Esam Hummadi

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EDUCATION

Ph.D., Biotechnology **February, 2018**
Swansea University, UK
Thesis: "Bioactive Volatile and Secretory Metabolites of the Entomopathogenic Fungus *Metarhizium*".

M.Sc. Biotechnology **September, 2003**
University of Baghdad, Iraq
Dissertation: "Biochemical Study on Streptodornase Produced from *Streptococcus pyogenes*".

B.Sc., Plant Protection **September, 1994**
University of Baghdad, Iraq

TEACHING/SUPERVISING EXPERIENCE

Lecturer and Assistant Professor, University of Diyala (2015-present)

- Supervising undergraduate dissertations
- Supervising postgraduate dissertations
- Assisting with programme development and student assessment
- Student assessment

TEACHING EXPERIENCE (UNDERGRADUATE COURSES TAUGHT)

Principles of Biotechnology, Environmental Biotechnology, Antibiotics, Practical Molecular Biology, Practical Microbial Genetic.

ACADEMIC JOURNAL REVIEWING

- Process Safety and Environmental Protection
- Heliyon
- Phytochemical Analysis
- Waste and Biomass Valorization
- Bulletin of Environmental Contamination and Toxicology
- International Journal of Energy Research

PROFESSIONAL AFFILIATIONS

Member

- The Society of Biology (UK)
- The British Mycological Society (UK)
- Microbiology Society (UK)
- Antibiotic Research (UK)
- British Society for Antimicrobial Chemotherapy (UK)
- European Society of Clinical Microbiology and Infectious Diseases (Switzerland)

TECHNICAL SKILLS

- Production and purification of bioactive compounds.
- In vivo tests of bioactive compounds.
- Handling nucleic acids.
- Enzymatic kinetics and catalysis.
- Molecular Biology techniques.

PATENTS

Butt, Tariq, and **Esam Hummadi**. "Use of Volatile Organic Compounds as Pesticides." U.S. Patent Application No. 17/042,541.

RESEARCH INTERESTS

Environmental Biotechnology, Natural Products, Antimicrobial Agents, Wastewater.

PUBLICATIONS

1) Mahmood, M. M.; Khudhaier M. K. and **Hummadi, E. H.** (2010). A drug sensitivity of bacteria isolated from otitis media patients and a study of transmission agents of the disease in Diyala government. Journal of Research Diyala Humanity. Vol. 42, p: 304-313.
2) Gatie I. H., Al-Taai H. R. R. and **Hummadi E. H.** (2010). Isolation of Formaldehyde Resistant Bacteria from Different Environmental Samples. Diyala Journal for Pure Scinces. Vol.7, No. 4.
3) **Hummadi, E. H.** (2011). Production of Nuclease from *Staphylococcus sp*. EH69 Diyala Journal for Pure Sciences. Vol.8, No.1, p: 11-25.
4) Al-Khalidy, S. H. H., Abdilhameed A. M. and **Hummadi E. H.** (2013). Detection the Optimum Conditions for Alginase Production by *Bacillus* sp. Isolated from Soil. Al-Mustansiriyah Journal of Science. Vol. 24, issue 1, p: 19-28.
5) Al-Tamimi, A., **Hummadi, E.,** & Hammadi, M. (2019). Antibacterial activity of ZnO and CO_3O_4 nanoparticles synthesized by co-precipitation method. Biochem. Cell. Arch., 19(2), 3489-3494.
6) Ahmed, M. J., Okoye, P. U., **Hummadi, E. H.,** & Hameed, B. H. (2019). High-performance porous biochar from the pyrolysis of natural and renewable seaweed (*Gelidiella acerosa*) and its application for the adsorption of methylene blue. *Bioresource technology*.
7) Khanday, W. A., Ahmed, M. J., Okoye, P. U., **Hummadi, E. H.,** & Hameed, B. H. (2019). Single-step pyrolysis of phosphoric acid-activated chitin for efficient adsorption of cephalexin antibiotic. *Bioresource Technology*.
8) Tan, Y. L., Ahmed, M. J., **Hummadi, E. H.,** & Hameed, B. H. (2019). Kinetics of Pyrolysis of Durian (*Durio zibethinus* L.) Shell Using Thermogravimetric Analysis. *Journal of Physical Science*, 30.
9) Hameed, I. A., Habeeb, A. A., Al-Zanganawee, J., & **Hummadi, E. H.** (2020). Effect of Colloidal Gold Nanoparticles Preparation Conditions on Viability of MCF-7 Breast Cancer Cells. Diyala Journal for Pure Science, 16(04).
10) Ahmed, M. J., Hameed, B. H., & **Hummadi, E. H.** (2020). Review on recent progress in chitosan/chitin-carbonaceous material composites for the adsorption of water pollutants. *Carbohydrate Polymers*, 116690.
11) **Hummadi, E. H.,** Dearden, A., Generalovic, T., Clunie, B., Harrott, A., Cetin, Y., ... & Butt, T. (2020). Volatile Organic Compounds of Metarhizium brunneum Influence the efficacy of Entomopathogenic Nematodes in Insect Control. *Biological Control*, 104527.
12) Ahmed, M. J., Hameed, B. H., & **Hummadi, E. H.** (2021). Insight into the chemically modified crop straw adsorbents for the enhanced removal of water contaminants: A review. Journal of Molecular Liquids, 115616.