



# **Murshidabad University**

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# **Number listed in International Database (Detail information):**

➤ Google Scholar Citation – 81, H-Index – 6, i10 Index - 3

➤ Scopus Citation – 121, H-Index – 8, Impact Factor: 18

ResearchGate Score – 111.1, Reads- 7,170, Citation- 69

# **Academic qualifications:**

College/University/Institution from which the degree was	vas Abbreviation of the		
obtained	degree		
Sripat Singh College, Jiaganj, Murshidabad (University of Kalyani)	B.Sc. (Graduation)		
University of Kalyani	M. Sc. (Post-Graduation)		
University of Calcutta	Ph. D. (Doctorate)		
International Forensic Science (IFS) Institute, Pune, Maharashtra,	Advanced PG diploma in		
India.	"Forensic Science and		
	DNA Fingerprinting"		

# Other Educational Qualifications:

Course/Degree/Diploma	Institution
Post-Doctorate	Geological Studies Unit, Indian Statistical Institute (ISI),
	Kolkata, India
Visiting Scientist	Geological Studies Unit, Indian Statistical Institute (ISI),
	Kolkata, India
CSIR-Research Associate (RA)	Department of Botany, University of Calcutta, Kolkata

**Teaching Experience:** 17 years

**Position holding:** Assistant Professor, Department of Botany, Murshidabad University (Erstwhile Krishnath College), Berhampore, Murshidabad, WB, India.

# **Positions held:**

Sl. No.	Employer(s)	Post held	Curriculum
1.	Ranaghat College, West Bengal, India	Guest Faculty	Under-Graduate Course
2.	Scottish Church College, West Bengal, India	Guest Faculty	Post-Graduate Course
3.	Jogamaya Devi College, West Bengal, India	Guest Faculty	Post-Graduate Course
4.	Lady Brabourne College, West Bengal, India	Guest Faculty	Post-Graduate Course
5.	Serampore College, West Bengal, India	Guest Faculty	Post-Graduate Course
6.	Brahmananda Keshab Chandra College, West Bengal, India	Guest Faculty	Post-Graduate Course
7.	Diamond Harbour Women's University, Sarisha, Diamond Harbour, West Bengal	Resource Person	Post-Graduate Course

**Research Experience:** 17 years

Area of Specialization: Palaeobotany and Palynology

Research interests: Neopalynology; Palaeontology, Forensic Botany: Xylotomy; Limnology;

Palaeobiology; Paleoclimatology; Biostratigraphy.

# Research guidance:

# **Projects:** 6

Sl. No.	Title	Funding Agency	Duration
1.	Botanical Evidences in relation to forensic investigations: Development of experimental database.	UGC, New Delhi	2008-2013
2.	A study of the Neogene and Quaternary successions of eastern Himalayan foreland basin.	Indian Statistical Institute (ISI), Kolkata under Ministry of Statistics and Program Implementation	2013-2015
3.	Sedimentology and stratigraphy of the Siwalik succession of eastern Himalaya and its bearing on the evolution of the Neogene foreland basin in the eastern Himalaya.	Indian Statistical Institute (ISI), Kolkata under Ministry of Statistics and Program Implementation	2015-2018
4.	Paleogeography of the Neogene foreland basin of Eastern Himalava and its		2018- March, 2019

	relationship with contemporaneous	Ministry of Statistics and	
	sediments of Mizoram	Program Implementation	
5.	Vegetation dynamics and climate change	CSIR, New Delhi, India	April, 2019-
	in the Sub-Himalayan Zone (Neogene		November,
	Foreland Basin) of Arunachal Pradesh,		2019
	India: A palynological approach		
6.	Vegetation dynamics and climate change	Start-up Research Grant	2022-2024
	in the Sub-Himalayan Zone (Neogene	(SRG), Science and	
	Foreland Basin) of Arunachal Pradesh,	Engineering Research	
	India: A palynological Investigation.	Board (SERB),	
		Department of Science	
	Principal Investigator (PI): Dr. Sandip	and Technology (DST),	
	More	Govt. of India, New Delhi	

# Selected list of publications:

a) Journals: 20

b) Books/book chapters: 3

c) Conference/seminar volumes: 22

### **Membership of Learned Societies:**

- 1) International Organisation of Palaeobotany
- 2) Indian Academy of Forensic Science (Life member)
- 3) Botanical Society of Bengal (Life member)
- **4)** Indian Association for Medico-legal Experts
- 5) Indian Science Congress Association (Life member)

### **Invited lectures delivered: 22**

#### Selected list of invited lectures:

- 1) Delivered a talk on "Forensic Palynology" as an invited speaker for 'Science Awareness Day' celebration' on April 25, 2017 jointly organized by the Departments of Botany and Chemistry, Sri Shikshayatan College, West Bengal, India.
- 2) Delivered a talk on "Forensic Palynology" as an invited speaker in the UGC-CPE sponsored one day seminar on "Advancement of Biological Sciences towards New Generation" on September 12, 2017 jointly organized by the Departments of Botany and Zoology, Bankim Sardar College, West Bengal, India.
- 3) As an invited speaker to demonstrate a practical procedure on "Acetolysis method: a technique of preparing modern pollen and spores for microscopic examination" at the DBT sponsored Summer School organized by the Department of Botany, Lady Brabourne College, Kolkata during 07-08 June, 2018.
- **4)** Delivered a talk on "Forensic Palynology" as an invited speaker on September 25, 2021 organized by the Departments of Botany, Jai Hind College, Mumbai, Maharashtra, India.
- **5)** Delivered a talk on "Palynology" as an invited speaker on September 12, 2021 organized by the Departments of Botany, Shyampur Sidheswari College, West Bengal, India.

- **6)** Invited lecture delivered on "Understanding Ecosystem for Health and well-being" in the district level Children's Science Congress, Dept. of Science and Technology, Govt of West Bengal held on 20.09.2022.
- **7)** Worked as a resource person in the DBT sponsored National Workshop on "Hands-on training on techniques and methods of Palaeobotany and Palynology" at the Department of Botany, Lady Brabourne College, Kolkata from 06.06.2023 to 09.06.2023.
- **8)** Worked as a resource person in the DBT sponsored National Workshop on "Techniques for studying plant fossils" at the Department of Botany, Lady Brabourne College, Kolkata from 21.05.2024 to 27.05.2024.

# **Fellowships:**

- 1) CSIR-Research Associate (RA) in the project entitled "Vegetation dynamics and climate change in the Sub-Himalayan Zone (Neogene Foreland Basin) of Arunachal Pradesh, India: A palynological approach" in Department of Botany, University of Calcutta from April 01, 2019 28th November, 2019.
- **2)** Visiting Scientist in the project entitled "Paleogeography of the Neogene foreland basin of Eastern Himalaya and its relationship with contemporaneous sediments of Mizoram" in the Geological Studies Unit, Indian Statistical Institute, Kolkata from September, 2018 to December, 2018.
- 3) Post-Doctoral Fellowship in the project entitled "Sedimentology and stratigraphy of the Siwalik succession of eastern Himalaya and its bearing on the evolution of the Neogene foreland basin in the eastern Himalaya" in the Geological Studies Unit of Indian Statistical Institute from April, 2015- till date.
- **4)** Post-Doctoral Fellowship in the project entitled "A study of the Neogene and Quaternary successions of eastern Himalayan foreland basin" in the Geological Studies Unit of Indian Statistical Institute from August, 2013 March, 2015.
- 5) Junior Research Fellowship & Senior Research Fellowship in Palaeobotany-Palynology Laboratory, Department of Botany, University of Calcutta, sponsored by UGC-RFSMS (Research Fellowship in Science for Meritorious Students) topic entitled "Botanical evidences in relation to forensic investigations: development of experimental database" during March 2008 March, 2013.

#### **Awards/Honors:**

- 1) Received CSIR- Research Associate (RA) in February, 2019.
- 2) Awarded first prize for poster presentation in "3rd International Conference on Legal Medicine, Medical Negligence & Litigation in Medical Practice and 3rd International Conference on Current Trends in Forensic Sciences, Medicine & Toxicology" during 3rd 5th February, 2012 at Jaipur, Rajasthan, India for significant research work entitled "Efficacy of spider webs as passive natural pollen collectors in forensic palynological investigations: an experimental study from India".
- **3)** Received award of Rs. 50,000/- as International Travel Grant from University Grants Commission, New Delhi, India for attending 'II (X) International Botanical Conference of Young Scientists' in St. Petersburg, Russia during 11-16 November, 2012.

- **4)** Nominated for the ISCA (Indian Science Congress Association) Young Scientists Award for 2012-2013 in the section Plant Sciences in 100<sup>th</sup> Indian Science Congress at Kolkata during 3-7 January, 2013.
- 5) Acted as Hon'ble Judge of Secondary / Higher Secondary / Under Graduate (College) Level in the District Level Student-Youth Science Fair, 2023-24, Murshidabad on 30.01.2024 at Govt. College of Engineering and Textile Technology, Berhampore, Murshidabad.

#### Other notable activities:

### A) Administrative Experience:

- **1)** Worked as a Paper setter, Moderator and Examiner in Master's degree course (Botany) in Jogamaya Devi College, West Bengal, India in the years 2015, 2016, 2017 and 2018, 2019.
- **2)** Working as a Paper setter and Examiner in Master's degree course (Botany) in Lady Brabourne College, West Bengal, India since 2016.
- 3) Worked as a Paper setter and Examiner in Master's degree course (Botany) in Serampore College, West Bengal, India in the year 2016.
- **4)** Worked as a Paper setter and Examiner in Master's degree course (Botany) in Scottish Church College, West Bengal, India in the years 2015, 2016 and 2017.
- **5)** Worked as a Paper setter and Examiner in Master's degree course (Botany) in Brahmananda Keshab Chandra College, West Bengal, India in the year 2018.
- 6) Worked as a Paper setter, Moderator and Examiner in Master's degree course (Botany) in Diamond Harbour Women's University, West Bengal, India in 2018, 2019 and 2020.
- 7) Working as a Member of the Board of Moderators in Botany (CBCS) for the Master's degree course (Botany) in Cooch Behar Panchanan Barma University, West Bengal, India since 2020.
- **8)** Member of the Library Sub-Committee, Krishnath College, Berhampore, Murshidabad since May, 2021.
- **9)** Member of the Research monitoring Committee, Krishnath College, Berhampore, Murshidabad since September, 2022.
- **10)** Member of the Institutional Development Planning Committee (Water Harvesting System & Vermi-Compost System Plantation), Krishnath College, Berhampore, Murshidabad since May, 2023.
- 11) Member of the West Bengal Health Scheme Committee, Krishnath College since 2021.
- **12)** Serving as the "Board Observer" for the ANM & GNM Examination conducted by the West Bengal Joint Entrance Examination Board since 2022.
- **13)** Serving as the "Board Observer" for the JENPAS Examination conducted by the West Bengal Joint Entrance Examination Board since 2022.

- **14)** Serving as the "Board Observer" for the WBJEE Examination conducted by the West Bengal Joint Entrance Examination Board since 2022.
- **15)** PG-BOS member in the Department of Botany, Cooch Behar Panchanan Barma University since 2021.
- **16)** Acting as external examiner in Botany for the M.Sc. 2<sup>nd</sup> Semester (DODL) Practical Examination in the Department of Botany, Kalyani University since 2022.

# B) Field Experience:

- 1) Carried out field work with Prof. Pascale Huyghe, University of Grenoble, Grenoble, France in the Quaternary exposures of the Tista River of Darjeeling district, West Bengal during November, 2017 in the Geological Studies Unit, Indian Statistical Institute, Kolkata, India.
- **2)** Carried out field work with Prof. Giorgio Basilici, Professor of Sedimentology at the State University of Campinus (UNICAMP) Brazil in the Siwalik rocks exposed in the Gish, Lish and Ramthi River cutting sections of Darjeeling district, West Bengal during December, 2016 in the Geological Studies Unit, Indian Statistical Institute, Kolkata, India.
- 3) Carried out field work with Dr. Rachel Abrahami, University of Grenoble, Grenoble, France in the Quaternary exposures of the Tista River of Darjeeling district, West Bengal during April, 2016 in the Geological Studies Unit, Indian Statistical Institute, Kolkata, India.
- **4)** Field work in the Siwalik rocks exposed in the rivers of the Tista valley, Gish, Churanthi, Kalijhora of Darjeeling and Jalpaiguri districts of West Bengal for sedimentological studies and the collection of plant megafossils (leaves, fruits, seeds and woods) & microfossils (pollen and non-pollen palynomorphs) during November, 2013 and January-February, 2015 under the project entitled "A study of the Neogene and Quaternary successions of eastern Himalayan foreland basin" and again in March, 2016 under the project entitled "Sedimentology and stratigraphy of the Siwalik succession of eastern Himalaya and its bearing on the evolution of the Neogene foreland basin in the eastern Himalaya" in the Geological Studies Unit, Indian Statistical Institute, Kolkata, India.
- 5) Field work in the Itanagar, Naharlagun, Nirjuli, Banderdewa area of Arunachal Pradesh for sedimentological studies and the collection of plant megafossils (fossil leaves, resin, fruits, seeds and woods) & microfossils (pollen and non-pollen palynomorphs) in December, 2013 and in March, 2015 under the project entitled "A study of the Neogene and Quaternary successions of eastern Himalayan foreland basin" in the Geological Studies Unit, Indian Statistical Institute, Kolkata, India.
- 6) Carried out field work in the Quaternary exposures of the rivers, Nagar, Dolancha, Cheramati, Balason and Tista of North Dinajpur, Jalpaiguri and Darjeeling districts of west Bengal for sedimentological studies and the collection of plant megafossils (leaves, fruits, seeds and woods) & microfossils (pollen and non-pollen palynomorphs) during November-December, 2013 under the project entitled "A study of the Neogene and Quaternary successions of eastern Himalayan foreland basin" in the Geological Studies Unit, Indian Statistical Institute, Kolkata, India.

## Selected List of Journal Publications/ Book Chapters/Conference Papers:

- A) Selected list of research papers published in journals:
- **1)** S Mahato, T Hazra, **S More**, MA Khan (2024). Triplinerved cinnamon from the Siwalik (middle Miocene) of eastern Himalaya: Systematics, epifoliar fossil fungi, palaeoecology and biogeography, Geobios [Elsevier], Vol.82, pages-53-67.
- **2)** Kansabanik, R., Biswas, M., **More, S.** and Mandal, A. (2023). Study on phytochemical screening of some selected pteridophytes in Murshidabad district, West Bengal, Res. Jr. Agril. Sci, vol. 14 (5), pp. 1619-1622.
- **3)** Mandal, A., **More, S.,** Biswas, M., Mondal, S.N., Ray, S. and Ghosh, S. (2023). Study on Secondary Metabolites of Some Ethnomedicinally Important Plants of Murshidabad District, West Bengal, India, Jour Pl Sci Res, vol. 39 (2), pp. 31-38.
- **4)** Taposhi Hazra, **Sandip More**, Mamata Murmu, Sumana Mahato, Narayan Ghorai, Subir Bera and Mahasin Ali Khan (2021). Palynological Characterization of Stingless Bee *Tetragonula Iridipennis* Smith (Hymenoptera: Apidae: Meliponini) Honey from Chotanagpur Plateau, Eastern India. Bee World, 1-5, DOI: 10.108 0/0005772X.2021.1874698.
- **5)** Taposhi Hazra, **Sandip More**, Sumana Mahato, Subir Bera, Mahasin Ali Khan (2020). *Terminalia arjuna*: An Important Subsistence Pollen Source for *Apis florea* During Spring Season in Southern West Bengal. Proceedings of National Academy of Science, India: Section-B(Biological Sciences), DOI:10.1007/s40011-020-01191-1.
- **6)** Bhattacharya, S., Khan, M.A., **More, S.,** Paruya, D.K., Chakraborty, T. and Bera Subir. 2018. Amber embalms essential oils: A rare preservation of monoterpenoids in fossil resins from eastern Himalaya. Palaios. 33: 1-10.
- **7) More S;** Rit, R; Khan, M; Paruya, DK; Taral, S; Chakraborty, T and Bera, Subir. 2018. Record of leaf and pollen cf. *Sloanea* L. (Elaeocarpaceae) from the Middle Siwalik of Darjeeling subHimalaya, India and its palaeobiogeographic implications. Journal of Geological Society of India, 91: 261-388.
- **8) More, S.** and Bera, S., 2018. Role of fresh water diatoms in linking victim, suspect and object with aquatic crime scene using physical evidences: First experimental study from India. Anil Aggrawal's Internet Journal of Forensic Medicine and Toxicology. 19(1): 15.
- **9) More, S.,** Paruya, D.K. and Bera, Subir 2017. Secondary xylary features in proving truth/falsity of an alibi: examples of three important Indian commercial woods. Current Botany. 8: 101-109.
- **10)** Biswas, A., **More, S** and Bera, S. 2016. Pollen analysis of winter honey from Purulia district of West Bengal, India. Journal of the Botanical Society of Bengal. 70(2): 93-98.
- **11) More S.,** Paruya, D. K., Taral S., Chakraborty T., Bera S. 2016. Depositional Environment of MioPliocene Siwalik Sedimentary Strata from the Darjeeling Himalayan Foothills, India: A Palynological Approach. PLoS ONE. 11(3): e0150168. doi. 0.1371/journal.pone.0150168.
- **12) More, S.,** Bera, Subir. 2015. Potential of Hairs as a Decisive tool in Forensic Palynological investigations: First experimental study from India. Research Journal of Forensic Sciences. 3(6), 1-7.

- **13) More, S.,** Thapa, K. Bera, Subir. 2013. Potential of dust and shoot from air filters of motor vehicle engines as a forensic tool, first experimental palynological approach in India, Journal of Forensic Research, 4,177. doi,10.4172/2157-7145.1000177).
- **14) More S.,** Bera Subir. 2011. Efficacy of packing materials as pollen trapping agents in forensic investigations, an experimental case study from West Bengal, India. Journal of the Indian Academy of Forensic Sciences, Vol. 43 (1 &2), 19-30.
- **15) More, S.,** Ghorai, N., Bera, Subir. 2010. Study on the selection of some local pollen plants in West Bengal, India as pollen brood feed in *Apis cerena* Fabr. Larvae by the worker bees, through meconium analysis and community ordination method of recovered pollen taxa. Proceedings of Zoological Society of India 63 (1), 39-44.

# B) Articles/ Chapters published in Books:

- **1)** Boral, D and **More, S.** (2024). Bioaerosols and Their Potential Effects as Aeroallergens on Human Health: Approaches, Advances and Perspectives (In press).
- **2)** Chakraborty, T., Taral, S., **More, S.**, Bera, S. (2019). Cenozoic Himalayan foreland basin: an overview and regional perspective of the evolving sedimentary succession. In: Geodynamics of the Indian Plate: Evolutionary Perspectives, Neal S. Gupta and S.K. Tandon (Eds.), Springer International.
- **3) More, S.,** Bera, S. (2011). Use of spider webs as passive natural pollen collectors in forensic palynological investigations, preliminary data from an experiment. In, Recent Studies in Biodiversity and Traditional Knowledge in India (Eds. C. Ghosh & A. P. Das), pp. 233-241.

### C) Selected list of published abstracts:

- 1) An abstract entitled "Motor vehicle exhaust as airborne pollen trap: a potential tool in forensic investigations" is being published in the proceedings of "XVIII Annual Conference of Indian Association for Angiosperm Taxonomy and International Seminar on Multidisciplinary Approaches in Angiosperm Systematics" held on 11th-13th October, 2008, Kalyani, West Bengal, India.
- 2) An abstract entitled "Utilization of *Carica papaya* L., (Caricaceae) pollen grains as brood food by *Apis cerana* worker larvae through meconium analysis" is being published in the proceedings of "XVIII Annual Conference of Indian Association for Angiosperm Taxonomy and International Seminar on Multidisciplinary Approaches in Angiosperm Systematics" on 11<sup>th</sup>-13<sup>th</sup> October, 2008 in Kalyani, West Bengal, India.
- **3)** An abstract entitled "Packing materials as pollen trapping agent in forensic investigations: a case study from West Bengal" is being published in the proceedings of "Recent trends in contemporary plants and microbial sciences" organized by Department of Botany, UGC centre of advanced study, University of Burdwan on March 19-20, 2010.
- **4)** An abstract entitled "Spider web as pollen trap: pollen spectrum from North Bengal, India" is being published in the proceedings of "XIX Annual Conference of Indian Association for

- Angiosperm Taxonomy and International Seminar on Angiosperm Systematics and Phylogeny: Retrospects and Prospects" on 12<sup>th</sup>-14<sup>th</sup> November, 2009 in Lucknow, India.
- **5)** An abstract entitled "Currency notes as pollen trap in forensic palynological investigations: a pollen mapping from flower markets of Kolkata, West Bengal" is being published in the proceedings of "2nd International Conference on Medical Negligence & Litigation in Medical Practice and 2nd International Conference on Recent Advances in Forensic Sciences, Medicine & Toxicology" on 20th -21st February, 2011, Goa, India.
- **6)** An abstract entitled "Forensic Limnology: use of fresh water diatoms in associating suspects and objects with an aquatic crime scene A first attempt from India" is being published in the proceedings of National Symposium entitled "Plant Diversity and Resources: Evolution, Analyses, Stress and Challenges and Palaeophytodiversity: Its Aspects and Prospects" held on 20th -22nd December, 2011, Kolkata, West Bengal.
- 7) An abstract entitled "Efficacy of spider webs as passive natural pollen collectors in forensic palynological investigations: an experimental study from India" is being published in the proceedings of "3rd International Conference on Legal Medicine, Medical Negligence & Litigation in Medical Practice and 3rd International Conference on Current Trends in Forensic Sciences, Medicine & Toxicology" on 3rd 5th February, 2012 at Jaipur, Rajasthan, India (have been awarded first prize for poster presentation).
- **8)** An abstract entitled "Forensic Palynology: potential of hairs as adjunctive tool in forensic studies in India" is being published in the proceedings of "Acharya P C Ray National Young Scientist's Conference" on 17th-18th February, 2012 at Kolkata.
- 9) An abstract entitled "Palynological analyses of spider webs and their potential in forensic science to associate a suspect/victim with a crime scene: First report from India" is being accepted for poster presentation in the "13th International Palynological Congress and 9th International Organization of Palaeobotany Conference" to be held on August 23-30 2012 at Chuo University in Tokyo, Japan.
- **10)** An abstract entitled "Potential of fresh water diatoms in associating suspects to an aquatic crime scene an experimental study from India" is being published in the "International Botanical conference of young scientists in St. Petersburg" during November 11-16, 2012, St. Petersberg, Russia.
- **11)**An abstract entitled "Efficacy of currency notes as pollen trapping agent in forensic investigations: First experimental database from India" is being published in the proceedings of "National conference on Recent developments in plant and earth sciences" during 28-29 November, 2013 in Lucknow, Uttar Pradesh.
- **12)**An abstract entitled "Forensic Palynology- A novel approach to solve legal problems using spores and pollen grains in India" is being published in the in the International Conference on "The Green Planet: past, present and future" during 21-23 December, 2016 help at Department of Botany, University of Calcutta, Kolkata, India.

- **13)**An abstract "Neopalynology: study of modern pollens to resolve issues related to forensic investigations" is being published in the State Level Seminar on "Modern Trends in Biological Sciences" on 5th February, 2020 jointly organised by Department of Zoology and Department of Physiology, Krishnath College, Berhampore, West Bengal.
- **14)** An abstract "Pollen- Nature's tiny clues: applications and future prospects" is being published in the State Level Seminar on "Fundamental and Translational Researches-Emerging perspectives" during 21-22 April, 2022 at the Department of Zoology, Krishnath College, Berhampore, West Bengal.

# Workshops attended:

- **1)** Participated in the Workshop on "Morphometrics and its applications in Palaeontology" held in the Indian Statistical Institute, Kolkata during 28th 29th March, 2018.
- **2)** Participated in the Workshop on "Statistical Methods and R Programming for Biologists" held in the Agricultural & Ecological Research Unit, Indian Statistical Institute, Kolkata during 07th -13th March, 2018.
- **3)** Participated a national level workshop on "Hands- on Training on Palaeobotanical and Palynological Techniques" held in the Department of Botany, University of Calcutta, West Bengal during April 21-28, 2014.
- **4)** Attended a Workshop on "Intellectual Property Rights" organized by Ramakrishna Mission Vivekananda Centenary College and Patent Information Centre, West Bengal State Council of Science and Technology, WBSCST, DST-Govt. of West Bengal on 17th September, 2012 at Rahara, West Bengal, India.

### Selected list of Seminar/Symposia/Conference/Workshop attended (Faculty of Science):

Name of the seminars, Conference		_	
Symposia	Name of the sponsoring	Place	Date
	Agency		
1) "XVIII Annual Conference of Indian	Department of Botany,	Kalyani, West	11 <sup>th</sup> -13 <sup>th</sup>
Association for Angiosperm Taxonomy"	University of kalyani	Bengal, India	October,
and International Seminar on			2008
"Multidisciplinary Approaches in			
Angiosperm Systematics".			
2) A seminar on "Cryptogamic Botany and 5th P.	Department of Botany,	Kolkata, West	5 <sup>th</sup>
Chatterjee Memorial Lecture" organized	University of Calcutta,	Bengal, India	December,
by P. Chatterjee Research Foundation.			2008
3) "XIX Annual Conference of Indian	National Botanical Research	Lucknow,	12th-14th
Association for Angiosperm Taxonomy"	Institute, Lucknow	India	November,
and International Seminar on "Angiosperm			2009
Systematics and Phylogeny: Retrospects			
and Prospects"			

4) Golden jubilee symposium on "Recent trends in contemporary plants and microbial sciences"		Burdwan, W.B., India	March 19 <sup>th</sup> -20 <sup>th</sup> , 2010
5) National Seminar on "Present Scenario & Future Prospect of Cryptogamic Botany" organized by P. Chatterjee Research Foundation.	Department of Botany, University of Calcutta	Kolkata, West Bengal, India	9 <sup>th</sup> November, 2011
6) "2nd International Conference on Medical Negligence & Litigation in Medical Practice and 2nd International Conference on Recent Advances in Forensic Sciences, Medicine & Toxicology"	Medico Legal Experts, New	Goa, India	20 <sup>th</sup> -21 <sup>st</sup> February, 2011
7) National Symposium on "Plant Diversity and Resources: Evolution, Analyses, Stress and Challenges and Palaeophytodiversity: Its Aspects and Prospects"	Department of Botany, University of Calcutta, Kolkata, West Bengal	Kolkata, India	20 <sup>th</sup> -22 <sup>nd</sup> December, 2011
8) "3rd International Conference on Legal Medicine, Medical Negligence & Litigation in Medical Practice and 3rd International Conference on Current Trends in Forensic Sciences, Medicine & Toxicology" (have been awarded first prize for poster presentation).	Medico Legal Experts, New Delhi	Jaipur, India	3 <sup>rd</sup> – 5 <sup>th</sup> February, 2012
9) "Acharya P C Ray National Young Scientist's Conference"	Presidency University, Calcutta University and Vivekananda Vijnan Mission	Kolkata, India	17 <sup>th</sup> -18 <sup>th</sup> February, 2012
10) "National Symposium on Genomics and Proteomics in Plant Science"	Centre of Advanced Study, Department of Botany, University of Calcutta	Kolkata, India	9 <sup>th</sup> March, 2012
11) A seminar on "Cryptogams the key contributor of Ecosystem" organized by P. Chatterjee Research Foundation.		Kolkata, West Bengal, India	7 <sup>th</sup> December, 2012
12) The "100 <sup>th</sup> Indian Science Congress"	Indian Science Congress Association	Kolkata, West Bengal, India	3 <sup>rd</sup> – 7 <sup>th</sup> January, 2013
13) National Seminar on "Research Scenario in Plant Science"	Centre of Advanced Study, Department of Botany, University of Calcutta	Kolkata, West Bengal, India	8 <sup>th</sup> January, 2013
14) International Conference on "The Green Planet: past, present and future"	Centre of Advanced Study, Department of Botany, University of Calcutta, Kolkata, India	Kolkata, India	21-23 December, 2016
15) Workshop on "Intellectual Property Rights"	Ramakrishna Mission Vivekananda Centenary College, and Patent Information Centre, West Bengal State Council of Science and Technology,	Rahara, West Bengal, India	17 <sup>th</sup> Septembe r, 2012

	WBSCST, DST-Govt. of West Bengal		
16) Workshop on "Statistical Methods and R Programming for Biologists"	Agricultural & Ecological Research Unit, Indian Statistical Institute, Kolkata	Kolkata, India	07 <sup>th</sup> – 13 <sup>th</sup> March, 2018
17) Workshop on "Morphometrics and its applications in Palaeontology"	Indian Statistical Institute, Kolkata	Kolkata, India	28 <sup>th</sup> – 29 <sup>th</sup> March, 2018
18) State Level Seminar on "Modern Trends in Biological Sciences"	Department of Zoology and Department of Physiology, Krishnath College	Berhampore, Murshidabad, West Bengal	5 <sup>th</sup> February, 2020
19) One Day National Seminar on "Environmental Perturbations: Root Causes and Remedies"	- F 88-7, -8- )	Murshidabad, West Bengal	28 <sup>th</sup> February, 2020
20) State Level Seminar on "Fundamental and Translational Researches-Emerging perspectives"		Berhampore, Murshidabad, West Bengal.	21-22 April, 2022

# **Courses / Programmes attended:**

- 1) Refresher Course in Life Sciences organised by UGC-HRDC Goa University, Goa from  $10^{\rm th}$  - $23^{\rm rd}$  January, 2023.
- 2) Faculty Induction Programme (FIP) organised by the UGC-HRDC Centre, Aligarh Muslim University, Aligarh from  $08^{th}$  September- $13^{th}$  October, 2023.