

**Dr. Joydip Mukherjee****Associate Professor****Department of Veterinary Physiology**

Faculty of Veterinary & Animal Sciences

West Bengal University of Animal & Fishery Sciences

Mohanpur Campus: PO-Krishi Viswavidyalaya, Mohanpur,
Dist. Nadia, West Bengal-741252**Belgachia Campus:** 37, K.B. Sarani, Kolkata-700037, WB**Contact:** Phone: 8902386001 (WA)E-mail: joyphy@gmail.com,drjmukharjee@wbuafscs.ac.in

Educational Qualification	2006	B.V.Sc.&A.H.	WBUAFS, West Bengal
	2008	M.V.Sc. in Animal Physiology	NDRI, Karnal
	2011	Ph.D.	NDRI, Karnal
	2010	NET	ICAR
Employment Details	Veterinary Officer (ARDD, Govt. of West Bengal)	30.12.2011 – 03.09.2012	
	Assistant Professor (Stage-I) WBUAFS, West Bengal	04.09.2012 – 03.09.2016	
	Assistant Professor (Stage-II) WBUAFS, West Bengal	04.09.2016 – 03.09.2021	
	Assistant Professor (Stage-III) WBUAFS, West Bengal	04.09.2021 – 03.09.2024	
	Associate Professor WBUAFS, West Bengal	03.09.2024 – till date	
Additional Responsibility	Head, Dept of Veterinary Physiology, WBUAFS, West Bengal	16.02.2023 – 12.06.2025	
	Member of Faculty Council, Faculty of Veterinary & Animal Scs., WBUAFS	Jan 2014 – Jan 2018	
	Provost of Prof. D.B. Mukherjee Boys Hostel	Feb 2013 – Jan 2017	
No of Publications	In-charge Placement Cell	April 2013 – Feb 2017	
	1. Research articles – 60		
	2. Books – 2 (Manual – 4)		
	3. Book Chapters – 15		
	4. Popular articles – 10		
5. Citations – 1012, h-index:19, i10-index: 33			
Award & Recognition	1. Junior Research Fellowship (ICAR)		
	2. Senior Research fellowship (ICAR)		
	3. DST Inspire fellowship (DST, Govt. of India)		
	4. Young Scientist Award (Society of Animal Physiologists of India)		
	5. Section Editor (Veterinary Anatomy and Physiology) in Indian Journal of Animal Sciences		

Membership of Scientific Society	<ol style="list-style-type: none"> 1. Society of Animal Physiologists of India 2. Society of Domestic Animal Biodiversity 3. Indian Science Congress Association 4. Association of Public Health Veterinarians
Seminar /Symposium / Workshop / capacity building programme	<p>Attended: International – 06, National – 25</p> <p>Coordinated as members of organizing committee more than 20 training programme, seminars and symposium</p>
Research Projects handled	<p>Completed</p> <ol style="list-style-type: none"> 1. As Co-PI: Ad-hoc project on ‘study the benefits of BUTYCIL in commercial broilers and to compare the benefits over commonly used antibiotic growth promoters’ for the period from June, 2013 – August, 2013 sponsored by West Bengal Chemical Industries Ltd. Project cost Rs.1.31 lakh. 2. As Co-PI: Ad-hoc project on ‘study the benefits of clostat in commercial broilers and to compare the benefits over commonly used antibiotic growth promoters’ for the period from April, 2013 – April 2014 sponsored by KEMIN INDUSTRIES South Asia Pvt. Ltd. Project cost Rs. 2.04 lakh. 3. As Co-PI: Project on ‘Livelihood improvement of poor and tribal people through livestock based enterprises under selected villages of Jhargram Block of West Bengal’ for the period from June, 2014 to till date. Sponsored by Rsatriya Krishi Vikash Yojana, Govt. of India. Project cost: Rs. 950.00 Lakh. 4. As Co-PI: Ad-hoc project on ‘Influence of Threonine on Mucin Biology for better gut health in Commercial Broiler Chicken’ for the period from April, 2015 – November 2015 sponsored by EVINIK South East Asia Pvt. Ltd., Singapore, Malaysia. Project cost Rs. 10.00 lakh. 5. As Co-PI: Project on “Study of Physio-biochemical profile in relation to heat synchronization in indigenous cows reared traditionally in west Bengal” for the period from September, 2016 to till date. Funded by the Animal Resources Development Department, Govt. of West Bengal. Project cost Rs. 4.19 lakh. 6.As Co-PI: Project on “Effects of a Saccharomyces cerevisiae fermentation product (SCFP) and a commercial phytogenic feed additive (PFA) as alternatives to antibiotic growth promoter on growth performance, gut microbiota, and intestinal morphology and immune responses of commercial broiler chickens” for the period from May 2024 to March 2025. Funded by the Cargil Incorporated under Transformational Strategies for Farm Risk Management (TRANSFORM). Project cost Rs INR 20.16 lakh <p>Ongoing</p> <ol style="list-style-type: none"> 1. As Co-PI): Project on “Science Technology and Innovation Hub in Chakdaha and Santipur Blocks of Nadia District, West Bengal State” for the period from Dec 2025 to till date under the scheme "VIGYAN DHARA (4305)" with TDBDST as the funding agency. Project cost Rs. 238.13 lakh
Specific areas of interest	<ul style="list-style-type: none"> ✓ Lactation Physiology ✓ Clinical Physiology
Science popularization	Several radio and television talks, and more than 15 articles in science magazines

LIST OF RESEARCH ARTICLE PUBLISHED DURING LAST 5 YEARS

1. Huozha R, **Mukherjee J**, BegumR, Rastogi SK. 2022. Alterations in the Hemato-biochemical, Endocrine, Somatic Cell Count and Milk Composition in Lactating Tarai Buffaloes during Different Lactation Stages. *Indian Journal of Animal Research*. B-4462: 1-5. **NAAS rating: 6.43.**
2. Jana S, Das P, **Mukherjee J**, Banerjee D, Ghosh PR, Das PK, Bhattacharya RN and Nandi SK. 2022. Waste-derived biomaterials as building blocks in the biomedical field. *Journal of Materials Chemistry B*. 10: 489-505 DOI: 10.1039/d1tb02125g. (Published online in Dec 2021) **Impact factor 7.571. NAAS rating: 13.57.**
3. Mondal D, Mukherjee P, **Mukherjee J**. 2022. Diagnosis and Management of Dilated Cardiomyopathy (DCM) in a Dog. *Intaspolyvet*, 21(1):183-184.
4. Mohapatra SS, **Mukherjee J**, Bharti MK, Kumar M, Parkunan T. 2022. Effect of Global Climate Change on Livestock Production and Mitigation Strategies to Decelerate Climate Change: A Review. *Int.J.Curr.Microbiol.App.Sci* 11(01): 34-45. **NAAS rating : 5.23**
5. Reddy SC, Ghosh PR, Das PK, Banerjee D, Mukherjee J, Naskar S, Das BC. 2022. Circadian and seasonal variations in the physio-biochemical parameters in Black Bengal goats (*Capra hircus*) of semi-arid tropical climate. *Indian Journal of Animal Sciences* 92 (3): 283–288. (Published online in March 2022). **NAAS rating : 6.29.**
6. Islam M, Das P, Roy B, Mandal AK, Ray S, Tudu NK, Samanta I, **Mukherjee J**, Batabyal S, Datta S. 2022. Effect of Selenium-enriched yeast supplement on the gross morphology and morphometry of the small intestine during post-hatch growth of chicken. *The Pharma Innovation Journal*. SP-11(3): 1318-1323. (Published online in March 2022) **NAAS rating: 5.23.**
7. Podder M, Bera S, Naskar S, Sahu D, **Mukherjee J**, Patra AK. 2022. Physiological, blood-biochemical and behavioural changes of Ghongroo pigs in seasonal heat stress of a hot-humid tropical environment. *International Journal of Biometeorology*. 66(7):1349-1364 <https://doi.org/10.1007/s00484-022-02281-7>. **Impact factor 3.4. NAAS rating: 9.0.**
8. Chaudhuri A, Das PK, Ghosh PR, **Mukherjee J**, Das K, Das P, Banerjee D. 2022. Comparative Expression Profile of RFRP-3 in Hypothalamus and Testis of Adult Rats. *Indian Journal of Animal Research*. B-4713:1-6. **NAAS rating: 6.43.**
9. Lodh S, Das PK, **Mukherjee J**, Naskar S, Banerjee D, Ghosh PR, Munsu S, Patra AK. 2022. Effect of dietary oregano essential oil and milk replacer on physiological status and immunological responses of pre- and post-weaned Ghongroo piglets. *Animal Biotechnology* 34(7): 2793-2804, DOI: 10.1080/10495398.2022.2118131. **NAAS rating : 8.14/ Impact Factor: 2.141.**
10. Kalita B, Das PK, Ghosh PR, Das K, Banerjee D, Naskar S, **Mukherjee J**. 2022. Hemato-biochemical, endocrine and in vitro immune competence of lactating Ghongroo sows during different days of lactation cycle. *Indian Journal of Animal Sciences* 92 (10): 1241–1244. **NAAS rating: 6.29.**
11. Chatterjee T, Mukherjee R, Maity A, **Mukherjee J**, Mandal GP, Mondal M, Habib M. 2022. Faecal Cortisol as A Marker of Stress in Wild and Captive Fishing Cats and Jungle Cats. *Int.J.Curr.Microbiol.App.Sci* 11(11): 141-144. **NAAS rating :5.23.**

12. Mohapatra A, De K, **Mukherjee J**. 2022. Role of micronutrients in managing bovine udder health in changing climate scenario of Indian subtropical regions .*Indian J Anim Health*. 61(2)- Special Issue: 164-172. **NAAS rating**: 5.25. (UGC approved, Journal no 20711)
13. Mann C, Das K, Mandal D, Banerjee D, **Mukherjee J**, Ganguly I, Naskar S, Bag S. 2023. Canine umbilical cord tissue derived mesenchymal stem cells naturally express mRNAs of some antimicrobial peptides. *Veterinary Research Communications*. 47:2229–2233. **Impact factor**: 1.8.
14. **Mukherjee J**, Das PK, Ghosh PR, Das K, Banerjee D, Lodh S, Das AK, Samui T, Hussain R. 2023. Neonatal physiology of Ghungroo pigs: A review. *Indian J Anim Health*. 62(2): 252-256. DOI: <https://doi.org/10.36062/ijah.2023.04023>. **NAAS rating**: 5.25.
15. **Mukherjee J**, De K, Das PK, Ghosh, PR, Banerjee D.2023. Biosensor-based approach to detect bovine mastitis. *Indian J Anim Health*. 62(2)- Special Issue: 151-156. DOI: <https://doi.org/10.36062/ijah.2023.spl.03023>. **NAAS rating**: 5.25.
16. Samui T, Ghosh PR, Das PK, Banerjee D, Naskar S, Bag S, **Mukherjee J**. 2023. Alterations in the haemato-biochemical, endocrine and in vitro immune competence of leukocytes in black Bengal does (*Capra hircus*) during periparturient period. *Indian J Anim Health*. 62(2)- Special Issue: 222-227. DOI: <https://doi.org/10.36062/ijah.2023.spl.00823>. (Published online in July, 2023). **NAAS rating**: 5.25. (UGC approved, Journal no 20711)
17. Banerjee D, **Mukherjee J**, Das TK, Das PK, Ghosh PR, Das, K. 2023. Impacts of climate variability and extreme weather conditions on animal husbandry in India: Challenges and strategies. *Indian J Anim Health*. 62(2)- Special Issue: 86-96 DOI: <https://doi.org/10.36062/ijah.2023.spl.04223>. **NAAS rating**: 5.25.
18. Sharma T, **Mukherjee J**, Das PK, Ghosh PR, Das K, Naskar S, Bera S, Maity A, Batabyal S, and Banerjee D. 2023. Adaptive changes of physiological functions and their seasonal variations in goats of coastal areas of Sundarban. **Biological Rhythm Research** <https://doi.org/10.1080/09291016.2023.2266544>. **Impact factor** 1.1. **NAAS rating**: 7.36.
19. Das P K, **Mukherjee J**, Banerjee D, Ghosh P R, Samanta I, Jas R, Patra A K (2024).Growth, haemato-biochemical, hormonal and disease characteristics in Black Bengal goats: a review. *Tropical Animal Health and Production* (2024) 56:52. <https://doi.org/10.1007/s11250-024-03898-z>. **Impact Factor**: 1.893.
20. Soren S, Mandal G P, Mondal S, Pradhan S, **Mukherjee J**, Banerjee D, Pakhira MC, Amla, Mondal A, Nsereko V, Samanta I (2024). Efficacy of *Saccharomyces cerevisiae* Fermentation Product and Probiotic Supplementation on Growth Performance, Gut Microflora and Immunity of Broiler Chickens. *Animals*. 14:866.<https://doi.org/10.3390/ani14060866>. **NAAS rating** : 8.14/ **Impact Factor**: 2.141.
21. **Mukherjee J**. 2024. Canine cardiac biomarkers: nature, activity and use. *Explor Anim Med Res*. 14:(1): 6-13. DOI: 10.52635/eamr/14.1.6-13. **NAAS rating** : 6.0.
22. **Mukherjee J** and De K. 2025. Microplastic in the farm animal derived food chain: The silent contaminants from farm to fork. *Indian Journal of Animal Health*. 64(2)- Special Issue: 344 - 355. <https://doi.org/10.36062/ijah.2025.spl.02825>. **NAAS rating**: 5.25.

23. Das S, Hembram A, Kesh S S, Jas R, Pandit S, Polley S, Baidya S, **Mukherjee J**, Nandi A, Sarkar U, Mandal S C. 2025. Role of IFN- γ and IL-10 cytokines and associated genes on *Haemonchus contortus* infection in resistant and susceptible Garole sheep. *Experimental Parasitology*. 274 (2025) 108970. <https://doi.org/10.1016/j.exppara.2025.108970>. **NAAS rating** :7.60/ **Impact Factor**: 1.85.
24. Khan M H, **Mukherjee J**, Soren S, Jas R, Pakhira M C, Mondal S, Paul A, Samanta I, Mondal A, Nsereko V. 2025. Effects of *Saccharomyces cerevisiae* fermentation product (SCFP) and phytogenic feed additive as alternatives to antibiotic growth promoters on pathogen mitigation, immunomodulation and production performance in commercial broiler chickens. *Poultry Science*. 104 (2025) 105743. <https://doi.org/10.1016/j.psj.2025.105743>. **NAAS rating** :7.70/ **Impact Factor**: 4.2.
24. Manna C, Das Kinsuk, Banerjee D, **Mukherjee J**, Jas R, Bag S, Dutt T. 2025. Abundance of Antimicrobial Peptides in Mesenchymal Stem Cells and Tissues: Variations Among Species. *International Journal of Peptide Research and Therapeutics*. 31:73. <https://doi.org/10.1007/s10989-025-10731-0>. **NAAS rating** : 8.4/ **Impact Factor**: 2.4.
25. Hussain R, Samui T, Khukhodziinai J S, Das P K, Ghosh P R, Banerjee D, Das K, Naskar S, Bag S, **Mukherjee J**. 2025. Effect of dietary supplementation of vitamin E and selenium on the growth, hemato-biochemical and endocrine profile of grower Ghungroo pigs. *Indian Journal of Animal Sciences* 95 (6): 554–559. <https://doi.org/10.56093/ijans.v95i6.149029>. **NAAS rating** : 6.30
26. Soren S, Ghosh R, **Mukherjee J**, Mandal S, Mandal S, Samanta I, Mandal G P. 2025. Effect of Dietary Synbiotic as a Replacement for Antibiotics on the Growth Performance, Gut Health and Immune Response in Broiler Chickens. *Indian J. Anim. Nutr.* 2025. 42 (2): 251-260. doi: 10.56093/IJAN.v42i2.13. **NAAS rating** : 5.19
27. Mondal S, Seikh A, Mandal G P, Roy B, **Mukherjee J**, Mondal S, Samanta I, Roy A, Soren, S. 2025. Evaluation of an essential oil blend derived from thymol, innamaldehyde, and menthol on the growth performance and gut health of broiler chickens. *Indian Journal of Animal Health*. DOI: <https://doi.org/10.36062/ijah.2025.05225>. **NAAS rating** : 5.25.
28. Khukhodziinai J S, Das P K, **Mukherjee J**, Banerjee D, Ghosh P R, Das A K, Samanta I, Jas R, Mondal S, Patra A K. 2024. Effect of Dietary Benzoic Acid and Oregano Essential Oil as a Substitute for an Anti-Coccidial Agent on Growth Performance and Physiological and Immunological Responses in Broiler Chickens Challenged with *Eimeria* Species. *Animals*. 14: 3008. <https://doi.org/10.3390/ani14203008>. **NAAS rating** : 8.7/ **Impact Factor**: 2.7.
29. Mohapatra S S, **Mukherjee J**, Das P K, Ghosh P R, Das K, De S, Banerjee D. 2024. Expression profile of RFRP-3 gene in hypothalamic tissue and its relationship with reproductive hormones across phases of the estrous cycle in female rats. *Discover Animal*. 1: 34. <https://doi.org/10.1007/s44338-024-00037-8>.
30. Manna C, Das K, Banerjee D, **Mukherjee J**, Jas R, Bag S, Dutt T. 2025. Abundance of Antimicrobial Peptides in Mesenchymal Stem Cells and Tissues: Variations Among Species. *International Journal of Peptide Research and Therapeutics*. (2025) 31:73 <https://doi.org/10.1007/s10989-025-10731-0>. **NAAS rating** : 8.4/ **Impact Factor**: 2.4.
31. Soren S, Ghosh R, **Mukherjee J**, Mandal S, Mandal S, Samanta I, Mandal G P. 2025. Effect of Dietary Synbiotic as a Replacement for Antibiotics on the Growth Performance,

- Gut Health and Immune Response in Broiler Chickens. *Indian J. Anim. Nutr.* 2025. 42 (2): 251-260. doi: 10.56093/IJAN.v42i2.13. **NAAS rating** : 5.19.
32. **Mukherjee J** and De K. 2025. Microplastic in the farm animal derived food chain: The silent contaminants from farm to fork. *Indian J Anim Health* (2025), 64(2)- Special Issue: 344 - 355. DOI: <https://doi.org/10.36062/ijah.2025.spl.02825>. **NAAS rating** : 5.01.
33. Manna C, Das K, Biswas S, **Mukherjee J**, Banerjee D, Bandyopadhyay S, Naskar S, Dandapat P, Dutt T, Bag S. 2025. De Novo Transcriptome Analysis of Primed Canine Umbilical Cord Derived Mesenchymal Stem Cells Uncovers a Collection of Antimicrobial Peptides. *International Journal of Peptide Research and Therapeutics.* (2026) 32:31. <https://doi.org/10.1007/s10989-026-10811-9>. **NAAS rating** : 8.4/ **Impact Factor**: 2.4.

LIST OF BOOKS / BOOK CHAPTERS PUBLISHED

Books (2)

1. Das PK, Sejian V, **Mukherjee J**, Banerjee D. 2023. Textbook of Veterinary Physiology. Springer, Singapore. Print ISBN 978-981-19-9409-8. Online ISBN 978-981-19-9410-4. **(Publication Date 31/08/24)**.
2. Das PK, Ghosh P R, Das K, Banerjee D, **Mukherjee J**, Sanyal S. 2024. Techniques in Veterinary Physiology. West Bengal Veterinary Council, Kolkata. Print ISBN 978-81-929561-0-7.

Book Chapters (15)

1. **Mukherjee, J.**, Das, P.K., Banerjee, D. (2023). Hematology. In: Das, P.K., Sejian, V., Mukherjee, J., Banerjee, D. (eds) Textbook of Veterinary Physiology. Springer, Singapore. https://doi.org/10.1007/978-981-19-9410-4_4.
2. **Mukherjee, J.**, Das, P.K., Banerjee, D., Mukherjee, A. (2023). Immune System. In: Das, P.K., Sejian, V., Mukherjee, J., Banerjee, D. (eds) Textbook of Veterinary Physiology. Springer, Singapore. https://doi.org/10.1007/978-981-19-9410-4_5.
3. Banerjee, D., Das, P.K., **Mukherjee, J.** (2023). Muscular System. In: Das, P.K., Sejian, V., Mukherjee, J., Banerjee, D. (eds) Textbook of Veterinary Physiology. Springer, Singapore. https://doi.org/10.1007/978-981-19-9410-4_10.
4. Banerjee, D., Das, P.K., **Mukherjee, J.** (2023). Nervous System. In: Das, P.K., Sejian, V., Mukherjee, J., Banerjee, D. (eds) Textbook of Veterinary Physiology. Springer, Singapore. https://doi.org/10.1007/978-981-19-9410-4_11.
5. Hyder, I., Reddy, P.R.K., **Mukherjee, J.** (2023). Physiology of Digestion. In: Das, P.K., Sejian, V., Mukherjee, J., Banerjee, D. (eds) Textbook of Veterinary Physiology. Springer, Singapore. https://doi.org/10.1007/978-981-19-9410-4_13.

6. Das, P.K., **Mukherjee, J.**, Banerjee, D. (2023). Development of Sex Organs. In: Das, P.K., Sejian, V., Mukherjee, J., Banerjee, D. (eds) Textbook of Veterinary Physiology. Springer, Singapore. https://doi.org/10.1007/978-981-19-9410-4_18.
7. Das, P.K., **Mukherjee, J.**, Banerjee, D. (2023). Functional Morphology of the Male Reproductive System. In: Das, P.K., Sejian, V., Mukherjee, J., Banerjee, D. (eds) Textbook of Veterinary Physiology. Springer, Singapore. https://doi.org/10.1007/978-981-19-9410-4_19.
8. Das, P.K., **Mukherjee, J.**, Banerjee, D. (2023). Spermatogenesis and Semen. In: Das, P.K., Sejian, V., Mukherjee, J., Banerjee, D. (eds) Textbook of Veterinary Physiology. Springer, Singapore. https://doi.org/10.1007/978-981-19-9410-4_20.
9. Das, P.K., **Mukherjee, J.**, Banerjee, D. (2023). Functional Morphology of the Female Reproductive System. In: Das, P.K., Sejian, V., Mukherjee, J., Banerjee, D. (eds) Textbook of Veterinary Physiology. Springer, Singapore. https://doi.org/10.1007/978-981-19-9410-4_21.
10. Das, P.K., **Mukherjee, J.**, Banerjee, D. (2023). Female Reproductive Physiology. In: Das, P.K., Sejian, V., Mukherjee, J., Banerjee, D. (eds) Textbook of Veterinary Physiology. Springer, Singapore. https://doi.org/10.1007/978-981-19-9410-4_22.
11. Das, P.K., **Mukherjee, J.**, Banerjee, D. (2023). Fertilisation, Gestation and Parturition. In: Das, P.K., Sejian, V., Mukherjee, J., Banerjee, D. (eds) Textbook of Veterinary Physiology. Springer, Singapore. https://doi.org/10.1007/978-981-19-9410-4_23.
12. Mukherjee, A., Das, P.K., Banerjee, D., **Mukherjee, J.** (2023). Assisted Reproductive Technologies in Farm Animals. In: Das, P.K., Sejian, V., Mukherjee, J., Banerjee, D. (eds) Textbook of Veterinary Physiology. Springer, Singapore. https://doi.org/10.1007/978-981-19-9410-4_24.
13. **Mukherjee, J.**, Das, P.K., Banerjee, D. (2023). Lactation Physiology. In: Das, P.K., Sejian, V., Mukherjee, J., Banerjee, D. (eds) Textbook of Veterinary Physiology. Springer, Singapore. https://doi.org/10.1007/978-981-19-9410-4_25.
14. **Mukherjee, J.** and Das, P. K. (2019). Immune responses of the mammary gland. In Sar, T. K. (eds). Mastitis symptoms, triggers and treatment. Nova Science publishers, Inc. New York. ISBN:978-1-53616-124-3.
15. Das, P. K. and Mukherjee, J. (2019). Physiology of milk secretion and its alteration during mastitis with related biomarkers. In Sar, T. K. (eds). Mastitis symptoms, triggers and treatment. Nova Science publishers, Inc. New York. ISBN:978-1-53616-124-3.