

Ashraf I Khasawneh

+962-799157366 | ashrafkh@hu.edu.jo | Irbid, Jordan



BIOMEDICAL SCIENCES & MICROBIOLOGY SPECIALIST

An experienced, enthusiastic Microbiologist highly competent in applied molecular and diagnostic virology. Self-motivated scientist accustomed to working with research of epidemiological and molecular projects. Gained solid practical knowledge across key specialist areas of modern virology including Molecular Epidemiology, Cloning, isolation, and purification of viruses. Highly skilled teacher with 10 years of experience in teaching Microbiology, Virology, and Immunology to Medical, Pharmacy, and Applied Health Sciences students.

Recent experience in providing diagnostic support to a virology project dealing with prevalence of human papillomavirus among women and in head and neck cancer patients in Jordan. Speedy writer of research proposals, skilled in data analysis, meeting the day-to-day operational needs and the quality assurance criteria. Fluent in English with professional experience in office work programs and molecular biology programs.

BIOMEDICAL RESEARCH SKILLS

• Molecular Biology

Gene cloning and expression methods, site-directed mutagenesis, DNA and RNA isolation, various PCR and RT-PCR methods, Sequencing PCR, Gel Electrophoresis, Transformation, Transfection, SDS-PAGE, Immunoblotting (ECL & Odyssey methods), ELISA, Luciferase assays, serum neutralization assays, immunofluorescent staining, Confocal Microscopy and Flow Cytometry techniques.

• General Cell Culture

Worked with 293T, Vero, and Hela cell lines, and know the methods of generating stable cell lines expressing desired genes

• BSL-3 lab trained

Experienced in virology techniques including virus production, propagation, and purification; virus neutralization; virus detection by PCR and immunoassays

• Handling of experimental animals (Mice)

Intraperitoneal DNA vaccine administration, mice handling.

EXPERIENCE OVERVIEW

Associate professor	The Hashemite University, School of Medicine	July 2021- current
Assistant professor	The Hashemite University, School of Medicine	2012-June 2021
Part-time lecturer	The University of Jordan, school of medicine	2013-2018
Immunology Demonstrator	Monash University	2010
MBBS Clinical skills tutor	Monash University	2009
PCL Facilitator	Monash University	2008
Ophthalmology Resident	Ministry of health, Jordan	2006-2007
General Physician	Ministry of health, Jordan	2004-2006
General Physician	Ibn Al-Nafees Hospital, Jordan	2003-2004
Medical Internship	Ministry of health, Jordan	2002-2003

QUALIFICATION

2012 | PhD in Microbiology | Monash University, Australia

2007 | Master of biomedical science part 1 | Monash University, Australia

2002 | Bachelor of Medicine and Surgery | Jordan University of Science and Technology, Jordan

PROFESSIONL EXPERIENCE



THE HASHEMITE UNIVERSITY, SCHOOL OF MEDICINE | AL ZARQA, JORDAN

Virology Scientist and Lecturer

06/2012 – Current

Teaching Microbiology, Virology, and Immunology. Conducting research projects on human papillomavirus and *Staphylococcus aureus* using serological and molecular assays.

Duties

- Teaching Medical Virology course to Medical and Medical Laboratory students
- Teaching Medical Microbiology to Medical, Nursing and Pharmacy students
- Teaching Immunology to Medical, Biology, and pharmacy students

Projects:

- Prevalence of HPV among a subpopulation of Jordanian women
- HPV association with Head and Neck Cancer in Jordanian patients
- Biofilm Forming Genes among Jordanian Nasal Carriers of *Staphylococcus aureus*
 - Research skills
 - Designing, planning and executing research experiments
 - Preparation of papers for publication in scientific journals or for presentation in national or international congresses
 - Positive teamwork relationship with research assistants
 - Motivation for self-improvement by participating in training and education programs including seminars, meetings and conferences

Key outcomes:

- **HPV projects** – DNA extraction from collected samples, followed by detection of HPV genome using RT-PCR and genotyping using commercial kits. Data analysis and manuscript writing leading to 2 publications.
- ***Staphylococcus aureus* project** – Nasal swab collection, culture, phenotype and molecular characterization, analysis of biofilm forming genes using PCR. Manuscript writing leading to 3 publications.

Current Projects:

- Association of HPV, EBV, HCMV, MMTV, and BLV with breast cancer in Jordanian women.
- Analytical study to determine the incidence of SARS-CoV-2 and other expected circulating respiratory viruses among the population in Jordan.
- Epidemiology, Immunology and genetic studies of SARS-CoV-2 in Jordan
- GI shedding of SARS-CoV-2 and effects on the gut microbiome: a Jordanian study



MONASH UNIVERSITY, DEPARTMENT OF MICROBIOLOGY | CLAYTON, AUSTRALIA

Immunology Demonstrator

03/2010 – 09/2010

Teaching practical sessions for the second-year students at the department.

Key achievements:

- Provided guidance to students who attended microbiology classes. These practical sessions were core units in the curriculum and help students to better understand the theoretical classes. Assisted in the marking of quizzes given by the class supervisor.



MONASH UNIVERSITY, SCHOOL OF MEDICINE | CLAYTON, AUSTRALIA

MBBS Clinical skills tutor

03/2009 – 09/2009

Patient centred learning (PCL) Facilitator

07/2008 – 12/2008

Key achievements:

- Facilitating and guiding group discussions of 2nd year medical students in a clinically orientated setting.



MINISTRY OF HEALTH HOSPITALS

| AMMAN, JORDAN

Ophthalmology Resident

11/2006 – 03/2007

General Physician

09/2004 – 10/2006

Key achievements:

- Medical history taking; examining patients, ordering, and interpreting diagnostic tests, and prescribing medications for ER patients.

EDUCATIONAL BACKGROUND



MONASH UNIVERSITY & BURNET INSTITUTE | MELBOURNE, AUSTRALIA

PhD in Microbiology

03/2008 – 03/2012



Key projects:

- **HIV sequence evolution in patient samples** – Sequencing of evolved mutations and characterization of identified mutation within the DSR and MPER regions at various time points of the infection.
- **Forced sequence evolution of attenuated HIV cell cultured viruses containing mutations in the disulfide-bonded region (DSR)** – Attenuated HIV viruses harboring W596L.K601D DSR mutant that lacked gp120-gp41 association, showed evolution at MPER region.
- **Probing the conformational states of HIV gp41 using cysteine replacement mutagenesis** – A model for gp41 conformational activation was proposed, whereby a trimeric coiled coil in prefusion gp41 becomes extended into the polar segment in the prehairpin, providing a packing surface for C-terminal sequences to form a hairpin structure that extends to the terminal membrane-interactive sequences.



MONASH UNIVERSITY & BURNET INSTITUTE | MELBOURNE, AUSTRALIA

Masters of Biomedical Science part 1

02/2007 – 12/2007



Burnet Institute
Medical Research. Practical Action.

Key projects:

- **Recombinant baculovirus and Thymidine kinase Ganciclovir system: role in hepatitis C vaccine generation** - Constructed a DNA plasmid that encoded the HSVtk gene (pFBM TK GFP) which was further tested for gene expression and ability to induce apoptosis and Hsp70 upregulation after GCV treatment.



JORDAN UNIVERSITY OF SCIENCE AND TECHNOLOGY | IRBID, JORDAN

Bachelor of Medicine Bachelor of Surgery

09/1996 – 06/2002

Key areas of focus:

- Courses included human Anatomy, Physiology, Pharmacology, Microbiology, Pathology, and Biochemistry in the first 3 basic sciences years. Clinical training included rotations and theory lectures in the following topics: Internal Medicine, Surgery, Obstetrics and gynecology, Pediatrics in addition to minors.
- Gained vast experiences in Medicine, Surgery, Obstetrics and gynecology, and Pediatrics. Also learned professional history taking, physical examination, diagnosis and treatments of common diseases and emergency care at the teaching hospital at Jordan University of Science and Technology.

PRESENTATIONS AT CONFERENCES

- Human Papillomavirus status in Jordan among a subpopulation of women and in head and neck cancer patients
Oral presentation in the International conference on Oncology and Virology, 25-26 July 2019, Rome, Italy.
- Prevalence and Genotype Distribution of Human Papillomavirus in Amman, Jordan
Oral presentation in the World congress on Virology, Microbiology and Microbiologists, 19-20 November 2018, Orlando, USA.
- Conformational States of HIV-1 gp41 Revealed by Cysteine Scanning Mutagenesis

Oral presentation in the IUMS *Conference*, 17-21 July 2017, Singapore.

- Role of Thymidine Kinase Ganciclovir system in hepatitis C vaccine generation.
Oral Presentation in the ACH Conference, 14-17 May 2007, Melbourne, Australia.

PUBLICATIONS

1. Al-Jussani, G.N., **Khasawneh, A.I.**, Mullahuwash, Y.A. Significant Changes in Histochemical Pattern of Mucin in Colorectal Carcinoma with Marked Reduction in Poorly Differentiated Grade. *Biochemical and cellular archives*, 2021, 21(1), pp. 1627–1634.
2. **Khasawneh AI**, Asali FF, Kilani RM, Abu-Raideh JA, Himsawi NM, Salameh MA, Al Ghabbiessh GH, Saleh T. Prevalence and Genotype Distribution of Human Papillomavirus Among a Subpopulation of Jordanian Women. *International Journal of Women’s Health and Reproduction Sciences*, 2021, 9(1), pp. 17–23.
3. **Khasawneh AI**, Himsawi N, Abu-Raideh J, Salameh MA, Al-Tamimi M, Mahmoud SA, Saleh T. Status of Biofilm-Forming Genes among Jordanian Nasal Carriers of Methicillin-Sensitive and Methicillin-Resistant *Staphylococcus aureus*. *Iranian Biomedical Journal*. 2020 Nov;24(6):386.
4. Al-Tamimi M, Himsawi N, Abu-Raideh J, **Khasawneh AI**, Jazar DA, Al-Jawaldeh H, Hawamdeh H. Phenotypic and Molecular Screening of Nasal *S. aureus* from Adult Hospitalized Patients for Methicillin- and Vancomycin-resistance. *Infect Disord Drug Targets*. 2021;21(1):68-77. doi: 10.2174/1871526520666200109143158. PMID: 31916522.
5. Al-Suleiman JW, **Khasawneh AI**, Kheirallah KA. Could “trained immunity” be induced by live attenuated vaccines protect against COVID-19? Review of available evidence. *The Journal of Infection in Developing Countries*. 2020 Sep 30;14(09):957-62.
6. **Khasawneh AI**, Humeidan AA, Alsulaiman JW, Bloukh S, Ramadan M, Al-Shatanawi TN, Awad HH, Hijazi WY, Al-Kammash KR, Obeidat N, Saleh T, Kheirallah KA. Medical Students and COVID-19: Knowledge, Attitudes, and Precautionary Measures. A Descriptive Study From Jordan. *Front Public Health*. 2020 May 29;8:253. doi: 10.3389/fpubh.2020.00253. PMID: 32574313; PMCID: PMC7274076.
7. **Khasawneh AI**, Himsawi N, Abu-Raideh J, Salameh M, Abdullah N, Khasawneh R, Saleh T. Prevalence of Human Papillomavirus Associated with Head and Neck Squamous Cell Carcinoma in Jordanian Patients. *The Open Microbiology Journal*. 2020 Apr 23;14(1).
8. Al-Tamimi, M., Abu-Raideh, J., Himsawi, N., **Khasawneh, A.**, & Hawamdeh, H. (2020). Methicillin and vancomycin resistance in coagulase-negative *Staphylococci* isolated from the nostrils of hospitalized patients. *The Journal of Infection in Developing Countries*, 14(01), 28-35. <https://doi.org/10.3855/jidc.11025>
9. Al Haj Mahmoud S, Abboud MM, **Khasawneh A**, Mohammed NA. The Effects of Chloride Position on the Aerobic Degradation of Chlorobenzoates by *Klebsiella pneumoniae*. *Jordan Journal of Biological Sciences*. 2019; 12(4):513-518.
10. **Khasawneh, AI.**, Laumaea, A., Harrison, D.N. *et al.* Forced virus evolution reveals functional crosstalk between the disulfide bonded region and membrane proximal ectodomain region of HIV-1 gp41. *Retrovirology* **10**, 44 (2013). <https://doi.org/10.1186/1742-4690-10-44>

COMMUNICATION AND OFFICE BASED SKILLS

- Sequence analysis and expertise with Vector NTI Advanced, DNA Strider and Sequencher
- Professional in Microsoft office software
- Professional in Adobe Photoshop software

- Computational modeling, including basic knowledge of PyMOL for production of High-quality 3D images of proteins
- Data preparation and presentation
- GraphPad Prism software

REFERENCES

To be furnished upon request.