

# Saba Naseem Awan

PhD Researcher

Creative with Innovative Ideas



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Islamabad-Pakistan

## EDUCATION

### PhD Applied Biosciences

National University of Sciences and Technology,  
NUST, Islamabad, Pakistan

10/2020-Present 3.67/4.00 CGPA

#### Courses

- Cancer Genetics
- General & Molecular Immunology
- RNA Biology
- Gene Therapy

### MS Biomedical Sciences

National University of Sciences and Technology,  
NUST, Islamabad, Pakistan

09/2014-11/2017 3.55/4.00 CGPA

#### Courses

- Cancer Cytogenetics
- Human Anatomy and Physiology
- Neural Engineering
- Biomedical Instrumentation

### BS Applied Biosciences

National University of Sciences and Technology,  
NUST, Islamabad, Pakistan

09/2010-08/2014 3.23/4.00 CGPA

#### Courses

- Vaccinology
- Hematology
- Biophysics
- Immunology
- Bioinformatics
- Virology

## SKILLS

UV Spectroscopy

Transfection & Infection

Real Time PCR

Cell Culture

CRISPR/Cas 9

Western Blotting

Transformation Assay

Primer & CRISPR gRNA Designing

Confocal Microscopy

## WORK EXPERIENCE

### Research Assistant

HEC/World Bank Funded GCF Project

10/2021-09/2023 Islamabad, Karachi

NUST University Islamabad and Agha Khan University, Karachi

#### Achievements/Tasks

- 3 months training each year during 2022-2023 on Stem Cell isolation using FACS, Cytogenetics for karyotyping, Retroviral infection and Confocal training for analyzing the biological specimen
- Cell Culturing, Transformation assay, Real Time PCR
- Western Blotting, Transfection & Infection
- CRISPR guide RNA Designing and experimentation

### Teacher Assistant

Oncology Lab

03/2017-08/2017 Islamabad, Pakistan

Oncology lab is located in the NUST School of Mechanical & Manufacturing Engineering in Islamabad, Pakistan

#### Achievements/Tasks

- The task assigned was to train the Masters students about synthesis and characterization of Gold Nanoparticles
- Demonstrated about UV Spectroscopy, Centrifuge, Hot Plate, Autoclave, Shaker etc.
- Evaluated the students on the basis of tasks assigned

### Researcher

Biochemistry Lab

03/2016-09/2017 Islamabad, Pakistan

Biochemistry Lab is located in the NUST School of Mechanical and Manufacturing Engineering

#### Achievements/Tasks

- Extraction and Purification of Saponins from Plant Extract
- Synthesis of Saponin Gold Nanoparticles
- Characterization of saponin gold nanoparticles using UV, SEM and FTIR

### Researcher

Prosthetics Lab

09/2015-02/2016 Islamabad, Pakistan

Prosthetics lab is located in the NUST School of Mechanical and Manufacturing Engineering

#### Achievements/Tasks

- Material Testing Project
- Designed system reflecting Biceps & Triceps muscle function
- Optimized Nanoparticles

## Researcher

### Animal Research Centre

03/2016-08/2016 Islamabad, Pakistan

Animal Research Centre is located in NUST University

Achievements/Tasks

- Designed a Balb/c mice model of advanced Liver Inflammation
- Got Trained for animal Dissection
- Performed Tissue Sampling
- Collected blood from mice for doze Evaluation

## Researcher

### Human Systems Lab

10/2014-02/2015 Islamabad, Pakistan

Human Systems Lab is located in the NUST School of Mechanical and Manufacturing Engineering

Achievements/Tasks

- Performed Physiology Experiments
- Measured the Bio potentials of Muscles
- Measured ECG, EMG

## Researcher

### Bioinformatics Lab

09/2013-08/2014

Bioinformatics Lab is located in the Atta Ur Rehman School of Applied Biosciences in NUST

Achievements/Tasks

- Programming on UNIX Operating System
- Comparative Genome Analysis of Campylobacter Jejuni sub species jejuni & Doylei
- Constructed Heat Maps & Genome Atlas

## PERSONAL PROJECTS

### Role of TAM Kinase receptors in Breast Cancer and Leukemia

Research Papers submitted

### Synthesis and Characterization of Saponin Gold Nanoparticles for the treatment of CCl4 induced Liver Inflammation in Balb/c Mice (03/2016-09/2017)

Treatment with saponin gold nanoparticles was successful in recovering advanced liver inflammation

### Comparative Genome Analysis of Campylobacter Jejuni sub-species jejuni & Doylei using CMG Biotoools (09/2013-08/2014)

- Constructed Heat Maps and Genome Atlas and did programing on UNIX Operating System

## CERTIFICATES

### Workshop on Basics of Stem Cells in Surgery (15/02/2023)

Certificate of Training

### Workshop on CRISPR Genome Editing (16/02/23)

Certificate of Training

### Workshop on Induced Pluripotent Stem Cells: Reprogramming and Applications (17/02/23)

Certificate of Training

### Laboratory Animal Science Workshop (Agha Khan University, Karachi) (06/2022)

Hands On training on Laboratory Animals

### Confocal Microscope Training (Agha Khan University, Karachi) (06/2022-07/2022)

Got Training on Using Confocal for analysis of samples

### Finding Innovative and Creative Solutions for Society (01/2021-08/2021)

Proposed a creative solution to combat Corona virus

### The New Web of Science Training by Clarivate (07/2021)

Certificate of Training

## PUBLICATIONS

DOI: 10.1097/01.HS9.0000973716.92233.48

DOI: 10.1097/01.HS9.0000974192.13131.11

## LANGUAGES

### Urdu

Full Professional Proficiency

### English

Full Professional Proficiency

## INTERESTS

Research

Basket Ball

Planting

## REFERENCES

References will be provided upon request.