ANSUMAN CHATTOPADHYAY <u>PROFESSOR</u>

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 Visva-Bharati, Santiniketan, West Bengal, Pin:
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> <u>Personal details:</u>

- Date of Birth: 16/12/1968
- Gender: Male
- Category: General
- Whether differently abled: No

Education:

- University of Calcutta, 1989, B. Sc. (Hons.) in Zoology
- University of Calcutta, 1991, M. Sc. in Zoology
- North Eastern Hill University, Shillong; Meghalaya, 1997, Ph.D. in Zoology

> <u>Doctoral degree details:</u>

- **Ph.D. thesis title:** Relationship between cellular radio and chemosensitivity and endogenous glutathione in mammalian cells with respect to cytogenetical end points.
- Guide's Name: Prof. Anupam Chatterjee
- University: North Eastern Hill University; Shillong- 793022
- Year of Award: 1997

Work experience (in chronological order):

- Visva-Bharati University, Professor, 17.12.2011-continuing
- Visva-Bharati University, Associate Professor, 17.12.2005-16.12.2011
- North Eastern Hill University, Lecturer (Senior Grade), 10.04.2002-14.12.2005
- St. Edmunds College, Lecturer, 15.04.1996-09.04.2002

Areas of Research:

- Toxicology of fluoride, arsenic, chromium and nanoparticles (organ and genotoxicity; molecular mechanisms); Nrf2-Keap1 signaling pathway, changes in metal profiling; epigenetic regulation of DNA repair genes.
- Screening of anticancer properties of fungal metabolites and nanoparticles. Investigation of detailed molecular mechanism responsible for cell death.

Professional Recognitions/ Honors/ Awards/ Prizes/ Certificates/ Fellowships received:

- National Scholarship in B.Sc. Examination, 1989
- Visiting Fellowship (HBCSE, TIFR), 2004
- UICC Fellowship, Institute of Pathology, Munich, Germany, January-February, 2005
- Fellow of West Bengal Academy of Science & Technology
- Associate Editor of the journal "The Nucleus" Springer

> <u>Publications:</u>

- Books: 02
- Book Chapters: 03
- Research Papers: 89

> <u>Accomplishments as a mentor:</u>

- Number of students awarded Ph.D. degree: 10
- Number of students submitted Ph.D. thesis: 00
- Number of students registered for Ph.D. degree: 06
- Number of Post-doctoral fellows: 00

Reviewer of following Journals:

- PLOS ONE
- Chemosphere
- Biochimie
- Biological Trace Element Research
- Bulletin of Environmental Contamination and Toxicology
- Chemico-Biological Interaction
- Fluoride
- Journal of Applied Oral Science
- Cell Biology Education
- Proceeding of National Academy of Science (Allahabad)
- Indian Journal of Experimental Biology
- Pharmacologia
- Journal of Clinical and Diagnostic Research
- Journal of Water Resource and Protection
- International Blood Research and Reviews
- Human and Experimental Toxicology
- British Biotechnology Journal
- Ecotoxicology and Environmental Safety
- Science of the Total Environment
- Scientific Reports (Nature Publications)

Publications (List of papers published in SCI Journals, in year wise descending order):

- 1. Ghosh, P., Mandal, S., Mukherjee, S., Mondal, S., Chattopadhyay, A., & Sahoo, P. (2024). Dual sensing of hypochlorite and aluminium in plant tissues by a selective diimine-based chemosensor. *Journal of Photochemistry and Photobiology A: Chemistry*, 116004. https://doi.org/10.1016/j.jphotochem.2024.116004
- 2. Kamila, S., Dey, K. K., Islam, S., & Chattopadhyay, A. (2024). Mixture of arsenic and chromium alters antioxidant, DNA repair and tumor suppressor gene expressions in zebrafish brain at environmental concentrations. *Journal of Environmental Sciences*. https://doi.org/10.1016/j.jes.2024.07.014
- **3.** Mondal, S., Sarkar, O., Raut, J., Mandal, S. M., **Chattopadhyay, A.**, & Sahoo, P. (2024). Development of a Nanomarker for in Vivo Monitoring of Dopamine in Plants. *ACS Applied Bio Materials*, 7(7), 4690-4701. <u>https://doi.org/10.1021/acsabm.4c00506</u>
- **4.** Chatterjee, S., **Chattopadhyay, A.**, & Mandal, N. C. (2024). Antioxidant and anticancer potential of endophytic fungus Alternaria tenuissima PE2 isolated from the leaves of Psidium guajava L. *Journal of Mycopathological Research*, 62(2): 285-291. https://doi.org/10.57023/JMycR.62.2.2024.285
- **5.** Nag, S., Kamila, S., **Chattopadhyay, A.**, & Banerjee, P. (2024). A 'molecular chameleon' mimic ZrIV-consolidated Fluoro-specific coordination complex and arseno-selective supramolecular metallogelator as a phase discriminatory sensing probe: Substantiation of invitro and in-silico approaches with the sensing response. *Journal of Photochemistry and*

Photobiology A: Chemistry, 454, 115740. https://doi.org/10.1016/j.jphotochem.2024.115740

- 6. Mandal, S., Dey Bhowmik, A., Chattopadhyay, A., & Mandal, N. C. (2024). Limosilactobacillus fermentum LAB212 effectively ameliorates toxigenicity of aflatoxin. *The Nucleus*, 1-10. https://doi.org/10.1007/s13237-024-00488-0
- Islam, S., Sarkar, O., Mukherjee, S., Kamila, S., Bhowmik, A. D., & Chattopadhyay, A. (2024). Chronic low-dose chromium VI exposure induces oxidative stress and apoptosis with altered expressions of DNA repair genes and promoter hypermethylation in the liver of Swiss albino mice. *Journal of Applied Toxicology*. <u>https://doi.org/10.1002/jat.4600</u>
- 8. Kamila, S., Dey, K. K., Islam, S., & Chattopadhyay, A. (2024). Arsenic and chromium induced hepatotoxicity in zebrafish (Danio rerio) at environmentally relevant concentrations: Mixture effects and involvement of Nrf2-Keap1-ARE pathway. *Science of The Total Environment*, 171221. <u>https://doi.org/10.1016/j.scitotenv.2024.171221</u>
- **9.** Dey, K. K., Kamila, S., Das, T., & **Chattopadhyay, A.** (2024). Lead induced genotoxicity and hepatotoxicity in zebrafish (Danio rerio) at environmentally relevant concentration: Nrf2-Keap1 regulated stress response and expression of biomarker genes. *Environmental Toxicology and Pharmacology*, 104396. <u>https://doi.org/10.1016/j.etap.2024.104396</u>
- Raut, J., Sarkar, O., Das, T., Mandal, S. M., Chattopadhyay, A., & Sahoo, P. (2023). Efficient delivery of methotrexate to MDA-MB-231 breast cancer cells by a pH-responsive ZnO nanocarrier. *Scientific Reports*, 13(1), 21899. <u>https://doi.org/10.1038/s41598-023-49464-9</u>
- 11. Mondal, S., Raut, J., Sarkar, O., Mandal, S. M., Chattopadhyay, A., & Sahoo, P. (2023). Exigent carbon nanodots for trapping 6-thioguanine to resist fire blight caused by *Erwinia amylovora* in an orchard. *New Journal of Chemistry*, 47(45), 20859-20865. <u>https://doi.org/10.1039/D3NJ03979J</u>
- 12. Ghosh, P., Saha, S., Mukherjee, S., Chattopadhyay, A., & Sahoo, P. (2023). Direct fluorescence labelling of NO inside plant cells. *Organic & Biomolecular Chemistry*, 21(46), 9270-9274. <u>https://doi.org/10.1039/D3OB01647A</u>
- **13.** Mukherjee, S., Sarkar, O., & **Chattopadhyay**, **A**. (2023). Individual and combined effects of fluoride and arsenic on gut bacteria: a recent update. *The Nucleus*, 1-14. <u>https://doi.org/10.1007/s13237-023-00460-4</u>
- 14. Dey, K. K., Mondal, P., & Chattopadhyay, A. (2023). Environmentally relevant lead alters nuclear integrity in erythrocytes and generates oxidative stress in liver of *Anabas testudineus*: Involvement of Nrf2-Keap1 regulation and expression of biomarker genes. *Journal of Applied Toxicology*. <u>https://doi.org/10.1002/jat.4537</u>
- 15. Dey Bhowmik, A., Das, T., & Chattopadhyay, A. (2023). Chronic exposure to environmentally relevant concentration of fluoride impairs osteoblast's collagen synthesis and matrix mineralization: Involvement of epigenetic regulation in skeletal fluorosis. *Environmental Research*, 236, 116845. https://doi.org/10.1016/j.envres.2023.116845
- 16. Ghosh, P., Das, T., Chattopadhyay, A., & Sahoo, P. (2023). Differential detection of aspartic acid in MCF-7 breast cancer cells. Organic & Biomolecular Chemistry. <u>https://doi.org/10.1039/D30B01072D</u>
- 17. Kamila, S., Shaw, P., Islam, S., & Chattopadhyay, A. (2023). Ecotoxicology of hexavalent chromium in fish: An updated review. *Science of The Total Environment*, 164395. <u>https://doi.org/10.1016/j.scitotenv.2023.164395</u>
- 18. Ghosh, P., Dey, K. K., Chattopadhyay, A., & Sahoo P. (2023). A facile turn-on

luminescence technique to trap hydrazine and its application in button mushroom (Agaricus bisporus). *New Journal of Chemistry*, doi.<u>10.1039/D3NJ00504F</u>.

- 19. Islam, S., Kamila, S., Chattopadhyay, A. (2022). Toxic and carcinogenic effects of hexavalent chromium in mammalian cells in vivo and in vitro: a recent update. *Journal of Environmental Science and Health, Part C*, doi. <u>10.1080/26896583.2022.2158675</u>.
- **20.** Taniya, S., Khanra, S., Dey Bhowmik, A., Bandyopadhyay, A., Chatterjee, S., **Chattopadhyay**, A., & Debasis Das (2022). A new Fe(III) complex derived from cyclohexane based imine derivative: Studies on H₂PO₄⁻ recognition and anti-cancer activity against MCF7 and MDA-MB-231 human breast cancer cells. *ChemistrySelect*, doi. 10.1002/slct.202203054.
- 21. Baul, T. S. B., Hlychho, B., Addepalli, M. R., Duthie, A., Sarkar, O., Dey Bhowmik, A., Chattopadhyay, A., ... & Höpfl, H. (2022). Synthesis and structures of diorganotin (IV) Schiff base complexes [R2Sn (L) Cl2] and their proliferative responses on breast cancer cells. *Journal of Molecular Structure*, 134827, doi. 10.1016/j.molstruc.2022.134827.
- 22. Mondal, P., Mukhopadhyay, D., Shaw, P., Dey Bhowmik, A., & Chattopadhyay, A. (2022). Environmentally relevant fluoride alters nuclear integrity in erythrocytes and induces DNA damage in hepatocytes of zebrafish. *The Nucleus*, 1-9.
- 23. Nag, S., Mondal, A., Hirani H., Dey Bhowmik, A., Chattopadhyay, A., & Banerjee, P. (2022). A dual-responsive bio-amicable fluorophore for trace level recognition of Zn2+ and Cd2+: Prefatory diagnosis of neoplastic disease from urine and ALS from saliva. *Journal of Photochemistry & Photobiology, A: Chemistry, 433*, 114133.
- 24. Mandal, S., Dey Bhowmik, A., Mukhuty, A., Kundu, S., Truong, K. N., Rissanen, K., Chattopadhyay, A., & Sahoo, P. (2022). Reliable fluorescence technique to detect the antibiotic colistin, a possible environmental threat due to its overuse. *Scientific Reports*, *12*, 1-8.
- 25. Saha, S., Kamila, S., Chattopadhyay, A., & Sahoo, P. (2022). Easy and rapid chemosensing method for identification of accumulated Tin in algae: A solemn strives to protect marine eco-system. *New Journal of Chemistry*, *46*, 4233-4238.
- 26. Shaw, P., Mondal, P., Dey Bhowmik, A., Bandyopadhyay, A., Chakraborty, A., Sudarshan, M., & Chattopadhyay, A. (2021). Environmentally relevant hexavalent chromium disrupts elemental homeostasis and induces apoptosis in zebrafish liver. *Bulletin of Environmental Contamination and Toxicology*, 108, 716-724.
- 27. Banerjee, S., Islam, S., Chattopadhyay, A., Sen, A., & Kar, P. (2021). Synthesis of silver nanoparticles using underutilized fruit Baccaurea ramiflora (Latka) juice and its biological and cytotoxic efficacy against MCF-7 and MDA-MB 231 cancer cell lines. *South African Journal of Botany*, 145, 228-235.
- 28. Saha, S., Das, S., Sarkar, O., Chattopadhyay, A., Rissanen, K., & Sahoo, P. (2021). Introduction of a luminescent sensor for tracking trace levels of hydrazine in insect pollinated cropland flowers. *New Journal of Chemistry*, 45, 17095-17100.
- 29. Saha, S., Ghosh, P., Mondal, P., Chattopadhyay, A., & Sahoo, P. (2021). Involvement of a unique chemodosimeter in the selective estimation of noxious cyanide in common water hyacinth (Eichhornia crassipes): an environmental refinement. *Environmental Science: Processes & Impacts*, 23, 1308-1315.
- **30.** Bandyopadhyay, A., Garai, S., Banerjee, P. P., Bhattacharya, S., & Chattopadhyay, A. (2021). Bacopasaponins with cytotoxic activity against human breast cancer cells in vitro. *Molecular Biology Reports*, 48, 2497–2505.

- Mondal, P., Shaw, P., Dey Bhowmik, A., Bandyopadhyay, A., Sudarshan, M., Chakraborty, A., & Chattopadhyay, A. (2020). Combined effect of arsenic and fluoride at environmentally relevant concentrations in zebrafish (Danio rerio) brain: Alterations in stress marker and apoptotic gene expression. *Chemosphere*, 128678.
- 32. Dey Bhowmik, A., Shaw, P., Mondal, P., Chakraborty, A., Sudarshan, M., & Chattopadhyay, A. (2020). Calcium and Vitamin D Supplementation Effectively Alleviates Dental and Skeletal Fluorosis and Retain Elemental Homeostasis in Mice. *Biological Trace Element Research*, 1-10.
- **33.** Shaw, P., Sen, A., Mondal, P., Dey Bhowmik, A., Rath, J., & Chattopadhyay, A. (2020). Shinorine ameliorates chromium induced toxicity in zebrafish hepatocytes through the facultative activation of Nrf2-Keap1-ARE pathway. *Aquatic Toxicology*, 228, 105622.
- **34.** Bandyopadhyay, A., Roy, B., Shaw, P., Mondal, P., Mondal, M. K., Chowdhury, P., ... & Chattopadhyay, A. (2020). Chitosan-gold nanoparticles trigger apoptosis in human breast cancer cells in vitro. *The Nucleus*, 1-14.
- **35.** Dey Bhowmik, A., Podder, S., Mondal, P., Shaw, P., Bandyopadhyay, A., Das, A., ... & Chattopadhyay, A. (2020). Chronic exposure to environmentally relevant concentration of fluoride alters Ogg1 and Rad51 expressions in mice: Involvement of epigenetic regulation. *Ecotoxicology and Environmental Safety*, 202, 110962.
- **36.** Ghosh, A., Mandal, S., Das, S., Shaw, P., **Chattopadhyay**, A., & Sahoo, P. (2020). Insights into the phenomenon of acquisition and accumulation of Fe3+ in Hygrophila spinosa through fluorimetry and fluorescence images. *Tetrahedron Letters*, *61*(9), 151520.
- 37. Mondal, P., & Chattopadhyay, A. (2020). Environmental exposure of arsenic and fluoride and their combined toxicity: a recent update. *Journal of Applied Toxicology*, 40(5), 552-566.
- **38.** Bandyopadhyay, A., Roy, B., Shaw, P., Mondal, P., Mondal, M. K., Chowdhury, P., ... & Chattopadhyay, A. (2019). Cytotoxic effect of green synthesized silver nanoparticles in MCF7 and MDA-MB-231 human breast cancer cells in vitro. *The Nucleus*, 1-12.
- **39.** Shaw, P., Mondal, P., Bandyopadhyay, A., & **Chattopadhyay**, A. (2020). Environmentally relevant concentration of chromium induces nuclear deformities in erythrocytes and alters the expression of stress-responsive and apoptotic genes in brain of adult zebrafish. *Science of The Total Environment*, 703, 135622.
- **40.** Shaw, P., & **Chattopadhyay**, **A.** (2020). Nrf2–ARE signaling in cellular protection: Mechanism of action and the regulatory mechanisms. *Journal of Cellular Physiology*, 235(4), 3119-3130.
- **41.** Dey Bhowmik, A., Bandyopadhyay, A., & Chattopadhyay, A. (2019). Cytotoxic and mutagenic effects of green silver nanoparticles in cancer and normal cells: a brief review. *The Nucleus*, 62(3), 277-285.
- **42.** Banerjee, P. P., Bandyopadhyay, A., Mondal, P., Mondal, M. K., Chowdhury, P., Chakraborty, A., ... & Chattopadhyay, A. (2019). Cytotoxic effect of graphene oxide-functionalized gold nanoparticles in human breast cancer cell lines. *The Nucleus*, *62*(3), 243-250.
- **43.** Mondal, P., Shaw, P., Bandyopadhyay, A., Dey Bhowmik, A., Chakraborty, A., Sudarshan, M., & Chattopadhyay, A. (2019). Mixture effect of arsenic and fluoride at environmentally relevant concentrations in zebrafish (Danio rerio) liver: expression pattern of Nrf2 and related xenobiotic metabolizing enzymes. *Aquatic Toxicology*, <u>https://doi.org/10.1016/j.aquatox.2019.06.002</u>
- 44. Dey Bhowmik, A., & Chattopadhyay, A. (2019). A review on fluoride induced

organotoxicity and genotoxicity in mammals and zebrafish. The Nucleus, 1-9.

- 45. Dey Bhowmik, A., Shaw, P., Mondal, P., Munshi, C., Chatterjee, S., Bhattacharya, S., & Chattopadhyay, A. (2019). Incidence of fluorosis and urinary fluoride concentration are not always positively correlated with drinking water fluoride level. *Current Science*, 116(9):1551-54. doi: 10.18520/cs/v116/i9/1551-1554
- **46.** Shaw, P., Mondal, P., Bandyopadhyay, A., & **Chattopadhyay**, **A.** (2018). Environmentally relevant concentration of chromium activates Nrf2 and alters transcription of related XME genes in liver of zebrafish. *Chemosphere*, *214*, 35-46.
- **47.** Jha, B., Rao, M., **Chattopadhyay**, **A.**, Bandyopadhyay, A., Prasad, K., & Jha, A. K. (2018). Punica granatum fabricated platinum nanoparticles: a therapeutic pill for breast cancer. In *AIP Conference Proceedings* (Vol. 1953, No. 1, p. 030087). AIP Publishing.
- **48.** Garai, S., Ghosh, R., Bandopadhyay, P. P., Mandal, N. C., & **Chattopadhyay**, A. (2018). Anti-microbial and Anti-cancer Properties of Echinocystic Acid Extracted from Luffa cylindrica. *Journal of Food Processing & Technology*, 9(2), 717.
- 49. Banerjee, P. P., Bandyopadhyay, A., Harsha, S. N., Policegoudra, R. S., Bhattacharya, S., Karak, N., & Chattopadhyay, A. (2017). Mentha arvensis (Linn.)-mediated green silver nanoparticles trigger caspase 9-dependent cell death in MCF7 and MDA-MB-231 cells. *Breast Cancer: Targets and Therapy*, 9, 265.
- 50. Bandyopadhyay, A., Banerjee, P. P., Shaw, P., Mondal, M. K., Das, V. K., Chowdhury, P., ... & Chattopadhyay, A. (2017). Cytotoxic and Mutagenic Effects of Thuja occidentalis Mediated Silver Nanoparticles on Human Peripheral Blood Lymphocytes. *Materials Focus*, 6(3), 290-296.
- **51.** Sarkar, S., Mukherjee, S., Chattopadhyay, A., & Bhattacharya, S. (2017). Differential modulation of cellular antioxidant status in zebrafish liver and kidney exposed to low dose arsenic trioxide. *Ecotoxicology and environmental safety*, *135*, 173-182.
- 52. Adhikari, S., Sahana, A., Kumari, B., Ganguly, D., Das, S., Banerjee, P. P., Chattopadhyay, A. & Brandão, P. (2016). Molecular diversity in several pyridyl based Cu (ii) complexes: biophysical interaction and redox triggered fluorescence switch. *New Journal of Chemistry*, 40(12), 10378-10388.
- Adhikari, S., Ghosh, A., Mandal, S., Guria, S., Banerjee, P. P., Chattopadhyay, A., & Das, D. (2016). Colorimetric and fluorescence probe for the detection of nano-molar lysine in aqueous medium. Organic & biomolecular chemistry, 14(45), 10688-10694.
- 54. Mondal, M. K., Banerjee, P. P., Saha, S. K., Chowdhury, P., Sengupta, A., Bandyopadhyay, A., ... & Chattopadhyay, A. (2016). Selective reduction technique (SRT): A robust method to synthesize bioactive Ag/Au doped Graphene Oxide. *Materials & Design*, 102, 186-195.
- **55.** Banerjee, G., Sengupta, A., Roy, T., Banerjee, P. P., **Chattopadhyay**, A., & Ray, A. K. (2016). Isolation and characterization of fluoride resistant bacterial strains from fluoride endemic areas of West Bengal, India: assessment of their fluoride absorption efficiency. *Fluoride*, 49(4), 429.
- 56. Barua, S., Banerjee, P. P., Sadhu, A., Sengupta, A., Chatterjee, S., Sarkar, S., Chattopadhyay, A. & Karak, N. (2016). Silver nanoparticle as antibacterial and anticancer materials against human breast, cervical and oral cancer cells. *Journal of Nanoscience & Nanotechnology*, 16, 1-9.
- 57. Kumari, B., Lohar, S., Ghosh, M., Ta, S., Sengupta, A., Banerjee, P. P., Chattopadhyay, A. & Das, D. (2016). Structurally Characterized Zn 2+ Selective Ratiometric Fluorescence Probe in 100% Water for HeLa Cell Imaging: Experimental and Computational Studies.

Journal of fluorescence, *26*(1), 87-103.

- 58. Nandi, S., Sahana, A., Mandal, S., Sengupta, A., Chattopadhyay, A., Safin, D. A., ... & Das, D. (2015). Hydrazine selective dual signaling chemodosimetric probe in physiological conditions and its application in live cells. *Analytica chimica acta*, 893, 84-90.
- **59.** Ghosh, A., Nandi, S., Sengupta, A., **Chattopadhyay, A.**, Lohar, S., & Das, D. (2015). Single crystal X-ray structurally characterized palladium (II) selective fluorescence and colorimetric indicator for human breast cancer cell imaging. *Inorganica Chimica Acta*, *436*, 52-56.
- **60.** Mukhopadhyay, D., Priya, P., & Chattopadhyay, A. (2015). Sodium fluoride affects zebrafish behaviour and alters mRNA expressions of biomarker genes in the brain: Role of Nrf2/Keap1. *Environmental toxicology and pharmacology*, *40*(2), 352-359.
- **61.** Ghosh, A., Sengupta, A., **Chattopadhyay**, **A.**, & Das, D. (2015). Lysine triggered ratiometric conversion of dynamic to static excimer of a pyrene derivative: aggregation-induced emission, nanomolar detection and human breast cancer cell (MCF7) imaging. *Chemical Communications*, *51*(57), 11455-11458.
- 62. Lohar, S., Safin, D. A., Sengupta, A., Chattopadhyay, A., Matalobos, J. S., Babashkina, M. G., ... & Das, D. (2015). Ratiometric sensing of lysine through the formation of the pyrene excimer: experimental and computational studies. *Chemical Communications*, 51(40), 8536-8539
- **63.** Srivastava, R., Bhattacharya, S., Chakraborty, A., & Chattopadhyay, A. (2015). Differential in vivo genotoxicity of arsenic trioxide in glutathione depleted mouse bone marrow cells: expressions of Nrf2/Keap1/P62. *Toxicology mechanisms and methods*, *25*(3), 223-228.
- 64. Ghosh, A., Sengupta, A., Chattopadhyay, A., & Das, D. (2015). A single probe for sensing both acetate and aluminum (III): visible region detection, red fluorescence and human breast cancer cell imaging. *RSC Advances*, 5(31), 24194-24199.
- **65.** Kumari, B., Lohar, S., Adhikari, S., Sengupta, A., Chattopadhyay, A., Brandão, P., ... & Das, D. (2015). Rhodamine derived colorimetric and fluorescence mercury (II) chemodosimeter for human breast cancer cell (MCF7) imaging. *RSC Advances*, *5*(28), 21797-21802.
- 66. Mukhopadhyay, D., Srivastava, R., & Chattopadhyay, A. (2015). Sodium fluoride generates ROS and alters transcription of genes for xenobiotic metabolizing enzymes in adult zebrafish (Danio rerio) liver: expression pattern of Nrf2/Keap1 (INrf2). *Toxicology mechanisms and methods*, 25(5), 364-373
- **67.** Sengupta, A., Mukherjee, S., Bhattacharya, S., Saha, S. K., & Chattopadhyay, A. (2014). Expression Pattern of Myogenic Regulatory Transcription Factor mRNAs in the Embryo and Adult Labeo rohita (Hamilton, 1822). *International Journal of Zoology*, 1-9
- **68.** Lohar, S., Sengupta, A., Chattopadhyay, A., Matalobos, J. S., & Das, D. (2014). Structurally Characterized Antipyrine-Based Dual Fluorescent Probe: Enhanced AlIII Selectivity of a Dinuclear ZnII Complex for Intracellular Sensing by a Displacement Approach. *European Journal of Inorganic Chemistry*, 2014(33), 5675-5682.
- **69.** Adhikari, S., Ghosh, A., Mandal, S., Sengupta, A., **Chattopadhyay, A.**, Matalobos, J. S., ... & Das, D. (2014). Visible light excitable ON fluorescence and naked eye detection of Cu 2+ via hydrolysis of rhodamine–thiophene conjugate: human breast cancer cell (MCF7) imaging studies. *Dalton Transactions*, *43*(21), 7747-7751.
- 70. Sarkar, S., Mukherjee, S., Chattopadhyay, A., & Bhattacharya, S. (2014). Low dose of arsenic trioxide triggers oxidative stress in zebrafish brain: expression of antioxidant genes. *Ecotoxicology and environmental safety*, 107, 1-8.

- **71.** Mukhopadhyay, D., & Chattopadhyay, A. (2014). Induction of oxidative stress and related transcriptional effects of sodium fluoride in female zebrafish liver. *Bulletin of environmental contamination and toxicology*, *93*(1), 64-70.
- 72. Chatterjee, S., Munshi, C., Chattopadhyay, A., & Bhattacharya, S. (2013). Mercuric chloride effects on adult rat oval cells-induced apoptosis. *Toxicological & Environmental Chemistry*, 95(10), 1722-1738.
- 73. Nath, A., Chattopadhyay, A., & Joshi, S. R. (2013). Biological activity of endophytic fungi of Rauwolfia serpentina Benth: an ethnomedicinal plant used in folk medicines in Northeast India. *Proceedings of the National Academy of Sciences, India Section B: Biological Sciences*, 85(1), 233-240.
- 74. Chatterjee, S., Nandi, P., Mukherjee, S., Chattopadhyay, A., & Bhattacharya, S. (2013). Regulation of autophagy in rat hepatocytes treated in vitro with low concentration of mercury. *Toxicological & Environmental Chemistry*, 95(3), 504-504.
- 75. Srivastava, R., Sengupta, A., Mukherjee, S., Chatterjee, S., Sudarshan, M., Chakraborty, A., ... & Chattopadhyay, A. (2013). In vivo effect of arsenic trioxide on Keap1-p62-Nrf2 signaling pathway in mouse liver: expression of antioxidant responsive element-driven genes related to glutathione metabolism. *International Scholarly Research Notices*.
- **76.** Chatterjee, S., Banerjee, P. P., Chattopadhyay, A., & Bhattacharya, S. (2013). Low concentration of HgCl2 drives rat hepatocytes to autophagy/apoptosis/necroptosis in a time-dependent manner. *Toxicological & Environmental Chemistry*, *95*(7), 1192-1207.
- **77. Chattopadhyay, A.** (2012). Understanding of Mitosis and Meiosis in higher secondary students of Northeast India and the implications for genetics education. *Education*, 2(3), 41-47.
- **78.** Chattopadhyay, A., Podder, S., Agarwal, S., & Bhattacharya, S. (2011). Fluoride-induced histopathology and synthesis of stress protein in liver and kidney of mice. *Archives of toxicology*, 85(4), 327-335.
- **79.** Podder, S., **Chattopadhyay**, A., & Bhattacharya, S. (2011). Reduction in fluoride-induced genotoxicity in mouse bone marrow cells after substituting high fluoride-containing water with safe drinking water. *Journal of Applied Toxicology*, *31*(7), 703-705.
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- **84.** Chattopadhyay, A., & Mahajan, B. S. (2004). Students' understanding of DNA and DNA technologies after "Fifty years of DNA double helix". *epiSTEME-1*, *14*(49), 19.
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- **87.** Chatterjee, A., & Chattopadhyay, A. (1998). Influence of buthionine sulfoximine-mediated glutathione depletion on clastogenic activity of bleomycin and γ-rays. *Current Science*, 604-608.
- **88.** Choudhury, S., **Chattopadhyay, A.**, & Chatterjee, A. (1997). Modulation of the clastogenic activity of bleomycin by reduced-glutathione, glutathione-ester and buthionine sulphoximine. *Mutagenesis*, *12*(4), 221-225.
- **89.** Chatterjee, A., Chattopadhyay, A., & Lawlor, C. J. Z. (1995). Effect of glutathione on sister-chromatid exchanges in normal and buthionine sulfoximine-treated mice. *Mutation Research/Fundamental and Molecular Mechanisms of Mutagenesis*, *327*(1), 171-177.

> <u>Books/Reports/Chapters/General articles etc.</u>:

- O. Sarkar, K. K. Dey, S. Islam & A. Chattopadhyay (2022): "Lead and aquatic ecosystems, biomarkers and implications for humankind.". Biomarkers in Toxicology, Biomarkers in Disease: Methods, Discoveries and Applications, doi. <u>https://doi.org/10.1007/978-3-030-87225-0_58-1</u>
- **2.** A. Chattopadhyay & S. Podder (2014): "Vinyl fluoride.". Encyclopedia of Toxicology. 3rd ed. Elsevier
- **3.** S. Podder & **A. Chattopadhyay** (2014): "Transgenic animals: new vista in toxicological research.". Advanced Frontier on Biotechnology. Jaya Publishing House, Delhi, India
- **4.** S. Podder, **A. Chattopadhyay** & S. Bhattacharya (2012): "Genotoxicity of fluoride: modulation of endogenous glutathione level.". Lambert Academic Publishing. Saarbrucken Germany
- 5. S. Chatterjee, S. Bhattacharya & A. Chattopadhyay (2012): "Molecular mechanisms of functional disorder induced by mercury.". Lambert Academic Publishing. Saarbrucken Germany

> Ongoing Research Projects:

Name of the Teacher: Prof. Ansuman Chattopadhyay (PI); Principal Collaborator from UGC-DAE CSR: Dr. Anindita Chakraborty

Title of the Project: 'Enhancement of radio-sensitivity in cancer cells by depleting intracellular Nrf2 level'

Funding Agencies: UGC-DAE Consortium for Scientific Research (Sanction No. CRS/2021-22/02/520 dated 31.3.2022)

Completed Research Projects:

1. Title of the Project: 'Low radiation induced hyper radio-sensitivity of mammalian cells' Funding Agencies: IUAC, N. Delhi (completion date: 25.12.2009)

- Title of the Project: 'A highly efficient technique for breeding Indian major carps' Funding Agencies: West Bengal State Department of Science & Technology (completion date: 31.3.2012)
- Title of the Project: 'A highly efficient technique for breeding Indian major carps' Funding Agencies: West Bengal State Department of Science & Technology (completion date: 31.3.2012)
- 4. Title of the Project: 'Genotoxicity and apoptosis induction after coexposure to arsenic and fluoride in mammalian cells: effect on radiosensitivity and modulation of stress elements' Funding Agencies: UGC-DAE-CSR-Kolkata Centre (completion date: 31.8.2012)
- 5. Title of the Project: 'Isolation, characterization and anticancer properties of endophytic fungal metabolites from north eastern India'
 Funding Agencies: DBT (Twinning) (completion date: 27.6.2014)
- 6. Title of the Project: 'Polymer supported green silver nanoparticles using plants of North-East India; studies on toxicity and anti-cancer property'
 Funding Agencies: DBT (Twinning) (completion date: 12.8.2017)
- 7. Title of the Project: 'Studies on anticancer properties of graphene oxide based gold nanoparticles'
 Funding Agencies: UGC-DAE-CSR-Kolkata Centre (completion date: 30.11.18)
- 8. Title of the Project: 'Assessment of endocrine disruption in fish reproduction' Funding Agencies: DBT project (completion date: 27.12.2019)

➢ Life Membership:

- UICC (International Union Against Cancer)
- Indian Society of Cell Biology
- Indian Association for Radiation Biology
- Zoological Society of Calcutta
- Association of Teachers in Biology
- All India Congress of Cytology and Genetics
- DNA Society of India
- International Society for Fluoride Research
- Archana Sharma Foundation of Calcutta (ASFC)

Seminar/Symposia/Training organized:

• Joint convener

Two days' Workshop cum National Seminar on "Trends in Modern Biology: Techniques and Applications", 23rd and 24th march 2019, organized by Department of Zoology, Visva-Bharati in association with National Institute of Pharmaceutical Education and Research.

• Chairperson

- i. National Seminar on Advancement of Biology in the 21st Century, 28th to 29th February 2020, organized by Department of Zoology, Visva-Bharati in association with The Zoological Society, Kolkata.
- **ii.** International conference on "Novel Approaches in Life Sciences" held on 8th and 9th April 2022, organized by the Department of Botany, G N Khalsa College, Mumbai.
- **iii.** National seminar on "Recent Advances in Animal Sciences" held on 7th and 8th March 2024, organized by the Department of Zoology, Visva-Bharati, Santiniketan.

Other information:

- **Invited lecture**: "FLUORIDE TOXICITY ASSOCIATED ENVIRONMENTAL HEALTH" Organized by: Department of Environmental Science, University of Calcutta.
- Awarded with a **Certificate of Participation** for attending **EnviroSustainCon 2024** and presenting a talk titled "Impairment of osteoblast's collagen synthesis and matrix mineralization effectuates skeletal fluorosis in mice: involvement of epigenetic regulation."

Extracurricular activities:

- 'Sangit Prabhakar' diploma in 'Tabla' playing from Prayag Sangit Samiti (Allahabad). Singer of 'Rabindra sangeet'.
- Member of the National Academic Committee of the **International Biology Olympiad** held in Mumbai, India, 2008.
- Participated as "Scientific Observer" from India in the International Biology Olympiad held in Changwon, South Korea, 2010.
- Performed "Rabindra sangeet" in the National Seminar on Recent Advances in Animal Sciences on 07.03.2024 organized by Department of Zoology, Visva-Bharati.
- Performed "Rabindra sangeet" in the 16th Reunion of Department of Zoology on 09.03.2024 organized by Department of Zoology, Visva-Bharati.