

CURRICULUM VITAE

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Personal Information:

Birth Place: Jeddah, Saudi Arabia.

Nationality: Saudis.

General Specialization: Molecular Microbiology.

Specialization field: Bacterial Infectious Diseases.

Language: Arabic (mother-tongue) and English (fluent).

Education & Scientific Qualifications:

- **B.Sc.**, Microbiology, King Saud University, Riyadh, Saudi Arabia.
- **M.Sc.**, Biological Sciences, University of Arkansas, Fayetteville, Arkansas, USA.
Thesis Title: “Characterize Cytochrome *b*: containing a subunit of alkaliphilic bacteria”, (November 2006).
- **Ph.D.**, Cell & Molecular Biology, University of Arkansas, Fayetteville, Arkansas, USA.
Dissertation Title: “Phenotypic and Functional Genomics Analyses of *Salmonella* for Food Safety Applications”, (February 2015).

Professional & Academic Appointments:

- Undergraduate student research project, Laboratory of Dr Ali Bahkali, Department of Botany & Microbiology, King Saud University, Riyadh, Saudi Arabia.

Curriculum Vitae- T. M. Dawoud, August 2017

- Teaching assistant, Department of Botany & Microbiology, King Saud University, Riyadh, Saudi Arabia.
- International student, Spring International language center, University of Arkansas, Fayetteville, Arkansas, USA.
- Graduate student (master degree), Dr David M. Ivey Laboratory, Biological Sciences Department, University of Arkansas, Fayetteville, Arkansas, USA.
- Graduate students research organizer, Department of Botany & Microbiology, King Saud University, Riyadh, Saudi Arabia (December 2006- December 2007).
- Graduate student (Ph.D. degree), Dr Young Min Kwon Laboratory, Cell & Molecular Biology Program, University of Arkansas, Fayetteville, Arkansas, USA (Spring 2008-Fall 2014).
- Member of Food Safety Center, University of Arkansas, Fayetteville, Arkansas, USA (Spring 2008-Fall 2014).
- Assistant Professor, Botany & Microbiology Department, Science College, King Saud University, Riyadh, Saudi Arabia (Since May 2015).
- Member of the Board of Botany and Microbiology, Faculty of Science, King Saud University.
- Member of the Higher Committee of the Department of Botany and Microbiology (academic year 1437/1438 H).
- Member of the representative of the Department of Botany and Microbiology in the budget committee of the College of Science, King Saud University 2015/2016.
- Director of the Central Laboratory of Botany and Microbiology Department (Academic Year 1436/1437 H) .

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- Member of the Committee of Study Plans and Equations in Botany and Microbiology Department, Faculty of Science, King Saud University.
- Member of the Academic Guidance Committee for Students, Botany and Microbiology Department, Faculty of Science, King Saud University.
- Rapporteur of the committee to discuss the graduate research project for students of the Department of Botany and Microbiology, Faculty of Science, King Saud University (for the academic year 1437/1438 H).
- Supervisor of Alumni, Training and Community Partnership Committees, Department of Botany and Microbiology, College of Science, King Saud University (for the academic year 1437/1438 H).
- Rapporteur of Alumni and Human Resources Committee, Department of Botany and Microbiology, Faculty of Science, King Saud University (1437/1438 H).
- Rapporteur of Student Training Unit, Botany and Microbiology Department, Faculty of Science, King Saud University (1437/1438 H).
- General Director of Riyadh Incubation Center (Technology Incubators), The Vice Rectorate for Graduate Studies and Scientific Research, King Saud University (01/ 1438 H).
- Member of the Technical Licensing Committee, Knowledge EcoSystem , The Vice Rectorate for Graduate Studies and Scientific Research, King Saud University (01/ 1438 H).
- Arbitrator for Microbiology Program, Program Transformation at Taif University (2 - 4 Ramadan 1438 H).

Teaching Experience:

- **1996-1999:** Laboratory course instructor (Teaching assistant) for Bachelor degree students- Botany & Microbiology Department, King Saud University, Riyadh, Saudi Arabia.
- **1996-1997:** General Microbiology, General Bacteriology, General Virology, and General Mycology,
- **1997-1998:** Physiology of Bacteria, Physiology of fungi, Microbial Ecology, Industrial Mycology, Yeasts, Microbial & Ecological Pollution, and Water & Sewer Microbiology.
- **1998-1999:** Microbial Genetics, Pathogenic Bacteriology, Pathogenic Mycology, Immunology, and Antibiotics.
- **Summer 2015:** 330 MIC (Microbial Physiology), 492 MIC (Applied training in food and environmental microbes and human health).
- **Fall 2015:** 140 MIC (General Microbiology), 351 MIC (Microbial Genetics), 493 MIC (Training in health Microbial laboratory), 499 MIC (Research Project), and 522 MIC (Mechanisms of Bacterial Pathogenesis).

Professional Societies:

- Life Sciences Society, Science College, King Saud University, Riyadh, Saudi Arabia.
- American Society of Microbiology (ASM), USA.
- Arkansas Association for Food Protection (AAFP), USA.

Professional & Academic Honors and Awards:

- Graduate Studies Scholarship from King Saud University.
- Students Travel Grants, 113th General Meeting, American Society of Microbiology (ASM), Denver, Colorado, USA. (May 18-21, 2013).

Community Services:

- Saudi Students Club President, University of Arkansas, Fayetteville, Arkansas, USA. (March 2012-September 2013).
- Arabic/English interpreter for new Arabic speaker students, Fayetteville Schools District, Fayetteville, Arkansas, USA.
- Active international Arabic student with international admission office, University of Arkansas, Fayetteville, Arkansas, USA.
- Active international member in helping out Saudi students and their families with International Students & Scholars Office (ISS) during 09/11 tragedy.
- Active member in helping out Saudi students with issues associated with their scholarship, University of Arkansas, Fayetteville, Arkansas, USA.

Research Interests:

General Interest:

- Microbial Genetics and Genomics.
- Microbial Diagnostics.
- Microbial Ecology.
- Applied Microbiology (biotechnology, bioremediation, food microbiology, etc.).
- Food Safety, Food Poisoning.
- Pathogens associated with healthcare infection.

Specific Interest:

- Bacterial pathogenesis and virulence mechanisms.
- Antibiotics resistance.
- Microbial stress adaptation (host, environmental and food processing).
- Food-borne, Water-borne, Soil-borne, Vector-borne, and Zoonotic infections.
- Microbial community analysis.
- Bacterial functional genomics.

Technical and Specialized Skills Summary:

- Basic bacteria experimentation techniques (culture, isolation, and stock preparation of bacteria), electro-competent cells preparation.
- Restriction digestion analysis.

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- PCR, DNA-based approaches, and Primers design.
- Plasmid and Genomic DNA extractions.
- Transformation, DNA recombination.
- Gel electrophoresis and DNA gel extraction (Agarose and PAGE gels).
- Molecular cloning, Gene expression, Protein purification.
- SDS-PAGE gel electrophoresis, Western blotting.
- Site-directed mutagenesis, Transposon mutagenesis, Mutant library preparation.
- Bioinformatics analysis using JMP software.
- Sample(s) preparation for Next Generation Sequencing (NGS).
- Genome-wide high-throughput screening for vaccine and drug candidate targets.

Annual Conferences/ Meetings (Posters):

- The 109th American Society of Microbiology Annual General Meeting, Philadelphia, PA. May 17-21, 2009.
- The 113th American Society of Microbiology Annual General Meeting, Denver, CO. May 18-21, 2013.
- The 5th Annual Arkansas Association for Food Protection (AAFP), Fayetteville AR. September 10-11, 2013.
- The Annual Meeting of International Association of Food Protection (IAFP), Indianapolis, IN. Aug. 3-6, 2014.

Oral Presentation:

- Heat Survival and Phenotype Microarray Profiling of *Salmonella enterica* serovar Typhimurium Mutants. The 22nd Annual Meeting of the South Central Branch of the American Society of Microbiology (SCB-ASM). Fayetteville, AR. September 11-13, 2014.

Publications:

- **Dawoud, T.**, P. Herrera, I. Hanning, Y.M. Kwon, and S.C. Ricke. 2011. *In vitro* invasion of laying hen ovarian follicles by *Salmonella* Enteritidis strains. Poultry Sci. 90: 1134-1137.
- Khatiwara, A., T. Jiang, S.-S. Sung, **T. Dawoud**, J.N. Kim, D. Bhattacharya, H.-B. Kim, S. C. Ricke, and Y.M. Kwon. 2012. Genome scanning for conditionally essential genes in *Salmonella*. Appl. Environ. Microbiol. 78: 3098-3107.
- **Dawoud, T.**, T. Jiang, R. K. Mandal, S.C. Ricke, and Y.M. Kwon. 2014. Improving the efficiency of transposon mutagenesis in *Salmonella* Enteritidis by overcoming host-restriction barriers. Molecular Biotechnol. 56: 1004–1010.
- **Dawoud, T. M.**, A. Khatiwara, S. H. Park, M. L. Davis, C. A. Baker, S. C. Ricke., and Y. M. Kwon (2016). Heat Survival and Phenotype Microarray Profiling of *Salmonella enterica* serovar Typhimurium Mutants, Current Microbiology. pp 1-11, Available online 21 December 2016. DOI: 10.1007/s00284-016-1170-1.
- **Dawoud, T. M.**, T. Jiang, S. H. Park, C. Baker, S. C. Ricke., and Y. M. Kwon (2016). Genome-wide Identification of *Salmonella* Typhimurium Genes Essential for Cold Temperature Survival on a Chicken Carcass Using a Tn-seq Method. (In preparation).
- Nathan A. Jarvis, Corliss A. O'Bryan, **Turki M. Dawoud**, Si Hong Park, Young Min Kwon, Philip G. Crandall, Steven C. Ricke, An overview of *Salmonella* thermal destruction during food processing and preparation, Food Control, Volume 68, October 2016, Pages 280-290.
- Abdullah A. Al-Arfaj, Mohamed S. Ali, Ashgan M. Hessain, Adel M. Zakri, **Turki M. Dawoud**, Khalid S. Al-Maary, Ihab M. Moussa, Phenotypic and genotypic analysis of pathogenic *Escherichia coli* virulence genes recovered from Riyadh, Saudi Arabia, Saudi Journal of Biological Sciences, Available online 24 November 2015.

- Khalid S. Al-Maary, **Turki M. Dawoud**, Ayman S. Mubarak, Ashgan M. Hessain, Hussein M. Galal, Saleh A. Kabli, Moussa I. Mohamed, Molecular characterization of the capsular antigens of *Pasteurella multocida* isolates using multiplex PCR, Saudi Journal of Biological Sciences, Available online 17 June 2016, ISSN 1319-562X.
- Moussa I. Mohamed, Khalid S. Al-Maary, **Turki M. Dawoud**, Ayman S. Mubarak, Ashgan M. Hessain and Kh. F. Mohamed. International Journal of Pharmacology. 2016; 12(7):749-53.
- Mohamed A. Yassin, Abd El-Rahim M.A. El-Samawaty, **Turki M. Dawoud**, Omar H. Abd-Elkader, Khalid S. Al Maary, Ashraf A. Hatamleh, Abdallah M. Elgorban, Characterization and anti-*Aspergillus flavus* impact of nanoparticles synthesized by *Penicillium citrinum*, Saudi Journal of Biological Sciences, Available online 31 October 2016.
- Ashraf A. Mostafa, Abdulaziz A. Al-Askar, Khalid S. Almaary, **Turki M. Dawoud**, Essam N. Sholkamy, Marwah M. Bakri, Antimicrobial activity of some plant extracts against bacterial strains causing food poisoning diseases, Saudi Journal of Biological Sciences, Available online 24 February 2017
- **Dawoud , Turki M.**, Morgan L. Davis, Si Hong Park, Sun Ae Kim, Young Min Kwon, Nathan Jarvis, Corliss A. O'Bryan, Zhaohao Shi, Philip G. Crandall, Steven C. Ricke. The potential link between thermal resistance and virulence in *Salmonella*: A review, Frontiers in Veterinary Science (Veterinary Infectious Diseases), 2017 (Accepted). Available: <https://doi.org/10.3389/fvets.2017.00093>
- Kamelia osman, Walid Mousa, Eman Abdeen, Walid Elmonir, El-Diasty Eman, Fatma ElMougy, **Turki Dawoud**, Aymen Mubarak, Ihab Moussa, and Ashgan Hessain. The human and cattle medically important mycobioime causing pulmonary distress in humans and cattle in an urban-rural population. Scientific Reports, June 2017 (submitted).
- Hend Yousef; Kamelia Osman; Avelino Álvarez-Ordóñez; Lorena Ruiz; Mohamed Elhadidy; Ayman Mubarak; **Turki Dawoud**; Ihab Moussa; Fatma ElMougy; Ashgan Hessain; Wafaa Abd El-Ghany;

Ahmed Orabi. Pollution of poultry hatcheries environment with haemolytic biofilm forming antimicrobial resistant *Escherichia coli*. BMC Microbiology, June 2017 (submitted).

Book Chapters:

- Ricke, S.C., **T. M. Dawoud**, and Y.M. Kwon. 2015. Chapter 4. Application of molecular methods for traceability of foodborne pathogens in food safety systems. In: S.C. Ricke, J.R. Donadson, and C.A. Phillips (Eds.) Food Safety: Emerging Issues, Technologies and Systems. Elsevier, Oxford, UK.
- Handley, J.A., S.H. Park, Z. Shi, **T. M. Dawoud**, Y.M. Kwon, and S.C. Ricke. 2015. Chapter 6. *Salmonella* and the potential role for microbial process indicators on chicken carcasses. In: S.C. Ricke, J.R. Donadson, and C.A. Phillips (Eds.) Food Safety: Emerging Issues, Technologies and Systems. Elsevier, Oxford, UK.
- **Dawoud, T. M.**, Z. Shi, Y. M. Kwon, and S. C. Ricke. 2017. Chapter 7. Overview of Salmonellosis and Food-borne *Salmonella*: Historical and Current Perspectives. In: S.C. Ricke and R. K. Gast (Eds.) Producing Safe Eggs: Microbial Ecology of Salmonella. Academic Press, San Diego, CA, USA.
- Ricke S.C., **T.M. Dawoud**, Z. Shi, P. Kaldhone, and Y.M. Kwon. 2017. Chapter 10. Foodborne *Salmonella* in Laying Hens and Egg Production. In: S.C. Ricke, G.G. Atungulu, S.H. Park, and C.E. Rainwater (Eds.) Food and Feed Safety Systems and Analysis. Elsevier Inc., San Diego, CA (Submitted).