphis gossypii* (Glover) (Hemiptera: Aphididae). *Environmental Entomology*, 45(1): 268-75.
9. H. K. Roopa, R. Asokan, **K. B. Rebijith**, H. Ranjitha Hande, Riaz Mahmood and N.K. Krishna Kumar. 2015. Prevalence of a new genetic group, MEAM-K, of the whitefly, *Bemisia tabaci* (Hemiptera: Aleyrodidae) in Karnataka, India, as evident from mtCOI sequences. *Florida Entomologist*, 98(4): 1062-1071.
10. B. N. Chaitanya, R. Asokan, T. Sita, **K. B. Rebijith** and N. K. Krishna Kumar. 2015. Double-Stranded RNA-Mediated Silencing of Sodium Channel and Ultraspiracle Genes in *Aphis gossypii* (Hemiptera: Aphididae). *Annals of Entomological Society of America*, 109(1): 92-98.
11. R. Asokan, **K. B. Rebijith**, H. K. Roopa and N. K. Krishna Kumar. 2015. Delivery of dsGST in a non-invasive method is lethal to the whitefly, *Bemisia tabaci* (G.) (Hemiptera: Aleyrodidae). *Applied Biochemistry and Biotechnology*, DOI: 10.1007/s12010-014-1437-6.
12. R. Asokan, B. N. Chaithanya, **K. B. Rebijith**, N. K. Krishna Kumar, C. A. Viraktamath and V. V. Ramamurthy. 2015. CO-I based molecular identification of mango leafhoppers (Hemiptera: Cicadellidae) in India. *Indian Journal of Biotechnology*, 14: 260-263.
13. K. K. Srikumar, P. S. Bhat, T. N. Raviprasad, K. Vanitha, N. K. K. Kumar, **K. B. Rebijith** and R. Asokan. 2015. Distribution of major sucking pest, *Helopeltis* spp (Hemiptera: Miridae) of cashew in India. *Proceedings of Zoological Society*, DOI: 10.1007/s12595-013-0091-2

2014

14. **K. B. Rebijith**, R. Asokan, V. Krishna and N. K. Krishna Kumar. 2014. DNA Barcoding and Elucidation of Cryptic Diversity in Thrips (Insecta: Thysanoptera). *Florida Entomologist*, 97(4): 1328-1347.
15. H. K. Roopa, **K. B. Rebijith**, R. Asokan, Riaz Mahmood and N. K. Krishna Kumar. 2014. Isolation and identification of culturable bacteria from honeydew of whitefly, *Bemisia tabaci* (G.) (Hemiptera: Aleyrodidae). *Meta Gene*, DOI: 10.1016/j.mgene.2013.11.002
16. **K. B. Rebijith**, R. Asokan, V. Krishna and Ranjitha H. Hande. 2014. In Silico Prediction and Characterization of MicroRNAs from *Aphis gossypii* (Hemiptera: Aphididae). *Annals of Entomological Society of America*, 107: 521-531.
17. R. Ellango, R. Asokan, **K. B. Rebijith**, Riaz Mahmood and V. V. Ramamurthy. 2013. Cloning and sequence analysis of four important genes of *Plutella xylostella* (L.) (Lepidoptera: Yponomeutidae). *Entomological News*, 123(5): 348-356.
18. Asha Thomas, Anand Kar, **K. B. Rebijith**, R. Asokan and V. V. Ramamurthy. 2014. *Bemisia tabaci* (Hemiptera: Aleyrodidae) Species Complex from Cotton Cultivars: A Comparative Study of Population Density, Morphology, and Molecular Variations. *Annals of Entomological Society of America*, 107(2): 389-398.

19. V. Sridhar, A. K. Chakravarthy, R. Asokan, L. S. Vinesh, **K. B. Rebijith** and S. Vennila. 2014. New record of the invasive South American tomato leaf miner, *Tuta absoluta* (Meyrick). *Pest Management in Horticultural Ecosystems*, 20(2): 148-154.
20. R. Asokan, H. K. Roopa, **K. B. Rebijith**, H. H. Ranjitha and N. K. Krishna Kumar. 2014. In silico mining of micro-RNAs from *Spodoptera frugiperda* (Smith) (Lepidoptera: Noctuidae). *African Journal of Biotechnology*, 13(1): 32-43.

2013

21. **K. B. Rebijith**, R. Asokan, N. K. Krishna Kumar, V. Krishna, B. N. Chaitanya and V. V. Ramamurthy. 2013. DNA barcoding and elucidation of cryptic aphid species (Hemiptera: Aphididae) in India. *Bulletin of Entomological Research*, 103: 601-610.
22. R. Asokan, **K. B. Rebijith**, H. H. Ranjitha, H. K. Roopa and V. V. Ramamurthy. 2013. Prediction and characterization of novel microRNAs from brown plant hopper, *Nilaparvata lugens* (Stål) (Hemiptera: Delphacidae). *Entomological Research*, 43: 224-235.
23. R. Asokan, **K. B. Rebijith**, N. K. Krishna Kumar and M. Manamohan. 2013. Genetic diversity of tomato fruit borer, *Helicoverpa armigera* Hübner (Lepidoptera: Noctuidae) inferred from mitochondrial cytochrome oxidase-I (mtCO-I). *Pest Management in Horticultural Ecosystems*, 18(1): 29-34.
24. M. Mani, Sunil Joshi, M. Kalyanasundaram, C. Shivaraju, A. Krishnamoorthy, R. Asokan and **K. B. Rebijith**. 2013. A new invasive jack beardsley mealybug, *Pseudococcus jackbeardsleyi* on papaya in India. *Florida Entomologist*, 96(1): 242-245.
25. R. Asokan, **K. B. Rebijith**, Shakthi K Singh and V. V. Ramamurthy. 2013. Life stages independent identification of fruit flies (Diptera: Tephritidae) using 28srDNA sequences. *The Bioscan*, 8(1): 1-10.
26. R. Asokan, **K. B. Rebijith**, V. Krishna, N. K. Krishna Kumar, T. K. Jacob, S. Devasahayam, Kaomud Tyagi and E. S. Sujeesh. 2013. Molecular diversity of cardamom thrips, *Sciothrips cardamomi* (Ramakrishna) (Thripidae: Thysanoptera). *Oriental Insects*, 47(1): 55-64.
27. **K. B. Rebijith**, Asokan. R, Ranjitha H. H, V. Krishna and K. Nirmal Babu. 2013. In silico mining of novel microRNAs from Coffee (*Coffea arabica*) using expressed sequence tags. *Journal of Horticultural Science & Biotechnology*, 88: 325-337.
28. P. S. Bhat, K. K. Srikumar, T. N. Raviprasad, K. Vanitha, **K. B. Rebijith** and R. Asokan. 2013. Biology, behavior, functional response and molecular characterization of *Rihirbus trochantericus* Stal var. Luteous (Hemiptera: Redividae: Harpactorinae) a potential predator of *Helopeltis* spp (Hemiptera: Miridae). *Entomological News*, 123(4): 264-277.

2012

29. **K. B. Rebijith**, R. Asokan, N. K. Krishna Kumar, K. K. Sreekumar, V. V. Ramamurthy and P. Shivarama Bhat. 2012. DNA barcoding and development of species-specific markers for the identification of tea mosquito bugs (Miridae: Heteroptera) in India. *Environmental Entomology*, 41: 1239-1245.
30. **K. B. Rebijith**, R. Asokan, V. Krishna, N. K. Krishna Kumar and V. V. Ramamurthy. 2012. Development of species-specific markers and molecular differences in mitochondrial and nuclear DNA sequences of *Aphis gossypii* and *Myzus persicae* (Hemiptera: Aphididae). *Florida Entomologist*, 95(3): 674-682.
31. R. Asokan, **K. B. Rebijith**, K. K. Sreekumar, P. Shivarama Bhat and V. V. Ramamurthy. 2012. Molecular Identification and Diversity of *Helopeltis antonii* and *Helopeltis theivora* (Hemiptera: Miridae) in India. *Florida Entomologist*, 95(2): 350-358.
32. H. K. Roopa, N. K. Krishna Kumar, R. Asokan, **K. B. Rebijith**, Riaz Mahmood and Abraham Verghese. 2012. Phylogenetic analysis of *Trialeurodes* spp. (Hemiptera: Aleyrodidae), from India based on differences in mitochondrial and nuclear DNA. *Florida Entomologist*, 95(4): 1086-1094.
33. R. Ellango, R. Asokan, **K. B. Rebijith**, B. N. Chaithanya and Riaz Mohammed. 2012. Molecular variations in the Diamondback moth, *Plutella xylostella* (L.) (Yponomeutidae: Lepidoptera) as inferred from mitochondrial and ribosomal markers. *Indian Journal of Entomology*, 74(3): 241-245.
34. R. Asokan, S. N. Nagesha, M. Manamohan, N. K. Krishna Kumar, H. M. Mahadeva Swamy, **K. B. Rebijith**, M. N. Prakash and G. Sharath Chandra. 2012. Molecular diversity of *Helicoverpa armigera* Hübner (Noctuidae: Lepidoptera) in India. *Oriental Insects*, 46(2): 130-143.
35. R. Asokan, S. N. Nagesha, M. Manamohan, N. K. Krishna Kumar, H. M. Mahadeva Swamy, G. Sharath Chandra, M. N. Prakash, **K. B. Rebijith**, and R. Ellango. 2012. Common siRNAs for various target genes of the Fruit Borer, *Helicoverpa armigera* Hubner (Noctuidae: Lepidoptera). *Current Science*, 102(12): 1692-1699.

2011

36. **K. B. Rebijith**, R. Asokan. N. K. Krishna Kumar, V. Krishna and V. V. Ramamurthy. 2011. Development of species-specific markers and molecular differences in mtDNA of *Thrips palmi* Karny and *Scirtothrips dorsalis* Hood (Thripidae: Thysanoptera), vectors of tospoviruses (Bunyaviridae) in India. *Entomological News*, 122(3): 201-213.
37. R. Asokan, **K. B. Rebijith**, S. K. Singh, A. S. Sidhu, S. Siddharthan, Praveen. K. K, R. Ellango and V.V. Ramamurthy. 2011. Molecular identification and phylogeny of *Bactrocera* species (Diptera: Tephritidae). *Florida Entomologist*, 94(4): 1026-1035.
38. R. Asokan, **K. B. Rebijith**, N. K. Krishna Kumar, K. K. Srikumar and P. Sivarama Bhat. 2011. Development of DNA barcode and species-specific markers for *Helopeltis antonii* Signoret and *Pachypeltis maesarum* (Kirkaldy) (Heteroptera: Miridae), pests of Cashew in India. *Entomological News*, 122(2): 173-182.

Research Papers Under Revision

1. **K. B. Rebijith**, H. Ranjitha Hande, R. Asokan, Hemant Gupta and N. K. Krishna Kumar. 2016. Differential expression of miRNAs in response to dsRNA in *Spodoptera litura*. (**Major Revision** in *Nature Communications*).
2. **K. B. Rebijith**, R. Asokan, H. Ranjitha Hande and N. K. Krishna Kumar. 2016. The first report of miRNAome from Tea Mosquito Bug, *Helopeltis antonii* Signoret, using high-throughput sequencing. (**Major Revision** in *Journal of Pest Science*).
3. **K. B. Rebijith**, R. Asokan, H. Ranjitha Hande and N. K. Krishna Kumar. 2016. Identification, expression profiling and Validation of microRNAs in melon aphids, *Aphis gossypii* Glover. (**Major Revision** in *Insect Molecular Biology*).
4. **K. B. Rebijith**, R. Asokan, H. Ranjitha Hande, S. J. Gawande and N. K. Krishna Kumar. 2016. Identification, expression profiling and target gene analysis of microRNAs in the onion thrips, *Thrips tabaci* Lindeman (Thysanoptera: Thripidae), vectors of tospoviruses (Bunyaviridae). (**Accepted** in *Ecology and Evolution*).
5. H. H. Ranjitha, **K. B. Rebijith**, R. Asokan, H. K. Roopa, V. V. Ramamurthy and N. K. Krishna Kumar. 2017. In silico identification and characterization of novel microRNAs of Formosan subterranean termite, *Coptotermes formosanus* (Shiraki) (Isoptera: Rhinotermitidae). (**Minor Revision** in *Bioinformatics*).
6. Salam Rita Devi, Asha Thomas, **K.B. Rebijith** and V.V. Ramamurthy. 2016. Biology and integrated taxonomy of *Sitophilus oryzae* and *S. zeamais* (Coleoptera: Curculionidae) (**Accepted** in *Journal of Stored Products Research*)

Book Chapters

1. **K. B. Rebijith**, R. Asokan and N. K. Krishna Kumar. 2015. Molecular identification of mealybugs (Hemiptera: Pseudococcidae). *Mealybugs and their management in Agricultural and Horticultural crops* (Springer). DOI: 10.1007/978-81-322-2677-2_5
2. R. Asokan and **K. B. Rebijith**. 2015. RNAi in insect pest management. *Advanced Breeding strategies for biotic and abiotic stress tolerance in vegetable crops*. 150-155.
3. N. K. Krishna Kumar, D. K. Nagaraju, C. A. Viraktamath, R. Asokan, H. R. Ranganath, K. N. Chandrasekhara, **K. B. Rebijith** and T. H. Singh. 2012. Gall insects damaging eggplant and bell peppers in South India. *Advances in Genetics & Breeding of Capsicum and Eggplant*. 153-162.
4. Minoo Divakaran, **K. B. Rebijith**, M. K. Rajesh and K. Nirmal Babu. 2017. Spices. *Biotechnology of Plantation Crops*. 283-312.

Technical Bulletins

1. R. Asokan, N. K. Krishna Kumar, **K. B. Rebijith**, S. Devasahayam, T. K. Jacob, Kaomud Tyagi, E. S. Sujeesh. Molecular identification and diversity of cardamom thrips, *Sciothrips cardamomi* (Ramk.) (Thripidae: Thysanoptera). *IIHR Technical Bulletin Number: 37* (1). August, 2011.
2. R. Asokan, N. K. Krishna Kumar, **K. B. Rebijith**. Sequence submission for important sucking pests of horticultural crops. *IIHR Technical Bulletin Number: 37* (2). August, 2011.
3. R. Asokan, Sunil Joshi, N. K. Krishna Kumar, **K. B. Rebijith**. DNA Barcode for Important Sap Sucking Insect Pests of Horticultural Crops. *IIHR Technical Bulletin Number: 37* (3). August, 2011.
4. R. Asokan, V. V. Ramamurthy, N. K. Krishna Kumar, C. A. Viraktamath, **K. B. Rebijith**. Molecular identification of insects. *IIHR Technical Bulletin Number: 38*. August, 2011.

Abstracts in Symposia/Conferences

1. R. Asokan, **K. B. Rebijith** and N. K. Krishna Kumar. 2016. Differential expression of miRNAs in response to dsRNA of various target genes in Noctuidae. Symposium: Mechanisms Affecting the Efficiency of RNA Interference in Insects: XXV International Congress of Entomology, Orlando, Florida, USA. doi: 10.1603/ICE.2016.94537
2. **K. B. Rebijith**, R. Asokan, N. K. Krishna Kumar and V. Krishna. 2013. DNA barcoding and elucidation of cryptic species in aphids (Hemiptera: Aphididae) and Thrips (Thysanoptera: Thripidae). TS1-OR7. National Seminar on “Applications of Bioinformatics in Agriculture”, Department of Information Technology, Govt. of India. Page. 11.
3. **K. B. Rebijith**, R. Asokan, V. Krishna, H. H. Ranjitha and N. K. Krishna Kumar. 2013. In silico prediction and characterization of novel microRNAs from melon aphid, *Aphis gossypii* (Hemiptera: Aphididae), TS5-OR1. National Seminar on “Applications of Bioinformatics in Agriculture”, Department of Information Technology, Govt. of India. Page. 59
4. R. Asokan, H. H. Ranjitha, **K. B. Rebijith** and N. K. Krishna Kumar. 2013. Computational prediction and characterization of miRNAs from ground termite, *Coptotermus formosanus* Shiraki (Isoptera: Rhinotermitidae), TS5-OR3. National Seminar on “Applications of Bioinformatics in Agriculture”, Department of Information Technology, Govt. of India. Page. 61.
5. H. K. Roopa, R. Asokan, **K. B. Rebijith**, H. H. Ranjitha and N. K. Krishna Kumar. 2013. In silico mining of microRNAs from *Spodoptera frugiperda* (Smith), Lepidoptera: Noctuidae). TS5-OR5. National Seminar on “Applications of Bioinformatics in Agriculture”, Department of Information Technology, Govt. of India. Page. 63.

6. H. K. Roopa, **K. B. Rebijith**, R. Asokan, Riaz mahmood and N. K. Krishna Kumar. **2013**. Isolation and identification of culturable bacteria from honeydew of Whitefly, *Bemisia tabaci* (G.) (Hemiptera: Aleyrodidae). TS5-OR5. National Seminar on “Applications of Bioinformatics in Agriculture”, Department of Information Technology, Govt. of India. Page. 60.
7. R. Asokan, N. K. Krishna Kumar and **K. B. Rebijith**. **2011**. Advances in molecular taxonomy and insect pest management using RNAi. National Seminar on ‘Current Trends in Biotechnological Strategies for Eco-friendly Crop Protection. Page. 45.
8. R. Asokan, G. Sharath Chandra, M. Manamohan, N. K. Krishna Kumar, S. N. Nagesha, **K. B. Rebijith**, R. Ellango, B. N. Chaitanya and H. M. Mahadeva Swamy. **2011**. RNAi: A novel molecular tool in the management of the bollworm, *Helicoverpa armigera* Hubner (Lepidoptera: Noctuidae). National Seminar on ‘Current Trends in Biotechnological Strategies for Eco-friendly Crop Protection. Page. 53.
9. R. Asokan, N. K. Krishna Kumar, **K. B. Rebijith**, R. Ellango, H. M. Mahadevaswamy, S. N. Nagesha, B. N. Chaitanya and Veda Prasanna Devi. **2010**. Molecular genetic differences among populations of melon thrips, *Thrips palmi*, a vector of watermelon bud necrosis virus. Proc. Whitefly and Thrips Transmitted Viruses. Page. 59.
10. N. K. Krishna Kumar, R. Asokan, R. Venugopalan, K. N. Chandrasekhara and **K. B. Rebijith**. **2010**. Factors influencing transmission of tomato spotted wilt virus by the western flower thrips *Frankliniella occidentalis* (pergande). Proc. Whitefly and Thrips Transmitted Viruses. Page. 89.
11. Lissy Jose and **K. B. Rebijith**. **2004**. Human hair amino acids; a clue to diagnosis of Cancer. In the proceedings of International Conference on Biotechnology and Neuroscience, Centre for Neuroscience, CUSAT, Society of Biotechnologists & Society of Neurochemistry – India, Page. 74.

SELECTED TRAININGS AND WORKSHOPS

- **Hands on Training in Whole Genome Sequencing Data Analyses** at **BIONIVID Private Limited**, Bengaluru – Dec 2013.
- National Level Hands-on Training Workshop on ‘**Principles and Practices of Animal Taxonomy with Special Reference to Insects**’, at **Zoological Survey of India**, Calicut, India – Feb – Mar 2012.
- **Summer training** in the cancer treatment unit at **Erode Cancer Centre (ECC)** – May - Jun 2007.
- **Training** in Microbiology and Biochemistry at **PVS Hospital** - May 2005.

TECHNICAL SKILLS

- **Entomology:** Taxonomic identification, rearing, biocontrol, biodiversity, behaviour, insect-virus and plant-insect relationship studies, endosymbiont studies, insecticide resistance studies, kairomone studies against coleopteran insects, extensive field visits
- **Molecular Biology:** Isolation and analysis of DNA and RNA from cells/tissues of animals, plants, ancient and long-term preserved insect samples, miRNA isolation from animals and plants, plasmid DNA isolation, design of primers and probes, PCR, colony PCR, RT-PCR, qRT-PCR, stem-loop RT-PCR, inverse PCR, AGE, SDS-PAGE, Native PAGE, Molecular cloning, plasmid engineering, Assembly PCR, Gibson assembly, Golden Gate cloning, Next Generation Sequencing (MiSeq, HiSeq 2500-Illumina), Small RNA sequencing and validation, RAPD, RFLP, SSR, microsatellites, plant tissue culture, restriction digestion, Sanger sequencing and sequence analyses, DNA barcoding, Species-specific markers, Molecular identification of bacteria, Molecular diversity and phylogeny
- **Biochemistry:** Southern blot, Northern blot, Western blot, ELISA, Immunoblot analysis, Thin Layer Chromatography, Gas Chromatography
- **Information Technology and Statistics:** Operating System: Windows, Linux and Basic Perl; MS office, Adobe Photoshop, CorelDRAW, MATLAB, SAS and GraphPad Prism
- **Sequence Analyses and Bioinformatics:** Use of online genome browsers (eg: UCSC), NCBI, miRBase and BOLD database, BioEdit, MEGA, Geneious, Primer 3, OligoAnalyzer, PAUP, Mr.Bayes, S-DIVA, BEAST and BEAUti, Mr.Modeltest, DAMBE, dsCheck, SnapGene, LocalBLAST, BLAST, cutadapt, miRDeep, miRanalyzer, RNAfold, mfold, miRanda, PITA, psTarget, TargetScan, Circos, Blast-2-Go, NGS-QC-Toolkit, Bowtie, velvet-g & h, SSPACE, RepeatMasker, Prodigal, BLASTall, DAVID, KEGG for gene ontology, Wego, m-pileup, oases, Trinity, Top-hat
- **In vivo techniques:** Use, handling and breeding of insects and mouse models; administration of compounds

COMPETENCES

- **Business and Industrial Experience:** Industrial collaboration with Mahyco Industries for Thrips-Tospoviruses interaction studies, mainly dealt with Dr. K. S. Ravi. Discussed and obtained advices from Dr. K. S. Mohan, Monsanto India, for successful completion of various objectives in the ORP-SP project.

- **Leadership and Management:** Planned, led and managed my own research projects; trained MSc and PhD students and was involved in their day-to-day supervision; developed problem solving ability (experiments trouble-shooting).
- **Teamwork:** Successful internal and external collaborations led to several publications, both during my PhD and the postdoc; I enjoy meeting with colleagues for progress reports and share feedbacks about each other's research; taught/learned Bioinformatics, Biotechnology and Statistical techniques to/from colleagues and collaborators; established and completed fruitful collaborations.
- **Independence:** full responsibility to lead my research projects; identified new avenues for research, designed the projects and wrote the proposals independently; secured competitive funding to support my own projects; developed experimental assays that were new to the lab.
- **Communication:** Delivered oral presentations at many national and international conferences, some with up to hundreds of delegates; wrote scientific publications, PhD thesis, fellowships and grant applications; video- and teleconferencing; volunteered at public events, developed ability to communicate science to a non-specialist audience and serving as a reviewer for many research journals.
- **Creative thinking:** Succeeded at identifying and 'selling' cutting-edge ideas and research avenues to funding bodies, awarded with international research position; independently designed experiments and research methods.
- **Networking:** Frequent attendance to meetings/conferences; initiative in making connections with potential collaborators; participated in big collaborative network projects (e.g. Outreach Program on sucking pests).
- **Attention to detail:** accurate record keeping of experiments; use of checklists to organize my work and make sure that it is completed in a timely manner; complied with stringent Home Office regulations to perform experiments with animals; peer reviewed scientific publications; reviewed manuscripts/grants of colleagues to judge the science and check their quality.

NCBI ACCESSION NUMBERS/ BOLD PROJECTS

1. Generated **more than 1073 DNA barcodes (CO-I)** for various insect pests and more than **350 NCBI-GenBank** Accession numbers, consisting of **CO-II, EF-1 α** , and many **other gene sequences** from various **agriculturally important insect pests** of horticultural crops.
2. Developed **DNA barcode** for **more than 1000 different insect pests** of horticultural crops and maintaining **four projects** in International Barcode of Life Database (**iBOL**).

AWARDS

1. Best PhD thesis Award '**ALFRED RUSSEL WALLACE AWARD**' - **2016**, from **Royal Entomological Society**, London, United Kingdom.
2. Awarded '**POSTDOCTORAL RESEARCH ASSOCIATESHIP**' – **2016**, from Department of Physiology, Development and Neuroscience (PDN), **Cambridge University**, United Kingdom.
3. Won '**INTERNATIONAL BEST RESEARCH SCHOLAR AWARD**' - **2015** for the contributions in the **field of Molecular Entomology** on 8th December 2015, International Science Congress (ISC-2015) held at Tribhuvan University, Kathmandu, Nepal.
4. Won '**BEST PAPER AWARD**' in **National Seminar** on 'Applications of Bioinformatics in Agriculture', held at ICAR-CPCRI, Kasaragod, on November **2013**.
5. Won a '**SPECIAL AWARD**' on Oncology Research, in an **International Conference on Biotechnology & Neuroscience** on December **2004**; held at Cochin University of Science Technology, CUSAT, Cochin.

PERSONAL PROFILE

- Ability to form and work in a team and can easily handle the pressure
- Proven leadership ability
- Truthful and reliable person who carefully prioritize work and always try to exceed expectations
- Always act with honour and integrity
- Ability to take quality decision
- Proven ability in scientific trouble shooting
- Proven ability to initiate scientific projects from various facets in Entomology
- Proven track record in making sound judgment with an ability to think outside of the square
- Proven planning skills: SMART (Specific, Measurable, Attainable, Realistic and Timely)
- Effective time management with great respect for deadlines
- Excellent communication and presentation skills
- Open minded to new ideas and committed to self-improvement
- Attention to detail

HONOURS

- Admitted as a **Fellow** of International Science Congress Association (ISCA) – 2015.
- **Member** in **Royal Entomological Society (Mem-RES)**, London, United Kingdom.

Peer Recognition

- ✓ Member of the review panel of **BMC Genomics** (Springer)
- ✓ Member of the review panel of **Heredity** (Nature Publishing Group)
- ✓ Member of the review panel of **PlosOne** (Public Library of Science, ISSN: 1932–6203)
- ✓ Member of the review panel of **Insect Science** (Wiley)
- ✓ Member of the review panel of **Applied Entomology and Zoology** (Springer)
- ✓ Member of the review panel of **Molecular Ecology Resources** (Wiley)
- ✓ Member of the review panel of **Molecular Biology Reports** (Springer)
- ✓ Member of the review panel of **Florida Entomologist** (BioOne)
- ✓ Member of the review panel of **Meta Gene** (Elsevier)
- ✓ Member of the review panel of **CAB Reviews** (SJR)
- ✓ Member of the review panel of **Saudi Journal of Biological Sciences** (Elsevier)

MY WEBSITES

- **Google Scholar** - https://scholar.google.co.uk/citations?user=Hp_DW1cAAAAJ&hl=en
- **ResearchGate** - https://www.researchgate.net/profile/Rebijith_K_B
- **LinkedIn** - <https://uk.linkedin.com/in/rebijith-k-b-2476a443>
- **ORCID** - <http://orcid.org/0000-0003-2959-1345>

REFEREES

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2.	Dr. R. Asokan Principal Scientist Division of Biotechnology ICAR-Indian Institute of Horticultural Research (IIHR) Hessaraghatta Lake (PO), Bengaluru- 560089, India	asokanihr@gmail.com Mobile: +91 9164592474
3.	Dr. N. K. Krishna Kumar Ex-Deputy Director General (Horticultural Sciences), ICAR, India Regional Representative, South and Central Asia (Present) Bioversity International India, CGIAR New Delhi- 110 012, India	k.kumar@cgiar.org , Mobile: +91 8447284636
4.	Dr. Trevor J. Wardill BBSRC Research Fellow Department of Physiology, Development and Neuroscience Cambridge University Cambridge – CB2 3EG	tjw79@cam.ac.uk Mobile: +44 7914945555