JORDAN UNIVERSITY OF SCIENCE AND TECHNOLOGY • COLLEGE OF AGRICULTURE •
ANIMAL PRODUCTION DEPARTMENT •IRBID, JORDAN
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HOSAM J. AL-TAMIMI
PROFESSOR OF ANIMAL PHYSIOLOGY

CAREER OBJECTIVE

Contribute to national and international sustainable agriculture and food security through implementation of applied and basic physiology research in laboratory and food animals.

EDUCATION

1998-2003 University of Missouri-Columbia Missouri-USA
Ph.D., Animal Science

1996-1998 New Mexico State University New Mexico-USA
M.S., Animal Science

1990-1994 Jordan University of Science & Technology Irbid-Jordan
B.S., Agriculture-Animal Production

PROFESSIONAL EXPERIENCE

Professor

2020-Present Jordan University of Science and Technology, College of Agriculture, Department of Animal Production, Irbid-Jordan

Associate Professor

2011-2020 Jordan University of Science and Technology, College of Agriculture, Department of Animal Production, Irbid-Jordan

Associate Professor

2003-2011 Mutah University, College of Agriculture, Department of Animal Production, Karak-Jordan

Assistant Professor

2004-2008 Mutah University, College of Agriculture, Department of Animal Production, Karak-Jordan

Full-time Lecturer

2003-2004 Mutah University, College of Agriculture, Department of Animal Production, Karak-Jordan

- Academic and administrative activities at Jordan University of Science and Technology (2011-present):
- Teaching, Graduate Advising and Research (2011-present): fully involved in teaching variable undergraduate and graduate courses, including: Advanced Animal Physiology 1 and 2 (Graduate), Animal Physiology, Animal Physiology Laboratory, Artificial Insemination, Dairy Cattle Production, Environmental Physiology of Farm Animals, Farm Animal Products (for non Animal Production nor Nutrition/Food Technology students), Farm Animal Products and Production (for non Agriculture nor Veterinary students), Practical Applications, Principles of Animal Science, Reproductive Physiology, Seminar (graduate and non-graduate), Special Topics (Camel Husbandry). Furthermore, supervision of more than 8 graduate students so far at the M.S. level. Research activity described at a later section. Briefly, after resignation from Mutah University in 2011 (due to research shrinkage and institutional financial challenges), I established the Biotelemetry laboratory at Jordan University of Science and Technology (now fully-equipped). Details described later.
- Assistant Dean for the College of Agriculture (2011-2012): Assisting dean in all college activity management issues, including: monitoring of staff activity (vacancies, check-ins and -outs), overtime financial issues, annual evaluation of college academic and non-academic activities (graduation ceremony, certificates), flow analyses for admitted and graduating students for all departments (by collaborating with department heads), evaluation and quality assurance of all course, laboratory and field requirements being the focal point to communicate and arrange with the "Accreditation and Quality Assurance Commission for Higher Education Institutions".
- Acting Chairman for the Animal Production Department (2012-2013): planning course work and academic loads to faculty members, task management allocation for department technicians, full monitoring and supervision of the animal and research field (animal farms; cattle, sheep, goats and poultry), dealing with versatile graduate and undergraduate student affairs (academic, financial assistance applications and assignments), vacancies of staff, curricula reform and course development, organizing research activity in the animal research field for faculty members and graduate students, and serving as an active member of the Animal Research and Use Committee (review of research proposals to assure compliance to animal ethics issues).

- Academic activity at Mutah University (2003-2011):
- Teaching (undergraduate courses): Animal Physiology, Animal Environmental Physiology, Reproductive Physiology and Artificial Insemination, Animal Health, Camel Production, Undergraduate Seminar, Sheep and Goat Production, Cattle Production, Sheep and Goat Practical Husbandry, Practical Training in Cattle Production, and Endocrinology.

- Involved in several research projects (listed separately), primarily dealing with physiological responses of lab and farm animals exposed to different forms of climatic stress.
- Served as major advisor for 5 graduate students (Departments of Nutrition & Food Technology, Animal Production and Biology) at the M.S. level, and served as co-advisor for 3 graduate students (Nutrition & Food Technology and Veterinary Medicine)
- Served as graduate committee member for 15 students at different Jordanian universities.
- Served in community service - "Veterinary Health" and "Animal Production" days - in Karak areas, Jordan.

PROFESSIONAL EXPERIENCE AT GRADUATE SCHOOL LEVELS

Ph.D. Program 1998-2003 University of Missouri-Columbia, Animal Science Department/College of Agriculture, Columbia-Missouri

Teaching & Research Assistant

- Participated in teaching "Animal Physiology" to undergraduate Animal Science and Pre-Veterinary students.
- Involved in several research projects mainly dealing with the relationship between local controllers of vasomotor tone within the cardiovascular system and ergopeptine alkaloid toxicity, in rats, mice as well as sheep and cattle, and interaction with physiological pathways of temperature regulation and tolerance to harsh climatic conditions.

M.S. Program 1996-1998 New Mexico State University, Animal Science Department

College of Agriculture & Home Economics

New Mexico, USA

Research Assistant

- Research primarily dealt with the role of thyroid gland on reproductive characteristics in ewes. Also involved in other research projects dealing with certain feed-evoked toxicities in sheep.

1996-1997 Food Technology Extension Program New Mexico, USA

Department of Food Science & Technology

College of Agriculture & Home Economics

Technical Assistant/Food Technologist

- Analysis of canned food prior to introduction into the consumer market, design of food-labels (nutritional facts label). Also offered basic consultations to processed food manufactures concerning preservation, marketing, and optimal processing procedures.

1995-1996 The British Society for the Protection of Animals Abroad (SPANA) Amman, Jordan

Lecturer

- Activity primarily focused on disseminating principles of animal welfare, protection of natural reserves, and water economy to farmers and school students.

1994-1995 Amman Food Industries, Inc. Amman, Jordan

Production Engineer

- Supervision of processed food (pastries) production lines, monitoring of quality assurance standards, and work force – management of human resources.

RESEARCH GRANTS ATTRACTED & RESEARCH ACTIVITY

- 2019: Thermophysiological performance of heat-stressed rats drinking different functional water types
  - Location: Jordan University of Science and Technology, Jordan.
  - Source: Research Deanship, Jordan University of Science and Technology, Jordan.
  - Grant: ~8,300 $US.
- 2018: Impact of heat stress on acute phase proteins and performance of laying hens in Jordan
  - Location: Jordan University of Science and Technology, Jordan.
  - Source: Research Deanship, Jordan University of Science and Technology, Jordan.
  - Grant: ~11,750 $US.
- 2015: Effects of creatine and/or betaine on productive, immunological, and thermophysiological responses in heat stressed-broiler chicks.
  - Location: Jordan University of Science and Technology, Jordan.
  - Source: Research Deanship, Jordan University of Science and Technology, Jordan.
  - Grant: ~8,300 $US.
- 2015: Physiological and immunological response to preemptive consumption of camel milk in rats exposed to lipopolysaccharide challenge.
  - Location: Jordan University of Science and Technology, Jordan.
  - Source: Research Deanship, Jordan University of Science and Technology, Jordan.
  - Grant: ~8,500 $US.
- 2014: Intensive Thermophysiological Evaluation of the Dromedary Camel to Thermal and/or Dehydration Stress.
  - Location: Jordan University of Science and Technology, Jordan.
  - Source: Research Deanship, Jordan University of Science and Technology, Jordan.
  - Grant: ~70,400 $US.

- 2014: Intensive Thermophysiological Evaluation of the Dromedary Camel to Thermal and/or Dehydration Stress.
  - Location: Jordan University of Science and Technology, Jordan.
  - Source: Research Deanship, Jordan University of Science and Technology, Jordan.
  - Grant: ~70,400 $US.
- 2013: Livestock Activity and Location Monitoring using Wireless Body-Mounted Sensors.
  - Location: Jordan University of Science and Technology, Jordan.
  - Source: Research Deanship, Jordan University of Science and Technology, Jordan.
  - Grant: ~21,000 $US.
- 2012: Effects of high dietary iodine on thermophysiological and thyroid functions in heat-stressed rats.
  - Location: Jordan University of Science and Technology, Jordan.
  - Source: Research Deanship, Jordan University of Science and Technology, Jordan.
  - Grant: ~8,800 $US.
- 2012: Thermophysiological responses of heat and immune-challenged hypercholesterolemic rats, treated with resveratrol.
  - Location: Jordan University of Science and Technology, Jordan.
  - Source: Research Deanship, Jordan University of Science and Technology, Jordan.
  - Grant: ~9,200 $US.
- 2012: Thermophysiological Responses to Menthol or Capsaicin in Vasospasmic and Hyperthermic Rats.
  - Location: Jordan University of Science and Technology, Jordan.
  - Source: Research Deanship, Jordan University of Science and Technology, Jordan.
  - Grant: ~12,100 $US.
- 2012: Effects of Molsidomine on Water Metabolism, Thermoregulatory and Cardiovascular Dynamics in Rats Experiencing Hyperthermia.
  - Location: Jordan University of Science and Technology, Jordan.
  - Source: Research Deanship, Jordan University of Science and Technology, Jordan.
  - Grant: ~12,120 $US.
- 2011: Assessment of combined effects of heat stress and dehydration of sheep on physiological parameters and water turnover via thermographic and stable isotopes.
  - Location: Georg-August-Universität Göttingen, Germany.
  - Source: Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) & the University of Gottingen.
  - Grant: ~12,000 $US.

- 2011: Investigation of thermoregulatory, immune responses and predisposing genetic factors in *Black Bedouin*, *Shami* and crossbred goats to environmental and immune challenges.
  - Location: Karak-Jordan
  - Source: Ministry of Higher Education & Scientific Research (Scientific Research Support Fund).
  - Grant: ~131,000 $US.
- 2007: Effects of Clozapine on Ergotamine-evoked toxicity in rats.
  - Location: Mutah University, Karak-Jordan
  - Source: Deanship of Scientific Research - Mutah University.
  - Grant: ~7,000 $US.
- 2005: Differences in thermophysiological parameters of goats reared under intensive or extensive systems.
  - Location: Mutah University, Karak-Jordan
  - Source: Deanship of Scientific Research - Mutah University.
  - Grant: ~1,300 $US.
- 2004: Effects of 6-N-Propyl-2-Thiouracil on thermoregulatory and productive performance of goat kids during thermal stress.
  - Location: Mutah University, Karak-Jordan
  - Source: Deanship of Scientific Research - Mutah University.
  - Grant: ~4,500 $US.
- 2003: Protein requirements of growing Shami and Baladi goat kids.
  - Location: Mutah University, Karak-Jordan
  - Source: Deanship of Scientific Research - Mutah University.
  - Grant: ~3,000 $US.
- 2003: Characterization of thermophysiological performance in Shami and Baladi goat kids in Southern Jordan.
  - Location: Mutah University, Karak-Jordan
  - Source: Deanship of Scientific Research - Mutah University.
  - Grant: ~2,500 $US.

ACADEMIC BOARDS

- **Mutah University**:
- University Scientific Research Committee (headed by the University President); (2008-2011).
- Agriculture Deanship Executive Board; (2006-2011).
- Scientific Workshops Preparatory Committee; (2003-2006).
- College of Agriculture Scientific Research Committee; (2004-2006).
- Student Disciplinary Committee; (2007-2009).
- Student Elections Committee; (2003-2007).

- **Jordan University of Science and Technology**:
- Animal Care and Use Committee (2011-2013).
- Agriculture Deanship Executive Board; (2011-2013).
- Scientific Workshop Preparatory Committee & Treasurer; (2012).

- Departmental Scientific Research Committee; (2011-2013; 2016-now).
- Student Disciplinary Committee; (2019).
- Student Elections Committee; (2011, 2016).

PROFESSIONAL AFFILIATIONS

- American Association for the Advancement of Science
- International Goat Association
- Jordanian Association for Agricultural Engineers

LANGUAGE PROFICIENCY

- Arabic: Excellent
- English: Excellent
- German: Novice

SELECTED PUBLICATIONS

- **Al-Tamimi** H.J., Mahmoud K.Z., Nusairat B., Al-Dawood A. and Bani Khalaf H. 2019. Thermotolerance of Broiler Chicks Ingesting Dietary Betaine and/or Creatine. Animals 9(10):742.
- **Al-Tamimi** H.J., Al-Atiyat R.M., Al-Majali A.D. and Alamiri O. 2019. Renal Efficiency underlies Adaptive Heterothermy of Heat-Stressed Hypohydrated Goats. Tropical Animal Health and Production. 59: 1-9.
- **Al-Tamimi** H.J., Al-Dawood A. and Mahasneh Z. 2019. The Wolff–Chaikoff effect ameliorates heat stress in rats. Animal Biotelemetry, 7: 8-14.
- **Al-Tamimi** H.J., Al-Dawood A., Awaisheh S.S. and Abdalla T. 2019. Resveratrol mitigates hypercholesterolemia exacerbated hyperthermia in chronically heat-stressed rats. Veterinary World, 12(2): 337-344.
- Obeidat B.S., Mahmoud K.Z., Obeidat M.D., Ata M., Kridli R.T., Haddad S.G., Titi H.H., Jawasreh K.I., **Al-Tamimi** H.J., Subih H.S., Hatamleh S.M., Abu Ishmais M.A. and Abu Affan R. 2018. The effects of Saccharomyces cerevisiae supplementation on intake, nutrient digestibility, and rumen fluid pH in Awassi female lambs. Veterinary World, 11(7): 1015-1020.
- Awaisheh S.S., Obeidat M.M., **Al-Tamimi** H.J., Assaf A.M., EL-Qudah J.M., Al-khaza'leh J.M. and Rahahleh R.J. 2016. In vitro cytotoxic activity of probiotic bacterial cell extracts against Caco-2 and HRT-18 colorectal cancer cells. Milk and dairy products in human nutrition, 69: 33-37.
- Al-Atiyat, R.M., **Al-Tamimi** H.J., Salameh N.M. and Tabbaa M.J. 2015. Genetic diversity of different Jordan goat breeds using microsatellite markers. The Journal of Animal & Plant Sciences, 25(6): 1532-1539.
- Rababah, T.M., Awaisheh S.S., **Al-Tamimi** H.J. and Susan Brewer. 2015. The hypocholesterolemic and hormone modulation effects of isoflavones alone or co-fermented with probiotic bacteria in hypercholesterolemic rats model. Int J Food Sci Nutr, 66(5): 546–552.

- Obeidat, B.S., M.S. Awawdeh, R.T. Kridli, H.J. **Al-Tamimi**, M.A. Ballou, M.D. Obeidat, M.A. Abu Ishmais, F.A. Al-Lataifeh, H.S. Subih. 2014. Feeding corn silage improves nursing performance of Awassi ewes when used as a source of forage compared to wheat hay. Animal Feed Science and Technology, 192: 24-28.
- **Al-Tamimi**, H.J., Obeidat B.S., Abdullah A.Y. and Atiyat R.M. 2013. Disproportionate thermophysiological strain between intensively- and extensively-managed goats during summer. Small Ruminant Research, 109: 1–8.
- Obeidat B.S., **Al-Tamimi** H.J., Osaili T.M., Awawdeh M.S. and Abu Ishmais M.A. 2012. Broiler litter as an alternative feedstuff for Awassi ewes: Effect on nursing performance and their lambs' performance. Animal Feed Science and Technology 174(s 3–4):148–153.
- Al-Atiyat R.M., Tabbaa M.J., Salameh N.M. and **Al-Tamimi**e H.J. 2012. Analysis of Genetic Variation of Fat Tailed-sheep in Southern Region of Jordan. Asian J. Anim. Vet. Advances, 7(5):376-389.
- **Al-Tamimi**, H. 2007. Responses of simultaneously recorded intraperitoneal and subcutaneous temperatures of Black Bedouin goats to transient thyrosuppression during cold stress. Livestock Science 106: 254–260.
- **Al-Tamimi**, H. 2007. Responses of core and peripheral temperatures to chronic cold stress in transiently goitrous goats. Small Ruminant Research, 71: 280–285.
- **Al-Tamimi**, H. 2006. Responses of core and peripheral temperatures to chronic cold stress in transiently goitrous goats. J. Thermal Biol. 31: 626–633.
- **Al-Tamimi**, H. 2005. Effects of solar radiation on thermophysiological and growth parameters of indigenous Black Bedwin goat kids in southern Jordan. J. Biol. Sci. 5 (6): 724-728.
- **Al-Tamimi**, H., G. Rottinghaus, D. Spiers, T. Carson, and N. Hill. 2003. Thermoregulatory response of dairy cows fed ergotized barley during summer heat stress. J. Veterinary Diagnostic Investigation. 15:355-360.
- **Al-Tamimi**, H.J. 2002. Nitric oxide and fescue toxicosis. Ph.D. dissertation. University of Missouri-Columbia, USA.
- **Al-Tamimi**, H.J. 1998. Endocrine, reproductive, and milk characteristics of ewes treated with propylthiouracil during gestation. MS thesis, New Mexico State University, USA.

CONFERENCES PROCEDGINS AND PARTICIPATIONS

- Obeidat M.D., **Al-Tamimi** H.J., Nusairat B. and Obeidat B.S. 2019. Effect of breed and density on growth performance and carcass traits of two broiler breeds. International Congress on Agriculture and Forestry Research, Marmaris-Turkey. Conference Book of Proceedings.
- **Al-Tamimi** H.J., Ababneh M. and Daradka M. 2019. A Practical Method for Synchronized Recording of Scrotal and Core Temperatures in Unrestrained Goats. International Congress on Agriculture and Forestry Research, Marmaris-Turkey. Conference Book of Proceedings.

- Awaisheh, S. S, Al-nabulsi, A. A, **Al-Tamimi**, H. J., Rahahleh, R. J., Al-Bakheit, A. A., and Al-Qudah, M. M. 2018. Isoflavones and phytosterols enriched milk mitigates body weight gain and hypercholesterolemia, and modulate steroids and thyroids hormones in Sprague-Dawley rats. International Conference on Food, Nutrition and Dietetics: Gastronomy Research, Alanya, Turkey. November 28th-30th. Conference Book of Proceedings.
- **Al-Tamimi**, H.J., K.Z. Mahmoud and H. Bani Khalaf. 2017. Effects of creatine and/or betaine on performance of heat-stressed broiler chicks. European Federation of Animal Science, Tallin, Estonia. August 28th-September 1st. Abstract (Poster), p.29.
- **Al-Tamimi**, H.J. and M. Daradka. 2016. Characterization of central, systemic and peripheral thermoregulation in the dromedary camel. 67th Annual Meeting of European Association of Animal Production, North Ireland, UK. August 29th-September 2nd. Abstract (oral presentation).
- **Al-Tamimi**, H.J. 2016. CGR advanced course: "Genome-wide gene expression profiling", The Physiological Society, Liverpool, UK, March 29th-April 1st. Workshop.
- **Al-Tamimi**, H.J., and Mahasnih, Z. 2015. Employment of the Wolff Chaikoff Phenomenon to Mitigate Acute Heat Stress-Induced Hyperthermia. 66th Annual Meeting of European Association of Animal Production, Warsaw, Poland. August 31st-September 4th. Abstract (poster), p.38.
- **Al-Tamimi**, H.J. 2014. Thermoregulation in goats. 5th International Symposium on the Physiology and Pharmacology of Temperature Regulation, Kruger National Park, South Africa, 7-12 September. Abstract (invited speaker).
- **Al-Tamimi**, H.J., Atiyat R.M. and A.M. Al-Majali. 2012. Differences in body core and shell temperature patterns between Black Bedouin, Damascus and crossbred goat kids in late winter. XI International Conference on Goats, International Goat Association, Gran Canaria, Spain. September 23-26. Abstract (poster).
- **Al-Tamimi**, H.J. 2009. Synchronized recording of core, scrotal and femoral temperatures in unrestrained goats. The 3rd International Symposium on Physiology and Pharmacology of Temperature Regulation, July 23-26, 209, Matsue, Izumo, Japan. Abstract (poster).
- **Al-Tamimi**, H. 2006. Core and Peripheral Temperature Regulation in Chronically Cold-Stressed and Transiently Goitrous Goats. 2nd International Symposium on the Physiology and Pharmacology of Temperature Regulation, Phoenix AZ, USA, March 3-6. Abstract (poster).
- **Al-Tamimi**, H, D. Spiers, and M. Ellersieck. 2002. Effects of transdermal nitroglycerin on thermoregulatory characteristics of beef steers ingesting an endophyte-infected diet under cyclical heat challenge. Agriculture Experimental Station, University of Missouri-Columbia.
- Oliver, J. W., H. **Al-Tamimi**, J. C. Waller, H. A. Fribourg, K. D. Gwinn, L. K. Abney, and R. D. Linnabary. 2001. Effect of chronic exposure of beef steers to the endophytic fungus tall fescue: comparative effects on nitric oxide synthase activity and nitrate/nitrite levels in lateral saphenous veins. Southern Extension and Research Activity Information Exchange Group-8 (SERAIEG-8), Chapel Hill, Tennessee. pp. 55-59.
- **Al-Tamimi**, H., D. Spiers, and G. E. Rottinghaus. 2001. Refinement of a rat model to study fescue toxicosis II. Nitric oxide studies. Southern Extension and Research Activity Information Exchange Group-8 (SERAIEG-8), Chapel Hill, Tennessee.

- Snider, D., D. Spiers and H. **Al-Tamimi**. 2001. Development of a basic model to predict rectal temperature in cattle based on telemetry measure of thermal status. Miller internship presentation, University of Missouri-Columbia.
- Spiers, D., P. Eichen, G. Rottinghaus, J. Lakritz, M. Leonard and H. **Al-Tamimi**. 2001. Managed reductions of problems associated with fescue toxicosis at the animal level (University of Missouri). ASAS joint meeting; Indianapolis, Indiana.
- **Al-Tamimi**, H., D. Spiers, and M. Ellersieck. 2000. Nitric oxide role in rats fed and endophyte-infected seed diet. ASAS joint meeting; Baltimore, Maryland.
- **Al-Tamimi**, H., D. Spiers, J. Spain, G. Rottinghaus, N. Hill, D. Chatman, J. Underwood, and M. Ellersieck. 1999. Preliminary study of dairy cow response to ergotized barley during heat stress. ASAS joint meeting; Indianapolis, Indiana.
- Shirly, K., D. Hallford, M. Thomas, J. Hernandez, C. Rasor, J. Richards and H. **Al-Tamimi**. 1998. Serum LH after a GnRH challenge as an inducer of time of puberty in young Debouillet ewe lambs. Abstract. Mid-western Joint Meeting. Des Moines, Iowa.
- Richards, J., D. Hallford, G. Duff, H. **Al-Tamimi**, J.Hernandez and K. Shirly. 1998. Serum, growth, and semen traits of ram lambs fed locoweed and treated with vitamin E/selenium. Abstract. Mid-western Joint Meeting. Des Moines, Iowa. Pages 243-247 in Proc. Western Sec., ASAS.
- **Al-Tamimi**, H. J., D. M. Hallford, F. A. Schneider, L. A. Donovan, J. A. Hernandez, and J. B. Richards. 1998. Reproductive and endocrine characteristics of ewes treated with propylthiouracil during gestation. Pages 197–201 in Proc. Western Sec., ASAS.

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REFERENCES

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