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Academic Qualifications:

Degree/Experience	University/Institute	Class/Division	Year
Post Doctoral Research	University of Pennsylvania (Philadelphia, USA)	-	July 2012- October- 2013
Ph.D.	Bose Institute (Jadavpur University) Kolkata, India	-	June 2012
NET Examination	CSIR	-	2007 (June)
M.Sc.	Jadavpur University Kolkata, India	I (Silver medalist)	2007
B.Sc. Hons (Chemistry)	Jadavpur University Kolkata, India	I	2005

Current Status:
Assistant Professor (Stage-II)
Department of Chemistry
Netaji Nagar Day College
Netaji Nagar, Kolkata 700092

Project Completed:

Project name: Evaluation of Anti-cancer potential of a natural triterpene Lupeol in renal cell Carcinoma.

UGC Minor project. Completed on 2019.

PhD Research Highlights:

- Free Radical Chemistry and Biology
- Mechanisms of Oxidative Stress induced organ pathophysiology
- Studies on the signal transduction mechanism of cell death and survival.
- Determination of bio efficacy of organic molecules and extracts.
- Isolation and purification of the bio-active principle(s) from herbal plants and unravelling the mechanisms and exploring the antitoxic/antioxidant potentials of these phytochemicals (natural and man-made antioxidants).
- To find out a novel strategy to mitigate the potential side effect of drug using antioxidant.

Post Doctoral Research Highlights:

- Investigating the mechanistic role of mitochondria targeted CYP 2E1 in alcohol induced toxicity in intestinal epithelial cell lines and if this induces epithelial-to-mesenchymal transition (EMT) in intestinal epithelium causing dysfunction.
- Studying the role of Benzo[a]pyrene and TCDD-mediated pancreatic mitochondrial dysfunction and its significance in pancreatitis, which is thought to be an early indicator of pancreatic cancer.

List of Publications

1. Ghosh N, **Ghosh J**, Ghosh S, sinha K, Sil PC. Nutraceutical interventions for neuroprotection: a comprehensive review. ***Biochemical Pharmacology***. 2025, 245:117637. doi: 10.1016/j.bcp.2025.117637
2. Sinha K, **Ghosh J**, Sil PC. Machine Learning in Drug Metabolism Study. ***Curr Drug Metab.*** 2022;23(13):1012-1026.
3. Thakur N.;**Ghosh J**.;Pandey S.K.;Pabbathi A.;Das J. A comprehensive review on biosynthesis of magnesium oxide nanoparticles, and their antimicrobial, anticancer, antioxidant activities as well as toxicity study. ***Inorganic Chemistry Communications***, 2022, 146, 110156
4. **Ghosh J**, Chowdhury AR, Srinivasan S et al. Cigarette Smoke Toxins-Induced Mitochondrial Dysfunction and Pancreatitis Involves Aryl Hydrocarbon Receptor Mediated Cyp1 Gene Expression: Protective Effects of Resveratrol. ***Toxicol Sci.*** 2018 Dec 1;166(2):428-440.
5. Bajpai P, Srinivasan S, **Ghosh J**, Nagy LD, Wei S, Guengerich FP, Avadhani NG. Targeting of Splice Variants of Human Cytochrome P450 2C8 (CYP2C8) to Mitochondria and Their Role in Arachidonic Acid Metabolism and Respiratory Dysfunction. ***J. Biol. Chem.*** 2014; 289: 29614-29630.
6. **Ghosh J** and Sil PC. Arjunolic acid: A new multifunctional therapeutic promise of alternative medicine. ***Biochimie.*** 2013; 95: 1098-1109.
7. **Ghosh J**, Das J, Manna P, Sil PC. The protective role of arjunolic acid against doxorubicin induced intracellular ROS dependent JNK-p38 and p53 mediated cardiac apoptosis. ***Biomaterials.*** 2011; 32: 4857-4866.
8. **Ghosh J**, Das J, Manna P, Sil PC. Hepatotoxicity of di-(2-ethylhexyl)-phthalate (DEHP) is attributed to calcium aggravation, ROS-mediated mitochondrial depolarization and ERK/NF- κ B pathway activation. ***Free Radical Biology and Medicine.*** 2010; 49: 1779-1791.
9. **Ghosh J**, Das J, Manna P, Sil PC. Arjunolic acid, a triterpenoid saponin, prevents acetaminophen (APAP)-induced liver and hepatocyte injury via the

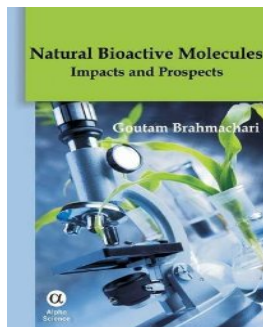
inhibition of APAP bioactivation and JNK-mediated mitochondrial protection. ***Free Radical Biology and Medicine***. 2010; 48: 535-553.

10. **Ghosh J**, Das J, Manna P, Sil PC. Acetaminophen induced renal injury via oxidative stress and TNF- α production: Therapeutic potential of arjunolic acid. ***Toxicology***. 2010; 268: 8-18.
11. **Ghosh J**, Das J, Manna P, Sil PC. Protective effect of the fruits of *Terminalia arjuna* against cadmium-induced oxidant stress and hepatic cell injury via MAPK activation and mitochondria dependent pathway. ***Food Chemistry***. 2010; 123: 1062-1075.
12. **Ghosh J**, Das J, Manna P, Sil PC. Taurine prevents arsenic-induced cardiac oxidative stress and apoptotic damage: Role of NF-kB, p38 and JNK MAPK pathway. ***Toxicology and Applied Pharmacology***. 2009; 240: 73-87.
13. **Ghosh J**, Das J, Manna P, Sil PC. Cytoprotective effect of arjunolic acid in response to sodium fluoride mediated oxidative stress and cell death via necrotic pathway. ***Toxicology In Vitro***. 2008; 22: 1918-1926.
14. Bhattacharyya S, **Ghosh J**, Sil PC. Iron induces hepatocytes death via MAPK activation and mitochondria-dependent apoptotic pathway: beneficial role of glycine. ***Free Radical Research***. 2012; 46(10):1296-1307.
15. Das J, **Ghosh J**, Roy A, Sil PC. Mangiferin exerts hepatoprotective activity against D-galactosamine induced acute toxicity and oxidative/nitrosative stress via Nrf2-NFkB pathways. ***Toxicology and Applied Pharmacology***. 2012; 260(1):35-47.
16. Das J, **Ghosh J**, Manna P, Sil PC. Taurine suppresses doxorubicin-triggered oxidative stress and cardiac apoptosis in rat via up-regulation of PI3-K/Akt and inhibition of p53, p38-JNK. ***Biochemical Pharmacology***. 2011; 81(7): 891-909.
17. Manna P, Bhattacharyya S, Das J, **Ghosh J**, Sil PC. Phytochemical Role of *Pithecellobium dulce* against CCl₄-mediated Hepatic Oxidative Impairments and Necrotic Cell Death. ***Evidence Based Complementary and Alternative Medicine***. 2011; 2011:832805.

18. Das J, **Ghosh J**, Manna P, Sil PC. Acetaminophen induced acute liver failure via oxidative stress and JNK activation: Protective role of taurine by the suppression of cytochrome P450 2E1. ***Free Radical Research***. 2011; 44: 340-55.
19. Manna P, Das J, **Ghosh J**, Sil PC. Contribution of type 1 diabetes to rat liver dysfunction and cellular damage via activation of NOS, PARP, I κ B α /NF- κ B, MAPKs and mitochondria dependent pathways: Prophylactic role of arjunolic acid. ***Free Radical Biology and Medicine***. 2010; 48(11):1465-1484.
20. Das J, **Ghosh J**, Manna P, Sil PC. Taurine protects acetaminophen-induced oxidative damage in mice kidney through APAP urinary excretion and CYP2E1 inactivation. ***Toxicology***. 2010; 269: 24-34.
21. Das J, **Ghosh J**, Manna P, Sinha M, Sil PC. Taurine protects rat testes against NaAsO₂-induced oxidative stress and apoptosis via mitochondrial dependent and independent pathways. ***Toxicology Letter***. 2009; 187: 201-210.
22. Das J, **Ghosh J**, Manna P, Sinha M, Sil PC. Arsenic-induced oxidative cerebral disorders: protection by taurine. ***Drug and Chemical Toxicology***. 2009; 32: 93-102.
23. Das J, **Ghosh J**, Manna P, Sinha M, Sil PC. Taurine provides antioxidant defense against NaF-induced cytotoxicity in murine hepatocytes. ***Pathophysiology***. 2008; 15: 181-190.

Book Chapter:

1.



Ghosh J and Sil PC. Therapeutic Efficacy of Macro and Small Bioactive Molecules in Organ Pathophysiology. (Chapter X).

Book Name: Natural Bioactive Molecules: *Impacts and Prospects*. Publishing Year: 2013 August.

Editor: Prof. Goutam Brahmachari.

Publisher: Alpha Science International Ltd., Oxford, U.K., 2013 (ISBN: 978-1-84265-780-5);

2.

Ghosh J and Sil PC. Natural Bioactive Molecules: Mechanism of Actions and Perspectives in Organ Pathophysiology.

Book Name: Studies in Natural Products Chemistry. Volume 45.

Publishing Year: 1st March, 2015. ISBN : 9780444634733

Editor: Prof. Atta-Ur-Rahman

Publisher: Elsevier

3.

Ghosh J and Sil PC. Arsenic toxicity: Mechanistic aspects and its therapeutic strategies. (Chapter 8)

Book Name: Handbook of Arsenic Toxicology

Publishing Year: 2015

Editor: Dr. S.J.S Flora

Publisher: Elsevier; ISBN : 978-0-12-418688-0

Reviewer of the Journal:

1. Toxicology and Industrial Health
2. Journal of Medicinal Food
3. BMC Complementary and Alternative Medicine
4. Canadian Journal of Physiology and Pharmacology
5. Indian Journal of Medical Research