

MUHAMMAD JUNAID NAWAZ

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PROFESSIONAL SUMMARY

Result-driven Meat Scientist and Doctor of Veterinary Medicine (DVM) with over 7 years of combined experience spanning academic research, international public health, and industrial R&D. Proven expertise in mitigating muscle myopathies, developing clean-label functional ingredient formulations, and optimizing postmortem intervention strategies to elevate carcass quality and food safety. Adept at bridging the gap between multi-species muscle biology and large-scale meat processing system integration.

WORK EXPERIENCE

GRADUATE RESEARCH ASSISTANT | *Department of Animal and Dairy Science, Meat Science and Technology Center*

The University of Georgia - Athens, GA, USA | January 2022 – Present

- **Lead Doctoral Research on Chicken Myopathies:** Investigating the textural, rheological, and sensory effects of functional plant fibers (citrus fiber) to mitigate quality defects in further processed poultry products (deli loaves, breakfast sausages, and nuggets) affected by Wooden Breast myopathy.
- **International Agribusiness Fellowship (Uruguay):** Selected for an international agribusiness study program (Spring 2026) to analyze pasture-based livestock production and cooperative processing models; conducted technical field evaluations and site reviews at the INIA research stations and El Timbó processing facilities.
- **Designed and Conducted Trained & Consumer Sensory Panels:** Developed surveys, recruitment strategies, and data collection models to assess beef and poultry product quality parameters and consumer acceptance.
- **Active Research Collaboration:** Executed key testing and data tracking for multi-disciplinary trials, including evaluating the effects of nanocellulose supplementation on swine carcass characteristics, mitigating chronic heat stress in Southeastern finishing beef, and measuring objective tenderness variations between sous vide and clam shell cooking methodologies.

LECTURER | *Department of Meat Technology*

Cholistan University of Veterinary and Animal Sciences - Bahawalpur, Pakistan |
Dec 2018 – Dec 2021

- **Curriculum Innovation:** Designed and implemented comprehensive undergraduate and post-graduate curricula for basic and advanced meat science, integrating meat biochemistry, modern processing standards, and quality assurance protocols.
- **Laboratory Infrastructure Development:** Spearheaded the successful establishment of an undergraduate departmental testing laboratory, expanding institutional capabilities in proximate analysis and meat safety metrics.
- **Academic Advisement & Committee Service:** Mentored over 30 students on academic progression and industry career goals; active member of key university administrative committees driving departmental compliance and community outreach.
- **One Health Leadership:** Served as foundational faculty member to establish and guide a student led One Health Club, fostering interdisciplinary collaboration regarding zoonotic tracking and food systems.

VETERINARY OFFICER | *Livestock and Dairy Development Department*

Government of the Punjab - Punjab Pakistan | July 2016 – December 2018

- **Abattoir Inspection & Public Health:** Served as Principal Inspector at a municipal abattoir, modernizing antemortem and postmortem examination protocols to maximize carcass safety and processing compliance.
- **International Disease Surveillance:** Appointed as Vaccine Monitoring Officer for a Food and Agriculture Organization (FAO)-led Foot and Mouth Disease (FMD) vaccination program; directed disease monitoring and preventive health initiatives as Officer In-charge of a Civil Veterinary Dispensary.
- **Extension & Capacity Building:** Designed training modules and upskilled community facilitators to disseminate Good Management Practices (GMP) to local livestock producers, driving regional biological security.

QUALITY CONTROL MANAGER | *Punjab Agriculture And Meat Company*

Kold Kraft Tongda – Lahore, Pakistan | June 2015 – June 2016

- **SOP & Food Safety Architecture:** Developed and deployed strict Standard Operating Procedures (SOPs) for Good Hygienic Practices (GHP), directly improving frozen product quality and processing plant regulatory alignment.
- **R&D Product Development:** Formulated and optimized novel high-temperature cooked, pressure pa-packed sausage recipes adapted to local consumer sensory preferences.
- **USAID Project Training:** Partnered as an expert trainer for a USAID-funded project, conducting on-site abattoir staff training on Halal Food Management Systems (PS3733) across eight leading meat-exporting processors in Pakistan.

EDUCATION

Ph.D. in Animal Science (Meat Science and Technology)

The University of Georgia, Athens, GA, USA | Expected 2026

- GPA: 3.73/4.00
- Dissertation Research: Investigating the textural, rheological, technological, and sensory effects of functional plant fibers (citrus fiber) to mitigate quality defects in further-processed poultry products (nuggets, breakfast sausages, and deli loaves) affected by Wooden Breast meat.

M.Phil. in Meat Science and Technology

University of Veterinary and Animal Sciences, Lahore, Pakistan | 2018

- GPA: 3.92/4.00
- Thesis Research: Investigated the vacuum-packed frozen shelf life of poultry products to optimize quality retention and safety margins.

Advanced Graduate Training: One Health Program

Global Health Institute, Duke University, NC, USA | 2018 | Supplemental Track

- GPA: 4.00/4.00
- Core Competencies: Completed advanced multi-disciplinary coursework bridging public health, environmental safety, and animal systems
- Key Modules: Food Safety & Entomology, Zoonotic Diseases, Introduction to One Health Approach, Environmental Health, and Public Health Lab Techniques.

D.V.M. (Doctor of Veterinary Medicine)

University of Veterinary and Animal Sciences, Lahore, Pakistan | 2015

- GPA: 3.66/4.00
- Core Competencies: Deep fundamental understanding of multi-species muscle biology, physiology, and systemic microbiology, with direct translation toward commercial meat safety and processing quality.

ACADEMIC HONORS & AWARDS

- Recipient, C. Boyd Ramsey RMC Scholar Award | American Meat Science Association (AMSA) – 2022
- Graduate Fellowship / Assistantship, The University of Georgia | 2022 – Present
- Recipient, UGA Graduate School Travel Award | The University of Georgia – 2023
 - Awarded to support international research presentation at the International Congress of Meat Science and Technology (ICoMST) in Padova, Italy.
- Recipient, College of Agricultural and Environmental Sciences Travel Abroad Award | The University of Georgia – 2026
 - Highly competitive institutional funding, awarded for international agricultural research exposure and field studies.

- Recipient, PhD Accelerator Award | The University of Georgia Graduate School – 2026
- Recipient, "Ghulam Hur Gold Medal" in Gross Anatomy, University of Veterinary and Animal Sciences | 2010 – 2011

PUBLICATIONS & CONFERENCE PRESENTATIONS

- Nawaz, M. J.*, H. Thippareddi, B. Bowker, W. Kerr, D. H. Thomas, J. A. Scott, C. Lee, and A. M. Stelzleni. 2025. Citrus fiber alters dynamic rheology, texture, and water holding capacity of chicken Wooden Breast breakfast sausage batter. *Meat and Muscle Biology*. 9(S1): 19325, 43. doi: 10.22175/mmb.19325.
- A Lee, C. T., C. B. Welch, D. H. Thomas, C. C. Catrett, M. J. Nawaz, J. N. Proctor, and A. M. Stelzleni. 2025. Effects of chronic heat stress mitigation on finishing beef performance, blood cortisol, microbiome, and carcass measures in the Southeastern United States. *Meat and Muscle Biology*. 9(S1): 19325, 19. doi: 10.22175/mmb.19325.
- Thomas, D. H., C. T. Lee, M. J. Nawaz, J. A. Scott, and A. M. Stelzleni. 2025. Effects of sous vide cookery on tenderness, degrees of doneness, and cook loss compared to clamshell cookery. *Meat and Muscle Biology*. 9(S1): 19325, 35. doi: 10.22175/mmb.19325.
- Nawaz, M. J.*, H. Thippareddi, B. Bowker, H. Zhuang, D. Chatterjee, and A. M. Stelzleni. 2025. Effects of citrus fiber on texture and water holding capacity of Wooden Breast chicken nuggets. *Meat and Muscle Biology*. 9(S1):18383, 46. doi: 10.22175/mmb.18383.
- Proctor, J. N., A. M. Stelzleni, C. T. Lee, M. J. Nawaz, and C. C. Catrett. 2025. Influence of heat mitigation strategies in Southern beef finishing systems on carcass and meat quality attributes. *Meat and Muscle Biology*. 9(S1):18383, 46. doi: 10.22175/mmb.18383.
- Nawaz, M. J., B. C. Bowker, J. J. McDonald, H. Thippareddi, and A. M. Stelzleni*. 2023. Effects of citrus fiber on texture properties of chicken nugget batter made with Wooden Breast. *Proceedings of the 69th International Congress of Meat Science and Technology (ICoMST)*. doi: 10.1080/1828051X.2023.2249713.
- Williams, J., M. J. Nawaz*, H. Thippareddi, S. Brannen, S. A. DeVane, and A. M. Stelzleni. 2023. Evaluating stacked processing to improve Wooden Breast functionality and tenderness. *Meat and Muscle Biology*. 7(2):71. doi: 10.22175/mmb.15450.

TRAINING ATTENDED

- In-service Competency Enhancement Training for University Faculty, Center for Educational Policy and Administration.
- Biomedical Research with GCP – Basic Course, CITI Program.
- Blood Borne Pathogens Training, Duke University, Occupational & Environmental Safety Office.
- Capacity Building Training of Veterinary Officers, Livestock & Dairy Development Department, Punjab.
- Monitoring Cow Udder Health, UVAS demonstration farm extension & training program.
- Carcass Grading & Meat Cuts Standardization Training, The Agribusiness Project, by USAID.

ADDITIONAL SKILLS

- **Meat Analytics & Instrumentation:** Texture Profile Analysis (TPA), Colorimetry (L^* , a^* , b^*), Warner-Bratzler Shear Force, pH monitoring, proximate analysis, lipid oxidation (TBARS), water-holding capacity (WHC), sensory analyses.
- **Product Development & Processing:** Formulation of deli loaves, breakfast sausages, uncoated nuggets and emulsified/further processed products; clean-label plant fiber utilization.
- **Regulatory Compliance & Auditing:** Deep understanding of USDA-FSIS regulations, CFR criteria, Halal Food Management Systems (PS3733), HACCP, and Good Manufacturing Practices (GMP).

REFERENCES

1. Dr. Alexander Stelzleni | Professor and Graduate Coordinator
Animal and Dairy Science, University of Georgia | astelz@uga.edu
2. Dr. John Gonzalez | Professor,
Animal and Dairy Science, University of Georgia | johngonz@uga.edu
3. Dr. Sher Ali | Assistant Professor
Department of Meat Science and Technology, University of Veterinary and Animal Sciences, Lahore | sher.ali@uvas.edu.pk