DR. RITAM CHATTERJEE

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District: 24 Parganas (South)
West Bengal | Pin 743613
India

ACADEMICS

Doctor of Philosophy, Zoology, University of Calcutta, Kolkata, West Bengal , India *2012-2018*

Master of Science (1st Class, A+), Zoology, University of Calcutta, Kolkata, West Bengal, India *2009-2011*

Bachelor of Science (1st Class), Zoology (**Hons.**), University of Calcutta, Kolkata, WB, India *2006-2009*

EMPLOYMENT

1. Assistant Professor, Department of Zoology**, Cooch Behar Panchanan Barma University,** Cooch Behar, West Bengal, India. (18th February 2021 – Present)

2. Post-Doctoral Fellow (DBT-RA) at the School of Medical Science and Technology**, Indian Institute of Technology Kharagpur,** Kharagpur, West Bengal, India. (19th July 2018 – 4th February 2021)

2. **Assistant Professor** at the Department of Zoology (PG & UG), **Arunachal University of Studies**, Arunachal Pradesh, India. (16th April 2018 – 9th July 2018)

3. **Guest Faculty** at the Department of Zoology (UG), **Bankim Sardar College** (Affiliated to the University of Calcutta), West Bengal, India. (1st April 2016 – 2nd April 2018)

ACHIEVEMENTS & AWARDS

1. Qualified for **DBT Research Associateship Program (Post-Doctoral Fellowship)** of Department of Biotechnology, Government of India**,** conducted by IISC, Bangalore in 2018.

2. Qualified **National Eligibility Test (NET)** on **Life science** conducted by CSIR & UGC in December 2012.

3. Qualified **Graduate Aptitude Test for Engineering (GATE)** on **Life science** conducted by Indian Institute of Technology (IIT), Delhi in 2012.

4. Received **ZSK-Research Excellence Award** from **The Zoological Society, Kolkata** on 26th September 2024.

5. **Best faculty oral presentation award** for "Oxidative stress and its mechanistic association with the alteration of TGF-β1/NOX4/NRF2/Notch1 signaling cascade and EMT dynamics during oral pre-cancer and cancer", **National Conference on Recent Advances in Animal Science (RAAS - 2026)** organized by Department of Zoology, Institute of Science, North Bengal University, Darjeeling, West Bengal, India. (18th – 119th March 2026)

6. **Best oral presentation award** for "Bone marrow aplasia and deregulation of vital signaling components: a correlative study in experimental mice", **International Conference on Trends in Biochemical and Biomedical Research (TBBR-2018)** organized by Department of Biochemistry, Institute of Science, Banaras Hindu University, Varanasi, Uttar Pradesh, India. (13^{th} – 15^{th} February 2018)
7. **Best poster presentation award** for "Aplastic anemia related hematopoietic catastrophe and kinase-phosphatase signaling", **3^{rd} International Conference on Perspective of Cell Signaling and Molecular Medicine** organized by Bose Institute, Kolkata, West Bengal, India. (8^{th} – 10^{th} January 2017)

8. **Best poster presentation award** for "Bone Marrow Pathophysiological Consequences in Aplastic Anemia, MDS and Leukemia in Experimental Mice", **National Symposium on Frontiers in Modern Biology** organized by Indian Science Congress Association and Department of Zoology, Dr. Hari Singh Gour Central University at Sagar, Madhya Pradesh, India. (23^{rd} - 24^{th} March 2014).

9. **Best presentation award** for "Aplastic Anemia: Kinase-Phosphatase Regulation Scenario", Symposium organized by **Central Calcutta Society for Advancement of Human Development and Research**, Kolkata, West Bengal, India. (21^{st} July 2014)

RESEARCH INTERESTS

- **Molecular alterations associated with oral pre-cancerous and cancerous lesions:**

Oral cancer is one of the most common neoplasia having a maximum survivability rate of approximately five years. About one third of the global burden of oral cancer cases is present in India. Since, as per the prediction of WHO, the global death toll due to the disease will exceed 8 million a year by 2030, it is utmost necessary to develop advanced therapeutic modalities after in-depth investigation into the pathophysiological domain of the disease. In most of the cases, oral cancer develops from the pre-cancerous lesions viz; oral sub-mucous fibrosis (OSF), leukoplakia, erythroplakia etc. These are all associated with the consumption of tobacco, alcohol, smoking etc. The malignant transformation involves well established discrete stages from normal mucosa to invasive carcinoma. Histopathological examination of tissue biopsy has been regarded as the gold standard for oral cancer and pre-cancer diagnosis. However, there is critical need for understanding the detailed molecular mechanism for the development of better therapeutic strategies against oral carcinogenesis. The research activities of my lab in collaboration with MJN Medical College, Cooch Behar and Vellore Institute of Technology, broadly aims to explore the molecular details regarding the oxidative stress status, mitochondrial energetics, vital cell signaling cascades, phenotypic plasticity, epigenetic modifications, stemness acquisition associated with oral pre-malignant and malignant conditions.

- **Polypharmacological analysis of turmeric and aswagandha together with therapeutic applications:**

Various parts of the turmeric and ashwagandha plants have been used as medicinal treatments for various conditions from ulcers and arthritis to cardiovascular disease and neuroinflammation, anxiety, depression and oxidative stress. These widely used Ayurvedic medicines display extensive polypharmacology with influences on many key inflammatory and other markers of disease. Despite the irrefutable therapeutic value delivered by these Ayurvedic herbs, clinical reliability and research repeatability with their treatments are still poor. The pharmacology of each herbal agent must be better understood and reliably mapped if curcumin and ashwagandha are to be accepted and used with predictability and

prescriber confidence in modern medical applications. The collaborative work of my lab with the Biologic Pharmamedical INC. of Canada, broadly focuses on exploring the therapeutic efficacy together with the in-depth analysis of the alterations of various signaling cascades associated with the systemic application of the various constituents of *Curcuma* sp. and *Ashwagandha* sp.

- **Hematopoietic disorder related pathophysiological alterations of various signaling cascades associated with the maintenance homeostatic balance in the hematopoietic stem/ progenitor compartment of bone marrow:**

Hematopoietic stem cells (HSCs) that mainly resides in the bone marrow (BM) differentiates to produce different cellular constituents of blood. In bone marrow, local tissue microenvironments required for the maintenance and regulation of hematopoietic stem/ progenitor cell (HSPC) population constitute the hematopoietic niche. Complex interactions between the hematopoietic cells and niche facilitate normal hematopoietic physiology. Catastrophic events in the bone marrow can lead to various pathophysiological consequences like aplastic anemia, myelodysplastic syndrome (MDS), leukemia etc. My domain of interest includes the expressional alterations of various signaling components together with the shift of cellular energetics and associated epigenetic modifications in the HSPC compartment of bone marrow during the hematopoietic disorders.

- **Effect of the antihelmintic at cellular and sub-cellular level on the common parasites of domestic fowl:**

Recently, I have collaborated with Professor Pradip Kumar Kar, to study the efficacy of drugs on common helminthes of domestic fowl. I am studying the effect of those drugs on parasites at cellular and sub-cellular level.

OTHER SPECIAL INTERESTS

Studying and culturing the scriptures related to the ideas of Upanishads, Bhagavad Gita, Sri Sri Chandi, Sri Ramakrishna-Ma Sarada-Swami Vivekananda literatures and other spiritual books for applying the ideas in the management of stress and various modern-day mental issues.

RESEARCH EXPERTISE

1. Histopathological and immunohistochemical analysis of oral pre-cancers and cancer.
3. Study of epithelial-mesenchymal transition and acquisition of stemness during oral carcinogenesis.
3. Multifractal fern pattern analysis of saliva as non-invasive diagnostic tool for oral carcinogenesis.
4. Development of murine models for hematopoietic disorders like leukemia, aplastic anemia, myelodysplastic syndrome and study of the alterations of hematopoietic stem/ progenitor cells and hematopoietic microenvironments.
5. Redox biology, Kinase-phosphatase biology, cell cycle and apoptosis profiling, p53 cascade, Wnt, NOTCH, Shh signaling analysis.
6. Investigation of the pathophysiological alterations of mitochondrial membrane potentials during malignant and nonmalignant disorders.

7. Study of epigenetic status alteration under xenobiotic stress.
8. Investigation of the pesticides mediated modulation of hematopoietic stem cell and niche.
9. Analysis of the therapeutic efficacy of vital phytochemicals.
10. Development of murine model of peritoneal sarcomatosis and therapeutic applications of phytochemicals and probiotics.

EXPERTISE IN RELEVANT TECHNIQUES

Flowcytometry
Immunostaining (Immunohistochemistry and immunocytochemistry)
Scanning electron microscopy
Atomic force microscopy
Fourier Transform Infrared Spectroscopy
Single cell culture, tissue explant culture, CFU-assay
Hematological profiling
Histopathology, cytopathology and cytochemistry
Chromosomal study (metaphase spread analysis)

PUBLICATIONS

TOTAL PUBLICATIONS IN INTERNATIONAL PEER-REVIEWED JOURNALS: **21**
BOOK CHAPTER: **1**
TOTAL IMPACT FACTOR: **69.2 (Thompson & Reuters)**
TOTAL CITATIONS: **417**
H-INDEX: **10**
i10-INDEX: 11
GOOGLE SCHOLAR LINK: https://scholar.google.co.in/citations?user=7-XA9zEAAAAJ&hl=en

2026

1. Alolika Bose, **Ritam Chatterjee**, Yogesh P. Bharitkar, Muhammad Saqib, Elena I. Korotkova, and Pradip Kumar Kar. "Unraveling the anthelmintic efficacy of Curcuma amada Roxb. extract: A multi-modal mechanistic study against Raillietina spp. infection." Scientific Reports 16 (2026): 15615. **[IF= 4.9] (Joint Corresponding Author)**

2. Bidisha Kongor and **Ritam Chatterjee**. "Saliva Speaks: A Critical Analysis of Salivary Biomarkers as an Early Oral Cancer Diagnostic Tool." Clinica Chimica Acta (2026). https://doi.org/10.1016/j.cca.2026.120853 **[IF= 4.1] (Corresponding Author)**

2025

1. Bidisha Kongor, Sourangshu Chakraborti, Anjan Kumar Das, Krishna Pada Das, Palash Bhattacharya, Sk Shahidul Islam, Mousumi Pal, Basudev Mahato, Raunak Kumar Das, **Ritam Chatterjee**. "Alterations in Nuclear Morphometric and Distribution Parameters Spells Malignant Potentiality of Oral Leukoplakia." Proceedings of the Zoological Society (2025). https://doi.org/10.1007/s12595-025-00594-0 **(Joint Corresponding Author)**

2. **Ritam Chatterjee**, Sukalpa Chattopadhyay and Sujata Law. "Modulation of the Tumor Promoting and Tumor Suppressing Roles of ROS in Hematopoietic Cells of Experimental Leukemic Mice." Biotechnic & Histochemistry (2025) doi:10.1080/10520295.2025.2514003. **[IF= 1.4] (Joint First Author)**

2024

Franco Cavaleri, Sukalpa Chattopadhyay, Vrushalee Palsule, Pradip Kumar Kar, **Ritam Chatterjee**. Study of Drug Targets Associated With Oncogenesis and Cancer Cell Survival and the Therapeutic Activity of Engineered Ashwagandha Extract Having Differential Withanolide Constitutions. Integrative Cancer Therapies (2024). DOI: https://doi.org/10.1177/15347354231223499 **[IF= 3.1] (Joint Corresponding Author)**

2023

Franco Cavaleri, Sukalpa Chattopadhyay, Vrushalee Palsule, Pradip Kumar Kar, **Ritam Chatterjee**. Study of drug target identification and associated molecular mechanisms for the therapeutic activity and hair follicle induction of two ashwagandha extracts having differential withanolide constitutions. Journal of Nutrition and Metabolism (2023). DOI: https://doi.org/10.1155/2023/9599744 **[IF= 4] (C0-Author)**

2022

BOOK CHAPTER:

Sujata Law and **Ritam Chatterjee**. Association of ROS with epithelial-mesenchymal transition and acquisition of stemness during carcinogenesis. Hand Book of Oxidative Stress and Cancer. (2022) (ISBN No. 978-981-15-9412-0)

2021

1. Ritam Chatterjee, Biswajoy Ghosh, Mousumi Mandal, Debaleena Nawn, Satarupa Banerjee, Mousumi Pal, Ranjan Rashmi Paul, Swarnabindu Banerjee, and Jyotirmoy Chatterjee. Pathophysiological relationship between hypoxia associated oxidative stress, Epithelial-mesenchymal transition, stemness acquisition and alteration of Shh/Gli-1 axis during oral sub-mucous fibrosis and oral squamous cell carcinoma. European Journal of Cell Biology,100 (1), p.151146 (2021). **[IF= 4.3] (First & Corresponding Author)**

2. Neha Sharma, Debaleena Nawn, Sawon Pratiher, Sayani Shome, **Ritam Chatterjee**, Karabi Biswas, Mousumi Pal, Ranjan Rashmi Paul, Srimonti Dutta, Jyotirmoy Chatterjee. Multifractal texture analysis of salivary fern pattern for oral pre-cancers and cancer assessment. IEEE Sensors Journal, 21(7), pp.9333-9340 (2021). **[IF= 4.5] (C0-Author)**

2020

Ritam Chatterjee and Jyotirmoy Chatterjee. ROS and oncogenesis with special reference to EMT and stemness. European Journal of Cell Biology, 99(2-3), p.151073 (2020). **[IF= 4.3] (First & Corresponding Author)**

2019

Ritam Chatterjee, Sujata Law. Genomic insult oriented mitochondrial instability and proliferative hindrance in the bone marrow of aplastic mice including stem/progenitor population. Pathology-Research and Practice, 215, pp.784-793 (2019). **[IF= 3.7] (First Author)**

2018

1. **Ritam Chatterjee**, Sujata Law. Epigenetic and microenvironmental alterations in bone marrow associated with ROS in experimental aplastic anemia. European journal of cell biology, 97, pp. 32-43 (2018). **[IF= 4.3] (First Author)**

2. Sujata Law, Shalini Sanyal, **Ritam Chatterjee**, Atrayo Law, Aditya Law, Sukalpa Chattopadhyay. Therapeutic management of peritoneal ascitic sarcomatosis by Ruta graveolens: A study in experimental mice. Pathology-Research and Practice, 214(9), pp.1282-1290. (2018). **[IF= 3.7] (Co-Author)**

2017

Ritam Chatterjee, Shubhangi Gupta, Sujata Law. Hematopathological alterations of major tumor suppressor cascade, vital cell cycle inhibitors and hematopoietic niche components in experimental myelodysplasia. Chemico- Biological Interactions, 273, pp.1-10 (2017). **[IF= 5.2] (First Author)**

2016

1. **Ritam Chatterjee**, Sukalpa Chattopadhyay, Sujata Law. Deregulation of vital mitotic kinase–phosphatase signaling in hematopoietic stem/progenitor compartment leads to cellular catastrophe in experimental aplastic anemia. Molecular and Cellular Biochemistry, 422(1-2), pp.121-134 (2016). **[IF= 3.7] (First Author)**

2. **Ritam Chatterjee**, Sukalpa Chattopadhyay, Sujata Law. Alteration of classical and hematopoiesis specific p53 pathway in the bone marrow hematopoietic stem/progenitor compartment facilitates leukemia progression in experimental mice. Leukemia Research, 47, pp.70-77 (2016). **[IF= 2.4] (First Author)**

3. **Ritam Chatterjee**, Sukalpa Chattopadhyay, Shalini Sanyal, Suchismita Daw, Sujata Law. Pathophysiological Scenario of Hematopoietic Disorders: A Comparative study of Aplastic Anemia, Myelodysplastic Syndrome and Leukemia in Experimental Animals. Proceedings of the Zoological Society, 69 (1), pp.114-124 (2016). **(Joint First Author)**

4. Suchismita Daw, **Ritam Chatterjee**, Aditya Law, Sujata Law. Analysis of hematopathology and alteration of JAK1/STAT3/STAT5 signaling axis in experimental myelodysplastic syndrome. Chemico-Biological Interactions, 260, pp.176-185 (2016). **[IF= 5.2] (Co-Author)**

5. Sukalpa Chattopadhyay, Malay Chaklader, **Ritam Chatterjee**, Aditya Law, Sujata Law. Differential expression of mitotic regulators

and tumor microenvironment influences the regional growth pattern of solid sarcoma along the cranio-caudal axis. Experimental cell research, 340(1), pp.91-101 (2016). **[IF= 3.5] (Co-Author)**

6. Sukalpa Chattopadhyay, **Ritam Chatterjee**, Sujata Law. Noncannonical Wnt5a-Ca2+-NFAT Signaling Axis in Pesticide Induced Bone Marrow Aplasia Mouse Model. A Study to Explore the Novel Mechanism of Pesticide Toxicity. Environmental Toxicology, 31(10), pp.1163-1175 (2016). **[IF= 3.2] (Co-Author)**

2013

Malay Chaklader, Ankita Pan, Aditya Law, Sukalpa Chattopadhyay, **Ritam Chatterjee**, Sujata Law. Differential Remodeling of Cadherins and Intermediate Cytoskelital Filaments Influence Microenvironment of Solid and Ascitic Sarcoma. Molecular and Cellular Biochemistry, 382(1-2), pp.293-306 (2013). **[IF= 3.7] (Co-Author)**

2012

Malay Chaklader, Prasun Das, Jacintha Archana Pereira, Aditya Law, Sukalpa Chattopadhyay, **Ritam Chatterjee**, Abhradeep Mondal, Sujata Law. 17-AAG mediated targeting of HSP90 limits TERT activity in peritoneal sarcoma related malignant ascites by downregulating cyclin D1 during cell cycle entry. Experimental Oncology, 34(2), pp.90-96 (2012). **(Co-Author)**

RESEARCH COLLABORATORS

National Collaborators

1. Dr. Basudev Mahato, Associate Professor, Department of Oral Pathology & Microbiology, Dr. R Ahemed Dental College & Hospital, Kolkata, West Bengal
2. Prof. Mousumi Pal, HOD, Department of Oral & Maxillo-Facial Pathology, Guru Nanak Institute of Dental Sciences and Research, Kolkata, West Bengal
3. Professor Anjan Kumar Das, HOD, Department of Pathology, MJN Medical College, Cooch Behar, West Bengal
4. Professor Jyotirmoy Chatterjee, School of Medical Science and Technology, IIT Kharagpur, West Bengal (Retired)
5. Professor Sujata Law, Department of Biotechnology, Brainware University, Kolkata, West Bengal
6. Professor Pradip Kumar Kar, Department of Zoology, Cooch Behar Panchanan Barma University, Cooch Behar, West Bengal
7. Dr. Raunak Kumar Das, Assistant Professor, Centre for Biomaterials, Cellular and Molecular Theranostics, Vellore Institute of Technology, Vellore, Tamil Nadu
8. Dr. Argha Sarkar, Assistant Professor, Department of Botany, Bangabasi College, Kolkata, West Bengal

International Collaborators

Biologic Pharmamedical INC., Canada

RESEARCH EXPERIENCE

1. Continuing research as **Faculty Member** at the "**Cancer Theragnostics and Image Analysis Lab**", Department of Zoology, Cooch Behar Panchanan Barma University. [Research topics: **oral carcinogenesis and signaling alterations**; **therapeutic efficacy of various phytochemicals**; **Paleobiology**].

2. **DBT-Research Associate** (GOI) (PI: Professor Jyotirmoy Chatterjee) from July 2018. [Research topic: "**Elucidating Malignant Potentiality of Oral Pre-malignant Disorders Using Molecular Pathology and Mechanobiological Attributes.**"].

3. **Ph.D. Scholar** at the Department of Biochemistry and Medical Biotechnology, **Calcutta School of Tropical Medicine** (Supervisor: Dr. Sujata Law) from 2012 to January 2018.
[Title of the Ph.D. thesis: "**Bone marrow aplasia and stem-stromal microenvironmental scenario regarding pathophysiology and kinase-phosphatase balance.**"
Ph.D. registration: Department of Zoology, **University of Calcutta**]

4. **Senior Research fellowship** in WB-DBT project at the Department of Biochemistry and Medical Biotechnology, **Calcutta School of Tropical Medicine** (PI: Dr. Sujata Law) from April 2015 to March 2016. . [Project title: "**Regulatory approach of stem cells and stem cells niche in Leukemia, Aplastic anemia and Myelodysplastic syndrome (MDS): A diagnostic and therapeutic intervention.**"].

5. **Junior Research fellowship** in WB-DBT project at the Department of Biochemistry and Medical Biotechnology, **Calcutta School of Tropical Medicine** (PI: Dr. Sujata Law) from April 2013 to March 2015. [Project title: "**Regulatory approach of stem cells and stem cells niche in Leukemia, Aplastic anemia and Myelodysplastic syndrome (MDS): A diagnostic and therapeutic intervention.**"].

6. Short term project (for 6 months) under Dr. Sujata Law (Associate Professor on Stem Cell Biology) at Department of Biochemistry and Medical Biotechnology, **Calcutta School of Tropical Medicine** on **Tumor Biology**.

CONFERENCE ATTENDED

1. **National Conference on Recent Advances in Animal Science (RAAS - 2026)** organized by Department of Zoology, Institute of Science, North Bengal University, Darjeeling, West Bengal, India. (18^{th} – 119^{th} March 2026)
2. **International Conference on Animal Biology: Opportunities and Challenges (ICAB-2026)** Organized by Department of Zoology, BHU in collaboration with The Zoological Society, Kolkata (ZSK), Banaras, Uttar Pradesh, India (29^{th} -31^{st} January, 2026)

3. **Contemporary Research in Modern Zoology (CRMZ)** which is being organized by the Post Graduate Department of Zoology at Barasat Government College, Barasat, West Bengal, India (5^{th} - 6^{th} December, 2025)

4. **National Seminar on Recent Advances in Animal Science (RAASVB-2024)** organized by the Department of Zoology, Visva-Bharati, West Bengal, India (7^{th}-8^{th} March, 2024)

5. **46^{th} All India Cell Biology Conference (AICBC 2024)** organized by Advanced Centre for Treatment, Research and Education in Cancer (ATREC), Tata Memorial Centre, Navi Mumbai, Maharashtra, India in association with Indian Society of Cell Biology (ISCB) (10^{th} – 12^{th} January 2024)

6. **Student's Week Celebration** of Bankim Sardar College, Canning, West Bengal, India (8^{th} January 2024)

7. **ICMRM-2023** organized by Research & Development Cell and IQAC, Bhairab Ganguly College, Swami Vivekananda University in association with Azteca University, Mexico at Bhairab Ganguly College, West Bengal, India (12^{th} – 13^{th} October 2023)

8. **CAESURE-2023 (Poetics of Cultural Translation)** jointly organized by Center for Indian Arts & Cultural Studies (CIACS), Cooch Behar Panchanan Barma University, Department of English, Cooch Behar College and Caesurae Collective Society at Cooch Behar College, Cooch Behar, West Bengal, India (10^{th} – 12^{th} April 2023)

9. **Vigyan Utsav** organized by Central Calcutta Science and Cultural Organization for youth in co-operation with the Department of Science & Technology and Biotechnology, Government of West Bengal, Kolkata, West Bengal, India (4^{th} December 2022)

10. **Extension Programme of PHYSICON-2019** organized by the Department of Physiology, Bankura Christian College, Bankura, West Bengal, India (18^{th} – 20^{th} November, 2022)

11. Children's Science Congress organized by DSTBT, Government of West Bengal and DST, Government of India at Alipurduar High School, Alipurduar, West Bengal, India. (28th September 2022)

12. International Conference on Mechanistic and Therapeutic Approaches in Human and Animal Health organized by the Department of Zoology, Cooch Behar Panchanan Barma University, Cooch Behar, West Bengal, India (6th - 8th December, 2021)

9 8th International Translational Cancer Research Conference (TCR-2020) organized by Department of Biochemistry, Institute of Science, Banaras Hindu University, Varanasi, Uttar Pradesh, India & Society for Translational Cancer Research (STCR). (13th- 16th February 2020)

10. 4th Regional State Science Congress organized by the University of Burdwan, Burdwan, West Bengal, India. (9th-10th December 2019)

11. PHYSICON-2019 organized by the Department of Physiology, Bankura Christian College, Bankura, West Bengal, India. (15th-17th November)

12. FDMM 2019 organized by Indian Institute of Chemical Biology (CSIR), Kolkata, West Bengal, India. (1st – 3rd March 2019)

13. International Conference on Trends in Biochemical and Biomedical Research (TBBR-2018) organized by Department of Biochemistry, Institute of Science, Banaras Hindu University, Varanasi, Uttar Pradesh, India. (13th- 15th February 2018)

14. INTZOOCON 2018, an International Conference to celebrate 100 years of excellence from 1999-2019 of the Department of Zoology, University of Calcutta, Kolkata, West Bengal, India. (1st – 3rd February 2018)

15. Frontiers in Biotechnology, 2017 organized by the Department of Biotechnology, St. Xabier`s College (Autonomous), Kolkata, West Bengal, India. (27th October 2017)

16. 10th Year Celebration of Excellence in Science at IISER Kolkata, "Advances in Life Science" organized by Indian Institute of Science Education and Research Kolkata, Kalyani, West Bengal, India. (13th – 15th January 2017)

17. 3rd International Conference on Perspective of Cell Signaling and Molecular Medicine organized by Bose Institute, Kolkata, West Bengal, India. (8th – 10th January 2017)

18. PHYSIOCON-2016 organized by the Department of Physiology, Midnapore College (Autonomous), Midnapore, West Bengal, India. (18th - 20th November 2016)

19. International Seminar on Frontiers in Translational and Regenerative Biology organized by the Department of Zoology, University of Calcutta and Council of Scientific & Industrial Research, India at Kolkata, West Bengal, India. (31st January 2016)

20. FIPSPHYSICON-2015 at University of Calcutta, Kolkata, West Bengal, India. (18th – 20th December 2015)

21. 6th International Conference on Stem Cells and Cancer (ICSCC-2015) at Pune, Maharashtra, India. (2nd – 5th October 2015)

22. 34th Annual Convention of Indian Association for Cancer Research at Jaipur, Rajasthan, India. (19th-21st February 2015)

23. National Seminar on Molecular Aspects of Human Diseases organized by Dept. of Zoology, University of Calcutta, Kolkata, India. (31st January 2015)

24. PHYSICON-2014, Berhampur, West Bengal, India. (19th - 21st December 2014)

25. Symposium organized by **Central Calcutta Society for Advancement of Human Development and Research**, Kolkata, West Bengal, India. (21st July 2014).

26. National Symposium on Frontiers in Modern Biology organized by Indian Science Congress Association and Department of Zoology, Dr. Hari Singh Gour Central University at Sagar, Madhya Pradesh, India. (23rd - 24th March 2014).

27. Hematology Update 2013 (CME) organized by the Department of Hematology, NRS Medical College, Kolkata, India. (2nd – 3rd March 2013).

28. 100th Indian Science Congress at University of Calcutta, Kolkata, India. (3rd-7th January 2013).

29. Satellite symposium on **"Biodiversity: Technology domains and spatial scale analysis"** organized by Department of Zoology, University of Calcutta, Kolkata, India. (30th March 2011).

WORKSHOPS ATTENDED

1. **One Day Training Programme on "My Bharat Portal"** Sponsored by Ministry of Youth Affairs & Sports, Govt. of India, organized by Subhas Chandra Bose Centenary College, Lalbagh, Murrrsidabad, West Bengal, India (24th December 2024)

2. **"Workshop on Good Clinical Practice & Basic Biomedical Ethics"** organized by Indian Society of Rational Pharmacotherapeutics and M.J.N. Medical College, Cooch Behar, West Bengal, India. (12th August 2022)

3. "**Workshop and Hands on Training on Biomedical Techniques**" organized by The Department of Biochemistry and Medical Biotechnology, Calcutta School of Tropical Medicine, Kolkata, West Bengal, India. (13th – 15th February 2017)

4. Training on **"Clinical of Flowcytometry"** organized by University of Calcutta and BD Bioscience at CRNN, Kolkata, West Bengal, India. (11th – 13th June 2013)

5. Training on **"Fluorescence Microscopy"** organized by USIC and Department of Microbiology, University of Burdwan, Burdwan, West Bengal, India. (22nd – 23rd November 2012)

PRESENTATIONS

INVITED TALKS:

1. Oxidative Stress as "Double-Edged Sword": Haematological and Oncological Perspectives. **National Seminar on Recent Advances in Animal Science (RAASVB-2024)** organized by the Department of Zoology, Visva-Bharati, West Bengal, India (8th March, 2024)

2. Vedanta and Mind Management (as motivational speaker). **Student's Week Celebration** of Bankim Sardar College, Canning, West Bengal, India (8th January 2024)

3. Exploration of the dual role of ROS, taking examples from haematology and oncology. Talk organized by the Department of Zoology, University of North Bengal, West Bengal, India. (25th November 2022)

4. Analysis of bimodal effect of ROS taking examples from hematological and oncological perspectives. **Extension Programme of PHYSICON-2019** organized by the Department of Physiology, Bankura Christian College, Bankura, West Bengal, India (18th – 20th November, 2022)

5. Cancer progression with special reference to oral cancer. **Bengal Science Lecture-2022** (as eminent speaker), **Children's Science Congress** organized by DSTBT, Government of West Bengal and DST, Government of India at Alipurduar High School, Alipurduar, West Bengal, India. (28th September 2022)

6. Approach towards mental health management in present pandemic scenario based on core Indian Philosophical ideas. Webinar for **"Emotional wellbeing and mental health awareness during the COVID-19 pandemic"** organized by Cooch Behar Panchanan Barma University, Cooch Behar, West Bengal, India (18th June, 2021)

7. Therapeutic potential of Stem Cell and its current status and future prospects. **ZOOLOGY WEB LECTURE SERIES** organized by the Department of Zoology, Raidighi College, West Bengal, India. (2nd August 2020)

8. Maintaining mental health in COVID pandemic situation: Vedantic Approach. **National Level Webinar on COVID-19 Pandemic: Impact on Human Health and Population** organized by the Department of Zoology, Karimpur Pannadevi College, West Bengal, India. (28th July 2020)

9. Oxidative stress in the perspective of hematopathology and oncology. **ZOOLOGY WEB LECTURE SERIES** organized by the Department of Zoology, Vivekananda College, West Bengal, India. (12th July 2020)

CONFERENCE TALKS:

1. Oxidative stress and its mechanistic association with the alteration of TGF-β1/NOX4/NRF2/Notch1 signaling cascade and EMT dynamics during oral pre-cancer and cancer, **National Conference on Recent Advances in Animal Science (RAAS - 2026)** organized by Department of Zoology, Institute of Science, North Bengal University, Darjeeling, West Bengal, India. (18th – 119th March 2026)

2. Association of ROS with the manifestation of non-malignant and malignant hematopoietic disorders: experimental study in the murine models of aplastic anemia and leukemia. **International Conference on Animal Biology: Opportunities and Challenges (ICAB-2026)** Organized by Department of Zoology, BHU in collaboration with The Zoological Society, Kolkata (ZSK), Banaras, Uttar Pradesh, India (29th -31st January, 2026)

3. Attribution of ROS in the Pathogenesis of Malignant and Non-Malignant Hematopoietic Disorders: Experimental Study with the Murine Models of Leukemia and Aplastic Anemia. **Contemporary Research in Modern Zoology (CRMZ)** which is being organized by the Post Graduate Department of Zoology at Barasat Government College, Barasat, West Bengal, India (5th - 6th December, 2025)

4. Hematopoietic disorders and alteration of classical and hematopoiesis specific p53 cascades. **ICMRM-2023** organized by Research & Development Cell and IQAC, Bhairab Ganguly College, Swami Vivekananda University in association with Azteca University, Mexico at Bhairab Ganguly College, West Bengal, India (12th October 2023)

5. Epigenetic and microenvironmental alterations in bone marrow associated with ROS in experimental aplastic anemia. **Vigyan Utsav** organized by Central Calcutta Science and Cultural Organization for youth in co-operation with the Department of Science & Technology and Biotechnology, Government of West Bengal, Kolkata, West Bengal, India (4th December 2022) (Paper presentation).

6. Correlative association between the experimental alterations of vital signaling components and development of hematopoietic catastrophe during bone marrow aplasia in experimental mice. **International Conference on Mechanistic and Therapeutic Approaches in Human and Animal Health** organized by the Department of Zoology, Cooch Behar Panchanan Barma University, Cooch Behar, West Bengal, India (6th - 8th December, 2021)

7. Attribution of oxidative stress in pre-malignant and malignant oral pathophysiologies. **8th International Translational Cancer Research Conference (TCR-2020)** organized by Department of Biochemistry, Institute of Science, Banaras Hindu University, Varanasi, Uttar Pradesh, India & Society for Translational Cancer Research (STCR). (13th- 16th February 2020)

8. Elucidation of the association of oxidative stress, EMT and pathophysiological alterations of buccal mucosa during sub-mucous fibrosis and Squamous cell carcinoma. **4th Regional State Science Congress** organized by the University of Burdwan, Burdwan, West Bengal, India. (9th-10th December 2019)

9. Association of oxidative stress with EMT and pathophysiological alterations of buccal mucosa in pre-malignant and malignant conditions. **PHYSICON-2019** organized by the Department of Physiology, Bankura Christian College, Bankura, West Bengal, India. (15^{th}-17^{th} November 2019)

10. Bone marrow aplasia and deregulation of vital signaling components: a correlative study in experimental mice. **International Conference on Trends in Biochemical and Biomedical Research (TBBR-2018)** organized by Department of Biochemistry, Institute of Science, Banaras Hindu University, Varanasi, Uttar Pradesh, India. (13^{th} – 15^{th} February 2018) (**Best Presentation Awarded**)

11.Bone Marrow Aplasia and Kinase-phosphatase Signaling Deregulation: A Study in Experimental Mice. **PHYSIOCON-2016**, Midnapore, West Bengal, India. (18^{th} - 20th November 2016)

12. Dysregulated Haematopoiesis in Bone marrow of Experimental mice. **PHYSICON-2014**, Berhampur, West Bengal, India. (19^{th} - 21^{st} December 2014)

13. Aplastic Anemia: Kinase-Phosphatase Regulation Scenario. Symposium organized by **Central Calcutta Society for Advancement of Human Development and Research**, Kolkata, West Bengal, India. (21^{st} July 2014) (**Best Presentation Awarded**)

SCIENTIFIC POSTERS:

1. Hematopoietic disorders and alteration of classical and hematopoiesis specific p53 cascades: mechanistic intervention in experimental mouse models. **46th All India Cell Biology Conference (AICBC 2024)** organized by Advanced Centre for Treatment, Research and Education in Cancer (ATREC), Tata Memorial Centre, Navi Mumbai, Maharashtra, India in association with Indian Society of Cell Biology (ISCB) (11^{th} January 2024)

1. Expressional alteration of signaling components and associated hematopoietic catastrophe during bone marrow aplasia in experimental mice. **FDMM 2019** organized by Indian Institute of Chemical Biology (CSIR), Kolkata, West Bengal, India. (1st – 3rd March 2019)

2. ROS associated hematopoietic devastation and development of aplastic anemia: a mechanistic study in experimental mice. **INTZOOCON 2018** organized by the Department of Zoology, University of Calcutta, Kolkata, West Bengal, India. (1st – 3rd February 2018)

3. Signaling deregulation regarding kinase-phosphatase scenario behind hematopoietic failure during experimental aplasia, **Frontiers in Biotechnology, 2017** organized by the Department of Biotechnology, St. Xabier`s College (Autonomous), Kolkata, West Bengal, India. (27^{th} October 2017)

4. Bone marrow failure and kinase-phosphatase signaling in experimental aplastic anemia. **10th Year Celebration of Excellence in Science at IISER Kolkata, "Advances in Life Science"** organized by Indian Institute of Science Education and Research Kolkata, Kalyani, West Bengal, India. (13^{th} – 15^{th} January 2017)

5. Aplastic anemia related hematopoietic catastrophe and kinase-phosphatase signaling. **3^{rd} International Conference on Perspective of Cell Signaling and Molecular Medicine** organized by Bose Institute, Kolkata, West Bengal, India. (8^{th} – 10^{th} January 2017) (**Best Poster Awarded**)

6. Hematopoietic Pathophysiologies: A Comparative Study through Animal Models. **International Seminar on Frontiers in Translational and Regenerative Biology** organized by University of Calcutta and Council of Scientific & Industrial Research, India at Kolkata, West Bengal, India. (31st January 2016)

7. Comparative Study of Hematopoietic Pathophysiologies using Murine Models. **FIPSPHYSICON-2015** at University of Calcutta, Kolkata, West Bengal, India. (18th – 20th December 2015)

8. Involvement of Vital Kinases and Phosphatases behind Hematopoietic Catastrophe during Bone Marrow Aplasia. **6th**

International Conference on Stem Cells and Cancer (ICSCC-2015) at Pune, Maharashtra, India. (2nd – 5th October 2015)

9. Hematopoietic Pathophysiological Scenario of Leukemia Involving some of the Mitotic Kinases and Phosphatases. **34th Annual Convention of Indian Association for Cancer Research** at Jaipur, Rajasthan, India. (19th-21st February 2015)

10. Aplastic anemic bone marrow: pathophysiology and enzymatic signaling study. **National Seminar on Molecular Aspects of Human Diseases** organized by Dept. of Zoology, University of Calcutta, Kolkata, West Bengal, India. (31st January 2015)

11. Bone Marrow Pathophysiological Consequences in Aplastic Anemia, MDS and Leukemia in Experimental Mice. **National Symposium on Frontiers in Modern Biology** organized by Indian Science Congress Association and Department of Zoology, Dr. Hari Singh Gour Central University at Sagar, Madhya Pradesh, India. (23rd - 24th March 2014). (**Best Poster Awarded**)

Ph.D. SUPERVSISON

1. Franco Cavaleri (Ph.D. Completed) [International Scholar]

2. Surya Raha (Registered)

3. Bidisha Kongor (Registered) [INSPIRE Fellow]

ADMINISTRATIVE ASSIGNMENTS AT COOCH BEHAR PANCHANAN BARMA UNIVERSITY (CBPBU)

1. Former Program Officer, NSS Unit-I, CBPBU. (December 2023 to April 2026)

2. Member Secretary, Institutional Animal Ethics Committee, CBPBU.

3. Club Secretary, National Digital Library of India (NDLI) Club of CBPBU in association with NDLI, IIT Kharagpur.

4. Member of Institutional Bio-safety Committee, CBPBU.

5. Convenor, Campus Greenery Committee, CBPBU.

6. Member, Campus Beautification Committee, CBPBU.

4. Member of Board of Studies in Zoology, Undergraduate (UG) and Postgraduate (PG), CBPBU.

5. Moderator, Paper Setter, Examiner and Evaluator of Zoology, PG Studies, CBPBU

MEMBER OF HONORARY SOCIETIES

1. The Indian Science Congress Association. (Life Member)

2. Indian Society of Cell Biology. (Life Member)

3. The Zoological Society. (Life Member)

4. The Physiological Society of India. (Life Member)

5. Alipurduar Nilkanta Mukherjee Welfare Society. (Life Member)