

Alyaa Abdelhameed

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ACADEMIC QUALIFICATIONS

- **Doctor of Philosophy (Ph.D.) Medical and Healthcare Studies (2018)**
Swansea University Medical School, Swansea University, Singleton Park, Swansea, SA2 8PP
Supervisory Team: Dr. Matthew Hitchings, Dr. Ricardo Del Sol and Dr. Geertje Van Keulen

Thesis Title: Study of the correlation between archived metal-polluted soils and microbial resistance to antibiotics and metals
- **Master of Science (M.Sc.) Microbiology/Bacteriology (2005)**
Baghdad University College of Science

Thesis Title: Purification L-Asparaginase enzyme from environmental isolates *Serratia marcescens*
- Bachelor of Science (B.Sc.) Microbiology (2002)

APPOINTMENTS HELD

- **Assistant Professor - Bacteriology and Molecular Biology (2013)**
College of Science, Diyala University, Iraq
- **Lecturer - Molecular Biology, Bacteriology and Environmental Microbiology (2012-2013)**
College of Science, Diyala University, Iraq
- **Assistant Lecturer - Food Microbiology, Industrial Microbiology (2005-2011)**
College of Science, Diyala University, Iraq
- **Research Technician- Microbiology and Antibiotics Laboratory (2002-2005)**
College of Science, Diyala University, Iraq

TEACHING EXPERIENCE

- **Undergraduate Project Supervision (2014-2018)**
Supervision and training of third year Genetics/Biochemistry undergraduate project students in basic laboratory techniques
- **Student Demonstrator – Molecular revolution undergraduate degrees (2016-2017)**
Swansea University, Singleton Park, Swansea, SA2 8PP
- **Student Demonstrator – Metabolic regulation undergraduate degrees (2016-2017)**
Swansea University, Singleton Park, Swansea, SA2 8PP
- **Student Demonstrator – Genetics and Biochemistry undergraduate degrees (2014-2016)**
Swansea University, Singleton Park, Swansea, SA2 8PP

TECHNICAL RESEARCH SKILLS

- **Laboratory experience**
 - Extensive culturing techniques: Microbiology, Antibiotic and Metals salts sensitivity test, Environmental and Clinical sampling, PCR technique, 16SrRNA-amplicon, Microbial enzymes purification and optimization
- **Computational experience**
 - Metagenesis analysis, Whole genome-mining (Resistance/ Biosynthesis gene), Bacterial diversity analyses
 - Multivariate statistical analyses, Advanced statistical analyses, Metal pollution calculation and Geographical mapping software
 - Software analysis packages such as Primer E-7, GraphPad, SPSS, Microsoft office and QGIS

- **Communication**

- Oral, written and presentation

AFFILIATIONS

- Microbiology Society
- Marine Biological Society

CONFERENCE CONTRIBUTIONS

- **Swansea University Medical School Research Postgraduate Research Conference (2017)**
Presentation: “*Metal Pollution Effect On Soil Microbial Community*”
Swansea University, UK
- **3rd Thünen Symposium on Soil Metagenomics (2016)**
Presentation: “*Metal Pollution Effect On Soil Microbial Community*”
Braunschweig, Germany
- **Society for General Microbiology Annual Conference (2015)**
Presentation: “*Long-term Effect Of Metal Pollution On Soil Microbial Community*”
Birmingham, UK
- **3rd International Symposium on the Environmental Dimension of Antibiotic Resistance (2015)** Poster: “*Correlation Between Metals Content Of Soil With Bacterial Resistance To Antibiotics*” Wernigerode, Germany

WORKSHOP ATTENDANCE

- **Analyses of metagenomes (2016)**
Braunschweig, Germany
- **Multivariate Analysis In Ecology using PRIMER-E (2015)**
Plymouth, UK
- **Introduction To Python For Biologists (2015)**
Edinburgh, UK

PUBLICATIONS

1. Nisayif, S., **Abdelhameed, A.** and Hummadi, E. **2013.** Optimization and characterization of Arginase from *Bacillus* sp. *Journal of Al Mustansiriyah Science*, 24 (1): 19-28.
2. Khudair, M. and **Abdelhameed, A.** **2013.** Study the normal flora of eye conjunctivitis for healthy persons and effect of Chloramphenicol antibiotic in Diyala Governorate. *Journal of Tikrit of Pure Science*, 18 (4): 74-76.
3. **Abdelhameed, A.** and Khudair, M. **2013.** Production and purification of lipase enzyme *pseudomonas aeruginosa* bacteria and study same effected conduction in actives. *Journal of Diyala agriculture science*, 2.
4. **Abdelhameed, A.**, Kither, M. & Farmman, M. **2013.** Production and purification of lipase enzyme *pseudomonas cepacia* sp. and study same effected conduction in actives. *Journal of Diyala agriculture science*, 5(2).
5. Abdelhameed, A. and Jassim, I. **2012.** Study the extracted the teichoich acid from *Staphylococcus aureus* isolated from Osteomyelitis patients. *Journal of College of Basic Education*, 118(18):673-685.
6. **Abdelhameed, A.** and Jassim, I. **2011.** Study the effect of the antibiotics on glutaminase activity purified from the environmental isolates *Serratia plymuthica* isolated from Diyala river. *Journal of Diyala agriculture science*, 3(1):22-33.
7. **Abdelhameed, A.** **2009.** Production of cellulase by *Serratia odorifera* in different conditions. *Journal of Research Diyala humanity*, 36:156-161.
8. **Abdelhameed, A.** and Nisayif, S. **2007.** Effect of some materials and metal ions on chitinase purified from environmental isolates *Serratia Plymuthica* sp. *Journal of Al-Mustansiriyah Science*, 18(3): 1-8.

PUBLICATIONS IN PREPARATION

1. Terra, L., Dyson, P. J., Hitchings, M. D., Thomas, L., **Abdelhameed**, A., Banat, I. M., ... & Quinn, G. A. (2018). A Novel Alkaliphilic Streptomyces Inhibits ESKAPE Pathogens. *Frontiers in Microbiology*, 9, 2458.
2. **Abdelhameed**, A. Hitchings, MD. Del Sol, R. and Van Keulen, G. Distinct soil bacterial diversity under long-term metals tolerance. (In preparation).
3. **Abdelhameed**, A. Hitchings, MD. Del Sol, R. and Van Keulen, G. Phenotypic characterization of antibiotic and metal resistance in environmental bacteria isolated from archived metal-polluted soil. (In preparation).
4. **Abdelhameed**, A. Hitchings, MD. Del Sol, R. and Van Keulen, G. Whole genome sequence analyses of antibiotic resistant *Streptomyces* spp. isolates from archived soils samples. (In preparation).
5. Aween, H. **Abdelhameed**, A. and Smith, T. Development of a transposon mutagenesis system for *Methylosinus trichosporium* OB3b and Identification of genes that are involved in reduction of selenite by *Methylosinus trichosporium* OB3b. (In preparation).
6. Abdussalam, W., Alkhaibari, A., **Abdelhameed**, A., Hummadi, E., Ju-Nam, Y. Antimicrobial activities of Novel Gold Nanoparticles Agent against *Escherichia coli* and *Staphylococcus Aureus* Bacteria. (In preparation).
7. **Abdelhameed**, A. Hitchings MD. Del Sol, R. and Van Keulen, G. Assessment of heavy metal pollution using multivariate statistical analyses in Swansea Neath Port-Talbot (SNPT) area in the UK. (In preparation).
8. **Abdelhameed**, A. Harris, L. Del Sol, R. and Van Keulen, G. (2018). Metal salts increase the susceptibility of methicillin sensitive and resistant *Staphylococcus aureus* to commonly used antibiotics. (In preparation).
9. Gerry Quinn , Andrea Gazze, Ingrid Hallin, Martin Swain, **Alyaa Abdelhameed**, Ed Dudley, Peter Matthews , Geertje van Keulen Parallel extraction methods increase protein identification in Park Grass Experiment soil(In preparation).