

Amna Amin Sethi

Lecturer
Department of Biomedical Engineering
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WORK EXPERIENCE

Lecturer, Department of Biomedical Engineering June 2020 – To date
NED University of Engineering & Technology
Courses Taught: Physiology, Basic Electronics

Research Assistant, National Center in Big Data & Cloud Computing June 2019 – May 2020
(Genomics Lab)

NED University of Engineering & Technology

My responsibilities include

- Conducting deep research into cancer mutations
- Keeping records of all research works carried out in the lab
- Maintaining laboratory equipments and inventory

Key achievement: Identified pathogenic alleles in liver cancer

Research Assistant, Department of Biomedical Eng. (BMD) Jan 2018 – June 2019

NED University of Engineering & Technology

My responsibilities include

- Extensive literature review
- Data analysis
- Preparation of grant applications, project proposals and other documentation

Research Intern, Dr. A. Q Khan Institute of Biotechnology and Genetic Engineering Jan 2016 – June 2016

- Worked on a project related to enzyme production through Solid State Fermentation

Research Intern, Department of Microbiology, University of Karachi June 2015 – Dec 2015

- Conducted research on fungal amylase production using industrial waste

QUALIFICATIONS

M.E in Biomedical Engineering 2017 – 2019

NED University of Engineering & Technology

Title of Independent Study Project: *Study of Liver Cancer Development in Hepatitis C patients*

My work is divided into two parts. First part is related to bioinformatics and other to epidemiology. In bioinformatics part, the potential driver mutations in liver cancer are identified in non-coding regions. The pathogenic alleles identified in non-coding regions may act as novel biomarkers for predicting liver cancer. The epidemiology part is related to developing mathematical model to study the persistence dynamics of hepatitis C virus which is a very well known risk factor of liver cancer. The temporal patterns are generated by using deterministic and stochastic methods. The impact of recurrence rates on the persistence of disease after successful treatment is also analyzed.

B.E in Biomedical Engineering 2011 – 2015

NED University of Engineering & Technology

Title of Final Year Project: *Production and Characterization of Amylase for industrial use*

My work is related to enzyme production. In this project, beta amylase is produced from fungal strain *Aspergillus flavus* using agricultural waste i.e., rice husk. This amylase is then partially purified and characterized.

RESEARCH INTERESTS

- ♦ Biotechnology
- ♦ Bioinformatics
- ♦ Infectious Disease Modelling

HONOURS AND AWARDS

- ♦ Secured 3.96 CGPA in M.E
- ♦ Secured 2nd Position in B.E
- ♦ Participated in 14th National and 5th International Conference of Botany organized by Pakistan Botanical Society in University of Karachi (Jan 15-18,2016)
- ♦ Participated as an organizer in 1st International Biophysics Symposium held in collaboration with Higher Education Commission at NED University of Engineering and Technology (June 2012)

PERSONAL SKILLS

- ♦ Organizational Skills
- ♦ Intrapersonal Communication Skills
- ♦ Leadership Skills

COMPUTER LITERACY

- ♦ Programming Language: C/C++, Python
- ♦ Operating System: Windows, Linux (Centos 7)
- ♦ Software's: MATLAB, R/R Studio

PUBLICATIONS

1. **Amna Amin Sethi**, Nisar Ahmed Shar “*Identification of Liver Cancer driver mutations from COSMIC data*”, submitted in Genes & Genomics (Manuscript ID: GENG-D-20-00521, Current Status: under review)
2. **Amna Amin Sethi**, Bilal Ahmed Usmani, Mustafain Ali, Syeda Wajiha Naqvi “*Role of Human Migration On Transmission of Infectious Diseases: Measles as a Case Study*”, submitted in International Journal of Biological Systems, 2019 (Manuscript ID: WSPC-JBS-D-19-00045, Current Status: under review)
3. **Amna Amin Sethi**, Nisar Ahmed Shar “*Impact of Liver Cancer somatic mutations on Protein structures and functions*”, *Current Proteomics*, 2020,17,1-8.
4. Farzana Yasmin, Minhal Abdullah, **Amna Amin Sethi**, Hafsa Saleem, Azra Narmeen, Asma Ansari, Shah Ali Ul Qader, Shakeel Ahmed Khan, “*SOLID STATE FERMENTATION: A COST EFFECTIVE APPROACH FOR PRODUCTION OF STARCH LIQUEFYING FUNGAL AMYLASE USING AGRO INDUSTRIAL WASTES*”, *SCIENCE INTERNATIONAL (LAHORE)*,2016, 28(3), 2703-2706.
5. Farzana Yasmin, Minhal Abdullah, Azra Narmeen, Hafsa Saleem, **Amna Amin Sethi**, “*PURIFICATION & CHARACTERIZATION OF β -AMYLASE PRODUCED BY ASPERGILLUS FLAVUS USING RICE HUSK*”, *SCIENCE INTERNATIONAL (LAHORE)*,2016, 28(3), 3601-3605.

CONFERENCE PUBLICATION

Aamir Ali Vakil, **Amna A. Sethi**, Asma Abrar, Hira Hashmani (2012) “An Enhanced Celsion Adaptive Thermodynamic Therapy (TDT) Paradigm”, First International Biophysics Symposium, NED University of Engineering & Technology. Pg 55.

PROJECTS CO - SUPERVISED

1. Selection of Genes for the Prediction of Breast Cancer (2020)
2. Characterization of genes in Alzheimer's disease. (2019)