Ministry of Higher Education& Scientific Research
Diyala University
College of Sciences

وزارة التعليم العالي والبحث العلمي
جامعة ديالى
كلية العلوم

أ.د. علياء معن عبد الحميد

Professor Dr Alyaa Abdelhameed

Professional summary

Professor and Head of the Department of Biotechnology at the University of Diyala, with experience in undergraduate and postgraduate teaching, research supervision and academic programme development. Research interests include microbial ecology, antimicrobial resistance, metagenomics and microbial genome mining.

Professional experience

Head of the Department of Biotechnology, University of Diyala, Iraq

Current appointment

- Lead departmental academic activities in the College of Science.

Postdoctoral Researcher, University of Tübingen, Germany

2024

- Research in the Ziemert Lab on biosynthetic gene clusters in human microbiomes.

Lecturer and Assistant Professor, University of Diyala, Iraq

2002–2022

- Taught microbiology, molecular biotechnology, microbial genetics and ecology, and applied and industrial microbiology.
- Supervised undergraduate, MSc and PhD research and contributed to curriculum development and student assessment.

External Examiner, Iraqi Universities

2018–present

- Examine MSc and PhD research degrees.

Student Demonstrator, Swansea University, United Kingdom

2014–2015

- Supported undergraduate laboratory teaching in genetics and biochemistry.

Education

PhD in Medical and Healthcare Studies, Swansea University, United Kingdom

2018

- Thesis on the relationship between metal contamination in archived soils and microbial resistance to antibiotics and metals.

MSc in Microbiology and Bacteriology, University of Baghdad, Iraq

2005

- Thesis on purification of L-asparaginase from environmental isolates of Serratia marcescens.

BSc in Microbiology, University of Anbar, Iraq

2002

- Project on the impact of giardiasis on the haematological profile of infected children.

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Languages

Arabic (native) • English (fluent) • German (A2)

Skills

- Laboratory methods: microbial culture, environmental and clinical sampling, antimicrobial susceptibility and metal resistance assays, PCR and 16S rRNA amplicon analysis.
- Biochemical methods: DNA and protein extraction, protein assays and microbial enzyme purification.
- Bioinformatics: metagenomics, whole-genome mining for resistance genes and biosynthetic gene clusters, and microbial diversity analysis.
- Data analysis and mapping: PRIMER 7, R, GraphPad, SPSS, QGIS and basic Python.

Awards and affiliations

- Iraqi Ministry of Higher Education and Scientific Research, first prize for best research among Iraqi universities, 2021.
- Microbiology Society, United Kingdom.

Peer review

Reviewer for Diyala Journal of Pure Science and Advances in Microbiology.

Selected publications

- Quinn, G. A., Abdelhameed, A., et al. (2022). Complimentary protein extraction methods increase the identification of the Park Grass Experiment metaproteome. Applied Soil Ecology, 173, 104388.
- Al-Dulaimi, M., Algburi, A., Abdelhameed, A., et al. (2021). Antimicrobial and anti-biofilm activity of polymyxin E alone and in combination with probiotic strains against selected Acinetobacter spp. Pathogens, 10(12), 1574.
- Quinn, G. A., Abdelhameed, A. M., et al. (2021). Streptomyces isolates from the soil of an ancient Irish cure site, capable of inhibiting multi-resistant bacteria and yeasts. Applied Sciences, 11(11), 4923.
- Quinn, G. A., Banat, A. M., Abdelhameed, A. M., & Banat, I. M. (2020). Streptomyces from traditional medicine: Sources of new innovations in antibiotic discovery. Journal of Medical Microbiology, 69(8), 1040.

Selected conference contributions

Oral presentations at 2NICST2020, Baku (2020), the Swansea University Medical School postgraduate research conference (2017), and the 3rd Thünen Symposium on Soil Metagenomics (2016).