



Dr. Dhiraj Saha

Professor
Department of Zoology
University of North Bengal
West Bengal, India

Research Interests:

- Tea Pest Biology and Ecology
- Insecticide Resistance Management (IRM) of Tea Pests
- Metabolic (Detoxifying) Enzymes activity in Tea Pests
- Genetic Diversity of Tea Pests
- Vector Biology
- Insecticide resistance in mosquito vectors
- Biochemical and molecular studies on insecticide resistance in mosquito vectors
- Phytochemical analysis of medicinal plants and its implementation on mosquito vector control.

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RajaRammohunpur, P.O. NBU, Siliguri-734013,
District – Darjeeling, West Bengal, India

Award/Medal :

2001	University Medal for securing First Class Second Position in B.Sc. Honours Examinations
2012	International Travel Support (ITS) to visit Bangkok, Thailand by University Grants Commission, India
2013.	International Travel Support (ITS) to visit Melbourne, Australia by Department of Science and Technology, India (Not Aailed)
2021.	“ <i>Prof. T. N. Ananthkrishnan Award for Insect Research</i> ” by Society of Medical Arthropodologist (SOMA) during 14 th International Conference of Medical Arthropodology on November 27, 2021.

Visit to abroad:

September, 2012	Kasetsart University, Bangkok, Thailand
January, 2018	Dhaka University, Dhaka, Bangladesh

Teaching and Research Experience:

November, 2006 to March, 2008	Assistant Professor (Stage 1) in Zoology from at Kurseong College, Kurseong, Darjeeling, West Bengal, India
March, 2008 to October, 2012	Assistant Professor (Stage 1), Department of Zoology, University of North Bengal
November, 2012 to October, 2017	Assistant Professor (Stage 2), Department of Zoology, University of North Bengal
November, 2017 to August, 2018	Assistant Professor (Stage 3), Department of Zoology, University of North Bengal
September, 2018 to August, 2021	Associate Professor, Department of Zoology, University of North Bengal
September, 2021---	Professor, Department of Zoology, University of North Bengal

Research Projects undertaken:

Sl. No.	Title of Projects	PI/Co-PI	Duration	Funding agency (Amount)
1.	Impact of pesticides used in tea plantations on arthropod pests of tea	Co- Investigator	Apr, 2008 to Mar, 2012	UGC SAP DRS-I (43.00 lac)
2.	Evaluating susceptibility level of the sucking pest, <i>Helopeltis theivora</i> Waterhouse (Heteroptera: Miridae) using biochemical parameters in the tea plantations of Darjeeling hill and adjoining plains.	Principal Investigator	Feb, 2011 to Jan, 2013	UGC (0.90 lac)
3.	Enzyme-based detection of susceptibility level in major sucking pests of tea, <i>Helopeltis theivora</i> Waterhouse (Hemiptera: Miridae) to commonly applied insecticides in Darjeeling foothills and plains	Co- Investigator	Jul, 2011 to Jun, 2014	UGC (11.06 lac)

4.	Advanced studies in the effect of pesticides on the target organism (tea pests) at the defense enzyme and molecular level	Co- Investigator	Apr, 2013 to Mar, 2018	UGC SAP DRS-II (65.00 lac)
5.	Host plant-based variation in fitness traits and major detoxifying enzymes activity in <i>Empoasca flavescens</i> Fabricius (Cicadellidae: Hemiptera), an emerging sucking pest of tea in sub Himalayan tea plantations of north east India.	Principal Investigator	Apr, 2013 to Mar, 2014	University Research Grant (0.75 lac)
6.	Genetic diversity of <i>Helopeltis theivora</i> (Miridae: Hemiptera) through RAPD-PCR (Randomly Amplified Polymorphic DNA- Polymerase Chain Reaction), a major sucking insect pest of tea from sub Himalayan tea plantations of Darjeeling hill and adjoining plains of Terai and the Dooars.	Principal Investigator	Apr, 2014 to Mar, 2015	University Research Grant (0.75 lac)
7.	Study of target site resistance through kdr mutation screening in <i>Aedes</i> and <i>Culex</i> mosquitoes from West Bengal, India	Principal Investigator	Nov, 2019 To Oct, 2022	DST-SERB (39.95 lac)
8.	Phytochemical profiling of <i>Xanthoxylum oxyphyllum</i> leaf extracts evaluation of their oviposition deterrent, ovicidal, larvicidal and pupicidal activity against <i>Culex sp</i> and <i>Aedes sp</i> .	Principal Investigator	Apr, 2020 to Mar, 2021	University Research Grant (1.50 lac)

Ph.D. awardee:

Sl. No.	Name	Tenure of work	Title of research work
1	Dr. Minu Bharati	01.07.2015 to 30.09.2019	<i>“Insecticide susceptibility status and biochemical mechanisms involved in resistance development of major Dengue vector from sub-Himalayan West Bengal, India”</i>
2.	Dr. Priyanka Rai	02.02.2017 to 28.09.2021	<i>“Study of resistance and underlying mechanisms against common insecticides in <i>Culex quinquefasciatus</i> Say, from different districts of Northern part of West Bengal, India”</i>

M.Phil. Awardee

<i>Sl. No.</i>	<i>Name</i>	<i>Tenure of work</i>	<i>Title of research work</i>
1.	Mr. Bhaskar Paul	January, 2019 to July, 2021	<i>“Study of soil arthropod fauna from different agro-ecosystem under various management practices from Sub-Himalayan West Bengal”</i>

Research Scholars registered/working for Ph.D. Programme:

<i>Sl. No</i>	<i>Name</i>	<i>Designation</i>	<i>Date of joining</i>	<i>Area of research work</i>
1.	Abhisekh Subba	<i>Research Scholar (UGC)</i>	12.09.2017	<i>Screening and characterization of extracts from few sub-Himalayan plants having mosquitocidal properties against different developmental stages of Aedes sp. and Culex sp.</i>
2.	Prerana Bhujel	<i>Research Scholar (UGC)</i>	24.12.2019	<i>Studies on insecticide susceptibility and biological fitness cost(s) in Culex quinquefasciatus Say after selection in pyrethroid(s) through successive generations.</i>
3.	Nilu Limboo	<i>Research Scholar (UGC)</i>	24.12.2019	<i>Biological fitness, biochemical and molecular changes associated with pyrethroid selection in Aedes sp.</i>
4.	Manas Pratim Modak	<i>Research Scholar (DST-SERB)</i>	21.01.2020	<i>Studies on the mutation(s) of voltage gated sodium ion channel (vgsc) associated with organochloride and pyrethroid resistance in Aedes and Culex mosquitoes from different districts of northern part of West Bengal, India.</i>
5.	Prapti Das	<i>Research Scholar (UGC)</i>	03.09.2020	<i>Study on the effects of synthetic pyrethroids on the expression of few cytochrome P₄₅₀ monooxygenase of Aedes mosquitoes from northern part of West Bengal</i>

6.	Abhirup Saha	Research Scholar (UGC)	15.07.2021	Analyzing the expression profile of major detoxifying genes in relation to insecticide resistance in <i>Culex</i> mosquitoes.
7.	Subhajit Das	Research Scholar (UGC)	15.03.2022	Study on Carboxylesterase and Acetylcholinesterase mediated insecticide resistance against organophosphate(s) in major dengue vectors(s) from the northern part of West Bengal.
8.	Debayan Raha	Research Scholar (CSIR)	19.10.2022	Study on the effect of temperature on susceptibility to synthetic insecticides, activity of metabolic detoxifying enzyme(s) and expression pattern of different heat shock proteins in <i>Aedes</i> mosquito(s) from the sub-Himalayan West Bengal, India.

Research Publications

1.	Limboo, N. and Saha, D. 2023 . Assessment of Lambda-cyhalothrin Toxicity on the Developmental and Reproductive Fitness of Dengue Vector, <i>Aedes albopictus</i> (Skuse) and the Associated Changes in the Activity of Insecticide Detoxifying Enzymes. Journal of Communicable Diseases , 55(1), pp.1-9.			
2.	Bharati, M., Rai, P. and Saha, D. 2022 . Evaluation of Temephos resistance and major insecticide detoxifying enzyme activities among different <i>Aedes albopictus</i> populations from sub-Himalayan West Bengal, India. <i>Journal of Medical Arthropodology & Public Health</i> 2(2) : 33-49.			
3.	Modak, M.P. and Saha, D. 2022 . First report of F1534C kdr mutation in deltamethrin resistant <i>Aedes albopictus</i> from northern part of West Bengal, India. Scientific Reports , 12(1), p.13653. Impact Factor 4.997			
4.	Rai, P. and Saha, D. 2022 . Variation of major insecticide detoxifying enzymes' activity in <i>Culex quinquefasciatus</i> from northern West Bengal, India. International Journal of Tropical Insect Science DOI: https://doi.org/10.1007/s42690-022-00768-9 (Published on 26 th February, 2022) Impact Factor 0.774 .			
5.	Saha, A. and Saha, D. 2021 . Mosquito diversity and their larval habitats from the northern part of West Bengal. <i>International Journal of Mosquito Research</i> 8(6) :48-52.			
6.	Bharati, M., and Saha, D. 2021 . Insecticide resistance status and biochemical mechanisms involved in <i>Aedes</i> mosquitoes. <i>Asian Pacific Journal of Tropical Medicine</i> 14(2) : 52-63. Medknow Publications. Impact Factor 1.94 .			
7.	Rai, P., Bharati, M. and Saha, D., 2020 . Insecticide resistance to Temephos and synthetic Pyrethroids in <i>Culex quinquefasciatus</i> Say from sub-Himalayan West Bengal, India. <i>International Journal of Tropical Insect Science</i> 40 : 809–816. Cambridge University Press, London, U.K. Impact Factor 0.854 .			

8.	Subba, A. Bharati, M., Rai, P., and Saha, D. 2020. Phytochemical composition of <i>Heracleum nepalense</i> D. Don fruit extracts and its activity against the larvae <i>Aedes albopictus</i> (Diptera: Culicidae). <i>International Journal of Tropical Insect Science</i> 40 : 373–383. Cambridge University Press, London, U.K.). Impact Factor 0.854.
9.	Rai, P., Bharati, M. and Saha, D. 2019. Assessment of insecticide resistance in <i>Culex quinquefasciatus</i> Say with first report on the presence of L1014F mutation from northern districts of West Bengal, India. <i>International Journal of Tropical Insect Science</i> 39 : 301–309. Cambridge University Press, London, U.K.). Impact Factor 0.854.
10.	Rai, P., Bharati, M., Subba, A. and Saha, D. 2019. Insecticide resistance mapping in the vector of lymphatic filariasis, <i>Culex quinquefasciatus</i> Say from northern region of West Bengal, India. <i>PLOS ONE</i> 14 (5): e0217706. https://doi.org/10.1371/journal.pone.0217706 . Impact Factor 3.24.
11.	Bharati, M., Rai, P. and Saha, D. 2019. <i>Insecticide resistance in Aedes albopictus Skuse from sub-Himalayan districts of West Bengal, India.</i> <i>Acta Tropica</i> 192 : 104-111. Elsevier Impact Factor 3.112.
12.	Bharati, M. and Saha, D., 2018. Multiple insecticide resistance in primary dengue vector, <i>Aedes aegypti</i> (Linn.), from dengue endemic districts of sub-Himalayan West Bengal, India. <i>PLOS ONE</i> 13 (9): e0203207. https://doi.org/10.1371/journal.pone.0203207 . Impact Factor 3.24.
13.	Bharati, M. and Saha, D. 2018. Assessment of insecticide resistance in primary dengue vector, <i>Aedes aegypti</i> (Linn.), from Northern districts of West Bengal, India. <i>Acta Tropica</i> 187 :78-86. Elsevier Impact Factor 3.112.
14.	Bharati, M. and Saha, D.2018. Differential expression of carboxylesterases in larva and adult of <i>Culex quinquefasciatus</i> Say from sub-Himalayan West Bengal, India. <i>International Journal of Tropical Insect Science</i> 38 (4):303-312. Cambridge University Press, London, U.K.). Impact Factor 0.854.
15.	Bharati, M. and Saha, D., 2017. Insecticide susceptibility status and major detoxifying enzymes activity in <i>Aedes albopictus</i> (Skuse), vector of dengue and chikungunya in Northern part of West Bengal, India. <i>Acta Tropica</i> , 170 , pp.112-119. Elsevier Impact Factor 3.112.
16.	Bharati, M., Saha, P. and Saha, D. 2016. Variation in Esterase Activity among Different <i>Aedes aegypti</i> L. Populations from the Dooars and Terai Regions of West Bengal, India. <i>Proceedings of Zoological Society</i> (July – Sep) 71 (3): 239-247. Springer-Verlag Publication, Netherlands).

17.	Saha, D. and Mukhopadhyay, A. 2016. Host plant-based variation in fitness traits and major detoxifying enzymes activity in <i>Scirtothrips dorsalis</i> Hood (Thripidae: Thysanoptera), an emerging sucking pest of tea from sub Himalayan tea plantations of northern part of West Bengal, India. <i>International Journal of Tropical Insect Science</i> . 36 (3): 106-118. Cambridge University Press, London, U.K.). Impact Factor 0.774.
18.	Kumar, B., Saha, D. and Mukhopadhyay, A. 2015. Enhancement of resistant ratio vis-a-vis defence-enzymes activity in tea mosquito bug, <i>Helopeltis theivora</i> Waterhouse (Hemiptera:Miridae) selected through exposure to sub-lethal dose of monocrotophos. <i>Proceedings of Zoological Society</i> (July-Dec 2015) 68 (2):184–188.
19.	Mukhopadhyay, A., Roy, S., Das, S. and Saha, D. 2013. Some stress factors in tea plantation of Sub-Himalayan Terrain of North Bengal vis-à-vis the changing pest scenario -an overview. <i>Two and a Bud</i> . 60 (2): 30-42.
20.	Saha, D. , Mukhopadhyay, A. and Bahadur, M. 2013. Variation in the activity of three detoxifying enzymes in major sucking pest of tea, <i>Helopeltis theivora</i> Waterhouse (Heteroptera: Miridae) from sub-Himalayan tea plantations of West Bengal, India. <i>Proceedings of Zoological Society</i> (July-Dec 2013) 66 (2):92–99. (Springer-Verlag Publication, Netherlands).
21.	Saha, D. and Mukhopadhyay, A. 2013. Insecticide resistance mechanisms in three sucking insect pests of tea with reference to North East India - an appraisal. <i>International Journal of Tropical Insect Science</i> . 33 (1): 46-70. (Cambridge University Press, London, U.K.). Impact Factor 0.774.
22.	Saha, D. , Mukhopadhyay, A. and Bahadur, M. 2012. Genetic diversity of <i>Empoasca flavescens</i> Fabricius (Homoptera: Cicadellidae), an emerging pest of tea from sub-Himalayan plantations of West Bengal, India. <i>Proceedings of Zoological Society</i> (July-Dec 2012) 65 (2): 126-131. (Springer-Verlag Publication, Netherlands).
23.	Saha, D. , Mukhopadhyay, A. and Bahadur, M. 2012. Effect of host plants on fitness traits and detoxifying enzymes activity of major sucking insect pest of tea, <i>Helopeltis theivora</i> (Heteroptera: Miridae). <i>Phytoparasitica</i> . 40 : 433-444. Impact Factor 1.32.
24.	Saha, D. , Roy S and Mukhopadhyay, A. 2012. Insecticide susceptibility and activity of major detoxifying enzymes in female <i>Helopeltis theivora</i> Waterhouse (Heteroptera: Miridae) from Sub-Himalayan tea plantations of North Bengal, India. <i>International Journal of Tropical Insect Science</i> . 32 (2): 85-93. (Cambridge University Press, London, U.K.) Impact Factor 0.774.

25.	Saha, D., Roy S and Mukhopadhyay, A. 2012. Seasonal incidence and enzyme-based susceptibility to synthetic insecticides in two upcoming sucking insect pests of tea. <i>Phytoparasitica</i> 40 : 105-115. (Springer-Verlag Publication, Netherlands).Impact Factor 1.32 .
26.	Saha, D., Mukhopadhyay, A. and Bahadur, M. 2010. Variation in Detoxifying Enzymes of Assam Thrips, <i>Scirtothrips dorsalis</i> Hood (Thysanoptera: Thripidae) from Organically and Insecticide Managed Tea Plantations. <i>NBU Journal of Animal Sciences</i> 4: 45-52. (ISSN 0975-1424).
27.	Saha, D. and Mukhopadhyay, A. 2008. Variation in Esterase activity of <i>Empoasca flavescens</i> Fabricius (Cicadellidae: Homoptera) in different tea Estates of Terai. <i>NBU Journal of Animal Sciences</i> 2(2): 39-41 (ISSN 0975-1424).
Books:	
1.	Saha, D. 2012. Insecticide Resistance Mechanisms in Sucking Insect Pests of Tea. Lambert Academic Publishing, GmbH and Co. KG, Dudweiler Landstraße 99, 66123 Saarbrücken, Germany (ISBN: 978-3-6594-24372-1).
Book Chapters:	
1.	Saha. D. and Rai, P. 2021. Insect and Mite Pests of Tea and their Integrated Bio-intensive Management. In: “Bio-intensive IPM for Commercial Crops” , A. Kumar, I D Shyamrao and Kumar, and S. Tamang (Eds.). Agrobios (India), Jodhpur, ISBN: 978-81-947480-4-5 .
2.	Saha. D. and Bharati, M. 2019. Insect Pests of Medical Importance and Their Management. In: “Commercial Entomology” , A. Kumar, N Kumar, and H. Chand (Eds.). New India Publishing Agency, New Delhi, ISBN: 978-93-87973-87-9 .
3.	Rai, P., Bharati, M. and Saha. D. 2018. Filariasis: its Manifestations, Epidemiology and Control Strategies. Open access ebooks. ISBN: 978-93-87500-10-5 .
4.	Bharati, M. and Saha. D. 2017. Mosquito Borne Diseases: Current Status and Control Approach in India in Vector-Borne Diseases & Treatment. Open access ebooks. ISBN: 978-93-87500-10-5 .
5.	Saha, D. 2016. Biochemical insecticide resistance in tea pests. In: ‘Insecticide Resistance’ Edited by Stanislav Trdan, InTech Europe, Rijeka, Croatia, ISBN 978-953-51-4591-2 . Published in March 2016.
6.	Saha, D. and Roy, S. 2012. Evaluation of Insecticide susceptibility and activity of three principal detoxifying enzymes in female <i>Helopeltis theivora</i> Waterhouse (Miridae: Heteroptera) from Sub-Himalayan tea plantations of North Bengal, India. In: “Proceedings of 2nd International Symposium on Biopesticide and Ecotoxicological Network (2ndISBioPEN)” . Department of Zoology, Kasetsart University, Bangkok, Thailand. pp. 387-400.

7.	Saha, D., Mukhopadhyay, A. and Bahadur, M. 2012. Variation in detoxifying enzymes activity in tea greenfly, <i>Empoasca flavescens</i> Fabricius (Homoptera: Jassidae) from sub Himalayan organic and conventional tea plantations. In: <i>“Proceedings of National Symposium on Biodiversity Status and Conservation Strategies with special Reference to North East India”</i> , Varatharajan, R. (Ed.). Centre for Advanced Studies, Department of Life sciences, Manipur University, Manipur, India. pp. 257-266. ISBN 978-81-923343-1-8.
<i>Participation in International/National/Conference/Symposia/Workshop:</i>	
1.	Training Programme on <i>“Computer Aided Learning Programme”</i> at Electronics Test and Development Centre Malda during 15 th - 29 th May 2006 under West Bengal Government Aided Teacher Training Programme.
2.	National Workshop on <i>“Bioinformatics”</i> at NBU Bioinformatics Facility, Department of Botany, University of North Bengal, Siliguri January 18 th – 20 th , 2008.
3.	Silver Jubilee Symposium(National) on <i>“Dimensions of Research Applications in Animal Sciences”</i> at Department of Zoology, University of North Bengal, Siliguri during December 2 nd – 3 rd , 2008.
4.	National Symposium on <i>“Pesticide stress on Target, Non-Target Organisms and Human Health”</i> at Department of Zoology, University of North Bengal, Siliguri during February 11 th – 12 th , 2010.
5.	National Conference on <i>“Evaluation of Biodiversity of Eastern Himalaya and Adjoining Plains”</i> at Department of Zoology, University of North Bengal, Siliguri during December 1 st – 4 th , 2010.
6.	National Symposium on <i>“Biodiversity Status and Conservation Strategies with special Reference to North East India”</i> at Department of Life Sciences, Manipur University, Manipur during March 17 th – 18 th , 2011.
7.	3 rd Congress on Insect Science <i>“Pest Management for Food Security and Environment Health”</i> at Department of Entomology, Punjab Agricultural University, Ludhiana, Punjab, India during April 18 th – 20 th , 2011.
8.	National Symposium on <i>“Biodiversity and Food Security: Challenges and Devising Strategies”</i> at Indian Institutes of Pulses Research (IIPR), Kanpur, India during December 10 th – 11 th , 2011.
9.	Workshop on <i>“User Awareness Programme on Access to E-Resources under N-LIST programme”</i> organized by University Library, University of North Bengal, and INFLIBINET Centre, Ahmedabad, at University of North Bengal, Siliguri, India during February 10 th , 2012.
10.	National Symposium on <i>“Anthropogenic Toxicants, Green Chemistry, Biodiversity and Sustainable Development: An Interdisciplinary Approach”</i> at Department of Zoology, P.D. Women’s College, Jalpaiguri during March 13 th -14 th , 2012.
11.	National Symposium on <i>“Research in Animal Sciences: Evaluation and Development”</i> at Department of Zoology, University of North Bengal, Siliguri during March 19 th – 20 th , 2012.

12.	National Seminar on <i>"Biodiversity and Sustainability vis-à-vis Economic Development in the northern parts of West Bengal"</i> at Raiganj Surendranath Mahavidyalaya, Raiganj, UD, West Bengal, India during August 26 th – 27 th , 2012.
13.	International Symposium on <i>"Biopesticide and Ecotoxicological Network (ISBioPEN)"</i> at Department of Zoology, Kasetsart University, Bangkok, Thailand during September 24 th -26 th , 2012.
14.	5 th International Science Conclave: A congregation of Nobel Laureates at Indian Institute of Information Technology, Allahabad, U.P. India, during December 8 th -14 th , 2012.
15.	4 th International Insect Science Congress (IISC) on <i>"Exploring the Incredible Insect World"</i> at University of Agricultural Sciences at Bangalore, India during February 14 th -17 th , 2013.
16.	National Symposium on <i>"Man, Animal and Environment Interaction in the Perspective of Modern Research"</i> at Department of Zoology, University of North Bengal, Siliguri, West Bengal, India, during March 8 th – 9 th , 2013
17.	6 th International Science Conclave: A congregation of Nobel Laureates at Indian Institute of Information Technology, Allahabad, U.P. India, during December 8 th -14 th , 2013.
18..	International Conference on Entomology at Department of Zoology and Environmental Sciences, Punjabi University, Patiala, Punjab, India, during February 21 th -23 rd , 2014.
19.	National Conference on Applied Zoology in Sustainable Development: an Update at Department of Zoology, University of North Bengal, Siliguri, West Bengal, India during 30 th January-2 nd February, 2015.
20.	22 nd West Bengal State Science and Technology Congress 2015 in Animal Science section at University of North Bengal, Siliguri, West Bengal during 28 th February- 1 st March 2015.
21.	22 nd West Bengal State Science and Technology Congress 2015 in Medical Science section at University of North Bengal, Siliguri, West Bengal during 28 th February- 1 st March 2015.
22.	<i>"CONEXION - An UGC sponsored University Industry Linkages Programme 2015"</i> at University of North Bengal, Siliguri, West Bengal during 3 rd March 2015.
23.	4 th Congress on Insect Science at Department of Entomology, Punjab Agricultural University, Ludhiana, Punjab, India during April 16 th -17 th , 2015.
24.	<i>"Science in Bengal"</i> a Satellite Conference of '22nd West Bengal State Science and Technology Congress 2015' held at University of North Bengal, Siliguri, West Bengal during June 3 rd - 4 th , 2015.
25.	UGC sponsored National seminar on <i>"Advances in Biology: Eastern Himalayan Perspective"</i> at Kalimpong College, Kalimpong, Darjeeling during October 3 rd – 4 th , 2015.
26.	National level Workshop on <i>"Contemporary laboratory and field courses in Zoological Science"</i> sponsored by Department of Higher Education, Government of West Bengal, organized by Department of Zoology, Acharya Prafulla Chandra Roy Government College, Siliguri, West Bengal, India during 22 nd November to 1 st December, 2015.

27.	UGC-CPE Assisted Inter Disciplinary (Science) National Seminar on “ <i>Frontiers in Science and Technology towards National Development</i> ” held at Acharya B.N. Seal College. Cooch Behar 736101, West Bengal during 10 - 11th April, 2016. Title of Presentation “ <i>RNAi Based Technology for Insect Pest Control: The Next Generation Insecticide</i> ” by Souromita Ghosh and Dhiraj Saha.
28.	1 st Regional Science and Technology Congress, Jalpaiguri Division, West Bengal, at Ananda Chandra College, Jalpaiguri, West Bengal, India, during 7 th – 8 th November, 2016. Title of Presentation “ <i>Biochemical and Genetic variability of Scirtothrips dorsalis Hood (Thysanoptera: Thripidae, an important sucking pest of tea from different tea plantations of sub-Himalayan West Bengal, India</i> ” by Dhiraj Saha.
29.	1st Regional Science and Technology Congress, Jalpaiguri Division, West Bengal, at Ananda Chandra College, Jalpaiguri, West Bengal, India, during 7 th – 8 th November, 2016. Title of Presentation “ <i>Activity of three major Insecticide detoxifying Enzymes in field population of Culex quinquefasciatus Say from Darjeeling district, West Bengal, India</i> ” by Prasanta Saha, Minu Bharati, Somnath Kundu and Dhiraj Saha
30.	1 st Regional Science and Technology Congress, Jalpaiguri Division, West Bengal, at Ananda Chandra College, Jalpaiguri, West Bengal, India, during 7 th - 8 th November, 2016. Title of Presentation “ <i>Variation of Major Insecticide Detoxifying Enzymes’ activity among different Aedes albopictus L. populations from three districts of sub-Himalayan West Bengal India</i> ” by Minu Bharati, Prasanta Saha, Somnath Kundu and Dhiraj Saha
31.	1 st Regional Science and Technology Congress, Jalpaiguri Division, West Bengal, at Ananda Chandra College, Jalpaiguri, West Bengal, India, during 7 th - 8 th November, 2016. Title of Presentation “ <i>Larvicidal activities of Piper nigrum L. (Piperaceae) leaf extracts against Culex quinquefasciatus Say (Diptera: Culicidae) from sub-Himalayan West Bengal India</i> ” by Somnath Kundu, Somobarna Roy, Minu Bharati, Prasanta Saha, and Dhiraj Saha.
32.	UGC sponsored conference Zoocon 2017: Animal science in 21 st century, at Department of Zoology, University of North Bengal, West Bengal, India during 11 th - 12 th February, 2017. Title of presentation “ <i>Insecticide susceptibility status and major detoxifying enzymes activity in Aedes albopictus (Skuse), vector of dengue and chikungunya in northern part of West Bengal, India</i> ” by Minu Bharati, Prasanta Saha, Somnath Kundu and Dhiraj Saha.
33.	UGC sponsored conference Zoocon 2017: Animal science in 21 st century, at Department of Zoology, University of North Bengal, West Bengal, India during 11 th - 12 th February, 2017. Title of presentation “ <i>Major insecticide detoxifying enzymes activity in field populations of Culex quinquefasciatus (Say), vector of lymphatic filariasis from Darjeeling district of West Bengal, India</i> ” by Prasanta Saha, Minu Bharati, Somnath Kundu and Dhiraj Saha.
34.	UGC sponsored conference Zoocon 2017: Animal science in 21 st century, at Department of Zoology, University of North Bengal, West Bengal, India during 11 th - 12 th February, 2017. Title of presentation “ <i>Activities of Piper nigrum L. (Piperaceae) leaf extracts against different larval stages of Culex quinquefasciatus Say (Diptera: Culicidae) from sub-Himalayan West Bengal, India.</i> ” by Somnath Kundu, Minu Bharati, Prasanta Saha and Dhiraj Saha.

35.	UGC sponsored conference Zoocon 2017: Animal science in 21 st century at Department of Zoology, University of North Bengal, West Bengal, India during 11 th - 12 th February, 2017. Title of presentation " <i>Exploration of natural enemies in managing tea pests in North Eastern India</i> " by Krishanu Dasgupta and Dhiraj Saha.
36.	24 th West Bengal State Science and Technology Congress 2017 at Science city, Kolkata, West Bengal, India during 28 th Feb - 1 st March 2017. Title of presentation " <i>Variation of major insecticide detoxifying enzymes' activity among different Aedes albopictus L. populations from three districts of sub-Himalayan West Bengal, India</i> " by Minu Bharati, Prasanta Saha, Somnath Kundu and Dhiraj Saha.
37.	24 th West Bengal State Science and Technology Congress 2017 at Science city, Kolkata, West Bengal, India during 28 th Feb - 1 st March 2017. Title of presentation " <i>Larvicidal activities of Piper nigrum L. (Piperaceae) leaf extracts against Culex quinquefasciatus Say (Diptera: Culicidae) from sub Himalayan West Bengal, India</i> " by Somnath Kundu, Somobarna Roy, Minu Bharati, Prasanta Saha and Dhiraj Saha.
38.	1 st International Zoology seminar on Concepts on Conservation and propagation of indigenous life forms in Eastern Himalayan region at Department of Zoology, Darjeeling Government College, Darjeeling, West Bengal, India during 12 th - 13 th May, 2017. Title of presentation " <i>Insecticide susceptibility status and underlying biochemical mechanisms among different Aedes albopictus S. populations from three sub-Himalayan districts of West Bengal, India</i> " by Minu Bharati, Priyanka Rai, Satarupa Dutta and Dhiraj Saha.
39.	1 st International Zoology seminar on Concepts on Conservation and propagation of indigenous life forms in Eastern Himalayan region at Department of Zoology, Darjeeling Government College, Darjeeling, West Bengal, India during 12 th - 13 th May, 2017. Title of presentation " <i>Insecticide susceptibility status in adult Culex quinquefasciatus Say, from different localities of Siliguri, India</i> " by Priyanka Rai, Minu Bharati, Satarupa Dutta and Dhiraj Saha.
40.	1 st International Zoology seminar on Concepts on Conservation and propagation of indigenous life forms in Eastern Himalayan region at Department of Zoology, Darjeeling Government College, Darjeeling, West Bengal, India during 12 th - 13 th May, 2017. Title of presentation " <i>Evaluation of Insecticide susceptibility in Culex quinquefasciatus larvae against temephos in siliguri sub divisional area, West Bengal, India</i> " by Satarupa Dutta, Minu Bharati, Priyanka Rai and Dhiraj Saha.
41.	2 nd Regional Science and Technology Congress, Siliguri Division, West Bengal, at Siliguri College, Siliguri, West Bengal, India, during 7 th - 8 th November, 2017. Title of Presentation " <i>Spatiotemporal variation in abundance and habitat preference of Aedes mosquitoes in northern part of West Bengal, India</i> " by Minu Bharati, Priyanka Rai and Dhiraj Saha.
42.	2 nd Regional Science and Technology Congress, Siliguri Division, West Bengal, at Siliguri College, Siliguri, West Bengal, India, during 7 th - 8 th November, 2017. Title of Presentation " <i>Insecticide susceptibility status in Culex quinquefasciatus Say, from different localities of Siliguri Township, West Bengal, India</i> " by Priyanka Rai, Minu Bharati and Dhiraj Saha.

43.	ISE-SFEC 2018, 18 th International congress of International Society for Ethnopharmacology & 5 th International Congress of the Society for Ethnopharmacology, India at Dhaka University, Dhaka, Bangladesh during 13 th - 15 th January, 2018. Title of presentation " <i>Larvicidal activity of medicinal plant extracts against Culex quinquefasciatus (Diptera - Culicidae)</i> " by Abhisekh Subba and Dhiraj Saha.
44.	25 th West Bengal State Science and Technology Congress, held at Science City Kolkata on 4 th - 5 th March, 2018. Title of presentation " <i>Insecticide susceptibility status in Culex quinquefasciatus Say, from different localities of Siliguri Township, West Bengal, India</i> " by Priyanka Rai, Minu Bharati and Dhiraj Saha.
45.	National Conference on Recent Trends in Zoological Research in North East India, held at North Eastern Hill University Shillong on 19 th - 20 th 2018. Title of presentation " <i>Multiple insecticide resistance in primary dengue vector Aedes aegypti Linn. from dengue endemic districts of sub-Himalayan West Bengal, India</i> " by Minu Bharati, Priyanka Rai, Abhisekh Subba and Dhiraj Saha.
46.	National Conference on Recent Trends in Zoological Research in North East India, held at North Eastern Hill University Shillong on 19 th - 20 th 2018. Title of presentation " <i>Assessing the larvicidal effect of aqueous extract of Zanthoxylum oxyphyllum and Artemesis vulgaris against Culex quinquefasciatus Diptera Culicidae</i> " by Abhisekh Subba, Minu Bharati, Priyanka Rai and Dhiraj Saha.
47.	National Conference on Recent Trends in Zoological Research in North East India, held at North Eastern Hill University Shillong on 19 th - 20 th 2018. Title of presentation " <i>Assessment of insecticide resistance of a major detoxifying enzyme in Culex quinquefasciatus populations from three districts of sub-Himalayan West Bengal, India</i> " by Priyanka Rai, Minu Bharati and Dhiraj Saha.
48.	India International Science Festival 2018, at Indira Gandhi Pratisthan, Lucknow on 6 th October 2018. Title of presentation " <i>Insecticide resistance and associated biochemical mechanisms in Culex quinquefasciatus populations from sub-Himalayan West Bengal, India</i> " by Priyanka Rai and Dhiraj Saha.
49.	India International Science Festival 2018, at Indira Gandhi Pratisthan, Lucknow on 6 th October 2018. Title of presentation " <i>Insecticide Resistance profiling in wild populations of Aedes albopictus Skuse from sub-Himalayan West Bengal, India</i> " by Priyanka Rai and Dhiraj Saha.
50.	3 rd Regional Science and Technology Congress, Siliguri Division, West Bengal, at Jalpaiguri Government Engineering College, Jalpaiguri, West Bengal, India, during 12 th - 13 th December, 2018. Title of Presentation " <i>Larvicidal activity of Heracleum wallichii D.C. against Aedes albopictus larva</i> " by Abhisekh Subba and Dhiraj Saha.
51.	3 rd Regional Science and Technology Congress, Siliguri Division, West Bengal, at Jalpaiguri Government Engineering College, Jalpaiguri, West Bengal, India, during 12 th - 13 th December, 2018. Title of Presentation " <i>Insecticide resistance in the wild population of Aedes albopictus Skuse from sub-Himalayan West Bengal</i> " by Minu Bharati and Dhiraj Saha.

52.	3 rd Regional Science and Technology Congress, Siliguri Division, West Bengal, at Jalpaiguri Government Engineering College, Jalpaiguri, West Bengal, India, during 12 th - 13 th December, 2018. Title of Presentation " <i>Insecticide resistance in Culex quinquefasciatus populations from Northern part of West Bengal India</i> " by Priyanka Rai and Dhiraj Saha
53.	Golden Jubilee International Conference on Trends in Zoology organised by Department of Zoology, University of Burdwan, West Bengal, India during 3 rd -4 th January, 2019. Title of presentation " <i>Spatial variation and Insecticide susceptibility status of Aedes albopictus against three major groups of insecticide in sub-Himalayan West Bengal, India</i> " by Minu Bharati and Dhiraj Saha.
54.	4 th Regional Science and Technology Congress, Siliguri Division, West Bengal, at Alipurduar College, Alipurduar, West Bengal, India, during 18 th – 19 th December, 2019. Title of Presentation " <i>Phytochemical composition of Zingiber montanum and its activity against larvae of Aedes albopictus Skuse and Culex quinquefasciatus Say</i> " by Abhisekh Subba and Dhiraj Saha.
55.	4 th Regional Science and Technology Congress, Siliguri Division, West Bengal, at Alipurduar College, Alipurduar, West Bengal, India, during 18 th - 19 th December, 2019. Title of Presentation " <i>Soil Arthropod Fauna: Composition, Ecology and Role in Soil Fertility</i> " by Bhaskar Paul and Dhiraj Saha.
56.	4 th Regional Science and Technology Congress, Siliguri Division, West Bengal, at Alipurduar College, Alipurduar, West Bengal, India, during 18 th - 19 th December, 2019. Title of Presentation " <i>Presence of kdr mutations, F1534C in wild population of Aedes albopictus and F1534C and V1016G in Aedes aegypti from India</i> " by Minu Bharati, Priyanka Rai, Abhisekh Subba and Dhiraj Saha.
57.	4 th Regional Science and Technology Congress, Siliguri Division, West Bengal, at Alipurduar College, Alipurduar, West Bengal, India, during 18 th - 19 th December, 2019. Title of Presentation " <i>An ecofriendly method of insect pest management</i> " by Nilu Limboo and Dhiraj Saha.
58.	4 th Regional Science and Technology Congress, Siliguri Division, West Bengal, at Alipurduar College, Alipurduar, West Bengal, India, during 18 th - 19 th December, 2019. Title of Presentation " <i>Insulin-like peptides in insects</i> " by Nupur Mondal and Dhiraj Saha.
59	4 th Regional Science and Technology Congress, Siliguri Division, West Bengal, at Alipurduar College, Alipurduar, West Bengal, India, during 18 th – 19 th December, 2019. Title of Presentation " <i>Induction of detoxifying enzymes in insects by plant allelochemicals</i> " by Prerana Bhujel and Dhiraj Saha.
60.	4 th Regional Science and Technology Congress, Siliguri Division, West Bengal, at Alipurduar College, Alipurduar, West Bengal, India, during 18 th - 19 th December, 2019. Title of Presentation " <i>First report on mutation in the sodium channel gene (L1014F) in Culex quinquefasciatus Say from Coochbehar, West Bengal, India</i> " by Priyanka Rai and Dhiraj Saha.
61.	27 th West Bengal State Science and Technology Congress, held at Science City Kolkata on 29 th February, 2020. Title of presentation " <i>Presence of kdr mutations, F1534C in wild population of Aedes albopictus and F1534C and V1016G in Aedes aegypti from India</i> " by Minu Bharati, Priyanka Rai, Abhisekh Subba and Dhiraj Saha.

62.	27 th West Bengal State Science and Technology Congress, held at Science City Kolkata on 29 th February, 2020. Title of presentation “First report on mutation in the sodium channel gene (L1014F) in <i>Culex quinquefasciatus</i> Say from Coochbehar, West Bengal, India” by Priyanka Rai and Dhiraj Saha.
63.	Attended an International Webinar on “Covid 19 Pandemic and Biodiversity – The Good, The Bad and The Ugly” organized by the Zoological Society of Assam, Gauhati, Assam on 20 th July, 2020.
64.	A one-day National Webinar on “Distribution, Prevalence and surveillance and control of Major Dengue vectors: <i>Aedes aegypti</i> and <i>Ae. albopictus</i>” organized by Insect Biochemistry and Molecular Biology Laboratory, Department of Zoology, University of North Bengal on 5 th September 2020.
65.	A one-day Webinar on “Control of Malaria and Dengue vectors by targeting insecticide resistance development mechanisms in mosquitoes” organized by Insect Biochemistry and Molecular Biology Laboratory, Department of Zoology, University of North Bengal on 20 th February, 2021
66.	A One-day Workshop on “insecticide resistance Control and of Dengue Mosquito” organized by Insect Biochemistry and Molecular Biology Laboratory, Department of Zoology, University of North Bengal on 20 th February, 2021
67.	Attended the “Cyber Shikshak- a Cyber Security Awareness Training Programme” organized by Cyber Security Centre of Excellence, Department of Information Technology & Electronics, Government of West Bengal in collaboration with Indian School of Ethical Hacking (ISOEH) on 17 th March, 2021 at Webel IT Park, Siliguri, West Bengal.
68.	15 th International Conference of Medical Arthropodology (SOMA), Osmania University, Hyderabad, Telangana, India, during 12 th -14 th December, 2022. Title of presentation “Role of motor garages in increasing aedes mosquito breeding habitat in northern districts of West Bengal, India” by Minu Bharti and Dhiraj Saha.
69.	15 th International Conference of Medical Arthropodology (SOMA), Osmania University, Hyderabad, Telangana, India, during 12 th -14 th December, 2022. Title of presentation “Current problems in management of <i>Culex quinquefasciatus</i> in sub-Himalayan West Bengal, India” by Priyanka Rai and Dhiraj Saha.
70.	15 th International Conference of Medical Arthropodology (SOMA), Osmania University, Hyderabad, Telangana, India, during 12 th -14 th December, 2022. Title of presentation “Screening, Bioassay guided isolation and identification of phytochemicals from fruit extract of <i>Heracleum nepalense</i> D. Don against the Larvae of <i>Culex quinquefasciatus</i>, Say” by Abhisekh Subba and Dhiraj Saha.
71.	15 th International Conference of Medical Arthropodology (SOMA), Osmania University, Hyderabad, Telangana, India, during 12 th -14 th December, 2022. Title of presentation “Target site resistance through <i>kdr</i> mutations screening in <i>Aedes</i> and <i>Culex</i> mosquitoes from northern part of West Bengal, India” by Dhiraj Saha Manas P. Modak.
72.	15 th International Conference of Medical Arthropodology (SOMA), Osmania University, Hyderabad, Telangana, India, during 12 th -14 th December, 2022. Title of presentation “Effect of sub-lethal concentrations of different synthetic pyrethroids on the level of cytochrome P₄₅₀ monooxygenase of <i>Aedes albopictus</i> (Skuse) larvae from northern part of West Bengal, India”

73.	5 th Regional Science and Technology Congress (Region- 1), West Bengal, at Cooch Behar Panchanan Barma University, Cooch Behar, West Bengal, India, during 17 th -18 th January 2023. Title of Presentation “Study of target site resistance through <i>kdr</i> mutation screening in <i>Aedes</i> and <i>Culex</i> mosquitoes from northern part of West Bengal, India” by Manas P. Modak and Dhiraj Saha.
74.	5 th Regional Science and Technology Congress (Region- 1), West Bengal, at Cooch Behar Panchanan Barma University, Cooch Behar, West Bengal, India, during 17 th -18 th January 2023. Title of Presentation “Diversity of soil arthropods in different tea plantation under various management practices from sub- Himalayan Terai region of West Bengal” by Bhaskar Paul and Dhiraj Saha.
75.	5 th Regional Science and Technology Congress (Region- 1), West Bengal, at Cooch Behar Panchanan Barma University, Cooch Behar, West Bengal, India, during 17 th -18 th January 2023. Title of Presentation “The effect of pyrethroid toxicity on development and reproductive fitness of dengue vector <i>Aedes albopictus</i> (Skuse).” by Nilu Limboo and Dhiraj Saha.
76.	5 th Regional Science and Technology Congress (Region- 1), West Bengal, at Cooch Behar Panchanan Barma University, Cooch Behar, West Bengal, India, during 17 th -18 th January 2023. Title of Presentation “Differential effect of major adulticides on levels of cytochrome P450 monooxygenase in wild <i>Aedes albopictus</i> population from northern part of West Bengal, India” by Prapti Das, Abhirup Saha, Subhajit Das and Dhiraj Saha.
77.	5 th Regional Science and Technology Congress (Region- 1), West Bengal, at Cooch Behar Panchanan Barma University, Cooch Behar, West Bengal, India, during 17 th -18 th January 2023. Title of Presentation “Effects of synthetic insecticides and phytochemicals in Insecticides detoxifying Enzymes of Vector Mosquitoes from India” by Abhirup Saha, Subhajit Das, Prapti Das and Dhiraj Saha.
78.	National Conference on Emerging Challenges and Prospects in Biological science at Department of Zoology, Sikkim University, Sikkim, India, during 23 rd -24 th February, 2023. Title of presentation “Major insecticide detoxifying enzymes’ activity in alphasmethrin selected <i>Culex quinquefasciatus</i>, Say” by Prerana Bhujel and Dhiraj Saha.
79.	2 nd International conference of the society of vector ecology, India region (ISOVECON 2023) at Vector Control Research Centre, Puducherry, India, During 13 th – 16 th March 2023. Title of Presentation “Effects of alphacypermethrin selection on life history traits of <i>Culex quinquefasciatus</i>” by Prerana Bhujel and Dhiraj Saha.