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UNIVERSITY OF NORTH BENGAL

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Raja Rammohunpur, Dist- Darjeeling, West Bengal, Pin-734013, India.

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Department of Botany

Print

Dr. Subhas Chandra Roy

M.Sc(Botany), M.Tech(Biotechnology), Ph.D. NET

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Members of Learned Societies:Indian Society of Genetics & Plant Breeding, PUSA Campus, New Delhi.

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Subject Specialization: Cytogenetics & Molecular Breeding and Biotechnology**.**

Area of Research Interest: Rice genetics and molecular breeding to develop high yielding rice varieties through conventional breeding (Hybridization) program to improve yield and quality. Collection and Conservation of local rice germplasm for proper use in breeding program. Pre-breeding for the widening of genetic base of the released varieties has been initiated by crossing wild rice *Oryza rufipogon* with *O. sativa* (Interspecific hybridization). *Oryza coarctata*, wild rice of Sundarban Mangrove area has been collected and morphologically characterized and Caryopsis studied under SEM. Whole genome re-sequencing of GI tagged Tulaipanji rice completed along with other rice cultivar Kalonunia and Chenga. New breeding lines of rice can be released by ICAR after successful trial in the Name of Tulaimati, Dinajmati, Bengalmati etc

No. of Ph.D. students: (a) Supervised: 03 (b): On-going: 04

No. of M.Phil. students: (a) Supervised: N/A (b) On-going: N/A

No. of Publications: 35 (a) Journals: 33 (b) Books: 01 (c): Book Chapter: 01.

Achievements & Awards: **Siksha Ratna Award 2019**.Department of Higher Education, Govt. of West Bengal.

Professional Experience: **23 Years,** served as SRA, in the Central Silk Board, Govt. of India, served as WBES (West Bengal Education Service) as Lecturer in Botany in different Govt. Colleges.

Administrative Experiences: Post held as Head, Department of Botany, NBU 2012-2014 and 2019-2021 continue till July 2021. Worked as Member of the Executive Council (EC) and member of the Court (Court member).

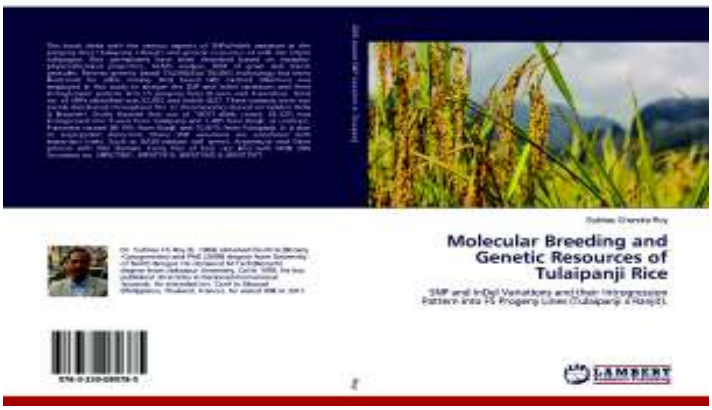
Postdoctoral research and Training: Training taken on **'Molecular Breeding on Rice'** from world's premier institute of rice research, **IRRI** (International Rice Research Institute), Manila, **Philippines** in 2011.

Abroad visit:

Country visited	Year	Purpose
Philippines	2011	Molecular Breeding course on Rice in IRRI (International Rice Research Institute, Laguna, Los Ban~os, Manila, **Philippines**). Duration: 19-30 September 2011.
Thailand	2014	Attending the 4th International Rice Congress, 27 October to 1st November 2014, at BITECH, Bangkok, **Thailand**.
France	2016	Attended 14th International Symposium of Rice Functional Genomics (ISRFG16, 26-30 September, 2016, Montpellier, **France**.
Singapore	2018	5th International Rice Research Congress, 15-17 Oct, 2018. Accepted the Abstract for Flash-Talk 5 minutes, **Singapore**.

Selective List of Publications:

Books: **Molecular Breeding and Genetic Resources of Tulaipanji Rice.**ISBN-9783330089785 Marketed by: www.morebooks.de, LamBert Academic Publishing, **Germany.**



Book Chapter:

T Choudhury, **Subhas Ch Roy**, Dilip De Sarker. 2019. **Ethnobotanical studies of Dakshin Dinajpur District of West Bengal: Local knowledge and Traditions**. In: Ethnobotany: Local knowledge and traditions. (Edi) JL Martinez, Amner Munoj-Acevedo and Mahendra Rai, ISBN: 9781138388987. **CRC-Press**, Taylor & Francis Group, pp. 132-157.

List of Publications:

2019	**Roy Subhas Chandra** Yield Improvement of Tulaipanji Rice through Recombination Breeding and Selection. Indian Journal of Plant Genetic Resources. 32(2):192-199. ISSN-0971-8184.
2018	**Roy Subhas Chandra**. 2018. Improvement of Tulaipanji rice through Molecular Breeding. Int J Biotechnol Biomedical Sciences. ISSN 2454-4582. Vol 4(2): 22-27.
2017	Tanmay Chowdhury, Amitava Mandal, **Subhas Chandra Roy**, Dilip De Sarker. Diversity of the genus Ocimum (Lamiaceae) through morpho-molecular (RAPD) and chemical (GC–MS) analysis. Journal of Genetic Engineering and Biotechnology (2017), 9th January 2017. https://doi.org/10.1016/j.jgeb.2016.12.004. ISSN. 20905920. **Subhas Chandra Roy**, Kaushik Moitra, Dilip De Sarker. Assessment of genetic diversity among four orchids based on ddRAD sequencing data for conservation purposes. Physiol Mol Biol Plants (January–March 2017) 23(1):169–183. DOI 10.1007/s12298-016-0401-z. ISSN: 0971-5894. **Roy Subhas Chandra** and Reddy VB. 2017. Assessment of SNP and InDel Variations Among the Rice Lines [Tulaipanji x Ranjit]. Rice Science, ISSN: 1672-6308. 2017, 24(6): 336-348.
2016	Tanmay Chowdhury, Amitava Mandal, Amit Kumar Jana, **Subhas Chandra Roy**, Dilip De Sarker. 2016. Study of phyto-sociology and ecology of naturally growing Ocimum species with their conservational strategies in Dakshin Dinajpur district of West Bengal. Acta Ecologica Sinica, vol. 36(6): 483–491. ISSN: 1872-2032.
2015	**Subhas Chandra Roy**. (2015).Gene transfer in higher plants for the development of genetically modified crops (GM crops). International Journal of Current Advanced Research, vol 4, issue 6: 132-148. ISSN No. 2319-6475. **Subhas Chandra Roy**. (2015). Phylogenetic relationship among the wild rice [Oryza rufipogon Griff.] of NBU campus and cultivated rice as revealed by chloroplast matK gene. International Journal of Agriculture Innovations and Research, Vol 3 issue 6:1869-1875. ISSN no. 2319-1473. **Subhas Ch. Roy** (2015) . DNA Barcoding for Wild Rice [Oryza rufipogon Griff.] of NBU Campus Based on matK gene and Assessment of Genetic Variation Using DREB and BAD2 Gene Sequences. Journal of Plant Gene and Trait, Canada. Vol.6 pages 1-10. ISSN: 1925-2013.
2014	T Chowdhury, **Subhas Ch. Roy** and Dilip De Sarker (2014). Wild edible plants of Uttar Dinajpur District, West Bengal. Life Science Leaflets, 47: 20-36. (ISSN no. 2277-4297 print). **Roy Subhas Chandra** & B. D. Sharma. 2014. Assessment of genetic diversity in rice [Oryza sativa L.] germplasm based on agro-morphology traits and zinc-iron content for crop improvement., Physiol Mol Biol Plants, 20(2): 209-224. Springer-Germany. ISSN: 0971-5894. **Roy Subhas Chandra** (2014). Morphological characterization of wild rice (Oryza rufipogon Griff.) of NBU campus (West Bengal) for in situ conservation and germplasm enhancement. NBU J Plant Sci. 8 (1): 53-64. ISSN No. 09746927. Chowdhury Tanmoy, De Sarker Dilip and **Roy Subhas Chandra** (2014). Local folk use of plants in Dakshin Dinajpur district of West Bnegal, India. International Research Journal of Biological sciences, 3(5): 67-79. ISSN (P), 2278 - 3202. **Roy Subhas Chandra** (2014). Molecular cloning and expression of tea chitinase gene in Pichia pastoris, International Journal of Advanced Biotechnology and Research(IJBR) ISSN 0976-2612, Online ISSN 2278–599X, Vol5, Issue4, 2014, p612-618. **Roy Subhas Chandra** (2014). Assessment of Morphological Diversity within Wild Rice (Oryza rufipogon Griff.) Germplasm of NBU Campus (West Bengal) For In Situ Conservation- A Case Study. Indian J plant Genetic Resources, vol.27(3): 251-258. ISSN : 0971-8184. **Roy Subhas Chandra** (2014). Mass propagation of an epiphytic orchid Acampe papillosa (Lindl.) through in vitro seed germination. NBU J Plant Sci. vol. 8 (1): 65-70. ISSN No. 09746927.
2013	**Roy, S. C**. and Tirthankar Roy. (2013). Peptide mass fingerprinting of rice (Oryza sativa L.) leaves during UV-B induced stress at seedling stage: A proteome analysis. Indian Journal of Biotechnology, 12: 504-508. ISSN: 0972-5849. **Roy, S. C**. (2013). Assessment of Genetic diversity in F2 Rice seed population of a cross between Tulaipanji and Ranjit using morphological,

	physiological and SSR Markers. NBUJPS, Vol.7(1): 9-20. ISSN no- 0974 6927. **Roy, S.C**., BD Sharma, S Singha and B Sinha (2013). Characterization of rice [Oryza sativa L.] germplasm based on Iron and Zinc content. NBUJPS, ISSN no- 0974 6927. Vol. 7(1): 89-94.
2012	**Roy, S. C**. and T. O. Bhutia. Evaluation of genetic variation among three species of Allium on the basis of karyomorphology and SDS-PAGE profiling. NBU Journal of Plant Science, ISSN no- 0974 6927. vol. 6 (1) March: 57-61. **Roy, S. C** and B N Chakraborty. Analysis of chitinase gene specific transcript accumulation in tea [Camellia sinensis (L.) O. Kuntze] during induced systemic resistance by methyl jasmonate, Indian Journal of Biotechnology, 11: 142-147. ISSN: 0972-5849.
2011	**Roy, S. C** and Abhishek Chattopadhyay (2011). Evaluation of genetic diversity in mango germplasm resources using RAPD markers and characterization of cultivar Guti based on 18SrRNA gene sequence. Indian J Genet Plant Breed, 71(3), 254-261. ISSN: 0975-6906.
2009	**Roy, S. C**. and Chakraborty, B. N. (2009). Cloning and sequencing of chitinase gene specific PCR amplified DNA fragment from tea plant [Camellia sinensis] and analysis of the nucleotide sequence using bioinformatics algorithms. Canadian J Pure Appl Sci, 3(ii), 798-801. K. Maitra, **Roy, S. C**. and De Sarker D. (2009). Mass propagation of Cymbidium aloifolium (L.) Sw. from asymbiotically germinated seeds using filter-paper bridge technique. J Pl Biol, 36 (1&2), 17-22. **Roy, S. C** and Chakraborty B. N. (2009). Genetic diversity and relationships among 21 tea cultivars (Camellia sinensis)- as revealed by RAPD and ISSR based fingerprinting., Indian J Biotech, 8, 370-376.
2008	**Roy, S. C** and Chattopadhya, A. (2008). Alkaline protease producing bacteria isolated from the soil of mango orchard and identified on the basis of 16S rDNA sequencing. Canadian J Pure Appl Sci. 2 (1), 143-148.
2007	**Roy, S. C**. (2007). Intraspecific diversification in Caladium bicolor (Ait.) Vent. (Araceae) as revealed by chromosome analysis. Environ Ecol, 25(4), 903-911.