College of Veterinary Medicine

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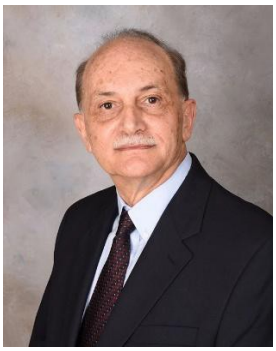

EDUCATION/TRAINING

Institution and Location	Degree	Graduation Year	Major
University of Baghdad- Iraq	DVM	1984	Veterinary Medicine
University of Bristol, U.K.	PhD	1989	Immunology

TEACHING

- Veterinary Virology and Clinical Microbiology
- Advanced Virology/Immunology
- Grand Rounds (Clinical Research)

RESEARCH INTERESTS

The research projects in my laboratory are centered around my keen interest in understanding how E. coli heat-labile enterotoxins (LT-1) from enterotoxigenic E. coli modulate the immune system. These proteins serve as carriers for various epitopes and function as adjuvants without the need for oil-based formulations. Over the years, we have made significant strides in elucidating the immunological properties of these bacterial toxins and their mechanisms of action on mammalian cells, both in controlled in vitro settings and within living organisms in vivo. We are actively exploring additional mechanisms by which these toxins interact with cells. Our investigations extend to the realm of cell biology, specifically the role of extracellular vesicles, including exosomes, in the enterotoxins immune cell-to-cell communication. This multifaceted project encompasses proteomic analysis and the study of gene expression related to proteins involved in cell-to-cell communication. Our ultimate goal is to harness the insights gained from these studies to develop strategies for controlling the progression of infectious diseases.

RECENT PUBLICATIONS

1. Hilarie Uwamahoro, Willard E Collier, Toufic Nashar, et al. Natural and Designed Cyclic Peptides as Potential Antiviral Drugs to Combat Future Coronavirus Outbreaks (2025). Molecules 30(8):16515). PMID: 40333520.

2. Bryson A, Gonzalez G, Al-Atoom N, Nashar N, Smith JR, Nashar T. Extracellular vesicles are conduits for E. coli heat-labile enterotoxin (LT) and the B-subunits of LT and cholera toxin in immune cell-to-cell communication. Microb Pathog. 2023 Apr; 177:106038. PubMed Central PMCID: PMC10065948.

Complete List of Published Work in My Bibliography:
https://www.ncbi.nlm.nih.gov/sites/myncbi/toufic.nashar.2/bibliography/50017324/public/?sort=date&direction=descending
Citations: https://www.researchgate.net/profile/Toufic-Nashar