

# Hassan Abdulla Al-mana

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*Research Assistant with experience working in diagnostic and research laboratories. Experienced in the operation and maintenance of equipment, validation of molecular assays, and research. Well-versed in the initial set-up of a new molecular infectious disease laboratory in compliance with ISO 15189 and CAP standards and guidelines. Interested in research on the applications of machine learning and artificial intelligence in the study of bacteria.*

## **CORE ATTRIBUTES**

- Able to communicate effectively with people at all levels
- Well presented
- Professional
- Customer-focused
- Calm Under pressure
- Attention to Detail
- Punctual and reliable
- Helpful, friendly, and polite
- Efficient and well organized
- Able to work effectively in a team
- Able to work on own initiative
- Flexible and adaptable
- Committed to corporate quality objectives and growth.

## **PROFESSIONAL EXPERIENCE**

**Qatar University, Doha, Qatar**

*July 2019 to Present*

**Research Assistant, Infectious Diseases – Biomedical Research Center (July 2019 – Present)**

- Working on researching projects, including proposal preparation, planning, procuring reagents, literature search, conducting the experiments, data analysis, and manuscript preparation.
- Working on community service projects including organizing workshops and events.

**Sidra Medicine, Doha, Qatar**

*January 2016 to July 2019*

**Technologist I - Pathology Sciences (November 2016 – July 2019)**

- Performed standard and complex molecular diagnostic testing for the detection and identification of infectious microorganisms (bacteria, viruses, and parasites) in patient specimens. Including nucleic acid extraction (manual and automated), amplification techniques (traditional and real-time PCR), and analysis and reporting.
- Wrote and Edited Standard Operating Protocols (SOPs).
- Implemented department and organizational policies and procedures and ensuring adherence to them.
- Inventory and Stock level management.

- Responsible for laboratory reagents, kits, and consumables procurement, including communicating with the procurement department and vendors to make purchase requests and ensure the timely delivery of consumables and reagents.
- Specimen Storage and Tracking.
- Staff training and competency assessment.
- Commercial kit verification and in-house developed assay validation, including designing and running experiments and preparing reports.
- Instrument maintenance, QC/QA, and troubleshooting.
- Monitored and maintained records (storage, inventory, QA/QC, competency, maintenance ...etc.)
- Laboratory Information System validation.
- Planned daily and weekly activities.
- Research and development of services for the molecular infectious diseases laboratory, including the development of molecular assays.
- Assisted in clinical research projects and investigations of cases of clinical interest.
- Helped in preparing the laboratory for the College of American Pathologists (CAP) accreditation (CAP accreditation awarded to the department in 2019).

**Graduate Associate (January 2016 – November 2016)**

- Completed in a clinical laboratory rotation in Hamad Medical Corporation including Specimen Reception and Referral, Phlebotomy, Molecular Genetics, Serology, and Molecular Virology, Cytogenetics, Immunology and Histocompatibility, and Microbiology.
- Trained on the performance of molecular diagnostic testing and instrument operation and maintenance including Biomerieux NUCLISENSE easyMAG, QIAGEN EZ1 Advanced XL, and Applied Biosystems 7500, ViiA7, and 9700.
- Performed molecular-based diagnostic testing for the detection and identification of infectious microorganisms in patient specimens.
- Assisted in writing and editing Standard Operating Protocols.
- Inventory and Stock level management.
- Worked on commercial kit verification and in-house developed assay validation.

**Carnegie Mellon University in Qatar, Doha, Qatar**

*September 2014 to May 2015*

**Course Assistant – Experimental Genetics and Molecular Biology**

- Instructed and guided students on the procedures and techniques used to conduct their experiments.
- Mentored students during their research projects.
- Held teaching sessions for students regularly.

### **EDUCATION**

**Master of Science**, Biomedical Sciences – Advanced Clinical Practice Track, Qatar University, Qatar, January 2020. *Thesis Title: Detection of methicillin-resistant Staphylococcus aureus (MRSA) by loop-mediated isothermal amplification (LAMP) and real-time PCR (qPCR).*

**Bachelor of Science**, Biological Sciences, Carnegie Mellon University, August 2015

### **TRAINING AND PROFESSIONAL DEVELOPMENT**

**Microsoft Professional Program – Data Science**, Microsoft Corporation, July 2019 – November 2019. *Capstone Project: Building a machine-learning model to predict housing loan rate spread in the US from the Home Mortgage Disclosure Act public data.*

**Exploring Biological Sequences**, European Bioinformatics Institute, October 2019

### **CERTIFICATIONS AND MEMBERSHIPS**

**Certified Associate in Project Management (CAPM® No: 2283022)**, Project Management Institute, USA, January 2019 – January 2024

**Medical License - Laboratory Technologist (License No. 15828)**, Qatar Council for Healthcare Practitioners, Qatar, August 2016 – August 2020

### **PUBLICATIONS**

1. **Al Mana, H.**; Yassine, H.M.; Younes, N.N.; Al-Mohannadi, A.; Al-Sadeq, D.W.; Alhababi, D.; Nasser, E.A.; Nasrallah, G.K. The Current Status of Cytomegalovirus (CMV) Prevalence in the MENA Region: A Systematic Review. *Pathogens* **2019**, *8*, 213.
2. Tsui CKM, Sundararaju S, **Al Mana H**, et al. Draft Genome Sequences of Two Streptococcus pneumoniae Strains Causing Invasive Infections in Children in Qatar. *Microbiol Resour Announc.* 2019; 8(23):e00511-19. Published 2019 Jun 6. doi:10.1128/MRA.00511-19.
3. Hasan MR, **Al Mana H**, Young V, et al. A novel real-time PCR assay panel for detection of common respiratory pathogens in a convenient, strip-tube array format. *Journal of Virological Methods.* 2019;265:42-48.

### **RESEARCH GRANTS**

**1. Detection of methicillin-resistant *Staphylococcus aureus* (MRSA) using loop-mediated isothermal amplification (LAMP).**

- Funding source: Qatar University.
- Total amount: QR 19,994.
- Supported period: February 2019 – May 2019

### **ORAL PRESENTATIONS IN SCIENTIFIC MEETINGS**

**1. Infectious Diseases Risk Assessment in Qatar.** Symposium on the Prevention of the Biological Weapons Proliferation and Bioterrorism: A Planning Guide for National Authorities in the State of Qatar, Doha, Qatar, *March 20, 2019.*

### **ORGANIZATIONAL COMMITTEES**

#### **Sidra Medicine**

**Scientific Planning Committee Member for “Emotional Intelligence” (April 2018 – July 2019)**

- Represented the Department of Pathology and Allied Health professionals in the committee.
- Participated in discussions to determine the suitability of the workshop to the intended audience, through determining the relevance and importance of the workshop in meeting professional practice gaps.

**Scientific Planning Committee member for “Cultural Intelligence” (April 2018 – July 2019)**

- Represented the Department of Pathology and Allied Health professionals in the committee.
- Participated in discussions to determine the suitability of the workshop to the intended audience, through determining the relevance and importance of the workshop in meeting professional practice gaps.

**Microbiology Weekly Case Update Organization Committee Member (September 2018 – July 2019)**

- Assisted with organizing Qatar Council for Healthcare Practitioners (QCHP) accredited lectures by helping with scheduling and ensuring the venue is booked.
- Ensured all QCHP required paperwork is completed and submitted, including declarations of financial interest and attendance sheets.
- Ensured the appropriate invites for the lectures are sent to the target audience.

**National Graduate Associate Committee President (November 2016 – September 2017)**

- Formed a committee of graduate associates from all departments.
- Liaised between the graduate associates and the Learning and Development department to identify and resolve issues with the training programs.

- Held quarterly meetings with the Chief Learning Officer and the manager of National Development to plan graduate associate training and rotation in all departments.
- Communicated relevant policies, procedures, and changes to the graduate associates.
- Organized events aimed at increasing exposure to the graduate associates within the organization.
- Worked with the Communications department to build a program to recognize graduate associates' achievements.
- Worked with National Development on multiple outreach programs and events.
- Worked with the Training and Education Manager in the Department of Pathology to design a rotation and training program for the graduate associates in the department.

### **Corporate Orientation Cultural Segment “Dari Qatar” Presenter (September 2016 – August 2017)**

- Presented the cultural segment to newly joined staff. The presentation includes a general overview of Qatar, a discussion of the traditions, the Dos and Don'ts, traditional food, what to see and do in Qatar, and recreational activities in Qatar.

#### **LABORATORY SKILLS**

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|---|--|---|
| • Streak, spread and pour plating techniques.     | • Loop-Mediated Isothermal Amplification (LAMP).                         | • SDS-PAGE.   |
| • Gram staining.                                  | • Cell fractionation and purification of cellular materials.             | • Western blots.  |
| • Nucleic acid extraction (manual and automated). | • Column chromatography (gel filtration, affinity, filtration, and HIC). | • Colorimetric assays.  |
| • Gel Electrophoresis.                            | • Protein isolation and purification.                                    | • ELISA.  |
| • Traditional PCR.                                | • Enzymatic Assays.  | • Primer and Probe Design.  |
| • Real-time PCR.                                  |  | • Molecular Assay Design and Validation.  |
| • Sanger Sequencing.                              |  | • Antibiotic resistance analysis in bacteria (BD Phoenix, Vitek 2, E-test, D-test, Disk diffusion). |
| • Next-generation Sequencing (NGS)                |  |   |

#### **COMPUTER SKILLS**

- **Software:** MS Office (MS Word, MS Excel, MS PowerPoint), Microsoft Power BI (Basic knowledge of DAX), Primer Express V3.0.1, IBM SPSS.
- **Languages and Frameworks:** HTML, CSS, SQL (PostgreSQL, T-SQL) and basic database architecture, R (Statistics and Modeling), Python, Unix/Linux Command Line and Bash Scripting.
- **Bioinformatics Skills and Tools:** sequence searching and alignment, Genome Assembly, Contig Ordering, Genome Annotation, Bacterial Genomics.

#### **SPOKEN AND WRITTEN LANGUAGES**

Arabic (Native) - English (Fluent) - Russian (Beginner)