

Razib Das, DVM, MS

PhD fellow in Nutritional Sciences (ABD)
Department of Human Nutrition, Food and Animal Sciences
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RESEARCH EXPERIENCE AND LAB SKILLS

PhD Researcher | Nutritional Sciences, University of Hawaii | Fall 2019 – Present

- Conducted in vivo experiments and experimental trials, raising broiler chickens at the farm facility of University of Hawaii.
- Managed all aspects of poultry husbandry, including feeding, health monitoring, and sample collection for molecular and microbiological analysis.
- Performed laboratory techniques essential for poultry nutrition and gut health research, including Enzyme-Linked Immunosorbent Assay (ELISA), DNA and RNA extraction, Quantitative Polymerase Chain Reaction (qPCR), Gas Chromatography for free fatty acid profiling, Proximate analysis of feed composition, Metagenomic analysis for microbiome profiling.
- Designed and executed experiments evaluating nutrient digestibility, immune response, and microbiome shifts in broilers.
- Analyzed data using statistical and bioinformatics tools to interpret findings and draw conclusions for improving poultry nutrition strategies. Utilized high performance computing (HPC), QIIME2, R studio for data analysis.

Teaching Assistant | School of Life Sciences, University of Hawaii | Spring 2023

- Worked in a microbiology preparation lab (a biosafety level 2), responsible for preparing microbiological culture plates and broths for laboratory use.
- Prepared plated media ready for inoculation, by using autoclaves and fume hoods to ensure proper sterilization and safety.

MS Student Researcher | Sylhet Agricultural University, Bangladesh | 2010-2012

- Collected fecal samples from wild birds to study the presence of Salmonella and assess its prevalence in avian populations.
- Isolated Salmonella strains from fecal samples using selective media and culture techniques.
- Conducted antibiotic susceptibility testing using the antibiogram method.

RESEARCH INTEREST

- Effect of different feed additives on growth and health of poultry
- Poultry gut microbiome
- In ovo technology
- Human Nutrition
- Epigenetic regulation (DNA methylation), transcriptomics, host–microbiome interactions, nutritional modulation of gene expression

EDUCATION AND QUALIFICATIONS

PhD fellow in Nutritional Sciences (ABD) | University of Hawaii | Expected May 2025

Research: Effect of in ovo supplementation of enzymes on poultry production and gut health.

Advisor: Dr. Rajesh Jha, Professor of Animal Nutrition,
Department of Human Nutrition, Food and Animal Sciences

MS in Microbiology | Sylhet Agricultural University, Bangladesh | 2010-2012

Thesis: Identification and Antibioqram Study of *Salmonella* spp. Isolated from Wild Birds.

Advisor: Dr. Sultan Ahmed, Professor,
Department of Microbiology and Immunology

Doctor of Veterinary Medicine | Sylhet Agricultural University, Bangladesh | 2003-2009

Subjects: Anatomy, Histology, Physiology, Pharmacology, Pathology, Parasitology,
Microbiology, Genetics, Animal Science, Animal Production, Nutrition, Avian
Medicine, Surgery, Epidemiology

WORK EXPERIENCE

Teaching Assistant | University of Hawaii | Fall 2019 to Spring 2025

Fall 2023- Spring 2025 BIOL171L Introduction to Biology 1 Lab

Spring 2023 Microbiology Preparation Room

Fall 2022 ANSC 244 Comparative Nutrition (3 credit course, as an instructor)

Spring 2022 ANSC 445 Animal Breeding and Genetics
ANSC 321 Applied Animal Nutrition

Fall 2021 ANSC 244 Comparative Nutrition
ANSC 432 Swine Production
MBBE 650 DNA and Genetic Analysis

Spring 2021 ANSC 445 Animal Breeding and Genetics
ANSC 321 Applied Animal Nutrition

Fall 2020 ANSC 244 Comparative Nutrition
ANSC 685 Nutrition and Disease: Cellular and Molecular Aspects

Spring 2020 ANSC 451 Physiology of Domestic Animals
ANSC 321 Animal Breeding and Genetics

Fall 2019 ANSC 244 Comparative Nutrition

Veterinary Surgeon | Department of Livestock Services, Bangladesh | 2012-2019

Served as a veterinarian and livestock extension officer in the Bangladesh Civil Service, providing clinical care, disease prevention, and advisory services to livestock farmers. Responsibilities included practicing veterinary medicine, and conducting livestock extension activities.

TRAINING

Sep 5, 2024	Initial Lab Safety Training University of Hawaii at Manoa
Jan 9, 2024	Preventing Harassment and Discrimination: Non-Supervisors Extended + Clery Act and Title IX (Full Course) University of Hawaii at Manoa
Dec 7, 2023	Hazardous Waste Generator Manoa Refresher Training University of Hawaii at Manoa
Nov 18, 2023	Biosafety Refresher Training John A. Burns School of Medicine University of Hawaii at Manoa
Nov 18, 2023	Bloodborne Pathogen Refresher Training John A. Burns School of Medicine University of Hawaii at Manoa
Apr 18, 2017	Introduction to Field Epidemiology Institute of Epidemiology, Disease Control, and Research Dhaka, Bangladesh

CONFERENCES

1. Pabitra, M.H., **Das, R.**, He, Y. The impact of climate variability on the beef cattle microbiome. In abstracts of CTAHR Showcase and Research Symposium (April 4, 2025). Honolulu, Hawaii, USA. Abstract #33.
2. Mishra, P., **Das, R.**, Mishra, B., Jha, R. Dietary supplementation of microalgae and xylanase influences nutrient transporter and tight junction gene expression in broiler chickens. Abstracts of 2025 International Poultry Scientific Forum (January, 2025). Atlanta, Georgia. USA. Abstract #P254, pp. 94.
3. Mishra, P., **Das, R.**, Mishra, B. and Jha, R. Dietary microalgae and xylanase influence cecal microbiota and microbial pathways in broiler chickens. In: Proceedings of Annual Meeting of the American Society for Microbiology- Hawaii Branch (Apr 27, 2024). Honolulu, Hawaii, USA. Abstract # O4, pp. 10.
4. **Das, R.**, Mishra, P., González-Ortiz, G., Bedford, M.R., Mishra, B. and Jha, R. (2024). Effect of in ovo xylooligosaccharides and dietary stimbiotics on enhancing gut health of broiler chickens. In: Proceedings of Annual Meeting of the American Society for Microbiology- Hawaii Branch (Apr 27, 2024). Honolulu, Hawaii, USA. Abstract # P13, pp. 31.
5. **Das, R.**, Mishra, P., Mishra, B. and Jha, R. Effect of in ovo injection of xylobiose and xylotriose on immunity, cecal metabolites, microbial ecology, and metabolic pathways in broiler chickens. in Abstracts of Poultry Science Association 112th Annual Meeting vol. 102 (E-Supplement 1) (Poultry Science, 2023).
6. **Das, R.**, Mishra, P., González-Ortiz, G., Bedford, M.R., Mishra, B. and Jha, R. Effect of in ovo injection of xylooligosaccharides and diets supplemented with xylanase or a combination of xylanase and xylooligosaccharides on hatchability, growth performance, and ileal gene expressions of broilers. in Abstracts of Poultry Science Association 112th Annual Meeting vol. 102 (E-Supplement 1) (Poultry Science, 2023).
7. Mishra, P., **Das, R.**, Chaudhary, A., Mishra, B. and Jha, R. Microalgae and xylanase in diet modulate cecal microbial diversity and metabolic pathways of broiler chickens. in

Abstracts of Poultry Science Association 112th Annual Meeting vol. 102 (E-Supplement 1) (Poultry Science, 2023).

8. **Das, R.**, Mishra, P., Mishra, B. and Jha, R. Effects of in ovo injection of xylobiose and xylotriose on growth performance, carcass traits, and immune-related gene expression of broilers. in Abstracts of 2023 International Poultry Scientific Forum (IPSF, 2023).
9. Mishra, P., **Das, R.**, Chaudhary, A., Mishra, B. and Jha, R. Effects of microalgae, with or without xylanase supplementation, on serum immunoglobulins, cecal short-chain fatty acids, and microbiome of broiler chickens. in Abstracts of 2023 International Poultry Scientific Forum (IPSF, 2023).
10. Chaudhary, A., Mishra, P., **Das, R.**, Amaz, S. A., Mahato, P. L., Jha, R., Mishra, B. Mitigation of heat stress in broiler chickens using dietary supplementation of microalgae (*Spirulina platensis*). in Abstracts of 2023 International Poultry Scientific Forum (IPSF, 2023).
11. Jha, R., **Das, R.**, Mishra, B. and Cowieson, A. J. Sources of corn and soybean meal and carbohydrase enzymes supplementation differently affect growth performance and nutrient digestibility in broiler chickens. in Abstracts of Poultry Science Association 110th Annual Meeting (Virtual) vol. 100 (E-Suppl 1) (Poultry Science, 2021).
12. Jha, R., **Das, R.**, Mishra, B. and Cowieson, A. J. Sources of corn and soybean meal and carbohydrase enzyme supplementation differently affect cecal volatile fatty acid production and microbiota profile in broiler chickens. in Abstracts of Poultry Science Association 110th Annual Meeting (Virtual) vol. 100 (E-Suppl 1) (Poultry Science, 2021).

PUBLICATIONS

1. Rifat, A.I., Bormon, C.C., Akib, M.G., Ataher, M.S., Kamruzzaman, M., Dutta, A., Das, A.K., Talukder, K., Azzam, M., Farouk, M.H., **Das, R.**, Mahfuz, S., 2024. Dietary inclusion of *Moringa oleifera* leaf extracts as alternatives to antibiotic growth promoter on live performance, carcass traits, physical meat quality, and health status of broiler chickens. *Italian Journal of Animal Science* 23, 1752–1763.
<https://doi.org/10.1080/1828051X.2024.2429608>
2. Bormon, C.C.; Akib, G.; Rifat, A.; Hossain, M.; Uddin, N.; Hossain, F.M.A.; Azzam, M.M.; Farouk, M.H.; **Das, R.**; Mahfuz, S.U. Effects of Oyster Mushroom (*Pleurotus Ostreatus*) Stem Residue Supplementation on Growth Performance, Meat Quality and Health Status of Broilers. *Poultry Science* 2024, 103, 104054.
<https://doi.org/10.1016/j.psj.2024.104054>
3. Akib, M.G.; Rifat, A.; Bormon, C.; Dutta, A.; Ataher, M.S.; Azzam, M.; Farouk, M.H.; **Das, R.**; Azad, M.A.K.; Mahfuz, S. Effects of *Moringa Oleifera* Leaf Powder on the Growth Performance, Meat Quality, Blood Parameters, and Cecal Bacteria of Broilers. *Veterinary Sciences* 2024, 11, 374, <https://doi.org/10.3390/vetsci11080374>
4. **Das, R.**; Mishra, P.; Mishra, B.; Jha, R. Effects of in Ovo Feeding of Xylobiose and Xylotriose on Growth Performance, Carcass Traits, Ileal Histomorphometry, and Immune-Related Gene

Expression in Broiler Chickens. *Animal Feed Science and Technology* 2024, 313, 115998.
<https://doi.org/10.1016/j.anifeedsci.2024.115998>

5. **Das, R.;** Mishra, P.; Mishra, B.; Jha, R. Effect of in Ovo Feeding of Xylobiose and Xylotriose on Plasma Immunoglobulin, Cecal Metabolites Production, Microbial Ecology, and Metabolic Pathways in Broiler Chickens. *J Animal Sci Biotechnol* 2024, 15, 62.
<https://doi.org/10.1186/s40104-024-01022-7>
6. Mishra, P.; **Das, R.;** Chaudhary, A.; Mishra, B.; Jha, R. Effects of Microalgae, with or without Xylanase Supplementation, on Serum Immunoglobulins, Cecal Short-Chain Fatty Acids, Microbial Diversity, and Metabolic Pathways of Broiler Chickens. *Poultry Science* 2024, 103, 103325. <https://doi.org/10.1016/j.psj.2023.103325>
7. Mishra, P.; **Das, R.;** Chaudhary, A.; Mishra, B.; Jha, R. Effects of Microalgae, with or without Xylanase Supplementation, on Growth Performance, Organs Development, and Gut Health Parameters of Broiler Chickens. *Poultry Science* 2023, 102, 103056.
<https://doi.org/10.1016/j.psj.2023.103056>
8. Chaudhary, A.; Mishra, P.; Amaz, S.A.; Mahato, P.L.; **Das, R.;** Jha, R.; Mishra, B. Dietary Supplementation of Microalgae Mitigates the Negative Effects of Heat Stress in Broilers. *Poultry Science* 2023, 102, 102958. <https://doi.org/10.1016/j.psj.2023.102958>
9. **Das, R.;** Mishra, P.; Jha, R. In Ovo Feeding as a Tool for Improving Performance and Gut Health of Poultry: A Review. *Front. Vet. Sci.* 2021, 8, 754246.
<https://doi.org/10.3389/fvets.2021.754246>
10. Jha, R.; **Das, R.;** Oak, S.; Mishra, P. Probiotics (Direct-Fed Microbials) in Poultry Nutrition and Their Effects on Nutrient Utilization, Growth and Laying Performance, and Gut Health: A Systematic Review. *Animals* 2020, 10, 1863. <https://doi.org/10.3390/ani10101863>
11. Sen, A.; Muhit, S.; Avi, R.D.T.; **Das, R.;** Akther, M.; Shagar, A.A.M. Clinical Prevalence of Diseases and Disorders in Cattle and Goat at the Upazila Veterinary Hospital, Beanibazar, Sylhet, Bangladesh. *Journal of Animal Science and Veterinary Medicine* 2018, 3, 18–23.
<https://doi.org/10.31248/JASVM2017.081>
12. Akanda, M.R.; Hasan, M.M.I.; Belal, S.A.; Roy, A.C.; Ahmad, S.U.; **Das, R.;** Masud, A.A. A Survey on Prevalence of Gastrointestinal Parasitic Infection in Cattle of Sylhet Division in Bangladesh. *American Journal of Phytomedicine and Clinical Therapeutics* 2014, 2, 855–860

MEMBERSHIP

Member, Poultry Science Association

Member, World Poultry Science Association

Member, Bangladesh Veterinary Association

Member, Livestock Cadre Association [A platform for all the Civil Service officers working in Livestock Department in Bangladesh]