

**NISHA ALEX**  
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## Profile

Outgoing professional **Laboratory technician researcher and Research Assistant** with 5 years of proven results in Microbiology, and Molecular Biology. Strong in teamwork, problem-solving, organized and able to handle multiple tasks under pressure. Excellent in written and verbal communication skills, capability to think strategically and creatively. Strong analytical skills and desire to learn new skills and capable of solution-based mindset and self-starter.

## Skills Summary

- ✓ Excellent knowledge in setting up and conducting biological, virology and biochemical tests and laboratory analyses in support of research and quality control in biotechnology and other fields.
- ✓ Assisted in updating and revision of Standard Operating Procedure (SOP) used in the department.
- ✓ Capable of working independently and a good team player.
- ✓ Ability to handle tough responsibilities given by the laboratory manager. Expertise in methods used in detection and diagnosis of infectious diseases.
- ✓ Proven to organize and assist with multiple Research Projects and comply with **GCP, FDA** standards.
- ✓ Implemented daily & weekly maintenance of equipment and quality control (QC) of all reagents, updated the records as per the laboratory policies.
- ✓ Skilled in laboratory practices and techniques, safety equipment and facilities of containment level 2(PC2) and biosafety level, 3 cabinets.
- ✓ Perform experimental procedures in biology and biomedical research projects.
- ✓ Skilled in RT-PCR, Western blotting, Tissue processing, ELISA, cell culture and Animal handling techniques (Giving Intraperitoneal injection, oral gavage and Animal Dissection)

## Professional Experience

Reference # 6

Jaber Innovative Laboratory (Research lab), Jaber Hospital, Kuwait

July 2020 – June 2<sup>nd</sup> 2021

*Full Time* (40 hrs per week)

### ***Laboratory technician Researcher (Covid-19 Testing)***

#### **Research project on Avigan COVID-19 drug.**

Specimen type: Nasopharyngeal (NP) swab in Viral Transport Media (VTM), and Stool.

- Analyze RT PCR data generated by the clinical laboratory team and provide results of COVID-19 diagnosis. Review test results, maintain legible work records and enter findings into laboratory information systems.
- Participate in training of new employees.
- Ensure safety, security, and the environment in all aspects of the daily activities, and any potential safety hazards are addressed and corrected immediately.

**Skills:**

- RNA extraction of Corona Virus (COVID-19) using Applied biosystems by Thermo Fisher Scientific (King Fisher Flex) and Kits used for extraction of swab: Thermo fisher Scientific (MagMAX™ Viral RNA isolation Kit) and Stool extraction Kit: Thermo Fisher Scientific (MagMAX™ Microbiome Ultra Kit). Followed by PCR preparation using Applied Biosystems by Thermo scientific – Taqpath COVID-19 RT-PCR kit (Multiplex reaction for genes such as S, N, Orf) and singleplex reaction to identify genes such as N, E, RdrP2 in stool samples.
- No extraction heat inactivation protocol for COVID-19 screening by RT-PCR
- RT-PCR testing for Covid-19 using Applied biosystems instrument such as QuantStudio5, Standard 7500, 7500 Fast Real Time PCR.
- Serology experiment of COVID-19

Blood plasma extraction to analyze IgG, IgM antibodies performed in Diasorin.

- Training attended for COVID-19 sequencing (AVISEq Genomics kit and performed in Illumina).

Reference # 5

New Kuwait German Laboratory, Kuwait

Feb 2021 – May 31<sup>st</sup> 2021

*Part Time* (24 hrs per week)

***Laboratory technician (Part time)***

**COVID-19 virology lab at New Kuwait German Laboratory, Kuwait**

- Perform molecular biology experiments of COVID-19 (RNA extraction using MGI and Genfine systems) from Nasopharyngeal swabs and saliva samples, RT-PCR using Biorad CFX-96

Reference # 4

Kuwait University, Kuwait

April 5, 2018 – October 4, 2019

*Full Time* (40 hrs per week)

## ***Biological Researcher***

### ***Faculty of Medicine, Microbiology Department, Virology Unit***

- To obtain MSDS for reagents and kits used within the unit. Maintain and update MSDS upon expiry
- Managed research laboratory, including equipment, supplies, and record-keeper.
- Research assistance to aid professors with their research work.
- Have actively participated internal and external audits as per instructions from the Laboratory Manager. Assist in updating and revision of SOPs.
- Mentored and academically trained students in lab related techniques, Faculty of Medicine, Kuwait University

#### **Skills:**

- Perform molecular biology experiments (RNA / DNA PCR, electrophoresis and sequencing of HIV (genotyping), identification using NCBI(BLAST).
- Animal handling, mice (BalbC) - collection of blood from the heart
- Dissection of mice-spleen and blood collection from the heart of mice
- Tissue culture - primary cell lines (spleen cells), Cell counting
- Isolation of blood cells and thymidine stimulation test (LTT)
- Extraction of samples by automated method (Magpure LC ROCHE) and manual using Qiagen & Roche kits. Working on highly sensitive molecular techniques such as Real- time PCRs like Step One Plus Real-time PCR, Nested PCR, Reverse Transcriptase PCR.
- Cytokine assay using MACSQuant flow cytometry.
- Working on HEK 293 cells, HEP 2; maintaining cells and DMSO freezing.

Reference # 3

Kuwait University, Kuwait

September 24, 2017 to April 4, 2018

Full time (40 hrs per week)

## ***Research Assistant***

Faculty of Medicine Department of Microbiology, Bacteriology unit, Kuwait University

- Research project MI03/13- Evaluation of the major outer membrane protein [MOMP] [PorA] of *Campylobacter jejuni* as a vaccine in an adult mouse diarrhea model.

#### **Skills:**

- *Campylobacter jejuni* (microaerophilic bacteria)– growth and identification by Gram staining, API- biochemical test
- Animal handling Mice (intraperitoneal injection, oral gavage), Mice dissection (spleen). Collection of blood from tail tip of mice
- Whole cell vaccine preparation. Purification of protein for vaccine preparation. Nanodrop 8000, thermo scientific.

- DNA and RNA isolation with Qiagen kits.
- Cloning, transformation, preparation of competent cells. Plasmid preparation, electrophoresis of amplified DNA by gel documentation.
- SDS-PAGE – biorad, Agarose gel electrophoresis – Biorad, Western blotting – biorad, PCR
- Genome sequencing DNA Sequencing by Applied Biosystem 3500 series Genetic Analyser, 3130xl series Genetic Analyser.
- Tissue culture- animal primary cell culture (spleen cells). Inverted microscope, Cell counting
- ELISA with mice serum and faces.

Reference # 2

Kuwait University, Kuwait

January 2016 to September 2017

*Full Time* (40 hrs per week)

***Biologist***

Faculty of pharmacy, Department of Pharmacology and therapeutics, Kuwait University, Kuwait

- Collaborated with team members to meet daily demands and handle challenging projects.
- Boosted efficiency by keeping work areas clean, tidy, and free of debris.
- Helped team handle high-volume work by prioritizing tasks and organizing supplies.
- Maintained full compliance with legal, health, and safety regulations.

**Skills:**

- Animal handling rat and mice (intraperitoneal injection and oral gavage to mice)
- Dissection of rat (brain, aorta, mesenteric bed, corpus, liver, kidney, heart-left ventricle, collection of blood from heart) and mice (Brain, spinal code and paw skin)
- Preparation of drug and Hot plate method, Cold plate method
- Tissue sonication, RNA extraction and synthesis of cDNA
- Plasma collected from Rat and Mice blood for H<sub>2</sub>S assays
- Real time PCR (Applied Biosystem 7500 Fast Real Time PCR)
- Western blotting – biorad, Spectrophotometry
- ELISA and SPSS (Chi-square).

Reference # 1

St. Xavier's college Aluva India

15 September 2008 to 28 Feb 2009

*Full Time* (40 hrs per week)

***Lecturer in Department of Microbiology,  
St. Xavier's college, Aluva, India.***

- Preparation of lecture notes and took classes for degree students and post-graduation students
- laboratory preparation- media preparation, gram staining, hanging drop- wet mount, acid fast staining, spore staining, fungal staining and antibiotic disc preparation, quadrant streaking, spread plate

## Educational Background

*Master of Science (M.Sc.)*  
Microbiology

Karpagam arts and science college,  
Autonomous affiliated to Bharathiar  
University, Tamil nadu, India. April  
2008, First Class (**74.16%**)

*Bachelor of Science (B.Sc.)*  
*Zoology (vocational*  
Medical Microbiology)

Mahatma Gandhi University, India.  
March 2006, First Class (**91.5%**)

## Skills

<b>Laboratory and Analysis Tools</b>	RT-PCR, ELISA, Bacterial culturing, Antibiotic sensitivity test, Microbiological Staining techniques, Media preparation, RNA extraction, Western blot, Flow Cytometry, SDS-PAGE, Agarose gel electrophoresis, H <sub>2</sub> S assay, Cell culture, Animal handling - Mice (Balb C) and Rat (SD), Intraperitoneal injection, Oral gavage for balb-c, Mice & Rat dissection.
<b>Language Skills</b>	English, Malayalam, Tamil, Hindi,
<b>Office Tools</b>	MS Office, MS Excel, MSWord, MS PowerPoint, MS Access, MS Outlook Internet Explorer

## Personal Details

Date of birth: 20<sup>th</sup> July 1985

Nationality: Indian

Place of Birth: Kerala