



VIDYASAGAR COLLEGE
39 SANKAR GHOSH LANE
KOLKATA

Name: Monalisa Dey
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1	Name	Monalisa Dey		
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5	Date of Joining	01-09-2014		
Academic qualifications				
6	Degree	Subject	University	Year
	Ph.D	Physiology	University of Calcutta	2014
	M.Phil	N.A.	N.A.	N.A.
	MA/M.sc	Human Physiology	University of Calcutta	2008
	BA/B.Sc	Physiology	Tripura University	2006
PH.D. DETAILS				
7	Title of the Thesis	Studies on FMN phosphatase from Goat Heart		
	Field of specialization under subject/ discipline	Biochemistry		
8	PREVIOUS POSITIONS/Engagement	N.A.		
9	Google scholar page:	N.A.		
10	ORCID ID	N.A.		
11	HONOURS AND AWARDS	N.A.		
12	CURRENT RESEARCH PROJECT/Field of Research	N.A.		

13	TECHNICAL UNDERSTANDING AND EXPERIENCE	<p>Expertise Summary Specializes in Physiology, with extensive contributions in enzymology, oxidative stress mechanisms, and natural antioxidants. Research encompasses:</p> <ol style="list-style-type: none">Enzyme Functionality and Regulation: Investigated flavin mononucleotide phosphatases in metabolic pathways and their interaction with divalent heavy metals.Oxidative Stress and Heavy Metal Toxicity: Explored the biochemical and cellular effects of lead and arsenic on vital organs, utilizing advanced techniques such as chromatography and electrophoresis.Therapeutic Antioxidants: Demonstrated the protective roles of natural compounds (e.g., Terminalia arjuna, Murraya koenigii) and melatonin in oxidative stress and tissue damage, emphasizing dose-response relationships.Hepatoprotection and Cardio-Protection: Assessed the impact of natural extracts on structural and functional integrity in stress-induced models of liver and heart damage.
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		Technical Proficiency: Proficient in chromatography, electrophoresis, biochemical assays, and animal handling techniques, critical to in vitro and in vivo experimental setups.
14	SUMMARY OF RESEARCH EXPERIENCE	<p>I have contributed to several studies focused on metabolic pathways, oxidative stress, and antioxidant mechanisms, with a particular emphasis on plant-based compounds and their potential therapeutic applications. My research includes the investigation of enzymes like flavin mononucleotide phosphatase from goat heart and liver, highlighting their roles in metabolism and interactions with divalent heavy metal cations. Additionally, I have contributed in the study of the hepatoprotective properties of various plant extracts, such as <i>Terminalia arjuna</i> and <i>Murraya koenigii</i>, demonstrating their efficacy in mitigating oxidative damage induced by substances like phenylhydrazine, adrenaline, and lead.</p> <p>My work also spans the effects of environmental stressors such as arsenic and lead on rat tissues, elucidating their impact on liver, heart, and blood cells. A significant portion of my research is dedicated to understanding the antioxidant mechanisms of melatonin and its potential in protecting against oxidative stress. Moreover, I have authored reviews on riboflavin metabolism and the role of alpha-fetoprotein in cancer pathogenesis, providing insights into these areas for future research.</p> <p>This body of work contributes to the understanding of cellular damage, therapeutic interventions, and metabolic processes, with implications for drug development and environmental health.</p>
15	EXPERIENCE OF PROJECT MANAGEMENT	NA
16	COMPLETE LIST OF PUBLICATIONS (Maintain Harvard Format)	<p><u>Papers Published</u></p> <ol style="list-style-type: none"> 1. Flavin mono nucleotide phosphatase from goat heart: A forgotten enzyme of an important metabolic pathway. Dey M, Mukherjee D, Dutta M, Mallik S, Ghosh D, Ghosh AK., Chattopadhyay A, Bandyopadhyay D. <i>Journal of Cell and Tissue Research</i>, 2013. 2. Aqueous bark extract of <i>Terminalia arjuna</i> protects against phenylhydrazine induced oxidative damage in goat red blood cell membrane protein, phospholipid asymmetry and structural morphology: a flow cytometric and biochemical analysis. Paul S, Ghosh AK, Ghosh D, Dutta M, Mitra E, Dey M, Bhowmick D, Das T, Firdaus SB, Mishra S, Bandyopadhyay D, Chattopadhyay A. <i>Journal of Pharmacy Research</i> ,(8) 2014, 1790-1804. 3. Aqueous bark extract of <i>Terminalia arjuna</i> protects against adrenaline induced hepatic damage in male

albino rats through antioxidant mechanism(s): a dose response study. Mishra S, Dutta M, Mondal SK, **Dey M**, Paul S, Chattopadhyay A, Bandyopadhyay D. *Journal of Pharmacy Research*, (8) 2014, 1264-1273.

4. Orally administered melatonin protects against adrenaline induced oxidative stress in rat liver and heart: Involvement of antioxidant mechanism(s). Rudra S, Mukherjee D, Dutta M, Ghosh AK, **Dey M**, Basu A, Pattari SK, Chattopadhyay A, Bandyopadhyay D. *Journal of Pharmacy Research*, (8) 2014, 308-320.
5. Flavin mono nucleotide phosphatase from goat liver: a possible target for divalent heavy metal cations. Mallik S, **Dey M**, Dutta M, Ghosh A.K., Bandyopadhyay D. *International Journal of Pharmacy and Pharmaceutical Sciences*, (6) 2014, 708-714.
6. High fat diet aggravates arsenic induced oxidative stress in rat heart and liver. Dutta M, Ghosh D, Ghosh A.K., Bose G, Chattopadhyay, A., Rudra S, **Dey M**, Bandyopadhyay A, Pattari S.K., Mallick S, Bandyopadhyay, D. *Food and Chemical Toxicology*, (66) 2014, 262-277.
7. Melatonin protects against lead acetate-induced changes in blood corpuscles and lipid profile of male Wistar rats. Ghosh D, **Dey M**, Ghosh A.K., Chattopadhyay, A., and Bandyopadhyay, D. *Journal of Pharmacy Research*, (88) 2014, 336-342.
8. Lead induced oxidative stress in rat heart and liver tissue homogenates: an in vitro study. Paul S, Ghosh D, Ghosh AK, Mitra E, **Dey M**, Chattopadhyay A, Bandyopadhyay D. *Journal of Cell and Tissue Research*, (13) 2013, 3829-3837.
9. Melatonin protects against lead oxidative stress in rat liver and kidney. Ghosh D, Mitra E, **Dey M**, Firdaus SB, Ghosh AK, Mukherjee D, Chattopadhyay A, Pattari SK, Dutta S and Bandyopadhyay D. *Asian Journal of*

		<p><i>Pharmaceutical and Clinical Research</i>, (2) 2013, 137-145.</p> <p>10. Hepatoprotective activity of aqueous leaf extract of <i>Murraya koenigii</i> against lead-induced hepatotoxicity in male wistar rat. Ghosh D, Firdaus SB, Mitra E, Dey M, Chattopadhyay A, Pattari SK, Dutta S, Jana K and Bandyopadhyay D. <i>International Journal of Pharmacy and Pharmaceutical Sciences</i>, (5) 2013,285-295.</p> <p>11. <i>Murraya koenigii</i> against lead induced oxidative stress in rat liver, heart and kidney: a dose response study. Ghosh D, Firdaus SB, Mitra E, Dey M, Bandyopadhyay D. Protective effect of aqueous leaf extract of <i>Asian J Pharm Clin Res</i>. 2012;5 (4):54-58.</p> <p>12. Use Of Curry Leaves In Protection Against Stress-Induced Disorders. Bandyopadhyay D, Mitra E, Ghosh D, Firdaus SB, Chattopadhyay A, Dey M, Ghosh AK. <i>Indian Journal of Physiology and Allied Sciences</i>, 2012.</p> <p>13. In vitro studies on the antioxidant potential of the aqueous extract of Curry leaves (<i>Murraya koenigii</i> L.) collected from different parts of the state of West Bengal . Ghosh D, Mitra E, Firdaus SB, Dey M, Ghosh AK, Chattopadhyay A, Bandyopadhyay D . <i>Indian Journal of Physiology and Allied Sciences</i>, 2012.</p> <p>14. Riboflavin metabolism: Current status and Future possibilities: A Review. Dey M, Bandyopadhyay D. <i>Journal of Cell and Tissue Research</i>, 2017;17(3)6293-6298.</p> <p>15. Role of Alpha-Fetoprotein in the pathogenesis of Cancer. Ghosh Chaudhuri A, Samanta S, Dey M, Raviraja NS, Dey S. <i>Journal of environmental Pathology, Toxicology and Oncology</i>. 43(2):57-76;2024</p>
17	Extracurricular Activities	NA

18	Link to personal website (if any)	NA
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