

Muhammad Adil Salim

Davis, California

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Work Experience

Graduate Student Researcher (GSR)

April 2020 — Present

Tagkopoulos lab. Genome Center University of California, Davis, CA

Lecture

Sep 2017 — August 2019

Institute of Integrative Bioscience, CECOS University Peshawar.

Lecture cum Undergraduate Research Coordinator

Feb 2016 — Aug 2017

Institute of Integrative Bioscience, CECOS University Peshawar.

Teaching:

Over the time I have offered the following undergraduate courses.

- Systems Biology
- Frontiers in Biotechnology
- Bioinformatics

I have previously co-offered the undergraduate Courses, Fundamentals of Biology, Cell Biology, and Biosafety and Bioethics.

STEM outreach

Science Technology Engineering and Math (STEM) outreach is an important area to work in Institute of Integrative Biosciences, I have been a resource person in several events at schools and colleges to give talks on “Careers in

Life Sciences" to motivate students towards new horizons in life sciences and break the dichotomy of default career options of Engineering and Medicine.

Administration and Research:

Working as in charge of the main Biology lab of Institute of integrative Biosciences (IIB), I managed the procurement and finances of the lab supplies, keep track of the inventory and ensure biosafety practices in the lab.

As project coordinator of joint project "**Propagation of Synthetic Biology (SynBioKP)**" of CECOS University and Directorate of Science and technology (DoST), Govt. of KP. We are promoting Synthetic Biology, advanced field of Biotechnology in KP and Pakistan, by organizing scientific events for the community. We trained the first ever team of Pakistan as team iGEM Peshawar for iGEM competition. Our research work aimed to construct a bacterial Biosensor to detect poisonous gases in vehicle emissions.

In Nov 2017, under the same project our second team iGEM Peshawar won **silver medal** in Giant Jamboree in Boston, USA. For the reporter fish for the detection of arsenic metals in water.

Awards and recognition for SynbioKP project.

- Won bronze medal in the Giant Jamboree in Boston, USA. Oct 2016 for iGEM 2016 research project.
- Won silver medal in the Giant Jamboree in Boston, USA. For iGEM 2017 research project.
- Won best Govt. Project award from Pakistan Innovation Foundation, December 2017.
- Won best innovation award from Pasha Fund.
- Won consecutive South Asian Triple Helix Association (SATHA) innovation awards for two year 2016 and 2017 for best iGEM 2016 and 2017.

Community events

Besides iGEM in SynBioKP project, I am also involve in running "The Future is Now (TFN)" series of event which include Lab skills certificate program, Synbio Design Challenge, Bio Meets Engineering, Synbio Socials and Startup weekend.

I also manage to organize a bimonthly “Trends in Life Sciences” lecture series in which we invite experts in the cutting research area to have a lecture and healthy discussion on the current trends in life sciences.

Freelance Blogger

2016 — 2017

Biotechinasia.com

Biotechinasia.com is an online biotech news website startup based in Malaysia. I occasionally write blogs and cover the Pakistan’s life science news.

Education background

PhD in Microbiology with a Designated Emphasis in Biotechnology (DEB)

2019 – Present

University of California, Davis, CA

MPhil Biotechnology

Nov 2013 — May 2016

Center of Biotechnology and Microbiology, University of Peshawar.

Research Topic: Network Biology of Dengue Fever: Protein-Protein interaction network analysis of Dengue virus protein and its host Homo sapiens.

BS (hons) Biotechnology

Nov 2009 — July 2013

Center of Biotechnology and Microbiology, University of Peshawar

Higher Secondary school Certificate

Sep 2007 — Aug 2009

Pre-Medical

Islamia College Peshawar.

Fellowships

Fulbright PhD

2019 – 2024

100% Fulbright PhD fellowship to University of California Davis.

Global undergraduate exchange Program

Spring 2012

I have been to **USA** as a **Global undergraduate exchange** student to **Shawnee State University, Portsmouth, OHIO** for a semester as a cultural ambassador of Pakistan in **spring 2012**.

Research Experience

1. A bacterial Biosenser for the detection of levels of CO and NOx in vehicle emission. (iGEM Peshawar Research Project)
 - Presented at iGEM Giant Jamboree Boston, USA Oct 27-31, 2017. (Won Bronze Medal)
2. "Network biology of Dengue Fever: Analysis of the dengue protein interaction network with its host *Homo sapiens*" (Manuscript in preparation)
 - a) Presented my Research Poster at the International conference on Emerging trends in Engineering, Management and Sciences (ICTEMS 14) at Islamabad. (won 2nd prize)
 - b) Presented my Research poster in 3rd National Conference on Computational Sciences at Institute of Space technology Islamabad.
 - c) Presented in International symposium of molecular Biology at CEMB, University of Punjab, Lahore.
3. Vaccine production for acute tracheobronchitis in dogs by cloning *flaA* gene of *bordetella bronchiseptica* in E.coli.
 - Won the best semester project award at Shawnee State University, OH, USA.

Bioinformatics tools

Cytoscape: an open source software platform for visualizing complex networks and integrating these with any type of attribute data.

Bioinformatics tools: Mega 7, Primer3 plus, GENSCAN, Vicsreen, JPred, PsiPred, ClustalW, Clustal Omega, Benchling, etc.

Python: Programing language (familiar)

R programming (familiar)

