

Department of Biochemistry

Introduction to Department of Biochemistry

Biochemistry takes the practices of general chemistry one step further by focusing on this chemistry makeup of and reactions within, living things. By specializing the chemical nature of living systems, biochemists develop skills that have broad applications within a variety of industries. The Undergraduate programme of Biochemistry at the University is committed to the professional and personal growth of undergraduate students through the development of new scientific knowledge, critical thinking, problem-solving strategies, active learning, self-realization and participation in research discoveries. It is our mission to create a stimulating and personal growth that environment for our students. We strive to provide ample opportunities for professional and personal growth that will allow our graduates to excel in future endeavor, such as industrial work in medicine and pharmacy.

Vision Statement of Department of Biochemistry

The Department of Biochemistry envisions itself to be the leading department of KPK, by providing theoretical knowledge in physical and life sciences, with quality research & practical hands on skills to develop professionals and researchers in the fields of pharmaceutical, environmental, industrial biochemistry and medical sciences and to become a working and sustainable component of the university in teaching, research, and community services.

Mission Statement of Department of Biochemistry

- To provide quality education and learning experience for female students in the area of biochemistry through
 - the application of innovative teaching methods and emphasis on the development of critical thinking and problem-solving skills.
 - the provision of a stimulating, exciting and collaborative scientific environment.
 - To make a research atmosphere that will equip our graduates with transferable skills and an awareness of research ethics in the field of biochemistry.

- Effective teaching, quality research, and relevant community services to develop them into well-rounded responsible individuals.
- To mold its students into competent professionals in the field of Biochemistry with provision of opportunities for career development for both students and staff.
- To contribute to the public understanding of the life-sciences and molecular medicine.

Facilities being provided by the department

The SBBWU Peshawar launched the department of Biochemistry in 2015. The department of Biochemistry is aimed to provide the fundamental knowledge about the subject as well as advanced conceptual approach and understandings in various biological and molecular aspects of life. The department is aimed to motivate and educate the students in such a way that enable critical thinking, quantitative and qualitative research in various disciplines including clinical, molecular and structural biochemistry as well strong written, verbal and communication skills.

The department is committed to provide a deep understanding about state-of-the-art basic and advanced analytical skills at graduate and post graduate level.

The department has well furnished labs and set a productive environment at labs that provide the students various research trainings and internship opportunities in all domains of biochemistry. Department has various national and international research collaborations with other academic, research, industrial and health sectors.

Programs offered:

Currently the department of Biochemistry is offering following programs.

- ❖ A four-year honors BS program,
- ❖ A two year Associate Degree Program
- ❖ MS/M.Phil
- ❖ PhD programs

Future scope/employment/internship opportunities for students

Being a biochemist, graduates can seek job opportunities and research applications in various academic, research, industrial and health sectors in the following domains.

- ❖ Diagnostics labs at hospitals e.g. Serology, haematology, chemical pathology and special chemistry labs
- ❖ Academic and teaching institutions
- ❖ Research centres and institutes
- ❖ Drugs and Pharmaceutical companies
- ❖ Industries

Faculty at the department of Biochemistry:

Dr. Bushra Ahmad,

Assistant Professor and Incharge

Dr. Bushra Ahmad was awarded PhD degree in Biochemistry from Quaid-i-Azam University, Islamabad. She has visited University of Oxford, U.K. for six months under the IRSIP program of HEC to conduct the part of her PhD research. She joined G. C. Women university Sialkot as Assistant Professor in 2015. She has also served Qurtuba University of Science and Technology as Assistant Professor for six months in 2018. She joined SBBWU Peshawar in 2019 as Assistant Professor in the department of Biochemistry. Currently she is working as Incharge of the department. She is HEC approved supervisor and published many research articles in world reputed journals. She has won SRGP under HEC in 2016. Her field of specialization is medicinal plants, natural product chemistry and nanotechnology. She is working with characterization and pharmacological evaluation of compounds and nanoparticles of medicinal plants. She has supervised many students at BS and MS level.

Dr. Rehana Masood

Assistant Professor

Dr. Rehana Masood has completed her Ph.D. from the State University of Sao Paulo, Sao Paulo Brazil. She has expertise in Proteins and Enzymes chemistry and structural analysis, Medicinal plants and their active compounds, water treatment through natural source, Nanotechnology, Nutritional biochemistry and Hormonal diseases. She has more than 20 articles and book chapters in the above specialized area. She supervised more than 50 students in diverse research areas and currently she is supervising BS, MS and PhD students. Along with research projects, she has brought skill-based projects to the university for the under privileged students. She is closely working with national and international organizations (UNICEF, UN, NAVTTAC and HERA) for the continuous scientific skilled-based training programs for the empowerment of young females. She has several national as well as international collaborations.

Dr. Sidra Pervez

Assistant Professor

Dr. Sidra Pervez, Assistant Professor in Department of Biochemistry, has received her PhD in Biotechnology with specialization in Biochemistry from University of Karachi. Her major areas of research are microbial production of enzymes, characterization, immobilization and purification of enzymes, applications of enzymes in textile and food juice industries, nanotechnology, algal feedstock conversion and biofuel production. She joined SBBWU in May, 2020 and before that she has also served as Lecturer and Assistant Professor at Jinnah University for Women, Karachi and Hazara University Manshara. She has won 02 research funded projects worth 4.0 million including NRPU and SRGP from HEC. One startup from IoBM was also won by MS students under her supervision by competing from participants across Pakistan. She has published 29 research articles and 03 book chapters. She is also HEC approved supervisor. She has also awarded travel grants from HEC and EMBL to present her research work at Malaysia and Germany respectively. She has supervised many MS and BS students. She is also serving as Co-chapter head KP in Pakistan Biological Safety Association.

Dr. Asma Shah

Lecturer

Dr. Asma Shah, lecturer in Department of Biochemistry, joined Women University Mardan in 2019 as an Assistant Professor. She received PhD degree in Biotechnology from University of Peshawar, Peshawar Pakistan. Her PhD research was based on the ecofriendly synthesis of metal nanoparticles for diverse biomedical and energy storage applications. In her short career, she has authored 15 national and international research publications with a cumulative impact factor 26.061. As of today, her research work has been cited 141 times while having h-index 7 and i10-index 3 (Google Scholar Citations). Part of her PhD research work was completed in iThemba Labs, Cape Town, South Africa and School of Life Sciences and technology, Beijing University of chemical technology PR China. Mostly her research work is based on medicinal plants and Nanobiotechnology.

Dr Rifat Jahan

Lecturer

I am Rifat Jahan working as Lecturer in the department of Biochemistry, since 2015. I did my Ph.D. from Islamia College, Peshawar. Supervised more than 25 research students. My research interest includes Medicinal Plants, Clinical Diseases and Neuroscience. Currently my research circle surrounds the mechanistic approaches towards neurodegenerative diseases induced by various neurotoxins. Our team especially focused the therapeutic efficacy of some

natural and synthetic compounds against induced neurodegenerative diseases. In this regard we are working on various neurotoxic insults especially both in vivo and in vitro AD and Epilepsy models. We have also got success in reducing the multiple pathological hallmarks of AD and Epilepsy in mice model.

Dr Kiran Saba

Lecturer

I am Dr. Kiran Saba, working as Lecturer in the Department of Biochemistry, Shaheed Benazir Bhutto Women University, Peshawar. I have done my PhD from Quaid-i- Azam University, Islamabad in 2020. I have been awarded with six months fellowship “International Research Support initiative Program (IRSIP)”, supported by Higher Education commission (HEC) of Pakistan and worked in the Department of Drug design and Pharmacology, University of Copenhagen, Denmark. I have been served as visiting faculty in Quaid-i- Azam University and Allama Iqbal Open University, Islamabad. I am reviewer of Plant cell, tissue and organ culture (PCTOC); Springer publisher. My areas of research are: Discovery and development of drugs; Recombinant DNA technology; Development of plant-based vaccines; Transformation and regeneration of plants and Pharmacological evaluation of plants.

Ms Haleema Hidayat

Lecturer

Haleema Hidayat, appointed as regular lecturer since Dec 2015. Currently enrolled in PhD from Awkum under HEC faculty development scholarship for Pakistani universities batch III. Have done M.phil from the institute of chemical sciences , university of peshawar. Research area are Computer aided drug designing and repurposing of approved drugs for new/emerging diseases using computational tools and softwares.

Ms Kiran Zafar

Lecturer

She did M.Phil from Quaid-i-Azam University, Islamabad and joined SBBWU Peshawar in 2015. Currently she is working as lecturer.

Ms Sarah Sarwar

Lecturer

She did M. Phil from Quaid-i-Azam University, Islamabad and joined SBBWU Peshawar in 2015. Currently she is working as lecturer.

Prominent Alumna's of department of Biochemistry

Serial No.	Name	Session	Current status
1.	Haseena Nawaz	2012-2016	Research assistant/PhD scholar at KMU/visiting lecturer at RMI
2.	Shumaila Haroom	2012-16	Junior Clinical Lab technician at Burn and plastic surgery center HMC, Hayatabad
3.	Muba Khan	2012-16	PST teacher and M.Phil. scholar at UOP
4.	Sadia Roedar	2013-17	PhD scholar at University of Wollongong Australia
5.	Faryal Usman	2013-17	Clinical Pathologist in NHS, Queen Elizabeth Hospital Birmingham UK
6.	Rabia Jahan	2013-17	PST teacher
7.	Asma Khan	2013-17	Teacher at Allied school system Swabi
8.	Mahnoor Ali	2013-17	Teacher Peshawar model girls' high school
9.	Mahnoor Wadood	2013-17	PhD scholar Denmark
10.	Gul Lakhta	2014-18	PhD scholar at University of Seoul, Korea
11.	Maria Karim	2014-18	Research assistant at KMU, intern Phlebotomist in IRNUM
12.	Sadia Noureen	2014-18	PST teacher, M.Phil. scholar at KMU
13.	Fatima Bibi	2014-18	M.Phil. Scholar at QAU
14.	Tamana Gul	2014-18	M.Phil. scholar at AWKUM
15.	Laiqa Mehreen	2015-19	MS scholar SBBWUP

16.	Hina Ahmad	2015-19	MS scholar SBBWUP
17.	Umama Sayed	2015-19	MS scholar SBBWUP
18.	Aqeela Bibi	2015-19	MS scholar SBBWUP
19.	Rukhsana	2015-19	M.Phil. Scholar AWKUM
20.	Aisha Faridoon	2015-19	M.Phil. scholar at ICUP
21.	Hafsa Nawaz	2015-19	M.Phil. scholar ICUP
22.	Nimra Qadeer	2015-19	M.Phil. scholar ICUP
23.	Fiza Imran	2015-19	M.Phil. scholar ICUP
24.	Sana shabir	2015-19	MS scholar SBBWUP
25.	Ruqayia Bibi	2015-19	MS scholar SBBWUP
26.	Qurat ul ain Ani	2016-20	M.Phil. scholar at AUP
27.	Tamana	2016-20	PST teacher
28.	Nida Haidar	2016-20	BPS 16 school leader
29.	Anoshia Shareef	2016-20	Serving in BPS 15 as Drawing Master and soon will join as subject specialist BPS 17
30.	Azmat Aea	2016-20	PST teacher Lower Dir
31.	Syeda Hareem Anwar	2016-20	MS scholar SBBWUP
32.	Shugla	2016-20	Research assistant at IBGE Islamabad
33.	Latafat Kahkashan	2016-20	M.Phil. scholar KMU
34.	Sumayya Gohar	2016-20	M.Phil. scholar SBBWUP and part time job at BISP

35.	Sumayyia Asgar	2016-20	MS scholar SBBWUP
36.	Aisha Sadique	2016-20	MS scholar SBBWUP
37.	Mishal Iftikhar	2017-21	MS scholar SBBWUP
38.	Faiza Umar	2017-21	MS scholar SBBWUP
39.	sumbal	2017-21	MS scholar SBBWUP
40.	Sawera	2017-21	MS scholar SBBWUP
41.	Salma zeb	2017-21	MS scholar SBBWUP
42.	Gul Rukh	2017-21	M.Phil. scholar NUST
43.	Nazia Khushal	2017-21	M.Phil. scholar BZUM
44.	Maria Fida	2017-21	BPS 15 at BISP
45.	Hasiba sultan	2017-21	M.Phil. scholar UOP
46.	Bushra Zafar	2017-21	MS scholar KMU
47.	Summia Arshad	2018-22	Teacher at Islamia model school Charssada
48.	Laiba Sajjad	2018-22	Teacher Alma matter school Peshawar
49.	Rashida Gojar	2018-22	Teacher at Al-Ilm academia school
50.	Sundas Asghar	2018-22	Racines school system Peshawar