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PUBLICATIONS

Peer-Reviewed Publications: 30

Book Chapters: 6

Key publications (SCI indexed journals)

1. Ghosh, S., Ghosh, T., Adhikari, D. "Bio-assay guided toxicopharmacological studies on effect of *Punica granatum* peel aqueous extract (PGPAE): insights into the phytochemical, antioxidant, antimicrobial and cytogenotoxic manifestations" *Journal of Agroalimentary Processes and Technologies* **2025**, 31(1), 12-44.
2. Adhikari, D., Ghosh, T., Ghosh, R. "A Comprehensive Comparative Study on Cascabela thevetia (L.) Lippold, Seed Aqueous Extract-mediated escalation of Abiotic Stress and cellular genotoxicity: Insights from multivariate allelochemical analysis vis-à-vis employment of plant bioassays (*Lathyrus sativus* L., and *Allium sativum* L., germinating root tip cells)" *Journal of Stress Physiology & Biochemistry* **2023**, 19(4), 178-202.
3. Basak, U.; Pakhira, M.; Sahoo, S.; Majumdar, S.; Ghosh, R.; Kundu, J.; Ghosh, T.; Ghosh, T.; Nandi, A.K.; Chatterjee, D.P. "Synthesis of PVDF-Based Graft Copolymeric Antifouling Membranes Showing Affinity-Driven Immobilization of Nucleobases" *ACS Applied Polymer Materials* **2022**, 4, 5756–5771.
4. Ghosh, T., Adhikari, D. "Transgenic Plants: A Curtain Raiser implying risks vis-à-vis benefits on present environment and society" *International Journal of Advanced Research in Biological Sciences* **2022**, 9(1), 71-95.
5. Ghosh, T., Mukherjee, S. "Cross-linked ionic polysaccharides: Insights from the structure to stimuli-sensitive drug delivery system applications" *Asian Journal of Chemistry* **2022**, 34(5), 1066-1072.
6. Adhikari, D.; Ghosh, T. "Structural insight and *in vitro* free radical scavenging capacity of arabinogalactan polysaccharides from the peels of *Punica granatum*" *Asian Journal of Chemistry* **2021**, 33(4), 873-880.
7. Ghosh, T.; Mukherjee, S.; Adhikari, D. "Evaluation of acute toxicity studies on Copper-induced oxidative stress in *Lathyrus Sativus* L., (variety Ratan) germinating seeds: A Biomarker based risk assessment" *Journal of Advanced Scientific Research* **2020**, 11(4), 243-254.
8. Adhikari, D.; Ghosh, T. "Chemical profiling of polysaccharides present in peels of *Citrus limetta* and bio-assay based screening of *in vitro* antioxidant activities" *Asian Journal of Chemistry* **2020**, 32(9), 2308-2314.
9. Acharjee, N.; Ghosh, T. "Structure analysis of sulfated polysaccharides extracted from *Scinaia interrupta*: experimental and density functional theory studies" *Asian Journal of Chemistry* **2020**, 32(7), 1589-1596.
10. Basak, U.; Ghosh, R.; Ghosh, T.; Majumdar, S.; Pakhira, M.; Ghosh, T.; Chatterjee, D. P. "Synthesis of 'living' poly(2-dimethylaminoethyl methacrylate) and stimuli responsive/multifunctional block copolymers effective in fabrication of CdS 'smart' 'Q-Particles'" *Polymer* **2018**, 155, 27-41.
11. Adhikari, D.; Mukherjee, S.; Ghosh, T.; Roy, D. "Biotic and Abiotic Stressors In Plant Molecular Breeding vis-à-vis Sustainable Molecular Farming Strategies For Food Security: Threats, Opportunities and Challenges

12. Ghosh, T.; Basu, A.; Adhikari, D.; Roy, D.; Pal, A. K. “Antioxidant activity and structural features of *Cinnamomum zeylanicum*”. *3 Biotech* **2015**, 5, 939–947.
13. Mukherjee, S.; Roy, D.; Adhikari, D.; Ghosh, T. “Impairment of haematological profile of *Channa punctatus* exposed to sodium arsenite”. *Int. J. Appl. Biol. Pharm.* **2015**, 6(2), 223 – 229.
14. Bandyopadhyay, S. S.; Navid, M. H.; Ghosh, T.; Schnitzler, P.; Ray, B. “Structural features and in vitro antiviral activities of sulfated polysaccharides from *Sphacelaria indica*”. *Phytochemistry* **2011**, 72, 276-283.
15. Ghosh, T.; Auerochs, S.; Saha, S.; Ray, B.; Marschall, M. “Anti-cytomegalovirus activity of sulfated glucans generated from a commercial preparation of rice bran”. *Antivir. Chem. Chemother.* **2010**, 21, 85-95.
16. Chattopadhyay, N.; Ghosh, T.; Sinha, S.; Chattopadhyay, K.; Karmakar, P.; Ray, B. “Polysaccharides from *Turbinaria conoides*: Structural features and antioxidant capacity”. *Food Chem.* **2010**, 118, 823-829.
17. Sinha, S.; Astani, A.; Ghosh, T.; Schnitzler, P.; Ray, B. “Polysaccharides from *Sargassum tenerrimum*: Structural features, chemical modification and anti-viral activity”. *Phytochemistry* **2010**, 71, 235-242.
18. Karmakar, P.; Pujol, C. A.; Damonte, E. B.; Ghosh, T.; Ray, B. “Polysaccharides from *Padina tetrastromatica*: Structural features, chemical modification and antiviral activity”. *Carbohydr. Polym.* **2010**, 80, 514-521.
19. Mandal, P.; Pujol, C. A.; Damonte, E. B.; Ghosh, T.; Ray, B. “Xylans from *Scinaia hatei*: Structural features, sulfation and anti-HSV activity”. *Int. J. Biol. Macromol.* **2010**, 46, 173-178.
20. Ghosh, T.; Chattopadhyay, K.; Marschall, M.; Karmakar, P.; Mandal, P.; Ray, B. “Focus on antivirally active sulfated polysaccharides: from structure-activity analysis to clinical evaluation”. *Glycobiology* **2009**, 19(1), 2-15.
21. Ghosh, T.; Pujol, C. A.; Damonte, E. B.; Sinha, S.; Ray, B. “Sulfated xylomannans from the red seaweed *Sebdenia polydactyla*: structural features, chemical modification and antiviral activity”. *Antivir. Chem. Chemother.* **2009**, 19, 235-242.
22. Karmakar, P.; Ghosh, T.; Sinha, S.; Saha, S.; Mandal, P.; Ghosal, P. K.; Ray, B. “Polysaccharides from the brown seaweed *Padina tetrastromatica*: Characterization of a sulfated fucan”. *Carbohydr. Polym.* **2009**, 78, 416–421.
23. Chattopadhyay, K.; Ghosh, T.; Pujol, C. A.; Carlucci, M. J.; Damonte, E. B.; Ray, B. “Polysaccharides from *Gracilaria corticata*: Sulfation, chemical characterization and anti-HSV activities”. *Int. J. Biol. Macromol.* **2008**, 43, 346–351.
24. Basu, A.; Saha, D.; Saha, R.; Nandi, R.; Ghosh, S. K.; Ghosh, T.; Saha, B. “A review of sources, toxicity and remediation technologies for removing arsenic from drinking water”. *Res. Chem. Intermediat.* **2014**, 40(2), 447-485.
25. Basu, A.; Ghosh, S. K.; Saha, R.; Ghosh, A.; Ghosh, T.; Mukherjee, K.; Bhattacharya, S. S.; Saha, B. “Kinetic studies of glutamic acid oxidation by hexavalent chromium in presence of surfactants”. *Tenside Surfact. Det.* **2012**, 49, 481-487.
26. Basu, A.; Ghosh, S. K.; Saha, R.; Nandi, R.; Ghosh, T.; Saha, B. “Effect of Some Non Functional Surfactants and Electrolytes on the Hexavalent Chromium Reduction by Glycerol: A Mechanistic Study”. *Tenside Surfact. Det.* **2011**, 48, 453-458.

Other publications:

1. Mukherjee, S.; Roy, D.; Ghosh, T.; Adhikari, D. Biochemical Attributes in Malarial Infection. *B N Seal Journal of Science* **2015**, VII (I): 106- 114. ISSN: 0975-5624.
2. Ghosh, T.; Sain, S.; Adhikari, D.; Roy, D.; Mukherjee, S. Screening of antioxidant capacity of selected plant

extracts. *B N Seal Journal of Science* **2015**, VII (I): 47-60. ISSN: 0975-5624.

3. Mukherjee, S.; Roy, D.; Ghosh, T.; Adhikari, D. Characterization of biochemical profile of Hepatitis B patient. *B N Seal Journal of Science* **2014**, VI (I): 118- 125. ISSN: 0975-5624.
4. Goswami, S.; Mukherjee, A.; Saha, S.; Ghosh, T.; Roy, D.; Ghosh, T.; Adhikari D.; Mukherjee, S. Cellular and metabolic response of haemocyte of *lobothelphusa sp* invaded with wound. *B N Seal Journal of Science* **2013**, V (I): 100- 114. ISSN: 0975-5624.

Book Chapters

1. Ghosh, T.; Mandal, S. “Mechanistic aspects of serine protease as biomarkers in wound healing of lung cancer” In: Pathophysiological Aspects of Proteases in Cancer edited by Sajal Chakraborti, Srijit Das and Cheorl-Ho-Kim **2025**, pp. 273-281, published by Academic Press, **Elsevier**. ISBN: 978-0-443-30098-1.
2. Ghosh, T.; Nandi, B.; Mandal, S. “From naturally sourced aspartic and metalloproteases inhibitors to therapeutic aspects of skin cancer” In: Therapeutics of Natural and Synthetic Compounds in Protease Induced Cancer Volume 1: Therapeutic Aspects of Some Natural Compounds in Proteases-Induced Cancer edited by Sajal Chakraborti **2025**, pp. 243-249, published by Academic Press, **Elsevier**. ISBN: 978-0-443-40419-1 (vol. 1).
3. Ghosh, T.; Mandal, S.; Nandi, B. “Role of boron containing synthetic compounds as serine proteases inhibitors in prostate cancer” In: Therapeutics of Natural and Synthetic Compounds in Protease Induced Cancer Volume II: Therapeutic aspects of some synthetic compounds in proteases-induced cancer edited by Sajal Chakraborti **2025**, pp. 353-359, published by Academic Press, **Elsevier**. ISBN: 978-0-443-40420-7 (vol. 2).
4. Ghosh, T.; Adhikari, D. “ROS-mediated genome alterations at cellular microenvironment during cancer metastasis: A curtain raiser” In: Handbook of Oxidative Stress in Cancer: Mechanistic Aspects edited by Sajal Chakraborti, Sushanta Roy Chowdhury and Bimal K. Ray **2021**, pp. 1-13, published by **Springer Nature**. eBook ISBN: 978-981-15-4501-6, DOI: https://doi.org/10.1007/978-981-15-4501-6_77-1
5. Adhikari, D.; Mukherjee, S.; Ghosh, T. Climate Changes vis-a-vis Environmental Actions and Forest Management with special reference to Sunderban biosphere: Measurements to protect Bio-resources from Socio-Political and Biological Perspective to meet a Better Future In: Cross-Cutting Research in Social Sciences **2019**, 286-304, published by **UGC-Human Resource Development Centre, University of Calcutta**. ISBN: 978-81-939363-0-6
6. Chattopadhyay, K.; Ghosh, T.; Karmakar, P.; Mandal, P.; Ghosh, P.; Ray, B. Ethnopharmacological Uses, Chemical Constituents and Biological Activities of Sesame: A Review. In: Recent Progress in Medicinal Plants **2009**, 23, 91-113, **Studium Press LLC, USA**.

Paper Presentation in Seminar / Conference / Symposium / Science Congress:

1. Paper presented (Oral) in the 6th Regional Science & Technology Congress (Region III), 2023-2024 jointly organized by Durgapur Government College & Department of Science & Technology & Biotechnology, Government of West Bengal during **Jan 9-10, 2024** at Durgapur Government College.

2. Paper presented (Poster) in the One day International Symposium on Frontiers in Science on **May 23, 2023** organized by Jhargram Raj College, Jhargram in collaboration with Egra SSB College Midnapur.
3. Paper presented (Poster) in the One day International Symposium on Frontiers in Science on **May 23, 2023** organized by Jhargram Raj College, Jhargram in collaboration with Egra SSB College Midnapur.
4. Paper presented (Oral) in the Interdisciplinary International web seminar on Modern Trends in Humanities, Science & Technology & Social Sciences for sustainable development, during **Sept 23 – 24, 2021** at Acharya Prafulla Chandra Roy Government College, Siliguri in collaboration with UGC-HRDC, University of North Bengal, Darjeeling.
5. Paper presented (Poster) in the two day International Seminar on Advancements in Chemical Sciences: Issues and Challenges on **Feb 4-5, 2020** organized by the Asansol Bidhan Chandra College, Department of Chemistry in collaboration with Indian Chemical Society.
6. Paper presented (Oral) in the 4th Regional Science & Technology Congress (Western Region), 2019 jointly organized by The University of Burdwan & Department of Science & Technology & Biotechnology, Government of West Bengal during **Dec 9-10, 2019** at The University of Burdwan.
7. Paper presented (Poster) in the one day National Seminar on “Modern Era of Biosciences: Lab to Land” commemorating Golden Jubilee Celebration jointly organized by Department of Conservation Biology & Zoology, Durgapur Government College on **Dec 5, 2019** at Durgapur Government College.
8. Paper presented (Poster) in the young scientists’ conference as a part of “India International Science Festival – 2019” on Frontier areas of Research theme during **Nov 5-8, 2019** at Biswabangla Convention Centre, Newtown, Kolkata
9. Paper presented (Poster) in the Symposium on Polymer Science organized by Society for Polymer Science (SPS), India during **July 5-6, 2019** at Indian Institute of Science Education & Research, Kolkata (IISER-K).
10. Paper presented (Oral) in the Department of Higher Education, Science & Technology and Biotechnology, Government of West Bengal organized 24th West Bengal State Science & Technology Congress, 2017 on **Feb 28, 2017** at Science City, Kolkata.
11. Paper presented (Poster) in the International symposium on facets of chemistry in biology (FOCB-II) on **Jan 12, 2017** organized by the Department of Chemistry, St. Xavier’s College (Autonomous), Kolkata.
12. Paper presented (Oral) in the DST, Government of West Bengal & Bankura Christian College jointly organized 1st Regional Science & Technology Congress, Bardhaman Division during **Nov 7-8, 2016** at Bankura Christian College and **[Selected as one of the best Oral Presentation and awarded Outstanding Paper award for best paper]**.
13. Paper presented (Poster) in the UGC Sponsored National Symposium “Enthralling Facets of Molecular Manifestation in Chemical Sciences” during **Sept 15-16, 2016** at Bidhannagar College, Kolkata.
14. Paper presented (Poster) in the One Day National Seminar on Recent advances in life science in the light of chemistry on **Sept 9, 2016** organized by Department of Chemistry, Bethune College, Kolkata in collaboration with Royal Society of Chemistry (Eastern India Section).
15. Paper presented (Poster) in the 3rd National Seminar on Recent Trends in Applied Sciences and Humanities during **Feb 19-20, 2016** at Department of Applied Sciences and Humanities, Durgapur Institute of Applied Sciences Technology and Management (DIATM).
16. Paper presented (Poster) in the National Seminar on Design, Synthesis, Interactions, Chemical and

- Biochemical Activities of Different Functional Molecules on Feb 4-6, 2016 at Department of Chemistry, The University of Burdwan.
17. Paper presented (Poster) in the National Seminar on Chemistry for Better Tomorrow – Disarmament and Peaceful Uses in Chemistry on Dec 15, 2015 at Sidho Kanho Birsha University, Purulia.
 18. Paper presented (Poster) in the State Level One day Seminar on Recent Trends in Chemical Sciences on July 16, 2015 at Bankura Sammilani College.
 19. Paper presented (Oral) in the National Seminar on Advanced Spectroscopy, Theoretical Chemistry, Synthesis, Reactivity and Structural Evaluation on Feb 19-21, 2015 at The University of Burdwan.
 20. Paper presentation (Poster) in the National Seminar on Recent Trends in Applied Sciences and Humanities and its impact on Engineering Field on Nov 5-6, 2014 at Durgapur Institute of Applied Sciences Technology and Management (DIATM).
 21. Paper presentation (Poster) in the National Seminar on Recent Trends in Applied Sciences and Humanities on Oct 30-31, 2013 at Durgapur Institute of Applied Sciences Technology and Management (DIATM).
 22. Paper presentation (Oral) in the National Seminar on Recent Advances in life sciences application on Dec 8-9, 2012 organized by PG Department of Zoology, ABN Seal College, Cooch Behar in collaboration with Department of Agricultural Entomology, UBKV, Pundibari, Cooch Behar.
 23. Paper presentation (Poster) in the National Symposium on Carbohydrates at the interface of chemistry and biology on Nov 23-25, 2011 jointly organized by CSIR-Indian Institute of Chemical Biology (IICB), Kolkata and NIPER, Kolkata in collaboration with ACTT (I).
 24. Presented Paper (Oral) on “Chemical and anti-HSV properties of a sulfated xylomannan generated from *Sebdenia polydactyla*” in the XXIII rd Carbohydrate Conference held on Jan 22-24, 2009 organized by Bhavnagar University, Gujarat. [Selected as the best oral presentation and awarded Young Scientist 2009 award by ACCT (I)]
 25. Presented Paper (Poster) on “Anti-viral activity of sulfated compounds isolated from natural sources” in the XXIIIrd Carbohydrate Conference held on Jan 22-24, 2009 organized by Bhavnagar University, Gujarat.
 26. Presented Paper (Poster) on “Actividad Antiviral Contra el Virus dengue de distintas clases de polisacaridos sulfatados obtenidos a partir de algas marinas” in the Revista Argentina de Microbiologia, 2008.
 27. Presented Paper (Poster) on “Anti-cytomegaloviral activity of sulfated compounds isolated from natural sources” in the 33rd International Herpesvirus Workshop, Estoril, Portugal, 2008.
 28. Presented Paper (Poster) on “Structural features of hemicellulosic polysaccharides from flax seed cake” in the UGC sponsored National Seminar in April, 2008 organized by the Department of Chemistry, The University of Burdwan.
 29. Presented Paper (Poster) on “Flax (*Linum usitatissimum*) Seed cake: A Potential Source of High Molecular Weight Xyloglucan?” in the XXIIInd Carbohydrate Conference held on Dec 19-21, 2007 organized by NIPER Mohali, Chandigarh.