

Shaimaa Kamal Hamad

Faculty of Agriculture, Cairo University • 7 El-Gamma st. • Giza, Egypt 12613 • shaimaa1@vt.edu • +20 (10) 64353810

EDUCATION

Cairo University, College of Agriculture, Animal Production Department	Giza, Egypt Sep 2017-Jul 2023
PhD, Poultry Science GPA (3.08)	
Dissertation: Mechanisms underlying sperm freezability in Cairo B-2 chicken	

Virginia Tech (VT), Animal and Poultry Sciences Department	Blacksburg, VA, USA Aug 2014-Aug 2016
MSc., Poultry Science GPA (3.08)	
Thesis: Developmental gene expression of host defense peptides in immune organs and the small intestine of turkey poult (Meleagris gallopavo)	

Cairo University, College of Agriculture, Animal Production Department	Giza, Egypt Sep 2005-Jun 2009
BSc., Poultry Science GPA: 3.91 (Excellent with Honors)	

Cairo University, College of Education, Beni Suef Campus	Beni Suef, Egypt Sep 2001- Jun 2005
BSc., English Language GPA: 3.51 (Very good with Honors)	

WORK AND RESEARCH EXPERIENCE

Ohio State University (OSU), Animal Sciences Department	Wooster, OH, USA Mar 2022-Feb 2023
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Visiting Scholar

Research project: **Characterization of Chicken Immune Responses to Coccidiosis and Necrotic Enteritis**

- Learning Flow Cytometry technique and FlowJo software.
- Learning how to grow Clostridium Perfringens and Eimeria.
- Applying DNA Isolation, PCR and Gel electrophoresis experience to coccidiosis and NE experiments.
- Conducting bird experiments to characterize the chicken immune responses to coccidiosis and NE.
- Submitted an abstract to FFH2022 (Poster presentation) and won a prize.
- Submitted an abstract to IMMUNOLOGY2023 (Oral presentation)
- Submitted an abstract to PSA2023 (Oral presentation)

Cairo University, College of Agriculture, Animal Production Department	Giza, Egypt Apr 2017-present
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Assistant Lecturer & Ph.D. Student

Research project "Egyptian-Chinese Collaboration": **Semen Cryopreservation and Mechanisms Underlying Sperm Freezability in Egyptian and Chinese Chickens**

- Conducted bird experiment (Setting up, maintaining, and semen sampling).
- Learned:
 - Semen collection and semen evaluation using CASA system and Artificial Insemination
 - Enzyme activity assays
- Applied RNA extraction, cDNA synthesis and RT-PCR techniques to detect the expression of the anti-freezing genes during cryopreservation process.
- Published three papers.
- Submitted an abstract to PSA2021 (Oral presentation).
- Working as a teaching assistant, creating and grading assessments and exams.

University of Arkansas, Poultry Science Department	Fayetteville, AR, USA Feb 2018-May 2019
<i>Graduate Assistant</i>	
<p>Research project: Chicken Muscle Neuropeptide Y (NPY) and Mitochondrial Function</p> <ul style="list-style-type: none"> • Applied RNA extraction, cDNA synthesis and RT-PCR techniques to detect the expression of mitochondrial genes. • Learned Western Blot, Immunoprecipitation, Immunofluorescence techniques and Cell culture. • Conducted several bird experiments (Setting up, maintaining, and sampling tissue). • Helped in bird experiments. • Published one editorial. • Submitted an abstract to PSA2018 (Oral presentation). 	

Virginia Tech, Animal and Poultry Sciences Department	Blacksburg, VA, USA Aug 2014-Sep 2016
<i>MSc. Student & Teaching Assistant</i>	
<p>Research project: Developmental gene expression of host defense peptides in turkey poults</p> <ul style="list-style-type: none"> • Learned designing primers, RNA extraction, cDNA synthesis and RT-PCR. • Learned DNA Isolation, PCR, Gel electrophoresis. • Learned JMP and Prizm software. • Helped in several bird experiments related to the immune response to NE (Setting up, maintaining and sampling). • Worked as a teaching assistant and graded assessments and exams. • Participated in mentoring or advising students during office hours • Taught courses: <ul style="list-style-type: none"> ○ (APSC 1454) Introduction to Animal & Poultry Sciences (Fall 2015). • Passed coursework (GPA 3.08). • Graduation (Fall 2016). 	

Cairo University, College of Agriculture, Animal Production Department,	Giza, Egypt Apr 2011-Aug 2014
<i>Teaching Assistant</i>	
<p>Research project: Effect of different levels of methionine on growth performance in broilers</p> <ul style="list-style-type: none"> • Conducted bird experiment to investigate the effect of different levels of methionine on growth performance in broilers and the expression of nutrient transporters. • Passed coursework (GPA 3.90). • Assisted in teaching the practical classes, creating, proctoring and grading exams in the following classes: <p>Taught Courses</p> <ul style="list-style-type: none"> - (201) Critical Thinking and Scientific Reports - (314) Animal and Poultry Production - (331) Management of Chicken Breeders - (206) Basics of Farm Animal Nutrition - (106) Introduction to Animal and Poultry Production - (102) Basics of Animal and Poultry Production - (371) Fish and Crustaceans Nutrition 	

The Academy of Scientific Research and Technology (ASRT)	Cairo, Egypt Nov 2010-Mar 2011
<i>Trainee</i>	
<ul style="list-style-type: none"> • Attended courses (9-hours each): <ul style="list-style-type: none"> - Management and leadership (advanced computer search, communication skills, conflict resolution, software and e-learning, motivation training, project management, self-esteem, stress management, team building, time management, meeting management, work portfolio, working smarter using technology to your advantage). - Critical thinking (critical analysis of scientific papers, fundamentals of critical thinking). - Data preparation for publication (making graphs using Prism and Excel, STAT software applications). 	

- Writing skills (advanced writing skills, grant writing, report writing, writing papers for publication).
- Presentation skills (designing posters, making dynamic work presentation).
Total quality management (accreditation of research laboratories, good lab practices, good manufacturing practices, introduction to total quality management, quality assurance and quality control of products, test method validation, writing standard operation procedures).
- Laboratory safety (biosafety, documentations, identifications of hazards, radiation safety, safety culture).
- Research development and innovation (creativity and innovation, intellectual property law, research ethics, the Egyptian innovation system).

PUBLICATIONS

- **Hamad, S.K.**, Elomda, A.M., Sun, Y., Li, Y., Zong, Y., Chen, J., Abbas, A.O., Stino, F.K., Nazmi, A. and Mehaisen, G.M., 2023. The In Vitro Evaluation of Rooster Semen Pellets Frozen with Dimethylacetamide. *Animals*, 13(10), p.1603.
- Mehaisen, G.M., Elomda, A.M., **Hamad, S.K.**, Ghaly, M.M., Sun, Y., Li, Y., Zong, Y., Chen, J., Partyka, A., Nazmi, A., Abbas, A.O. and Stino F., 2022. Effect of Dimethylacetamide Concentration on Motility, Quality, Antioxidant Biomarkers, Anti-Freeze Gene Expression, and Fertilizing Ability of Frozen/Thawed Rooster Sperm. *Animals*, 12(20), p.2739.
- Zong, Y., Sun, Y., Li, Y., Mehaisen, G.M., Yuan, J., Ma, H., Ni, A., Wang, Y., **Hamad, S.K.**, Elomda, A.M., Abbas, A.O. and Chen, J., 2022. Effect of glycerol concentration, glycerol removal method, and straw type on the quality and fertility of frozen chicken semen. *Journal of Poultry Science*, 101(6), p.101840.
- Cauble, R., **Hamad, S.**, Herring, E., Lichtenwalter, C., McGuire, C. and Dridi, S., 2018. Leptin activates NLRP3 inflammasome-associated with Type II diabetes and obesity. *Adv. Food Technol. Nutr. Sci. Open J*, 4, pp.e13-e16.
- **Hamad, S.K.**, Kim, S., El-Kadi, S.W., Wong, E.A. and Dalloul, R.A., 2017. Comparative expression of host defense peptides in turkey poults. *Journal of Poultry Science*, 96(7), pp.2083-2090.
- **Hamad, S.K.**, 2016. Developmental gene expression of host defense peptides in immune organs and the small intestine of turkey poults (*Meleagris gallopavo*) (MSc. Thesis, Virginia Tech University).

CONFERENCES

• Foods for Health Annual Meeting (FFH), Ohio State University Characterization of intestinal immune responses to coccidiosis in chicken (Poster)	Columbus, OH USA, 2022
• Multi-State Poultry Feeding and Nutrition Conference and Danisco Animal Nutrition & Health's (IFF) Technical Symposium	Indianapolis, IN USA, 2022
• Poultry Science Association Meeting (PSA) Cryopreservation of Rooster Semen Using Different Levels of Acetamide (Oral)	Virtual, 2021
• Poultry Science Association Meeting (PSA) Chicken Muscle Neuropeptide Y (NPY) and Mitochondrial Function (Oral)	San Antonio, TX USA, 2018
• International Poultry Scientific Forum (IPSF) Comparative expression of avian beta defensins in turkey poults (Poster)	Atlanta, GA USA, 2016

AWARDS AND SCHOLARSHIPS

• Foods for Health Annual Meeting Poster Competition Award, The Ohio State University	2022
• Fully Funded Joint-Supervision Scholarship by the Egyptian Ministry of Higher Education at the OSU	2022
• PSA Conference Travel Award - University of Arkansas	2018
• Graduate Research Assistantship - University of Arkansas	2018
• USAID Fully Funded MSc Scholarship – MSc. at Virginia Tech	2014
• Master Scholarship Fully Funded by the Academy of Scientific Research and Technology "ASRT", Egypt	2010

CERTIFICATES

• SLPT: Spoken Language Proficiency Test at the University of Arkansas	Mar 2019
• IELTS: Overall score (6.5)	Apr 2014
• GRE: Score (296)	Mar 2014

REFERENCES

PhD Advisors:

Dr. Ali Nazmi	nazmi.1@osu.edu
Dr. Farid Stino	faridstino@agr.cu.edu.eg
Dr. Gamal Mehaisen	gamoka@cu.edu.eg