VIDYASAGAR COLLEGE
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5	Date of Joining	20.11.2001			
Academic qualifications					
6	Degree	Subject	University	Year	
	Ph.D	PHYSIOLOGY	University of Calcutta	1995	
	M.Phil	NA	NA	NA	
	MA/M.sc	PHYSIOLOGY	University of Calcutta	1986	
	BA/B.Sc	PHYSIOLOGY	Presidency College; University of Calcutta.	1984	
PH.D. DETAILS					
7	Title of the Thesis	Role of erythropoietin on lipid peroxidation and protective systems against oxidative threat in red blood cell membrane.			
	Field of specialization under subject/ discipline	BIOCHEMISTRY			
8	PREVIOUS POSITIONS/Engagement	Junior Research Fellow (UGC), Senior Research Fellow (UGC), Research Associate (ICMR), Lecturer, Senior lecturer, Assistant Professor (Stage III & Stage IV), Vidyasagar College			
9	Google scholar page:	https://g.co/kgs/f3eQHK4			
10	ORCID ID	0000-0003-1371-6115			
11	HONOURS AND AWARDS	Qualified National Eligibility Test (NET), 1989			
12	CURRENT RESEARCH PROJECT/Field of Research	Physiology and Biochemistry: • Red blood cell membrane disorders • Myocardial ischemia • Stress and drug-induced gastric ulceration • Oxidative stress and Free Radical Biology			
13	TECHNICAL UNDERSTANDING AND EXPERIENCE	Twenty nine years of research experience (excluding Ph. D. programme). Published 102 research papers in peer reviewed National and International Journals. Conducted and completed 04 research projects funded by UGC, DST Govt. of India, and WBDST. Four students obtained their Ph. D. Degree under my supervision from University of Calcutta. Presently 05 students are registered with me and continuing their research works under my supervision for their Ph. D. Degree. Conversant with modern techniques used in research in Physiology and Biochemistry.			
14	SUMMARY OF RESEARCH EXPERIENCE	Oxidative stress and free radical biology, enzymology, studies on antioxidants like aqueous bark extract of *Terminalia arjuna*, Oleic acid			

		and melatonin in cardiac and gastric tissues, red blood cell membrane disorders and placental mitochondria. *h*-Index - 20 (as reflected in Google Scholar) *i*-10 Index – 37 (as reflected in Google Scholar)
15	EXPERIENCE OF PROJECT MANAGEMENT	**1. Exploring the antioxidant efficacy of oleic acid against phenylhydrazine induced oxidative stress mediated damage to goat red blood cell: a molecular approach** **Department of Science and Technology, Govt. of West Bengal** Principal Investigator 01.07.2018-31.07.2021 (Extended till 2024 due to pandemic situation; Just Completed). This project produced two research papers in peer reviewed International Journals and One Ph. D. Rs. 14,63,458/- **2. Studies on the protective effect of Terminalia arjuna against copper-ascorbate induced oxidative stress in human placental mitochondria.** **Department of Science and Technology, WOS.A, Govt. of India** Principal Mentor. This project produced one Ph. D. and also produced four research papers in peer reviewed Nation and International Journals. 06/2013-05/2016 Rs.18.4 Lakhs **3. Role of aqueous bark extract of Terminalia arjuna in the maintenance of cytoskeletal architecture of goat red blood cell membrane.** **UGC (Minor Research Project)** PHW-105/11-12 (ERO) dated 2.8.2011 Principal Investigator; Produced one research paper. 22/11/2011 – 21/05/2013 Rs. 1,86,000/- **4. Exploring the antioxidant potential of aqueous extract of the bark of Terminalia arjuna** **UGC (Minor Research Project)**[F.PSW-037/ 07-08 (ERO) dated 21. 02.2008 Principal Investigator March 2008-March 2010 Rs. 65,000/-
16	COMPLETE LIST OF PUBLICATIONS (Maintain Harvard Format)	1. Datta, M., Majumder, R., Banerjee, A., Bandyopadhyay, D. and Chattopadhyay, A., 2024. Melatonin protects against diclofenac induced oxidative stress mediated myocardial toxicity in rats: a mechanistic insight. Food and Chemical Toxicology, p.114813. 2. Sarkar, S., Chattopadhyay, A. and Bandyopadhyay, D., 2024. Melatonin as a promising agent alleviating endocrine deregulation and concurrent cardiovascular dysfunction: a review and future prospect. Melatonin Research, 7(1), pp.1-19. 3. Mukhopadhyay, M., Banerjee, A., Majumder, R., Chattopadhyay, A. and Bandyopadhyay, D., 2024. Ameliorative role of melatonin against adrenaline induced oxidative stress mediated cardiac and hepatic tissue injuries through preserving pyridoxine metabolism in male Wistar rats: A mechanistic insight. Advances in Redox Research, 11, p.100101. 4. Nath, A., Ghosh, S., Dey, T., Chattopadhyay, A. and Bandyopadhyay, D., 2023. The therapeutic potential of melatonin against hepatotoxicity caused by obesity and NSAIDs: A comprehensive review. Melatonin Research, 6(4), pp.452-473.

		5. Chakraborty, S., Khatoon, R., Chattopadhyay, A. and Bandyopadhyay, D., 2023. Emerging role of melatonin in the alleviation of ischemic heart disease: A comprehensive review. Indian Journal of Physiology and Allied Sciences, 75(04), pp.5-12. 6. Khatoon, R., Sarkar, S., Chattopadhyay, A. and Bandyopadhyay, D., 2023. The cardioprotective potential of melatonin on cardiac hypertrophy: A mechanistic overview. Melatonin Research, 6(3), pp.313-344. 7. Mukhopadhyay, M., Ghosh, P., Chattopadhyay, A. and Bandyopadhyay, D., 2023. An insight into the importance of B vitamins and melatonin in the prevention of diabetes through modulation of the brain energy metabolism-a comprehensive review. Melatonin Research, 6(3), pp.397-430. 8. Chakraborty, S., Sarkar, S., Chattopadhyay, A. and Bandyopadhyay, D., 2023. The dual-actions of melatonin as a potential oncostatic agent and a protector against chemotherapy-induced toxicity. Melatonin Research, 6(2), pp.189-214. 9. Majumder, R., Datta, M., Banerjee, A., Bandyopadhyay, D. and Chattopadhyay, A., 2023. Melatonin protects against ketorolac induced gastric mucosal toxic injuries through molecular mechanism associated with the modulation of Arylakylamine N-Acetyltransferase (AANAT) activity. *Chemico-Biological Interactions*, *382*, p.110611. 10. Banerjee, A., Dey, T., Majumder, R., Bhattacharya, T., Dey, S., Bandyopadhyay, D. and Chattopadhyay, A., 2023. Oleic acid prevents erythrocyte death by preserving haemoglobin and erythrocyte membrane proteins. *Free Radical Biology and Medicine*, *202*, pp.17-33. 11. Ghosh, P., Dey, T., Majumder, R., Datta, M., Chattopadhyay, A. and Bandyopadhyay, D., 2023. Melatonin attenuates cardiac injury caused by chromium-mediated oxidative stress in male Wistar rats: involvement of antioxidative mechanisms. *Melatonin Research*, *6*(1), pp.79-101. 12. Ghosh, P., Dey, T., Majumder, R., Datta, M., Chattopadhyay, A. and Bandyopadhyay, D., 2023. Insights into the antioxidative mechanisms of melatonin in ameliorating chromium-induced oxidative stress-mediated hepatic and renal tissue injuries in male Wistar rats. *Food and Chemical Toxicology*, *173*, p.113630. 13. Maity, J., Dey, T., Banerjee, A., Chattopadhyay, A., Das, A.R. and Bandyopadhyay, D., 2023. Melatonin ameliorates myocardial infarction in obese diabetic individuals: the possible involvement

of macrophage apoptotic factors. *Journal of Pineal Research*, *74*(2), p.e12847.

14. Banerjee, A., Chattopadhyay, A. and Bandyopadhyay, D., 2022. Prevention of diabetic cardiomyopathy through metabolic amendments of myocardium by melatonin: a role beyond antioxidative efficiency. *Melatonin Research*, *5*(2), pp.133-153.

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17. Banerjee, A., Chattopadhyay, A. and Bandyopadhyay, D., 2021. Potentially synergistic effects of melatonin and metformin in alleviating hyperglycaemia: a comprehensive review. *Melatonin Research*, *4*(4), pp.522-550.

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20. Majumder, R., Datta, M., Chattopadhyay, A. and Bandyopadhyay, D., 2021. Melatonin promotes gastric healing by modulating the components of matrix metalloproteinase signaling pathway: a novel scenario for gastric ulcer management. *Melatonin Research*, *4*(2), pp.213-231.

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22. Pal, P.K., Chattopadhyay, A. and Bandyopadhyay, D., 2021. Functional interplay of melatonin in the bile duct and gastrointestinal tract to mitigate disease development: An overview. *Melatonin Research*, *4*(1), pp.118-140.

23. Sarkar, S., Chattopadhyay, A. and Bandyopadhyay, D., 2021. Multiple strategies of melatonin protecting against cardiovascular

injury related to inflammation: A comprehensive overview. *Melatonin Research*, *4*(1), pp.1-29.

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oxidative stress induced red blood cell (RBC) injury: A review. *Melatonin Research*, *3*(1), pp.1-31.

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along with its antioxidant mechanisms: an in vitro study. *Melatonin research*, *1*(1), pp.1-20.

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Benzoic acid, one of the major components of aqueous bark extract of Terminalia arjuna protects against Copper-Ascorbate induced oxidative stress in human placental mitochondria through antioxidant mechanism (s): an in vitro study. *J. Pharm. Res*, *9*(1), pp.64-88.

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		65. Dutta, M., Ghosh, A.K., Mohan, V., Thakurdesai, P., Chattopadhyay, A., Das, T., Bhowmick, D. and Bandyopadhyay, D., 2014. Trigonelline [99%] protects against copper-ascorbate induced oxidative damage to mitochondria: an in vitro study. *J Pharm Res*, *8*(11), pp.1694-1718. 66. Dutta, M., Ghosh, D., Ghosh, A.K., Bose, G., Chattopadhyay, A., Rudra, S., Dey, M., Bandyopadhyay, A., Pattari, S.K., Mallick, S. and Bandyopadhyay, D., 2014. High fat diet aggravates arsenic induced oxidative stress in rat heart and liver. *Food and Chemical Toxicology*, *66*, pp.262-277. 67. Paul, S., Ghosh, D., Ghosh, A.K., Bhowmick, D., Bandyopadhyay, D. and Chattopadhyay, A., 2016. Aqueous bark extract of Terminalia arjuna protects against phenylhydrazine induced oxidative damage in goat red blood cell membrane bound and metabolic enzymes. *Int. J. Pharm. and Pharmaceutical Sciences*, *8*, pp.62-70. 68. Ghosh, D., Dey, M., Ghosh, A.K., Chattopadhyay, A. and Bandyopadhyay, D., 2014. Melatonin protects against lead acetate-induced changes in blood corpuscles and lipid profile of male Wistar rats. *Journal of Pharmacy Research*, *8*(3), pp.336-342. 69. Mitra, E., Ghosh, D., Ghosh, A.K., Basu, A., Chattopadhyay, A., Pattari, S.K., Datta, S. and Bandyopadhyay, D., 2014. Aqueous Tulsi leaf (Ocimum sanctum) extract possesses antioxidant properties and protects against cadmium-induced oxidative stress in rat heart. *International Journal of Pharmacy and Pharmaceutical Sciences*, *6*(1), pp.500-513. 70. Rudra, S., Mukherjee, D., Dutta, M., Ghosh, A.K., Dey, M., Basu, A., Pattari, S.K., Chattopadhyay, A. and Bandyopadhyay, D., 2014. Orally administered melatonin protects against adrenaline-induced oxidative stress in rat liver and heart: Involvement of antioxidant mechanism (s). *J. Pharm. Res*, *8*(3), pp.303-320. 71. Dutta, M., Ghosh, A.K., Rudra, S., Bandyopadhyay, D., Guha, B., Dutta, S. and Chattopadhyay, A., 2014. Human Placental mitochondria is a better model for studies on oxidative stress in vitro: a comparison with goat heart mitochondria. *Journal of Cell & Tissue Research*, *14*(1). 72. Dutta, M., Ghosh, A.K., Mohan, V., Mishra, P., Rangari, V., Chattopadhyay, A., Das, T., Bhowmick, D. and Bandyopadhyay, D., 2014. Antioxidant mechanism (s) of protective effects of Fenugreek 4-hydroxyisoleucine and trigonelline enriched fraction (TF4H (28%)) Sugaheal against copper-ascorbate induced injury to goat cardiac mitochondria in vitro. *J Pharm Res*, *8*(6), pp.798-811.

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17	Extracurricular Activities	Served two tenures as the Departmental Head, served as member of different committees in relation to college administration from time to time.
18	Link to personal website (if any)	NA

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