



Sulaiman Alnaimat

Full Professor of Molecular Microbiology · Dean, Faculty of Allied Medical Sciences

WHOLE-GENOME SEQUENCING · PHYLOGENOMICS · MICROBIAL TAXONOMY · EXTREMOPHILES · DESERT ROCK VARNISH · ANTIMICROBIALS

Al-Hussein Bin Talal University · P.O. Box 20 · Ma'an 71111 · Jordan

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01 Professional Summary

Experienced professor in molecular microbiology with over a decade of teaching and research, specialising in **whole-genome sequencing, microbial taxonomy, and phylogenomic analysis**. Research centres on bioactive gene clusters, actinomycete diversity, and the polyphasic characterisation of extremophiles recovered from desert rock varnish and arid environments of southern Jordan, complemented by senior leadership in higher-education administration.

02 Academic Qualifications

Post-Doctoral Fellowship in Molecular Microbiology University of New Hampshire, USA	2019 – 2020
Ph.D. in Microbiology University of Sheffield, United Kingdom	2008 – 2011
M.Sc. in Biology University of Jordan, College of Science	2006 – 2008
B.Sc. in Biology Mu'tah University, College of Science	1999 – 2003

03 Academic & Administrative Appointments

Dean, College of Allied Medical Sciences Al-Hussein Bin Talal University (AHU)	2025 – Present
Full Professor in Molecular Microbiology Al-Hussein Bin Talal University (AHU)	Nov 2025 – Present
Associate Professor — Medical Analysis & Biology Department Al-Hussein Bin Talal University (AHU)	Sept 2017 – Nov 2025
Part-Time Lecturer American University of Madaba (AUM), Jordan	2024 – 2025
Director — Center for Studies, Consultations & Community Development Al-Hussein Bin Talal University (AHU)	Dec 2020 – 2022
Vice Dean — Princess Aisha Bint Al-Hussein College of Nursing & Health Sciences Al-Hussein Bin Talal University (AHU)	2017 – 2018
Head — Department of Medical Analysis Al-Hussein Bin Talal University (AHU)	2017 – 2018
Head — Biology Department Al-Hussein Bin Talal University (AHU)	2016 – 2017
Vice Dean of Academic Research Al-Hussein Bin Talal University (AHU)	2014 – 2016

Member, Academic Research Council Al-Hussein Bin Talal University (AHU)	2014 – 2016
Editorial Board Member — Journal of Research Al-Hussein Bin Talal University (AHU)	2015 – 2016
Assistant Professor — Biology Department Al-Hussein Bin Talal University (AHU)	2011 – 2017
Teacher of Biological Sciences Ministry of Education, Jordan	2003 – 2008

04 Research & Technical Skills

Whole-Genome Sequencing & Annotation Genomic insights into <i>Bacillus velezensis</i> ; <i>Cellulosimicrobium funkei</i> characterisation.	Comparative & Phylogenomic Analysis Comparative genomic characterisation; taxonomic placement of microbial isolates.
Microbial Isolation & Identification Isolation of <i>Bacillus</i> sp. with antagonistic potential; <i>Vibrio coralliilyticus</i> in corals.	Molecular Techniques — PCR, 16S/18S rRNA, Metagenomics 18S rRNA for tadpole-shrimp identification; metagenomic analysis of desert varnish.
Bioinformatics & Computational Analysis Antibacterial gene-cluster profiling; genome mining for secondary metabolites.	Antibiotic Resistance & Antimicrobial Screening Antibiotic-resistant bacteria in the ICU; mycelial inhibition of MRSA.
Natural Product Evaluation — Apitherapy, Essential Oils Therapeutic use of honey and essential oils; bergamot nano-emulsion; <i>Artemisia herba-alba</i> .	Environmental & Desert Microbiology Rock-varnish microbiota; desert-derived microbial diversity.

05 Grants Awarded

Integrated and Sustainable Management of Fly (Diptera) Infestation in Ma'an Governorate: A Field, Laboratory and IPM-Based Applied Study Source: Al-Hussein Bin Talal University (AHU) Role: Principal Investigator Duration: Jun 2026 – Jun 2028	\$63,000 USD
Whole Genome Sequencing-Based Taxonomic Classification of Putative Novel Bacterial Species Source: Deanship of Scientific Research, AHU — Grant #05/2022 Role: Principal Investigator Duration: Jun 2022 – Present	12,000 JOD
Taxonomy and Polyphasic Characterization of Actinomycetes from Rock Varnish, Al-Jafer Basin Source: Fulbright Visiting Scholar Program Role: Sole Principal Investigator Duration: Sept 2019 – May 2020	\$44,000 USD
Phylogenetic Diversity of Microbial Communities in Al-Jafer Basin Rock Varnish Source: Deanship of Scientific Research, AHU — Grant #18/2014 Role: Principal Investigator Duration: Oct 2014 – Oct 2018	\$32,000 USD
FUTURE PROPOSAL Occurrence and characterisation of virulence genes among multidrug-resistant bacteria isolated from patients attending health-care facilities in Ma'an province, Jordan.	

06 Publications · Last 5 Years

- Abushattal, S., **Alnaimat, S. M.**, Odat, N., & Abushattal, M. (2026). Draft genome data analysis and pathogenicity profiling of *Staphylococcus aureus* strain IHS3A with antibiotic resistance genes isolated from a hospital in Jordan. *Data in Brief*, 112453.
- Alnaimat, S. M.**, Abushattal, S., Dmour, S. M., Al-Awaida, W. J., Ayyash, A. M., & Goh, K. W. (2025). Genomic insights into the taxonomic status and bioactive gene cluster profiling of *Bacillus velezensis* RVMD2 isolated from desert rock varnish in Ma'an, Jordan. *PLoS ONE*, 20(4), e0319345. <https://doi.org/10.1371/journal.pone.0319345> **Q1**

- c. **Alnaimat, S. M.**, AbuShattal, S., & Dmour, S. (2024). Comparative genomic characterization of *Cellulosimicrobium funkei* isolate RVMD1 from Ma'an desert rock varnish challenges *Cellulosimicrobium* systematics. *Frontiers in Microbiology*, 15, 1445943. <https://doi.org/10.3389/fmicb.2024.1445943>. **Q1**
- d. **Alnaimat, S. M.**, AbuShattal, S., & Dmour, S. (2025). Draft genome of halophilic *Salinicoccus roseus* H15 isolated from desert rock varnish in Ma'an, Jordan. *Microbiology Resource Announcements*, e00928-24. <https://doi.org/10.1128/mra.00928-24>. **Q3**
- e. Abushattal, S., **Alnaimat, S. M.**, Dmour, S. M., Saidat, N., & Al-Nsour, E. H. (2025). Molecular profiling and genetic diversity of mecA-mediated methicillin-resistant *Staphylococcus aureus* isolates from healthcare workers in a major hospital. *Electronic Journal of General Medicine*, 22(5), em686. **Q2**
- f. Saghir, S. A. M., Al Hroob, A. M., Alshehade, S. A., **Alnaimat, S.**, Al Yousfi, N. A., Al-Rawashdeh, S. A. B., ... & Alshawsh, M. A. (2025). Proteomic approaches for biomarker discovery and clinical applications in autoimmune diseases. *Clinica Chimica Acta*, 120533. **Q1**
- g. Abushattal, S., **Alnaimat, S. M.**, Dmour, S. M., Saidat, N., & Al-Nsour, E. H. (2025). Genotyping of methicillin-resistant *Staphylococcus epidermidis* in healthcare workers in a Jordanian hospital using molecular tools. *Jordan Journal of Biological Sciences*, 18(3). **Q2**
- h. AbuShattal, S., Alnasarat, H., **Alnaimat, S. M.**, & Eid, E. (2024). The use of 18S rRNA for identification of the first record of Tadpole Shrimp *Lepidurus apus* (Linnaeus, 1758) from Jordan. *Biodiversitas*, 25, 1223–1229. **Q2**
- i. Dmour, S. M., Saghir, S. A. M., AbuShattal, S., Qaralleh, H., **Alnaimat, S. M.**, Al-Jaafreh, A. M., Alsou, E. M., Abdulghani, M. A., & Almajali, I. S. (2024). Biological activities and chemical composition of essential oil isolated from *Artemisia herba-alba*. *Electronic Journal of General Medicine*, 21(1), em569. <https://doi.org/10.29333/ejgm/14161>. **Q1**
- j. Saghir, S. A., **Alnaimat, S. M.**, Dmour, S. M., Al-Tarawni, A. H., Abdelnour, S. A., Ahmeda, A. F., ... & Lindequist, U. (2023). The ameliorative effect of bergamot oil nano-emulsion in stressed ... *Saudi Pharmaceutical Journal*. **Q2**
- k. Abu-Zaitoon, Y. M., Al-Ramamneh, E. M., Al Tawaha, A. R., **Alnaimat, S. M.**, & Almomani, F. A. (2023). Comparative coexpression analysis of indole synthase and tryptophan synthase A reveals the independent production of auxin via the cytosolic free indole. *Plants*, 12(8), 1687. **Q1**
- l. Abu-Zaitoon, Y. M., Abu-Zaiton, A., Al Tawaha, A. R., **Alnaimat, S. M.**, ... (2022). Evidence from co-expression analysis for the involvement of amidase and INS in the tryptophan-independent pathway of IAA synthesis in *Arabidopsis*. *Applied Biochemistry and Biotechnology*, 194(10), 4673–4682. **Q2**
- m. Ennis, N. J., Dharumadurai, D., Seigny, J. L., Wilmot, R., **Alnaimat, S. M.**, Bryce, J. G., Thomas, W. K., & Tisa, L. S. (2022). Draft genome sequences of 11 Geodermatophilaceae strains isolated from building stones from New England. *Journal of Genomics*, 10, 69–77. **PubMed**
- n. Alkubati, S. A., Saghir, S. A. M., Alhariri, A., Al-Areefi, M., Al-Sayaghi, K. M., Alsabri, M., **Alnaimat, S. M.**, & Albagawi, B. S. (2022). Prevalence of antibiotic-resistant bacteria in intensive care units at Hodeida City, Yemen. *Journal of Applied Pharmaceutical Science*, 12(9), 139–145. **Q2**
- o. Al-Karablieh, N., Al-Horani, F. A., **Alnaimat, S. M.**, & Abu Zarga, M. H. (2022). Prevalence of *Vibrio coralliilyticus* in stony coral *Porites* sp. in the Gulf of Aqaba, Jordan. *Letters in Applied Microbiology*, 75(2), 460–469. **Q3**
- p. Al-Awaida, W., Al Hourani, B. J., Swedan, S., Nimer, R., Alzoughool, F., Al-Ameer, H. J., ... **Alnaimat, S. M.**, ... & Hadi, N. R. (2021). Correlates of SARS-CoV-2 variants on deaths, case incidence and case fatality ratio among the continents. *Genes*, 12(7), 1061. **Q2**
- q. Saghir, S. A. M., Al-Gabri, N. A., Ali, A. A., Al-Attar, A.-S. R., Al-Sobarry, M., Al-Shargi, O. Y. A., **Alnaimat, S. M.** (2021). Ameliorative effect of thymoquinone-loaded PLGA nanoparticles on chronic lung injury induced by lipopolysaccharide in rats. *Oxidative Medicine and Cellular Longevity*, 5511523. **Q1**

07 Publications · 2012 – 2019

1. Abu-zaitoon, Y., Tawaha, A., **Alnaimat, S.**, Al-rawashdeh, I., Abu-zaiton, A., & Khalifat, A. (2019). Investigation of the potential role of aldehyde oxidase in indole-3-acetic acid synthesis of developing rice grains. *Plant Cell Biotechnology and Molecular Biology*, 20(1-2), 6–13.

2. **Alnaimat, S.**, Abu Shattal, S., Althunibat, O., Alsbou, E., & Amasha, R. (2017). Iron (II) and other heavy-metal tolerance in bacteria isolated from rock varnish in the arid region of Al-Jafer Basin, Jordan. *Biodiversitas*, 18(3), 1250–1257.
3. **Alnaimat, S.**, Aladaileh, S., Abu Shattal, S., Al-asoufi, A., Nassarat, H., & Abu-Zaitoon, Y. (2017). Isolation and molecular characterization of a newly isolated strain of *Bacillus* sp. HMB8, with a distinct antagonistic potential against *Listeria monocytogenes* and some other food-spoilage pathogens. *Jordan Journal of Biological Sciences*, 10(2), 135–143.
4. **Alnaimat, S.**, Alharbi, N. S., Alharbi, S. A., Salmen, S. H., Chinnathambi, A., Al-Johny, B. O., & Wainwright, M. (2015). Mycelium of fungi isolated from mouldy foods inhibits *Staphylococcus aureus* including MRSA — a rationale for the re-introduction of mycotherapy? *Saudi Journal of Biological Sciences*, 22(5), 600–603.
5. **Alnaimat, S.**, Wainwright, M., Jaber, S., & Amash, R. (2015). Mechanism of the antibacterial action of (*Leptospermum scoparium*) oil on methicillin-resistant *Staphylococcus aureus* (MRSA) and *E. coli*. Paper presented at the 2nd Mediterranean Symposium on Medicinal and Aromatic Plants (MESMAP-2), Antalya, Turkey, 22–25 April 2015.
6. **Alnaimat, S.**, Wainwright, M., & Aladaileh, S. H. (2013). An initial in vitro investigation into the potential therapeutic use of *Lucilia sericata* maggot to control superficial fungal infections. *Jordan Journal of Biological Sciences*, 6, 137–142.
7. **Alnaimat, S.**, Wainwright, M., & Al'Abri, K. (2012). Antibacterial potential of honey from different origins: a comparison with manuka honey. *Journal of Microbiology, Biotechnology and Food Sciences*, 1(5), 1328–1338.
8. Alharbi, S. A., Mashat, B. H., Al-Harbi, N. A., Wainwright, M., Aloufi, A. S., & **Alnaimat, S.** (2012). Bismuth — inhibitory effects on bacteria and stimulation of fungal growth in vitro. *Saudi Journal of Biological Sciences*, 19(2), 147–150.

08 Manuscripts in Preparation

- **Alnaimat, S. M.**, et al. (In preparation). Metagenomic profiling of rock varnish and surrounding soil microbial communities in the semiarid region of Al-Jafer Basin, Jordan.
- **Alnaimat, S. M.**, et al. (In preparation). Taxonomic status, phylogeny, and secondary-metabolite clusters of *Bacillus pumilus* H23 isolated from desert rock varnish revealed by whole-genome sequencing.
- **Alnaimat, S. M.**, et al. (In preparation). Whole-genome analysis of *Paenibacillus polymyxa* strain APB1 isolated from Ma'an soil reveals potent antimicrobial and anti-MRSA activities linked to diverse biosynthetic gene clusters.

09 Courses Taught & Academic Activities

Courses taught: General Microbiology, Medical Microbiology, Clinical Microbiology, Environmental Microbiology, Microbial Genetics, Microbial Biotechnology, Cancer Biology, General Biology 101, General Biology 102, Cell Biology, Molecular Biology, Practical Molecular Biology, General Virology, Practical Microbiology, Seminar, Practical Clinical Microbiology, and Marine Pollution.

- **External examiner** for approximately 20 M.Sc. dissertations in the Biology Department of Mu'tah University.
- **Peer reviewer** for: Saudi Biological Journal; Jordan Journal of Biological Sciences (JJBS); Biodiversitas Journal of Biological Diversity; International Journal of Pharmaceutical Research; JMBFs; and International Journal of Biometeorology.
- **EndNote software trainer** for AHU academic staff.
- **Arabic-language science YouTube channel** — bit.ly/3h4hY2R

10 Public Lectures

- Using Google NotebookLM for Exam Preparation.
- Artificial Intelligence: Opportunities and Challenges — Abdul Hameed Shoman Library, Ma'an.
- Developing Healthcare Through Artificial Intelligence: Prospects and Challenges.
- Tips and Tricks for Managing Email More Effectively in Microsoft Outlook.

- Using ChatGPT in Academia: Harnessing the Power of AI for Research and Education.
- Using AI Language Models (ChatGPT) in the Daily Tasks of Municipality Employees.
- The Hidden World of Bacteria: Unveiling the Microscopic Giants Among Us.
- The Story of Antibiotics: From Serendipitous Discoveries to the Battle Against Resistance.
- Bacterial Self-Healing Concrete: Building a Sustainable Future with Microbial Technology.
- Viruses — Too Small but High Impact: Exploring the Intricate World of Viral Infections.
- Metagenomics in Medical Diagnosis: Recent Developments and Future Perspectives.
- Sites and Applications Benefiting Postgraduate Students: Navigating the Digital Tools for Academic Success.

11 Educational YouTube Channels

Ighris Faseelah Channel

Concise scientific knowledge and academic-skills enhancement for students and researchers; the name is inspired by a prophetic saying encouraging positive action and hope.

Playlists: Essential Resources for Postgraduate Students · Scientific Facts in Minutes · General Biology 101 · Seminar Skills · EndNote Referencing Training · Using Generative AI in Academic Work.

Dr. Sulaiman Alnaimat Channel

Detailed university-level explanations of life-sciences courses.

Playlists: Microbiology for Biological Sciences Students · Microbiology for Nursing Students · Microbiology for Medical Laboratory Students · General Environmental Science · Virology Course · General Biology 102 · Cancer Biology · General Biology Lab 103.

12 Workshops & Training Courses

4th EURESTOP Training School — From Data to Action: Estimation Methods & Data Visualization for Antimicrobial Resistance Burden

Jun 2026

Pula, Croatia

IAEA Fellowship Program — Development of e-Learning Materials

May – Jun 2019

Bangkok, Thailand

Erasmus Mundus PEACE I — Teaching Staff Exchange

May – Jun 2016

Staffordshire University, United Kingdom

DIES ProGRANT — Proposal Writing for Research Grants

Mar – Sept 2015

University of Cologne, Germany

13 Social Activities & Memberships

- Member, Committee for Innovation, Creativity and Entrepreneurship — Al-Hussein Bin Talal University (Jun 2025 – Present).
- Working-Group Member, ROOT-BENEFIT — COST Action CA22142, “Beneficial root-associated microorganisms for sustainable agriculture,” funded by the European Union (May 2025 – Present · root-benefit.eu).
- Working-Group Member, EURESTOP — COST Action CA21145, “European Network for diagnosis and treatment of antibiotic-resistant bacterial infections,” funded by the European Union (Jun 2025 – Oct 2026 · eurestop.eu).
- Member, Community Health Committee — Ayl District (2025 – Present).
- President, Ayl Charitable Society — Ma'an, Jordan (2021 – Present).
- Member, Administrative Board, Union of Charitable Societies — Ma'an City, Jordan (2025 – 2029).
- Member, Local Advisory Council — Ayl Al-Jadeah Municipality (2023 – Present).
- Member, National Plan Subcommittee on Drug-Resistant Microbes (2022 – Present).

Prof. Louis S. Tisa

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