CURRICULUM VITAE

Name: Dr. Ravi Rajwanshi
Designation: Assistant Professor
Department: Department of Biotechnology
School: Life Science
University: Assam University, Silchar, Assam, India

Email: ravi.rajwanshi@aus.ac.in
rrajwanshi@gmail.com

Educational Qualifications:

2008 **Doctor of Philosophy (Ph.D.)** from School of Life Sciences, Jawaharlal Nehru University, New Delhi, India.
Thesis title: Development of abiotic stress tolerant *Brassica juncea* with *Glyoxalase I* and *Glyoxalase II* genes under inducible/constitutive promoters using PMI and Cre-lox system.

2003 **Pre-Ph.D. course work** in Life Sciences (Two semesters) from Jawaharlal Nehru University, New Delhi, India.

2001 **M.Sc.** in Biosciences from Jamia Millia Islamia, New Delhi, India.
Dissertation title: Computer application on phenotypic characterization of plant varieties in *Capsicum* sp. and *Solanum* sp. through Image Analysis.

1999 **B.Sc.** in Biosciences from Jamia Millia Islamia, New Delhi, India.

1996 **All India Senior School Certificate Examination** (12^{th} class) from Central Board of Secondary Education, New Delhi, India.

1994 **All India Secondary School Examination** (10^{th} class) from Central Board of Secondary Education, New Delhi, India.

Areas of Interest: Plant Molecular Biology, Plant Biochemistry and Biotechnology, Plant stress Physiology, Functional Genomics, Plant Tissue Culture, Transgenic Plants

Work Experience:

Name of the Organization	Designation	Period		Nature of Post (permanent/temporary/ Ad-hoc/ contractual etc.)
		From	To	
National Research Center on Plant Biotechnology, IARI, New Delhi, India.	Research Associate	5^{th} March 2009	23^{rd} March 2010	Contractual
Department of Biotechnology, Assam	Assistant Professor	26^{th} March 2010	25^{th} March 2014	Permanent

University, Silchar, Assam, India	(Stage I)			
Department of Biotechnology, Assam University, Silchar, Assam, India	Assistant Professor (Stage II)	26th March 2014	Till Date	Permanent

Awards/Honours/Fellowships:

Award Details	Awarding Agency	Period	Remark (if any)
GATE	MHRD, Government of India	2002	Qualified GATE in Life Sciences
Senior Research Fellowship (SRF)	Department of Biotechnology (DBT), Government of India	01-09-2004 To 31-08-2006	In Indo-Swiss Collaboration in Biotechnology (ISCB) Project at Jawaharlal Nehru University, New Delhi, India
Travel Grant and Fellowship for training under Indo-Swiss Collaboration in Biotechnology (ISCB) Project at University of Basel, Switzerland	Swiss Agency for Development and Cooperation, Government of Switzerland and Department of Biotechnology (DBT), Government of India	13-02-2006 To 11-06-2006	Undergone scientific training in ISCB project entitled "Development of salt tolerant marker free transgenic Blackgram (*Vigna mungo*)" under the guidance of Prof. Thomas Hohn at University of Basel, Switzerland.
ICAR-NET	Indian Council of Agricultural Research (ICAR), Government of India	2009	Qualified ICAR-NET in Agricultural Biotechnology
DBT Overseas Associate	Department of Biotechnology (DBT), Government of India	01-08-2013 To 31-07-2014	Long Term (1 Year) fellowship to do research under the guidance of Prof. David A. Lightfoot at Department of Plant Soil, and Agricultural System, Southern Illinoise University Carbondale, Carbondale, Illinoise 62901, USA.

Projects:

Project Title	Awarding Agency	Period	Amount Sanctioned (Rs.)	Ongoing/ Completed
Functional studies of a Group 4 LEA gene in *Brassica juncea* for abiotic stress tolerance	CSIR, Government of India File No.- 38(2086)/10) Sanction order No.38(1274)/II/EMRII dated 26.04.2011	3 Years	2097920.00	Completed (As Co-PI) (2011-2014)
Gene cloning and functional studies of HMA4 of *Brassica juncea* for metal tolerance	UGC, Government of India (Sanction order No. 41-523/2012 dated 17.07.2012 w.e.f. 1.7.2012)	3 Years	431000.00	Completed (As Co-PI) (2012-2015)
Identification, characterization and expression profiling of drought stress responsive microRNAs in *Coffea arabica* L.	SERB, Government of India (FILE NO. EEQ/2016/000501)	4 Years	4032000.00	Ongoing (As PI) (2017-2021)

Publications in Peer Reviewed Journals:

1. Mohd. Aslam Yusuf, Deepak Kumar, **Ravi Rajwanshi**, Reto Jörg Strasser, Merope Tsimilli-Michael, Govindjee, Neera Bhalla Sarin **(2010)** Overexpression of γ-tocopherol methyl transferase gene in transgenic *Brassica juncea* plants alleviates abiotic stress: Physiological and chlorophyll a fluorescence measurements. ***Biochimica et Biophysica Acta – Bioenergetics***, 1797(8): 1428–1438. https://doi.org/10.1016/j.bbabio.2010.02.002 **[Impact Factor (2019): 3.465]**

2. Amit Katiyar, Shuchi Smita, Sangram Keshari Lenka, **Ravi Rajwanshi**, Viswanathan Chinnusamy and Kailash Chander Bansal **(2012)** Genome-wide identification and comparative analysis of *MYB* transcription factor family in rice and *Arabidopsis*. ***BMC Genomics***, 13(1): 544. https://doi.org/10.1186/1471-2164-13-544 **[Impact Factor (2019): 3.594]**

3. **Ravi Rajwanshi**, Neera Bhalla Sarin **(2013)** Selection of genetically transformed *Brassica juncea* L. cv. Varuna (Indian mustard) based on Positech system. ***Journal of Plant Biochemistry and Biotechnology***, 22(2): 214-221. https://doi.org/10.1007/s13562-012-0126-1 **[Impact Factor (2019): 0.773]**

4. Shuchi Smita, **Ravi Rajwanshi**, Sangram Keshari Lenka, Amit Katiyar, Viswanathan Chinnusamy, Kailash Chander Bansal **(2013)** Comparative analysis of fruit transcriptome in tomato (*Solanum lycopersicum*) genotypes with contrasting lycopene content. ***Plant Molecular Biology Reporter*** 31(6): 1384–1396. https://doi.org/10.1007/s11105-013-0613-0 **[Impact Factor (2019): 1.336]**

5. Shuchi Smita*, **Ravi Rajwanshi***, Sangram Keshari Lenka, Amit Katiyar, Viswanathan Chinnusamy, Kailash Chander Bansal **(2013)** Expression profile of genes coding for carotenoid biosyntheticpathway during ripening and their association with accumulationof lycopene in tomato fruits. ***Journal of Genetics***, 92(3): 363-368. https://doi.org/10.1007/s12041-013-0275-6 **[Impact Factor (2019): 0.996]** (* Authors contributed equally)

6. Jyotsna Gorantala, Sonam Grover, Amit Rahi, Prerna Chaudhary, **Ravi Rajwanshi**, Neera Bhalla Sarin, Rakesh Bhatnagar **(2014)** Generation of protective immune response against anthrax by oral immunization with protective antigen plant-based vaccine. ***Journal of Biotechnology***, 176: 1–10. doi:10.1016/j.jbiotec.2014.01.033 **[Impact Factor (2019): 3.503]** https://pubmed.ncbi.nlm.nih.gov/24548460/

7. **Ravi Rajwanshi***, Sreejita Chakraborty, Karam Jayanandi, Bibhas Deb, David A. Lightfoot **(2014)** Orthologous plant microRNAs: microregulators with greatpotential for improving stress tolerance in plants. ***Theoretical and Applied Genetics***, 12: 2525-2543 https://doi.org/10.1007/s00122-014-2391-y **[Impact Factor (2019): 4.439]** (*Corresponding author)

8. Sreejita Chakraborty, Karam Jayanandi Devi, Bibhas Deb, **Ravi Rajwanshi* (2016)** Identification and Characterization of Novel microRNAs and Their Targets in *Cucumis melo* L.: An in silico Approach. ***Focus on Sciences***, 2(1). DOI: 10.20286/focsci-020123 http://www.focmedsci.com/index.php/focsci/article/view/52 (*Corresponding author)

9. Karam Jayanandi Devi, Sreejita Chakraborty, Bibhas Deb, **Ravi Rajwanshi* (2016)** Computational identification and functional annotation of microRNAs and their targets from expressed sequence tags (ESTs) and genome survey sequences (GSSs) of coffee (*Coffea arabica* L.). ***Plant Gene***, 6: 30-42. https://doi.org/10.1016/j.plgene.2016.03.001 (*Corresponding author)

10. **Ravi Rajwanshi**, Deepak Kumar, Mohd Aslam Yusuf, Suchandra DebRoy, Neera Bhalla Sarin **(2016)** Stress-inducible overexpression of *glyoxalase I* is preferable to its constitutive overxpression for abiotic stress tolerance in transgenic *Brassica juncea*. ***Molecular Breeding***, 36(76): 1-15 https://doi.org/10.1007/s11032-016-0495-6 **[Impact Factor (2019): 2.149]**

11. Sahana Basu, Ranjan Kumar Giri, Ibtesham Benazir, Santosh Kumar, **Ravi Rajwanshi**, Sharad Kumar Dwivedi, Gautam Kumar **(2017)** Comprehensive physiological analyses and reactive oxygen species profiling in drought tolerant rice genotypes under salinity stress. ***Physiology and Molecular Biology of Plants***, 23(4): 837-850. https://doi.org/10.1007/s12298-017-0477-0 **[Impact Factor (2019): 2.005]**

12. Karam Jayanandi Devi, Prasanta Saha, Sreejita Chakraborty, **Ravi Rajwanshi* (2018)** Computational identification and functional annotation of microRNAs and their targets in three species of kiwifruit (*Actinidia* spp.). ***Indian Journal of Plant Physiology***, 23(1): 179-191. https://doi.org/10.1007/s40502-018-0353-0 (*Corresponding author)

13. N. Seema Devi, Puran Chandra, **Ravi Rajwanshi**, Pankaj Baiswar, T. S. Mehra, Shimreiso Vashum, K.P. Mohapatra **(2020)** Genetic variability and association analyses of growth and yield

attributes in *Mucuna pruriens* (L). collections of India. ***Indian Journal of Hill Farming*****,** Special Issue: 33-38. ***http://www.kiran.nic.in/pdf/IJHF/Special_Issue_2020/5.pdf***

14. Sahana Basu, Gautam Kumar, Nitu Kumari, Surbhi Kumari, Shashi Shekhar, Santosh Kumar, **Ravi Rajwanshi* (2020)** Reactive oxygen species and reactive nitrogen species induce lysigenous aerenchyma formation through programmed cell death in rice roots under submergence. ***Environmental and Experimental Botany***, 177: 104118 DOI: https://doi.org/10.1016/j.envexpbot.2020.104118 **[Impact Factor (2019): 4.027]** (*Corresponding author)

Publications of Book Chapters in Edited Books:

1. **Ravi Rajwanshi**, Suchandra Deb Roy, Mikhail Pooggin, Thomas Hohn, Neera Bhalla Sarin **(2007)** Marker free approach for developing abiotic stress tolerant transgenic *Brassica juncea* (Indian Mustard). In: Long CA, Anninos P, Pham T (eds) ***Proceedings of the 3rd WSEAS International Conference on Cellular and Molecular Biology, Biophysics and Bioengineering (BIO'07) In: Book Series: Mathematics and Computers in Science and Engineering***, Vouliagmeni, Athens, Greece, p.p. 110-116. **(ISBN: 978-960-6766-03-9; ISSN 1109-2769)** [Published by World Scientific and Engineering Academy and Society (WSEAS) Press (http://www.wseas.org)].

2. **Ravi Rajwanshi**, Manoj Kumar, Beche Lal **(2017)** Pre- and Postharvest Management Practices for Litchi Production in India. In: Kumar M., Kumar V., Bhalla-Sarin N., Varma A. (eds) **Lychee Disease Management**. Springer, Singapore, p.p. 45-66. **(ISBN: 978-981-10-4246-1)**

3. **Ravi Rajwanshi**, Karam Jayanandi Devi, Gopa Rani Sharma, Beche Lal **(2019)** Role of MiRNAs in Plant-Microbe Interaction. In: Kumar M, Muthusamy A, Kumar V, Bhalla-Sarin N (eds) ***In vitro*** **Plant Breeding towards Novel Agronomic Traits: Biotic and Abiotic Stress Tolerance.** Springer, Singapore, p.p. 167-195. **(ISBN: 978-981-32-9823-1)**

4. Anjana Rustagi, Neelam P. Negi, Himanish Dutta Choudhury, Ayushi Mahajan, Rekha, Swati Verma, Deepak Kumar, **Ravi Rajwanshi**, Neera Bhalla Sarin **(2020)** Transgenic Approach for Improvement of *Brassica* species. In: Wani SH, Jeshima Y, Thakur AK (eds.) ***Brassica*** **Improvement – Molecular, Genetics and Genomic Perspectives**. Springer Nature Switzerland, p.p. 1-28 **(ISBN: 978-3-030-34693-5)** (All authors contributed equally)

Abstracts Published in Proceedings of National/International Conferences/Seminars:

1. Neera Bhalla Sarin, P.Bhomkar, C.P.Upadhyay, A.Muthusamy, **Ravi Rajwanshi**, M.Saxena, N.Shiva Prakash, Mikhail Poogin and Thomas Hohn **(2005**) Regeneration and transformation of Black gram [*Vigna mungo* (L.)Hepper.]- A marker free approach for salt-stress tolerance. *4th International food legumes research conference*, New Delhi, India, p.p. A-91.

2. N.B. Sarin, P. Bhomkar, C.P. Upadhyay, S. Deb Roy, **R. Rajwanshi**, A. Muthusamy, M. Saxena, N. Shiva Prakash, M. Pooggin, and T. Hohn **(2006)** Antibiotic marker free approach for obtaining salt stress tolerant Vigna mungo (blackgram), In *in vitro cellular & developmental biology-Animal*, 42, pp. 21A.

3. Chandrama P. Upadhyay, P. Bhomkar, M. Saxena, **Ravi Rajwanshi**, Nisha Kant, Deepak Kumar, M.Pooggin, T.Hohn and N.B. Sarin **(2006)** Development and evaluation of transgenic Blackgram (*Vigna mungo*) for salt stress tolerance by overexpression of the *glyoxalase I* gene. *International Meeting on Biotic and Abiotic Stress Responses in Plants*, I.C.G.E.B., New Delhi, India, P-44.

4. Neera Bhalla Sarin, C.P.Upadhyaya, P.Bhomkar, **R.Rajwanshi,** Nishakant Pandey, N. Shiva Prakash, Mikhail Pooggin and Thomas Hohn **(2007)** Developing salt stress tolerance in the legume *Vigna mungo* (Blackgram) using the transgenic approach. *3rd cell stress society international congress on stress responses in biology and medicine and 2nd world conference of stress,* Budapest, Hungary, p.p.-222.

5. Neera Sarin, Chandrama Upadhyaya, Prasanna Bhomkar, **Ravi Rajwanshi,** Suchandra Deb Roy, Nishakant Pandey, Mikhail Pooggin and Thomas Hohn **(2008)** Stress Tolerance and Value addition in Brassica juncea and Vigna mungo through Transgenic approach. *5th International Crop Science Congress & Exhibition*, Jeju, Korea, p.p.-202-203.

6. **Ravi Rajwanshi**, Sangram K. Lenka, Shuchi Smita, Amit Katiyar and Kailash C. Bansal **(2009)** Expression analysis of carotenoid biosynthesis genes in tomato (*Solanum Lycopersicum* L.). *The 6th Solanaceae Genome Workshop 2009*, New Delhi, India, p.p.-229**.**

7. Amit Katiyar, Shuchi Smita, Sangram Keshari Lenka, **Ravi Rajwanshi**, Viswanathan Chinnusamy and Kailash Chander Bansal **(2010)** *Insilico* analysis of Myb transcription factor family genes in rice and arabidopsis. *Ist IFIP international conference on Bioinformatics*, Surat, Gujrat, p.p. 142.

8. Ghosh SK, Chakrabarty C, Laskar RS, Mondal R, Bhattacharjee MJ, Choudhury Y, **Rajwanshi R**, Ahmad A, Sherpa A, Bhaumik A, Haldar A, Singha B, Bhuiya B, Tiwary B, Choudhury B, Sharma I, Sharma J, Sengupta M, Pasha M, Das M, Bhattacharjee M, Kumar NS, Ghosh PR, Ghosh P, Majumder R, Devi S, Bhattacharjee S, Sen S, Maitra SS, Duttagupta S, Chakrabarti S **(2011)** Development of Individual Barcode for Human by using Mitochondrial D-loop Hypervariable Region: A tool that may be useful for the UID (Unique Identity) project in India, *Proceedings of the 98th Indian Science Congress*, Chennai, India, Section XII : New Biology p.p. 6.

9. **Ravi Rajwanshi (2012)** The Gyoxalase system: A potential candidate for crop improvement. *International conference on Biodiversity conservation and environmental health*, Department of Life Sciences and Bioinformatics Assam University, Silchar, Assam, p.p.-21.

10. Deepak Kumar, Mohd. Aslam Yusuf, Preeti Singh, **Ravi Rajwanshi**, Neera Bhalla Sarin **(2013)** OS5-3 gene pyramiding with γ-TMT and gly I genes adds value by enhancing salt and drought tolerance in *Brassica juncea* (Indian Mustard), *3rd International Symposium on Genomics of Plant Genetic Resources*, Jeju, Korea.

11. David A Lightfoot, Ayan Malakar, **Ravi Rajwanshi (2014)** Field analysis of SDS resistance in Soybean transgenic with the RLK from Rhg1 and Rfs2, *Plant & Animal Genome XXII*, San Diego, CA, USA, P972.

12. David A Lightfoot, Ayan Malakar, **Ravi Rajwanshi (2015)** Peptide binding by alloprotein and mutants of a receptor like kinase in soybean, *Plant & Animal Genome XXIII*, San Diego, CA, USA, P720.

13. Deepak Kumar, **Ravi Rajwanshi**, Mohd. Aslam Yusuf, Nisha Kant Pandey, Preeti Singh, Mukesh Saxena, Neera Bhalla Sarin **(2015)** Towards development of superior *Brassica juncea* by pyramiding of genes of diverse pathway for value addition, stress alleviation and human health, World Academy of Science, Engineering and Technology, *17th International conference on agricultural and forestry engineering*, Melbourne, Australia, Vol 2, No. 12.

14. Karam Jayanandi Devi, Sreejita Chakraborty, Bibhas Deb, **Ravi Rajwanshi (2015)** An *insilico* based update on microRNAs and their targets from expressed sequence tags (ESTs) of *Coffea arabica*, *Proceedings of the 102nd Indian Science Congress*, University of Mumbai, Mumbai, India, p.p. 165-166.

15. Karam Jayanandi Devi, Sreejita Chakraborty, Bibhas Deb, **Ravi Rajwanshi (2016)** *Insilico* approach for identification of novel miRNAs from *Coffea arabica* using Expressed Sequence Tags. *Proceedings of National Seminar on Recent advances and scope in Herbal Technology: Challenges and prospects* (RASHTCP-2016), Department of Pharmaceutical Sciences, Assam University, Silchar, Assam, India, p.p.-10.

16. Sreejita Chakraborty, Adrita Chowdhury, Karam Jayanandi Devi, **Ravi Rajwanshi (2016)** Computational identification of microRNAs and their targets from expressed sequence tags (ESTs) and genome survey sequences (GSSs) of red rice (*Oryza longistaminata*). *International Conference on Functional Plant Biology* 2017, Assam University, Silchar, Assam, India, p.p.-25.

17. Sreejita Chakraborty, Adrita Chowdhury, Karam Jayanandi Devi, **Ravi Rajwanshi (2016)** *In silico* identification of microRNAs and their targets from expressed sequence tags (ESTs) and genome survey sequences (GSSs) of *Oryza minuta. International Symposiumon Plant Biotechnology for Crop Improvement 2017*, Indian Institute of Technology, Guwahati, Assam, India, p.p.-80.

18. Ningthoujam Seema Devi, Banshanlang Iangrai, Kamal Prasad Mohapatra, **Ravi Rajwanshi (2016)** Assessment of genetic variability of velvet bean (*Mucuna pruriens*) using ISSR markers. *International Symposiumon Plant Biotechnology for Crop Improvement 2017*, Indian Institute of Technology, Guwahati, Assam, India, p.p.-69.

19. Karam Jayanandi Devi, Prasant Saha, Sreejita Chakraborty, **Ravi Rajwanshi (2016)** Computational identification of microRNAs and their targets in three species of kiwifruit (*Actinidia* spp.). *International Symposiumon Plant Biotechnology for Crop Improvement 2017*, Indian Institute of Technology, Guwahati, Assam, India, p.p.-58.

20. Rupjyoti Sarmah, Banshanlang Iangrai, Chubasenla Aochen, Thongbam Premila Devi, **Ravi Rajwanshi (2016)** Molecular screening for identification of blast resistance genes (R-genes) from rice cultivars belonging to different agro-climatic zones of North East India. *International Symposiumon Plant Biotechnology for Crop Improvement 2017*, Indian Institute of Technology, Guwahati, Assam, India, p.p.-49.

21. Sahana Basu, Suraj Kumar Jaiswal, Gautam Kumar, **Ravi Rajwanshi (2016)** Differential response of submergence on rice: A study on *Sub 1*-mediated submergence tolerance. *International Symposiumon Plant Biotechnology for Crop Improvement 2017*, Indian Institute of Technology, Guwahati, Assam, India, p.p.-35.

22. Ningthoujam Seema Devi, **Ravi Rajwanshi**, Kamal Prasad Mohapatra **(2018)** Biochemical studies of Mucuna pruriens (L.) De genotypes of North East India. *The 105th Indian Science Congress*, Manipur University, Manipur, India, p.p.-46.

23. Karam Jayanandi Devi, Bikram Biswas, **Ravi Rajwanshi (2018)** Computational identification of miRNAs from expressed sequence tags and genome survey sequences of *Quercus petraea* (Matt.) Liebl. and *Quercus robur* L. *The 105th Indian Science Congress*, Manipur University, Manipur, India, p.p.-47.

24. Sahana Basu[#], Gautam Kumar, **Ravi Rajwanshi[*] (2020)** Understanding the mechanism of submergence tolerance in rice. *Global Water Congress 2020*, E-conference/E-competition.
([#]Achieved 1st Position and Gold medal in the technical session 10 of Poster Paper Presentation)
([*]Corresponding author)

Conferences & Workshops attended:

1. Participated in symposium and seminar organized by Department of Biosciences on **"Intellectual Property Rights and Indian Germplasm Resources: Emerging Challenges"** (20th Oct- 21st Oct **2000**) at Jamia Millia Islamia, New Delhi, India.

2. Attended the **"Workshop on Molecular Analysis of Transgenic Plants"** (28th Jan- 6th Feb **2005**) as a part of Indo-Swiss collaboration in Biotechnology (ISCB) Project at School of Biotechnology, Madurai Kamaraj University, Madurai, India.

3. Participated at **"5th International Conference on Bioinformatics & Biotechnology InCoB 2006"** (18th – 20th December **2006**) organized by Indian Institute of Technology (Delhi), Jawaharlal Nehru University and Department of Biotechnology (Govt. of India) at The Ashok, New Delhi, India.

4. Participated in Interdisciplinary Science Conference – 2007 on **"Recent Trends in Research in Bioloical Sciences"** (7th December **2007**) organized by Centre for Interdsciplinary Research in Basic Sciences, Jamia Millia Islamia, New Delhi, India.

5. Participated in 2nd International Conference on **"Trends in Cellular and Molecular Biology**" (5th – 7th January **2008**) organized by School of Life Sciences, Jawaharlal Nehru University, New Delhi, India.

6. Attended and presented a poster entitled **"Expression analysis of carotenoid biosynthesis genes in tomato (*Solanum Lycopersicum* L."** at the **"The 6th Solanaceae Genome Workshop 2009"** (8th – 13th November **2009**) organized by Department of Biotechnology (Govt. of India) at Le Meridien, New Delhi, India.

7. Participated at the National Workshop on **"Principles & Applications of GC-MS and Atomic Absorption Spectrometry"** (6^{th} – 9^{th} September **2010**) organized by Central Instrumental Labortory, Assam University, Silchar, Assam, India.

8. Participated at the workshop on **"Basic Tools in Molecular Biology and Genomics"** (7^{th} – 16^{th} December **2010**) organized by Department of Biotechnology, Assam University, Silchar, Assam, India.

9. Participated and presented a paper entitled **"The Gyoxalase system: A potential candidate for crop improvement**" at the UGC sponsored **"International conference on Biodiversity conservation and environmental health" (**16^{th} – 17^{th} March **2012)** organized by Department of Life Sciences and Bioinformatics, Assam University, Silchar, Assam, India.

10. Participated in the Workshop on **"URKUND & MENDLEY"** organized by Rabindra Library, Assam University, Silchar, Assam, India on 7^{th} November, **2016**.

Invited lectures / Resource Person/ Paper presentation in Seminars/ Conferences:

1. Delivered a lecture on **"Development of Transgenic plants using marker free approach"** in a **"***National Workshop on Basic Tools in molecular biology and genomics*" conducted by Department of Biotechnology, Assam University, Silchar in collaboration with Silchar Medical College and Hospital, Silchar, Assam, India on 15-12-2010.

2. Delivered a lecture on **"DNA Sequencing and its applications in molecular biology"** in a **"***National Workshop on Basic Tools in molecular biology and genomics*" conducted by Department of Biotechnology, Assam University, Silchar in collaboration with Silchar Medical College and Hospital, Silchar, Assam, India on 16-12-2010.

3. Delivered a lecture on **"The Gyoxalase system: A potential candidate for crop improvement"** in an "*International conference on Biodiversity conservation and environmental health*" conducted by Department of Life Sciences and Bioinformatics, Assam University, Silchar, Assam, India on 17-03-2012.

4. Acted as Judge in a Lecture competition on **"Carbon Nano Material (CNM)"** organized by YMCA University of Science and Technology, Faridabad, Haryana, India on 08-06-2012.

5. Delivered a lecture on **"Biotechnology: Tools and Techniques"** in a workshop organized by Gurucharan College, Silchar, Assam, India on 30-01-2013.

6. Acted as Judge in a KVS regional level event of "**National Children Science Congress (NCSC)"** at Kendriya Vidyalaya, Tarapur, Silchar, Assam, India on 08-10-2015.

7. Acted as Judge/Chairperson of a technical session in National conference **"MICRON 2016"** organized by Department of Microbiology, Assam University, Silchar, Assam, India on 30-12-2016.

8. Acted as a resource person in a workshop on **"*Some Modern Techniques in Molecular Biology and Bioinformatics*"** conducted by Institutional Biotech Hub, Karimganj College, Karimganj, Assam, India on 21-02-2017.

9. Acted as a expert/judge for the "**National Science Day"** Programme organized by Assam University Biotech Hub, Assam University, Silchar, Assam, India on 28-02-2017.

10. Acted as a resource person in a CSIR-Central Institute of Medicinal and Aromatic Plants (CIMAP), Lucknow, Uttar Pradesh and Department of Horticulture, Aromatic and Medicinal Plants, Mizoram University, Aizawl sponsored National Workshop on **"*Skill Development Programme on Cultivation and Primary Processing of Economically Important Aromatic & Medical Plants Under Aroma Mission*"** at Mizoram University, Aizawl, Mizoram, India on 24-04-2018.

11. Delivered an invited lecture on **"Identification, characterization and expression profiling of selected microRNAs in *Coffea arabica* L."** in a UGC-SAP (DRS II) funded National Seminar on "*Current Trends in Biotechnology Research (CTBR-2019)*" organized by Department of Biotechnology, Assam University, Silchar, Assam, India on 20-03-2019.

12. Acted as Judge in a KVS regional level event of 27th "**National Children Science Congress (NCSC)"** at Kendriya Vidyalaya, Tarapur, Silchar, Assam, India on 19-10-2019.

Refresher Courses/ Orientation Courses/FDP attended:

1. Participated in the 77th Orientation Course **(8th Nov 2011 – 2nd Dec 2011)** organized by Academic Staff College, Jawaharlal Nehru University, New Delhi, India.
2. Participated in the Refresher Course in Life Sciences **(26th March 2013 – 15th April 2013)** organized by Academic Staff College, Mizoram University, Mizoram, India.
3. Completed the Facuty Development programme **(19th Dec 2016 – 31st Dec 2016)** organized by Entrepreneurship Development Institute of India at Assam University, Silchar, Assam, India.
4. Participated in the Refresher Course on "Indian Medicinal Plants" **(24th Aug 2017 – 13th Sep 2017)** organized by Human Resource Development Centre, Mizoram University, Aizawl, Mizoram, India.
5. Participated in One Week International Virtual FDP on **"Moodle Learning Management System"** organized Don Bosco College Central Library and IQAC, Itanagar, Arunachal Pradesh, India in association with Spoken Tutorial, IIT Bombay (An Initiative of National Mission on Education through ICT, MHRD, Government of India) from **15th – 19th June, 2020**.
6. Participated in the Online Refresher Course on **"Research Methodology" (7th July 2020 – 20th July 2017)** organized by Human Resource Development Centre, Mizoram University, Aizawl, Mizoram, India.
7. Participated in the 5-day international Faculty Development Program (FDP) cum Workshop **(21st – 25th September 2020)** on **"Sustainable Environmental Engineering Practices (SEEP 2020)"** organized by Department of Civil Engineering, National Institute of Technology Rourkela, India.

Participation in Webinars:

1. Participated in the webinar on **"Education for Future"** organized by FICCI, Guwahati, Assam, India on 6th June 2020.
2. Participated in the webinar on **"Entrepreneurship opportunities in Assam post COVID"** organized by FICCI, Guwahati, Assam, India on 6th June 2020.
3. Participated in the webinar on **"Climate change and sustainable agriculture"** organized by Department of Botany, Central University of Jammu, Jammu (J&K), India on 12th – 13th June 2020.
4. Attended the One-Day International Webinar on **"Application of geospacial and molecular tools in natural resource conservation and management"** organized by Department of Ecology and Environmental Science, Assam University, Silchar, Assam, India on 29th July 2020.
5. Participated in the webinar on **"Oppertunities in Engineering post Covid 19"** organized by Department of Agricultural Engineering, Assam University, Silchar, Assam, India on 31st July 2020.
6. Participated in the International Youth Day webinar on **"Role of youth in policy making and increasing their engagement at the local, national and global level to address the health and education issues during and post pandemic"** jointly organized by Ummeed Swasth Bhawishya (USB) Foundation and PISRD, India on 12th August 2020.
7. Attended an international webinar on "The challenges and Scientific Advances of SARS-COV 2" organized by Department of Microbiology, Assam University, Silchar, Assam, India on 27th August 2020.
8. Participated in the virtual webinar on **"Plant Based Technologies for Entrepreneurship Development"** organized by Rotary Club of Orchid City, Shillong, Meghalaya, India on 29th August, 2020.
9. Participated in the webinar on **"Evolving Role of Teachers and Future of Education"** organized by FICCI, Guwahati, Assam, India on 5th September 2020.

Research Guidance:

(i) Ph.D. Supervisor (Awarded: 1, Submitted: 1, Ongoing: 2); Ph.D. Co-supervisor: (Ongoing: 1)

Sr. No.	Student Name	Thesis Title*	Registration no. & Date	Submission Date	Degree Awarded Date
1.	**Dr. Karam Jayanandi Devi**	Identification, characterization and validation of regulatory microRNAs and their targets from expressed sequence tags (ESTs) and genome survey sequence (GSSs) of *Coffea arabica* L.	PhD/2178/12 Dated 26-09-2012	05-09-2018	04-06-2019
2.	**Ms. Ningthoujam Seema Devi**	Genetic variability in *Mucuna pruriens* (L.) collections of North East India	PhD/2179/12 Dated 26-09-2012	23-09-2019	---

(ii) Post Graduation Dissertations Guided: 26

Sr. No.	Student Name	Dissertation Name	Year of Submission
1.	**Mr. Abhijit Mitra**	A study on the physiological effect and expression of metallothionein (MT1) gene during Cu stress tolerance in *Oryza sativa* (rice) var. MSE-9	2011
2.	**Ms. U. Nirupma**	Physiological and expression studies of PIP2 gene in *Pisum sativum* cv. Aikel under salt stress condition	2011
3.	**Ms. N. Renuka Devi**	Physiological and expression studies of PIP2 gene in *Pisum sativum* cv. E6 under drought stress condition	2011
4.	**Ms. Kh. Yaiphabi Devi**	Physiological and expression study of Metallothionein in Oryza sativa cv. MSE-9 under heavy metal ($CdCl_2$) stress condition	2011
5.	**Mr. Shantanu Sen**	An *in silico* appraisal of few compounds against the enzyme *helicobacter pylori* urease for anti *H. pylori* drug efficacy and their QSAR analysis	2012
6.	**Mr. Kaushik K. Bharadwaj**	Physiological and Biochemical response of wheat towards salinity and heavy metal stress	2012
7.	**Mr. Saurav Nath**	Drought stress in Wheat: A Physiological and Biochemical study	2012
8.	**Ms. Deboshri Roy**	Effect of aluminium toxicity on rice cultivars of Assam	2013
9.	**Mr. Saugat Nath**	Computational identification of miRNAs from expressed sequence tags and genome survey sequences of Peanut (*Arachis hypogaea*)	2015
10.	**Mr. Hemonta Bordoloi**	Computational prediction of miRNAs from expressed sequence tags and genome survey sequences of Onion (*Allium cepa* L.)	2015
11.	**Mr. Prasanta Saha**	Computational identification of regulatory miRNAs from expressed sequence tags of *Actinidia delicosa*, *Actinidia chinensis* & *Actinidia eriantha*	2015
12.	**Ms. Adrita Chawdhury**	Computational prediction of miRNAs of *Oryza longistaminata* and *Oryza minuta*	2016
13.	**Mr. Bikram Biswas**	*In silico* prediction of miRNAs from ESTs and GSSs of *Quercus petraea* and *Quercus robur*	2016
14.	**Ms. Afrin Yasmin**	Computational identification and characterization of conserved miRNAs in Walnut (*Juglans regia* L.)	2016
15.	**Mr. Abu Barkat Md. Gulzar**	Effect of heavy metal (copper) on selected rice cultivars of Assam	2017
16.	**Mr. Trideep Jyoti Bora**	Response of selected rice varieties of Assam to salinity stress	2017
17.	**Ms. Gopa Rani Sharma**	Screening of rice cultivars for iron toxicity tolerance	2017
18.	**Ms. Karobi Nath**	Biochemical study in *Mucuna pruriens* leaves using different extraction solvents	2018
19.	**Mr. Nerswn Basumatary**	Biochemical study in *Mucuna* sp. seeds using different extraction solvents	2018
20.	**Ms. Saheli Akthar Choudhury**	Biochemical study of salt stress in *Coffea arabica* L.	2018
21.	**Ms. Ajita Nath**	Effect of drought stress on biochemical parameters of two *Coffea arabica* L. cultivars	2019
22.	**Ms. Ayesha Siddique**	Prediction of miRNAs and their targets using *in silico* approach from expressed sequence tags (ESTs) and genome survey sequences (GSSs) of coffee (*Coffea canephora* P.)	2019
23.	**Mr. Bikramjit Lahiri**	Biochemical screening of two varieties of *Coffea arabica* L. for drought tolerance	2019
24.	**Mr. Pappu Deb**	*In silico* approach for predicting microRNAs from expressed sequence tags of *Citrus reticulata* L.	2020
25.	**Ms. Namrata Kumari Mahato**	*In silico* prediction of miRNA from Chromosome 10 of *Coffea canephora*	2020
26.	**Ms. Mamta Singha**	Identification and characterization of miRNA from *Centella asiatica* L.: An EST-based homology approach	2020