

Debasish Maiti, Ph.D.; Professor

Department of Human Physiology, Tripura University

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Academic Qualification: M.Sc., Ph.D

Topics Taught: Cell Biology, Hematology and Immunology, Medical Microbiology, Stem Cell biology, Behavioral Physiology, Advanced Immunology, Biochemistry, Instrumentation, Animal use in research.

Position hold currently: Professor

Selected Publications in Scientific Journals:

1. Das M, Modak S, Aktar T, Bhattacharya A, Bhowmik D, Das D, Acharjee S, Bhattacharya A, **Maiti D.** (2026): Exploration of anticancer and antibacterial potential of nontoxic Moringa oleifera leaf extract. J Pure & applied Microbiol.
2. Das S, Roy R, Malik M, Paul P, Chakraborty P, Chatterjee S, **Maiti D** & Prosun Tribedi. (2026) "Piperine inhibits biofilm formation in co-cultures of Pseudomonas aeruginosa and Staphylococcus Aureus". Biofouling. 42(4), 411–428. <https://doi.org/10.1080/08927014.2026.2630947>
3. Pyngrope H, Chetia J, Kharpan B, Modak S, Aktar T, Pradhan A K, Jaiswar A, Paul PC., **Maiti D.** (2026) "Aromatic amino acid based Schiff base copper(II) complexes as potential lung cancer therapeutics: Biological and antioxidant activity, DNA/BSA interaction, mesogenic properties, molecular docking and DFT study" J Inorg Biochem. 276, 113187
4. Nath P, Sarkar C, Tribedi P and **Maiti D.** (2025) "N-ethyl-N-nitrosourea (ENU) alters cytokine expression in the bone marrow modifying the marrow microenvironment to develop leukemia" Medical Oncology; 42, 324. <https://doi.org/10.1007/s12032-025-02882-3>
5. Das A, Hussain SA, Deb R, **Maiti D**, Modak S, Acharya S, Bhattacharya A, Bhowmik KL and Debnath P. (2025) "Nickel (II) complexes with mixed ligands: Synthesis, WORM memory applications, and potential biological applications as anticancer and antifungal agents" Ind J Chem: 64, 528-541. Doi: 10.56042/ijc,v64i5.17716
6. Modak S, Aktar T, Majumder D, Singha AK and **Maiti D.** (2025): "A systemic review on leptin's role in defining cancer: special emphasis on immunomodulation, inflammation, and therapeutic interventions" Genes and Immunity: 26, 266-286. doi: 10.1038/s41435-025-00333-7
7. Chetia J, Pyngrope H, Kharpan B, Modak S, Aktar T, Shyam A, Paul P C., **Maiti D**, Mondal P. (2025) Cytotoxicity, CT-DNA/BSA interaction and antioxidant activity of Ni(II), Cu (II) and Zn(II) complexes derived from a design nematogenic L-Alanyl-glycine based Schiff base ligand. J Mol Structure, 1334, 141858. <https://doi.org/10.1016/j.molstruc.2025.141858>
8. Das S, Modak S, Aktar T, **Maiti D***. (2022): Unveiling the Therapeutic Potential of Methanolic extract of Amaranthus dubius: Anticancer, Antibacterial and Antioxidant activity. Indian J Biological Sciences: 28, 61-70. (ISSN 0972-8503). <http://dx.doi.org/10.62424/IJBS.2022.28.01.05>

9. Basak S, Sengupta A, Modak S, Kumar A, **Maiti D** and Das R. (2024): In vitro cytotoxic activity of chemically synthesized ZnTe nanoparticles against human lung cancer cell line L-132 with supported molecular docking study. *Materials Chemistry and Physics*, 326, 129774, <https://doi.org/10.1016/j.matchemphys.2024.129774>
10. Aktar T, Modak S, Majumder D, **Maiti D**. (2024): “A detailed insight into macrophages' role in shaping lung carcinogenesis”. *Life Sci.*;352:122896. doi: 10.1016/j.lfs.2024.122896.
11. Das A, Hussain SA, Banik H, **Maiti D**, Aktar T, Acharya S and Debnath P. (2024): “Multifunctional Transition Metal Complexes: Design, Synthesis, Luminescent Features, Electrical Behaviour, Nanostructure Morphology and Bioactive Properties with 1,1-Dicyanoethylene-2,2-dithiolate and p-Phenylenediamine Ligands” *Asian J Chem*; 36(6), 1348-1358. ISSN: 0975-427X (Online)
12. Ghosh AK, Verma A, Majumder D, **Maiti D**, Choudhuri T, Banerjee A and Saha S * (2024): “Theaflavins Induce Autophagy in Ehrlich's Ascites Carcinoma Cells both In vivo and In vitro” *Current Bioactive Compounds*; 20 (7), 77-87. DOI: 10.2174/0115734072277726240102062944 ISSN (Online): 1875-6646
13. Das A, Hussain S A, Banik H, **Maiti D**, Aktar T, Paul B, Debnath P, Sieroń L, Bhattacharya A, Bhowmik K L, Maniukiewicz W, Debnath P. (2024): Cd(II) and Zn(II) Complexes with 2-Mercaptopyridine: Synthesis, Crystal structure, Hirshfeld surface analysis, Luminescent properties, Aggregation behaviours, Current-Voltage characteristic and Antibacterial assay; *Polyhedron*; 247, 116747; DOI <https://doi.org/10.1016/j.poly.2023.116747> Online ISSN: 1873-3719
14. Das S, Roy R, Paul P, Chakraborty P, Chatterjee S, Malik M, Sarkar S, Das Gupta A, **Maiti D**, Tribedi P. (2024): Piperine, a Plant Alkaloid, Exhibits Efficient Disintegration of the Pre-existing Biofilm of *Staphylococcus aureus*: a Step Towards Effective Management of Biofilm Threats. *Applied Biochemistry and Biotechnology* 196:1272–1291. DOI: 10.1007/s12010-023-04610-x (IF 3.0); ISSN: 0273-2289 (Print)
15. Boruah S R, Bhattacharjee M, Dutta Purkayastha R N., Modak S, Aktar T, **Maiti D**, Sieroń L, Maniukiewicz W, Gomila R M., Frontera A. (2023): Insights into Synthesis, Crystal Structure, Bioactivity and Computational Studies of Cu(II) and Zn(II) Carboxylates Containing Aminopyridine. *Chemistry select*; 8(19),e202204937. <https://doi.org/10.1002/slct.202204937> (IF 2.3) Online ISSN:2365-6549
16. Nath P., Modak S., Aktar T., Maiti S., Ghosh A., Singh R., Debnath M., Saha B and **Maiti D**. (2023): Olive leaves extract alleviates inflammation and modifies the intrinsic apoptotic signal in the leukemic bone marrow. *Frontiers in Immunology*. 13; 1054186. DOI: 10.3389/fimmu.2022.1054186 (IF 8.7); ISSN: 16643224
17. Roy S., Singh WS., Manna K., **Maiti D.**, Majumder D., Modak S., Nath H., Hore S., Mitra S. (2023): Assessing and modelling drinking water quality at the railway stations of Tripura, India, with a possible strategic solution. *Arabian J Geosciences*. 16:98. DOI: <https://doi.org/10.1007/s12517-022-11130-1> (IF 1.9); ISSN: 18667538, 18667511; ISSN: 18667538, 18667511
18. Das, S., Paul, P., Dastidar, D.G. Chakraborty, P., Chatterjee, S., Sarkar, S., **Maiti, D.** and Tribedi, P. (2022) Piperine Exhibits Potential Antibiofilm Activity Against *Pseudomonas aeruginosa* by Accumulating Reactive Oxygen Species, Affecting Cell Surface Hydrophobicity and Quorum Sensing. *Appl Biochem Biotechnol* (2022). <https://doi.org/10.1007/s12010-022-04280-1> (IF 3.0); ISSN: 0273-2289

19. Debnath P, Debnath P, Roy M*, Siero ´n L, Maniukiewicz W* , Aktar T, **Maiti D**, S A Novikov * and Misra TK. (2022) “Novel Organotin(IV) Complexes of 2-[4-Hydroxy-3- ((2-hydroxyethylimino) methyl) phenylazo] benzoic Acid: Synthesis, Structure, Noncovalent Interactions and In Vitro Antibacterial Activity” Crystals, 12, 1582. <https://doi.org/10.3390/cryst12111582> (IF 2.6); ISSN: 2073-4352
20. Nath P, Majumder D, Debnath R, Debnath M, Sekhawat S S and **Maiti D**. (2022): Immunotherapeutic potential of ethanolic olive leaves extract (EOLE) and IL-28B combination therapy in ENU induced animal model of leukemia. Cytokine; 156, 155913; DOI: 10.1016/j.cyto.2022.155913 (IF 3.8); ISSN: 1043-4666.
21. Nath P and **Maiti D**. (2022): A review of the mutagenic potential of N-ethyl-N-nitrosourea (ENU) to induce hematological malignancies. J Biochem Mol Toxicol. e-23067; doi.org/10.1002/jbt.23067 (IF 3.6); ISSN: 10956670, 10990461
22. Nath P, Modak S, Aktar T and **Maiti D**. (2022): “Effects of N Ethyl N’ nitrosourea in mice brain in time fashion” Indian journal of Physiology and Allied Sciences; 74(1). (IF 0) pISSN: 0367-8350
23. Majumder D, Sarkar C, Debnath R, Tribedi P, and **Maiti D**. (2022): Mechanistic insight into the synergism of IL-27 and IL-28B in regulation of benzo(a)pyrene-induced lung carcinogenesis associated ROS/NF-κB/NLRP3 crosstalk. Chemico-Biological Interactions: 354, 109807; <https://doi.org/10.1016/j.cbi.2022.109807> (IF 5.1); ISSN: 00092797
24. Das S, Paul P, Chatterjee S, Chakraborty P, Sarkar R K, Ds A, **Maiti D** and Tribedi P. (2022) “Piperine exhibits promising antibiofilm activity against Staphylococcus aureus by accumulating reactive oxygen species (ROS)” Arch of Microbiol. 204; 59 <https://doi.org/10.1007/s00203-021-02642-7>; Electronic ISSN: 1432-072X; Print ISSN: 0302-8933
25. Paul P; Das S; Chatterjee S; Shukla A; Chatterjee P; Sarkar S; **Maiti D**; Das A; Tribedi P. (2021) “1,4-Naphthoquinone disintegrates the pre-existing biofilm of Staphylococcus aureus by accumulating reactive oxygen species” Arch Microbiol; 203, 4981–4992 doi.org/10.1007/s00203-021-02485-2; Electronic ISSN: 1432-072X; Print ISSN: 0302-8933
26. Paul P; Chakraborty P; Sarker R K; Chatterjee A; **Maiti D**; Das A; Mondal S; Bhattacharjee S; Ghosh Dastidar D; Tribedi P. (2021) “Tryptophan interferes with the quorum sensing and cell surface hydrophobicity of Staphylococcus aureus: A promising approach to inhibit the biofilm development” 3 Biotech; 11:376 doi.org/10.1007/s13205-021-02924-3; ISSN: 2190572X, 21905738
27. Majumder D, Debnath M, Sharma KN, Sekhawat SS, Prasad GBKS, **Maiti D**, Ramakrishna S. (2022): Olive oil consumption can prevent non-communicable diseases and COVID-19 : Review. Curr Pharm Biotechnol. doi: 10.2174/1389201022666210412143553
28. Majumder D, Debnath R, Nath P, Libin Kumar KV, Debnath M, Tribedi P and **Maiti D**. (2021). Bromelain and Olea europaea (L.) leaf extract mediated alleviation of benzo(a)pyrene induced lung cancer through Nrf2 and NFκB pathway. Environ Sci Pollu Res Int. doi: 10.1007/s11356-021-13803-y
29. Bhattacharjee M, Boruah S R, DuttaPurkayastha R N, Ganguly R, **Maiti D**, Franconetti A, Frontera A, M. Kirillov A, Chowdhury S, Roy S, Nath P. (2021) : Synthesis, characterization, DNA binding ability, in vitro cytotoxicity, electrochemical properties and theoretical studies of copper(II) carboxylate complexes. Inorganica Chimica Acta 518, 120235. <https://doi.org/10.1016/j.ica.2020.120235>

30. Chakraborty P, Paul P, Kumari M, Bhattacharjee S, Singh M, **Maiti D**, Ghosh Dastidar D., Akhter Y, Kundu T, Das Amlan , Tribedi P. (2021) Attenuation of *Pseudomonas aeruginosa* biofilm by thymoquinone: an individual and combinatorial study with tetrazine capped silver nanoparticles and tryptophan. *Folia Microbiologica*. <https://doi.org/10.1007/s12223-020-00841-1>
31. Majumder D, Nath P, Debnath R and **Maiti D**. 2021 “Understanding the complicated relationship between antioxidants and carcinogenesis” *J Biochem Mol Toxicol*; 35: e22643. doi: 10.1002/jbt.22643.
32. Majumder D, Debnath R and **Maiti D**. (2020): “IL-27 along with IL-28B ameliorates the pulmonary redox impairment, inflammation and immunosuppression in benzo(a)pyrene induced lung cancer bearing mice” *Life Sciences*: 260, 118384. <https://doi.org/10.1016/j.lfs.2020.118384>.
33. Adhikari S, Bhattacharjee T, Nath P, Das A, Jasinski J P, Butcherf R J, and **Maiti D**. (2020): “Bimetallic and trimetallic Cd(II) and Hg(II) mixed-ligand complexes with 1, 1-dicyanoethylene-2,2-dithiolate and polyamines: Synthesis, crystal structure, Hirshfeld surface analysis, and antimicrobial study” *Inorganica Chimica Acta* 512, 119877.
34. Dey P C, Nath P, **Maiti D** and Das R. (2020): Antibacterial activity of MPA-capped CdTe and Ag-doped CdTe nanocrystals: Showing different activity against gram-positive and gram-negative bacteria” *Chemical Papers*, DOI: <https://doi.org/10.1007/s11696-020-01170-w>
35. Singha AK, Sarkar C, Majumder D, Debnath R, Saha M, **Maiti D**. (2020) : IL-15 and GM-CSF stimulated macrophages enhances phagocytic activity in ENU induced leukemic mice. *Immunobiology*: 225(2), 151894. doi: 10.1016/j.imbio.2019.12.003
36. Debnath R, Majumder¹ D, Nath P, Ghosh D and **Maiti D**. (2019): Bromelain plus Peroxidase Reduces Non-Hodgkin Lymphoma Progression in *invivo* via Up-regulation of Antioxidant Enzymes and Modulating Apoptotic Protein Expression. *Nutr Cancer*.:1-11. doi: 10.1080/01635581.2019.1670217.
37. Chakraborty P, Sarker R K, Roy R, Ghosh A, **Maiti D** and Tribedi P. (2019). Bioaugmentation of soil with *Enterobacter cloacae* AKS7 enhances soil nitrogen content and boosts soil microbial functional-diversity; *3 Biotech*: 9:253. <https://doi.org/10.1007/s13205-019-1791-8>
38. Majumder D, Debnath M, Libin Kumar K V, Nath P, Debnath R, Sarkar C, Prasad GBKS, Verma Y K and **Maiti D**. (2019) Metabolic profiling and investigations on crude extract of *Olea europaea* L. leaves as a potential therapeutic agent against skin cancer. *J Functional Foods*: **58**, 266-274. <https://doi.org/10.1016/j.jff.2019.05.005>
39. Debnath R, Chatterjee N, Das S, Mishra S, Bose D, Banerjee S, Das S, Saha KD, Ghosh D, **Maiti D** (2019) : Bromelain with peroxidase from pineapple are more potent to target leukemia growth inhibition - A comparison with only bromelain. *Toxicol In Vitro*.;55:24-32. doi: 10.1016/j.tiv.2018.11.004
40. Saha B., Saha P., Mondal A., Naskar JP, **Maiti D.**, Chowdhury S. (2018) Sequential detection of Cu²⁺ and cysteine by imidazole based chemosensor in aqueous solution. *J Chinese Chemical Society*, 1-9. <https://doi.org/10.1002/jccs.201800200>
41. Paul P , Bhowmik KRN, Roy S, Deb D, Das N , Bhattacharjee M, Dutta Purkayastha RN, Male L, McKee V, Pallepogu R, **Maiti D**, Bauza A, Fontera A, Kirillov AM. (2018) Synthesis, structural

features, antibacterial behaviour and theoretical investigation of two new manganese(III) Schiff base complexes. *Polyhedron* **151**, 407–416.

42. Debnath B, Somraj Singh W, Das M, Goswami S, Singh MK, **Maiti D**, Manna K. (2018) Role of plant alkaloids on human health: A review of biological activities. *Materials Today Chemistry*: **9** , 56-72
43. **Maiti D.**, Singha AK., Sarkar C., Sarkar S., Sil Sarma I., Manna K., Dinda B. (2018). Friedelane, isolated from *Pouzolzia indica* Gaud. exhibits toxic effect against melanoma. *Cytotechnology*; 70(4):1111-1120. <https://doi.org/10.1007/s10616-017-0174-4>.
44. Chakraborty P, Joardar S, Ray S, Biswas P, **Maiti D**, and Tribedi P.(2018) 3,6-Di(pyridin-2-yl)-1,2,4,5-tetrazine (pytz)-capped silver nanoparticles (TzAgNPs) inhibit biofilm formation of *Pseudomonas aeruginosa*: a potential approach toward breaking the wall of biofilm through reactive oxygen species (ROS) generation. *Folia Microbiologica*. 2018;63(6):763-772, <https://doi.org/10.1007/s12223-018-0620-5>
45. Bhattacharyya P, Agarwal B, Goswami M, **Maiti D**, Baruah S and Tribedi P. (2018): Zinc oxide nanoparticle inhibits the biofilm formation of *Streptococcus pneumoniae*. *Antonie van Leeuwenhoek, Journal of Microbiology*; 111(1):89-99; DOI 10.1007/s10482-017-0930-7
46. Bhattacharya A, Saha P, Saha B, **Maiti D**, Mitra P, Naskar J P and Chowdhury S. (2017): A combination of experimental and computational studies on a new oxamido bridged dinuclear copper(II) complex. *Journal of Molecular Structure*. 2017; 1146, 43-49; <https://doi.org/10.1016/j.molstruc.2017.05.093>
47. Singha A K, Bhattacharjee B, Saha B and **Maiti D**. (2017): IL-3 and GM-CSF modulate functions of splenic macrophages in ENU induced leukemia. *Cytokine*; 91, 89-95, DOI: 10.1016/j.cyto.2016.12.009
48. Bhattacharjee B, Singha AK. and **Maiti D.**(2016): Phagocytic Activity of Neutrophil is Induced by Granulocyte Colony Stimulating Factor and Interleukin-15 in Leukemic Animal Model. *J Cell Immunother*. **2(1)**, 52-57. doi:10.1016/j.jocit.2016.01.002.
49. Singha AK, Bhattacharjee B and **Maiti D**. (2015): Cytotoxic activity of T lymphocytes is induced upon stimulation with IL-3 plus GM-CSF in animal leukemia model. *Leuk. Res*. 39, (11), 1255-1262 DOI: <http://dx.doi.org/10.1016/j.leukres.2015.08.011>. ISSN: 0145-2126
50. Bhattacharjee B., Singha AK. And **Maiti D.**(2015): Role of G-CSF plus IL-15 on neutrophil population in peripheral blood modulating protein tyrosine kinase activity in leukemic mice. *Int J Cur Res*. **7**; 15180-15186.
51. Xu Z, Yoshida T, Wu L, **Maiti D**, Cebotaru L, Duh EJ; (2015): “Transcription Factor MEF2C Suppresses Endothelial Cell Inflammation via Regulation of NF- κ B and KLF2”. *J Cell Physiol*, **230(6)**, 1310-1320; doi: 10.1002/jcp.24870.
52. Sutradhar P, Saha M* and **Maiti D.**; (2014): “Microwave synthesis of copper oxide nanoparticles using tea leaf and coffee powder extracts and its antibacterial activity”, *J Nanostruct Chem.*; **4**, 86.
53. Xu Z, Gong J, **Maiti D**, Vong L, Wu L, Schwarz JJ, Duh EJ. (2012): MEF2C Ablation in Endothelial Cells Reduces Retinal Vessel Loss and Suppresses Pathologic Retinal Neovascularization in Oxygen-Induced Retinopathy. *Am J Pathol*. **180(6)**:2548-60.

54. **Maiti D**, Xu Z and Duh EJ. (2008): Vascular endothelial growth factor induces MEF2C and MEF2-dependent activity in endothelial cells. *Invest Ophthalmol Vis Sci*, **49(8)**, 3640-8.
55. Xu Z, **Maiti D**, Kisiel W, Duh EJ. (2006) Tissue factor pathway inhibitor-2 is upregulated by vascular endothelial growth factor and suppresses growth factor-induced proliferation of endothelial cells. *Arterioscler Thromb Vasc Biol*. **26(12)**:2819-25.
56. Rojas JD, Sennoune SR, **Maiti D**, Bakunts K, Reuveni M, Sanka SC, Martinez GM, Seftor EA, Meininger CJ, Wu G, Wesson DE, Hendrix MJ, Martinez-Zaguilan R. (2006) Vacuolar-type H⁺-ATPases at the plasma membrane regulate pH and cell migration in microvascular endothelial cells. *Am J Physiol Heart Circ Physiol*. **291(3)**:H1147-57
57. Sanchez-Armass S, Sennoune SR, **Maiti D**, Ortega F, Martinez-Zaguilan R. (2006). Spectral Imaging Microscopy Demonstrates Cytoplasmic pH Oscillations in Glial Cells. *Am J Physiol Cell Physiol* **290(2)**, C524-38.
58. Rojas JD, Sennoune SR, **Maiti D**, Martinez GM, Bakunts K, Wesson DE and Martínez-Zaguilán R. (2004). Plasmalemmal V-H(+)-ATPases regulate intracellular pH in human lung microvascular endothelial cells. *Biochem Biophys Res Commun*. **320(4)**: 1123-32.
59. Sennoune S, **Maiti D**, and Martínez-Zaguilán R. (2003). Analysis of intracellular pH (pH^{cyt}) in mouse models of angiogenesis and carcinogenesis by spectral imaging microscopy, real time confocal imaging microscopy, and multiphoton spectral imaging. *Proc. Int. Soc. Opt. Engin. SPIE*. 4967:135-145. doi: 10.1117/12.478401
60. Law S, **Maiti D**, Palit A, Chaudhuri S. (2003). Role of biomodulators and involvement of protein tyrosine kinase on stem cell migration in normal and leukemic mice. *Immunology Letters*, 86, 287-290.
61. **Maiti D**, Bhattacharyya A and Basu J. (2001). Lipoarabinomannan from mycobacterium tuberculosis promotes macrophage survival by phosphorylating Bad through Phosphatidylinositol 3 Kinase/Akt pathway. *J. Biol. Chem*. 276, 329-333.
62. Law S, **Maiti D**, Palit A, Majumder D, Basu K, Chaudhuri S, Chaudhuri S. (2001). Facilitation of functional compartmentalization of bone marrow cells in leukemic mice by biological response modifiers: an immunotherapeutic approach. *Immunology Letters*, 76(3), 145-152.

Invited lecture / Plenary lecture

Maiti D. “Immunity and Cancer” Resource Person for Refresher Course at UGC-MMTTC, Tripura University, 9th -20th Sept 2025.

Maiti D. “Benzo(a)pyrene induced inflammation and carcinogenesis in lung and its amelioration by IL-27 and IL-28B in combination” HP Scientific Talk 2025; International Conference on Sustainable Health: Translational Research from Molecules to Behavioral Aspects. Vidyasagar University, West Bengal. 28th Feb-1st Mar 2025.

Maiti D. “Temporal Analysis of Inflammatory Responses and Oxidative Stress in Carcinogen-Induced Tumorigenesis” PHYSICON 2024. Tripura University, Tripura 15-17th Nov 2024.

Maiti D. “Treatment of leukemia that combine cytokine and natural product is effective” – Physicon 2022. Vidyasagar University, Midnapore, West Bengal. 3rd-5th March 2023.

Maiti D. “Physiology in Higher Education and Public Awareness” – Mahadevananda Mahavidyalaya, Barrackpore, West Bengal. 18th July 2021.

Maiti D. “Role of nutrition and life style changes in management of cancer” – Ambedkar College, Fatikroy, Tripura. 11th July 2021.

Maiti D. “Protection from Enemy” – FDC, Tripura University. 15th -28th March 2021 Refresher course on “Making Teaching Effective”, 15th March 2021.

Maiti D. “Development of cancer and Immune system ” – FDC, Tripura University. 11th -24th February 2020 Refresher course on “Advanced Methods in Teaching and Research”, 15th February 2020.

Maiti D, Nath P. IL-28B potentiates CTL activity in ENU induced leukemia. “Recent Trends in Physiology and Healthcare Research for Salubrious Society in PHYSICON 2019 at Bankura Christian College, Bankura 15-17th Nov 2019.

Maiti D. “Innovation on higher education” – FDC, Tripura University. 15 days Refresher course on “ ICT: Improving the quality of Higher Education and Innovation on Higher Education”, 9th March 2019.

Maiti D. “Immunity and Fight Against Cancer” – FDC , Tripura University , 21 days refresher course on “Naitalim: Gandhi’s Vision of Education and Present Scenario – Advanced Teaching and Research Methods” 12th January 2019

Topic: “**Monoclonal Antibody production and use**” invited as Resource person by Principal Investigator, on the Workshop on “Recent Diagnostic Modalities for Infectious Viral Diseases”, Agartala Govt. Medical College, Agartala. 18th September, 2018

National Seminar on “Biological Sciences for Human Welfare: Teaching and Research in Modern Perspective” in Berhampur Girls College on 29th September 2018.

Topic: **Role of IL-27 and IL-28B in amelioration of lung cancer and associated inflammation in Benzo(a) pyrene induced lung tumor bearing Swiss albino mice**”.

On 29th September 2018 at Berhampur Girls College on National Seminar.

Chaired the Session in National Seminar on “Biological Sciences for Human Welfare: Teaching and Research in Modern Perspective” in Berhampur Girls College on 30th September 2018.

Topic: “**Immunity and fight against Cancer**” invited by Invited by Programme Coordinator, Faculty Development Centre. Tripura University on 14th September, 2018.

Topic: “**Human Immunity System**” Invited by Programme Coordinator, Faculty Development Centre.

Tripura University on 23rd March 2018.

Topic: **“NK cell in cancer”** Invited by Principal, Women’s College, Agartala on 11th December, 2016.

Topic: **“Human body- wonderful creation ”** invited by Principal & Coordinator Science forum, Woman’s College, Agartala. Tripura on 5th December, 2015.

Topic: **“Application of Biotechnology ”** invited by Dean, College of Fisheries, Central Agricultural University for 3 days training program on “Molecular Biology Techniques” held at Institutional Biotech Hub, College of Fisheries, Agartala. Tripura during 22 – 25th September, 2014.

Topic: **“Determine the Protein expression and separation in cell culture system ”** invited by Convener of 3 days Workshop organizing Committee to teach hands on training in the workshop held at Institutional Biotech Hub, Woman’s College, Agartala. Tripura during 26th – 28th July, 2014.

Topic: **“Western Blotting”** invited by Convener of 3 days Workshop organizing Committee to teach hands on training in the workshop held at Institutional Biotech Hub, Woman’s College, Agartala. Tripura during 26th – 28th March, 2013.

Topic: **“Mammalian Cell Culture”** invited by coordinator of Institutional Biotech Hub, Woman’s College, Agartala. Tripura to a one day seminar “ Biotechnology and it’s prospects” on 12th May 2012

Topic : **The expression and activity of the MEF2C is induced by VEGF in endothelial cells**, invited by Sectional president of Medical Science including Physiology, in 98th Indian Science Congress meeting, SRM university, Chennai. 3-7 January 2011

Maiti D and Nath P. IL-28B potentiates CTL activity in ENU induced leukemia. “Recent Trends in Physiology and Healthcare Research for Salubrious Society in PHYSICON 2019 at Bankura Christian College, Bankura 15-17th Nov 2019.

Maiti D. “Monoclonal Antibody and its application” – Workshop on Recent Diagnostic modalities for infectious Viral Diseases – Agartala Government Medical College, 18th September 2018

Maiti D. “Innovation on higher education” – FDC, Tripura University. 15 days Refresher course on “ ICT: Improving the quality of Higher Education and Innovation on Higher Education” 9th March 2019

Maiti D. “Immunity and Fight Against Cancer” – FDC , Tripura University , 21 days refresher course on “Naitalim: Gandhi’s Vision of Education and Present Scenario – Advanced Teaching and Research Methods” 12th January 2019

Maiti D and Nath P “A study to evaluate the protective role of Interleukin 27 and Interleukin 28B against Benzo(a)pyrene induced lung carcinogenesis”, in National Seminar on “Biological Sciences for Human Welfare: Teaching and Research in Modern Perspective” Berhampur Girl’s College, Murshidabad, West Bengal 29th September 2018.

Maiti D, Singha A K, Sarkar C, Roy Saha M. IL-15 and GM-CSF modulates phagocytic activity of macrophages from ENU induced leukemic mice. National Seminar on PHMBI-18, Vidyasagar University, 27th-29th March 2018.

Debasish Maiti*, Ashish Kumar Singha, Chaitali Sarkar, Manasi Roy Saha IL-15 and GM-CSF modulates

phagocytic activity of macrophages from ENU induced leukemic mice. 104th Indian Science Congress, S V University, Tirupati, 3-7 January, 2017. Page

Debasish Maiti*, Ashish Kumar Singha, Chaitali Sarkar, Rahul Debnath, Debabrata Mazumdar. (2016); “The function of CTL is induced by GM-CSF and IL-15 in experimentally induced leukemia model”; PHYSICON 2016, Midnapore College, Midnapore West Bengal.; 18 -20th November 2016 (Abstract book).

Debasish Maiti, (2012) “Cytosolic pH gradients in breast cancer cells” 24th Annual Conference of Physiological Society of India. 6-8th December 2012. Andhra Medical College, Visakhapatnam.

Debasish Maiti, Ashish Kr. Singha, Bhaskar Bhattacharjee, Niranjana Das, Biswanath Dinda.(2012); “Study of some biological properties of 24 (28)- dehydromakisterone A, an active compound of *Sida glutinosa* (malvaceae)”; 3rd National Symposium on Earthworm Ecology and Environment, November 9-11; 2012, Tripura University.

Ashish Kumar Singha, Bhaskar Bhattacharjee, Rajashree Banik, Biswanath Dinda, **Debasish Maiti**.(2012)

Maiti D, Bhattacharjee B, Singha A K, Das N, Dinda B. (2012): “*Ichnocarpus frutescens* (Linn) – A plant with different biological activities ” National Seminar on Recent Trend in Environmental Research and Management”, Netaji Subhas Mahavidyalaya, Udaipur, Tripura. 8-9th September. 2012.

Maiti D, Duttachaudhuri M. and Chaudhuri S. (2012): “Effects of biological response modifiers on large granular lymphocyte in experimental leukemia as well as in human patients.” 2nd International Conference on “Perspectives of Cell Signaling and Molecular Medicine”, Bose Institute, Kolkata, 8-11th January 2012.

Maiti D, Duh EJ. (2012): “MEF2C gene is downregulated by TNF α in human retinal endothelial cell” 99th Indian Science Congress, KIIT University, Bhubaneswar, 3-7th January 2012.

Maiti D, Bhattacharjee B, Singha AK., Ghosh R and De UC. *Mussaenda roxburghii* (rubiacaceae): a medicinal plant. International Conference on Frontiers in Biological Researches, Vidyasagar University, Midnapore, 26-27th February 2012.

Maiti D, Duh EJ. (2011): “The expression and activity of the MEF2C is induced by VEGF in endothelial cells” 98th Indian Science Congress, SRM University, Chennai, 3-7th January 2011.

Bhattacharjee B, Singha A, Ghosh R, De U C, **Maiti D**. (2011): “Antimicrobial activity of *Dillenia pentagyna* (Dilleniaceae)” International conference on Emerging areas of chemistry, Dept. of Chemistry, Tripura University, January 12 -14, 2011

Maiti D, Duh EJ. (2007): “Vascular Endothelial Growth Factor Induces Expression and Activity of the MEF2C Transcription Factor in Retinal Endothelial Cells” The Aging Eye ARVO 2007 annual meeting, Fort Lauderdale, Florida. Abstract # 4456

Topic : **Cancer and proton pumps**. Invited by Prof. Judd E Shellito from Section of Pulmonary and Critical Care Medicine, Department of Medicine, Center for Lung Biology and Immunotherapy, Alcohol Research Center, Louisiana State University Health Sciences Center, New Orleans, Louisiana 70112, USA on May 2004.

Maiti D, Sennoune SR, Martinez-Zaguilan R. (2004) :“Ultraviolet(UV-B) light elicits acidosis in human breast cancer cells“ FASEB J. 18: A147.9

Maiti D, Sennoune S and Martinez-Zaguilan. (2003) Proton gradients in angiogenesis and cancer: Biological

Significance. 3rd Annual Cancer Research Symposium, UMC Health System. pPO-2.

Maiti D, Sennoune S, and Martinez-Zaguilan R. (2003) Proton gradients in human breast cancer cells determined by confocal, multiphoton, and spectral imaging microscopy. FASEB J. 17: A467.

Maiti D, Senoune S and Raul MartinezZaguilan.(2003) "pH gradients in breast cancer cells studied by single, two-photon laser scanning confocal/ spectral imaging microscopy. 47th annual meeting of American Biophysical Society. San Antonio. Abstract #Late abstract 86.

Maiti D, Palit A, Majumder D, Law S, Duttachaudhuri M, Chaudhuri S and Cahaudhuri S.(1996) CMI profile in leukemia : An experimental approach towards immunotherapy. 23rd Annual Conference of Indian Immunology Society, Vishakhapatnam, p83

Professional Societies

2001(life member)	Indian Immunology Society.
2010 (life member)	Indian Science Congress Association, India
2010 (life member)	Physiological Society of India, India
2013 (life member)	Indian Societies of Cell Biology
2014 (life member)	Society for Biotechnologists (India).
2003-2009	Biophysical Society (USA)
2006 –till date	American Physiological Society
2006-2009	Sigma Xi, International Multidisciplinary Research Society (USA)
2006- 2009	The American Society for Cell Biology (USA)
2007- 2009	Association for Research in Vision and Ophthalmology (USA)

Professional Experience:

- ✚ Working as Head (26th August 2025 – Till date) , Department of Human Physiology, Tripura University.
- ✚ Worked as Head (24th August 2016 – 23rd August 2019) , Department of Human Physiology, Tripura University.
- ✚ Working as a coordinator of State Biotech Hub(April 2011- till date), Tripura University.
- ✚ Working as a Chairman of Board of Postgraduate Studies (2016 Aug- Aug 2019) (From Aug 2016 to Till date), Department of Human Physiology, Tripura University.
- ✚ Nodal Officer – Foreign Students registration in Tripura University from 2020 to 2025
- ✚ Chairman – Tripura University Campus Development Committee (May 2020 – 2024)
- ✚ Member – Institution Innovation Council, Tripura University.(from 2020-2025)
- ✚ Member Secretary – Paramedical Course regulation forming committee, Tripura University
- ✚ Member of Board of Faculty Studies, Tripura University
- ✚ Working as member secretary (2013 – February 2021) of Institutional Animal Ethics Committee, Tripura University
- ✚ Member Secretary, Institutional Biosafety Committee (2023 – Till date)
- ✚ Member: Institutional Animal Ethics Committee (February 2021 – Till date), Tripura University
- ✚ Member, NAAC Task force, 2020
- ✚ Task team member of Annual Quality Assurance Report of Tripura University (2016-18).
- ✚ Thesis examiner of Calcutta University, Jawaharlal Nehru University, Jadavpur University.

Grant and Awards:

1. “Study of Induction and mechanisms of autophagy in EAC cells upon treatment with Theaflavins” (No. BT/PR25104/NER/95/1017/2017 Date: 26-09-19) September 2019- September 2022). Supported by DBT, Govt of India.
Role: Principal Investigator; Funded amount Rs 49.72 lakhs.
2. “Role of Macrophages in Experimentally Induced Leukemia” (No. 5/7/1218/2014-RCH Dt. 12-02-15) Feb 2015 – April 2017. Supported by ICMR. Govt. of India.
Role: Principal Investigator Funded Amount: 9.9 lakhs.
3. “Studies on anticancer activities of extracts (Bromelain and Peroxidase) of different pineapple (Ananas comosus) cultivars of Tripura. (No. BT/472/NE/TBP/2013) April 2014 – March 2017. supported by Department of Biotechnology, Govt. of India
Role: Principal Investigator Funded Amount: 23.82 lakhs.
4. “Establishment of State Biotech Hub by DBT under special programme for north eastern states of India” supported by Department of Biotechnology, Govt. of India, March 2011 – February 2014
Role: Coordinator. Amount: ₹ 304 Lakhs
Extended another two years. Amount: ₹ 69.18 Lakhs
Extended another two years upto Dec 2018 Amount: ₹ 163.74 Lakhs (81.87 X 2)
5. “Anticancer and antidiabetic principles from some medicinal plants of Tripura” supported by Department of Science and Technology, Govt. of India. 2010 - 2013
Role: Co-PI, PI – Prof. B. Dinda, Dept of Chemistry, T.U.; Amount: ₹ 19.5 Lakhs
6. Knights Templar Eye Foundation’s Award: 2007-2008 on “Role of Transcription Factor MEF2C in Retinal Angiogenesis in ROP”
Role: Project Investigator. Amount: \$30,000.00 for one year
7. Jonas S Friedenwald research grants award 2008 – Wilmer Eye Institute, Johns Hopkins University, USA.
8. Smt Shakuntala Dasgupta Memorial Oration Award 2012 – Physiological Society of India, India.
9. Ramendra Sundar Sinha Memorial Oration award 2022 – Physiological Society of India, India.
10. Awarded Fellow of Physiological Society of India in 2025
11. Selected as sectional member of the Medical Science (including Physiology) of Indian Science Congress Association 2014.

Training:

Postdoctoral Fellow 2004 – 2009. Department of Ophthalmology, Johns Hopkins University. Baltimore, Maryland. USA.

Topic: Angiogenesis and diabetic retinopathy

Postdoctoral Fellow 2002-2004, Department of Physiology, Texas Tech University Health Sciences Center. Lubbock, Texas, USA.

Topic: “Studies on the plasmalemmal vacuolar H⁺-ATPase in angiogenesis and metastasis”

Senior Research Fellow: 2001-2002, Indian Institute of Chemical Biology, Jadavpur. Calcutta, India.

Topic: **Signaling mechanism for pigmentation in melanoma cell line by a lipid isolated from human placenta.**

Senior Research Fellow:1999-2001 Bose Institute, Calcutta, India.

Topic: **Mechanism of signal transduction in monocyte and macrophage cell line in response to *Mycobacterium avium* and *Helicobacter pylori* treatment.**

Junior Research Fellow (thesis): 1995-1999, School of Tropical Medicine, under Calcutta University, Calcutta, India.

Topic: "Studies on Immunokinetic Behavior of Cellular Components Under Hematological Malignancy"

Pre-doctoral Training 1993, National Institute of Cholera and Enteric Diseases, Calcutta, India.
Topic: Study of outer membrane protein of *Vibrio parahaemolyticus* in connection to adherence in the epithelial layer of rabbit intestine *in vivo* and *in vitro* condition.

Peer Reviewer of Scientific Journals:

1. Journal of Community Nutrition and Health (www.jcnh.in) – Editorial Board Member
2. Asian Journal of Pharmaceutical and Clinical Research (www.ajpcr.com) – Editorial Board Member
3. Plos One – Reviewer
4. Molecular Cancer – Reviewer
5. Cytokine – Reviewer
6. Toxicology in vitro – Reviewer
7. Inflammation – Reviewer
8. Journal of Advances in Medicine and Medical Research - Reviewer

Research Guidance:

1. Dr. Bhaskar Bhattacharjee is awarded PhD and working as Scientist-II in Agartala Government Medical College, Agartala.
2. Dr. Ashish Kr. Singha is awarded PhD and working as postdoctoral fellow in University of Texas Health Science Center, San Antonio, USA.
3. Sri Rahul Debnath awarded PhD and working as postdoctoral fellow in the University of Pennsylvania, USA.
4. Sri Debabrata Majumder awarded PhD and working as PDF in Duke University School of Medicine.
5. Sri Priyatosh Nath is a registered PhD and working as PDF in Louisiana State University, USA.
6. Dr. Sharmistha Das is awarded PhD under my Co-supervision from The Neotia University, West bengal and working as Asst Professor in the same university
7. Sri Snehashish Modak is registered for PhD under my supervision
8. Ms Tamanna Aktar is registered for PhD under my supervision.
9. Dr. Pranabika Singha has worked under my supervision as postdoctoral fellow.

ANY OTHER INFORMATION:

- a. Organized 6 days Workshop as organizing secretary on “Protein isolation, separation, purification and characterisation” during 26th Feb to 3rd March 2019 sponsored by DBT, Govt. of India.
- b. Organized 3 days Workshop as organizing secretary on “Animal Ethics and Biomedical Research” during 18th -20th March 2019 sponsored by DBT, Govt. of India.
- c. Organized 5 days Workshop as organizing secretary on “Microbiology & Microbial Genomics” during 25th -29th March 2019 sponsored by DBT, Govt. of India.
- d. Acted as chairperson of the National Seminar on “Biological Sciences for Human Welfare: Teaching and Research in Modern Perspective” in Berhampur Girls College on 29th September 2018.
- e. Organized three days workshop as organizing secretary in the State Biotech Hub, Tripura

University on “Bioinformatics and its application” during 21-23rd February 2018 sponsored by Department of Biotechnology, Govt. of India during

- f. Organized three days workshop as organizing secretary in the State Biotech Hub, Tripura University on “Techniques for Genomic Research” sponsored by Department of Biotechnology, Govt. of India during 19th - 23rd March 2018
- g. Organized three days workshop as organizing secretary in the State Biotech Hub, Tripura University on “Chromatographic techniques” sponsored by Department of Biotechnology, Govt. of India during 7th -9th March 2018
- h. Organized three days workshop as organizing secretary in the State Biotech Hub, Tripura University “Cellular Techniques in Biological Research” in Tripura university during 20th – 22nd March 2017
- i. Organized three days workshop as organizing secretary on “Modern Trends in Biological research”, 27th – 29th March 2017 in the State Biotech Hub, Tripura University.
- j. Organized three days workshop as organizing secretary on “Capacity building in grant writing Skills and effective management of intellectual property rights (IPR) in Biotechnology by universities and research institutions in the North East Region”, 23rd – 25th February 2017 in Tripura University.
- k. Organized seven days workshop as organizing secretary sponsored by ISI, Kolkata, through Department of Human Physiology and Department of Information Technology, Tripura University “Statistical and Computing methods for Life Science data Analysis” in Tripura university during 14th - 19th March 2016.
- l. Organized three days seminar cum workshop as organizing secretary sponsored by DBT, Govt. of India, through State Biotech Hub, Tripura University “Recent Trends in Biotechnological Research” in Tripura university during 20th – 22nd January 2016.
- m. Organized seven days seminar cum workshop as organizing secretary sponsored by DBT, Govt. of India, through State Biotech Hub, Tripura University “Molecular and Cellular Techniques in Life Science Research” in Tripura university during 6th – 13th March, 2016.
- n. Organized two days seminar cum workshop as organizing secretary sponsored by DBT, Govt. of India, through State Biotech Hub, Tripura University “Advances in Modern Biotechnology” in Tripura university during 13th - 14th January 2015.
- o. Organized five days workshop as convener sponsored by DBT, Govt. of India, through State Biotech Hub, Tripura University “Advance Biotechnology” in Tripura university during 20th - 24th March, 2015.
- p. Organized a seven days workshop as Convener sponsored by DBT, Govt. of India, through State Biotech Hub, Tripura University “Workshop on “Cell and Molecular Biology” in Tripura university during 20th - 26th March 2014
- q. Organized a one day out reach training program sponsored by DBT, Govt. of India, through State biotech Hub, Tripura University “Basic Molecular biological Techniques” in Netaji S Mahavidyalaya, Udaipur, Tripura on 29th November, 2013.

- r. Organized a one day out reach training program sponsored by DBT, Govt. of India, through State biotech Hub, Tripura University “Basic Molecular biological Techniques” in M. B. B. College, Agartala on 27th November, 2013.
- s. Organized a Seminar sponsored by DBT, Govt. of India, through State biotech Hub, Tripura University “Combating a silent epidemic slow-killer oncogenic RNA Virus Hepatitis C: how should we curb them down to the Corner?” in Tripura university on 1st July 2013 by Dr. Santanu Roy Chaudhury, University of California Los Angeles, USA.
- t. Organized a one day out reach training program sponsored by DBT, Govt. of India, through State biotech Hub, Tripura University “Basic Biological Techniques” in Belonia College, Belonia on 8th March, 2013.
- u. Organized a workshop as Convener sponsored by DBT, Govt. of India, through State biotech Hub, Tripura University “Barcoding and PCR techniques” in Tripura university during 22nd -26th February 2013
- v. Acted as Chairperson in a session in 24th Physiological Society of India conference during 6-8th December 2012 held at Andhra Medical College, Visakhapatnam, Andhrapradesh.
- w. Organized a Seminar sponsored by DBT, Govt. of India, through State biotech Hub, Tripura University “cAMP-An old player has a new role in diarrhea” in Tripura University on 27th March 2012 by Dr. Kazi Mirajul Hoque, NICED, Kolkata.
- x. Organized a workshop as Convener sponsored by DBT, Govt. of India, through State biotech Hub, Tripura University “Workshhop on basic molecular biology and biotechnology” in Tripura university during 19th-23rd September 2011
- y. Organized a “One day seminar on molecular biology” as co-convener at Pragnya Bhavan, Agartala on 6th November 2011 with convener Dr. Arun Ghosh at Agartala Government Medical College, Agartala, Tripura.
- z. Acted as Co-Chairperson in a session in one day workshop on Molecular Biology held at Pragna Bhavan, Agartala on 6th November 2011.