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Nationality: Pakistani
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ACADEMIC QUALIFICATION: MBBS, MPhil, PhD, CHPE, CHR

<i>Certificate\Degree</i>	<i>Board/University</i>	<i>Div.\Grade</i>	<i>Year</i>
▪ PhD Biochemistry (Genetics & Genomics)	Khyber Medical University	1st	2021
▪ M.Phil. Biochemistry	KUST	1st \ A	2011
▪ MBBS	Peshawar University	1st \ A	2006
▪ F. Sc. (Pre-Medical)	FBISE	1st \ A	2000
▪ S.S.C. (Science)	FBISE	1st \ A	1997

- **Ph.D. in Biochemistry**, Khyber Medical University, Pakistan, 2021
- Dissertation: "Homozygosity Mapping and Mutational Analysis of Rare Human Hereditary Skin Disorders"
- **M.Phil. in Biochemistry**, Kohat University of Science and Technology, Pakistan, 2011
- Thesis: "Biological Activities of Medicinal Plants of Pakistan"

TEACHING EXPERIENCE:

- 18 years of teaching experience the in-Biochemistry department at Khyber Medical University Institute of Medical Sciences (KIMS). Kohat, KPK, Pakistan.
- HEC Approved supervisor

CLINICAL EXPERIENCE:

Gynae and obs

- 5 months in Gynecology & Obstetrics as Training Medical Officer (TMO) (Gynae "B" unit, Hayatabad Medical Complex, Peshawar)
- 6 months in Gynae & Obs (Gynae "B" unit, Ayub Teaching Hospital Abbottabad, From 9th Oct, 2006 to 8th April 2007.
- 6 months in Gynae & Obs at Gulshan Ara Maternity Home, Kohat.

Medicine

- 6 months in Medicine (Medical "A" ward, Ayub Teaching Hospital Abbottabad) From 9th April 2007 to 9th Oct 2007

PROFESSIONAL EXPERIENCE

- **Lecturer of Biochemistry**, 2009 – 2022
- **Assistant Professor of Biochemistry**, 2022 – Feb 2025
Khyber Medical University, Kohat, Pakistan
- **Associate Professor of Biochemistry**, 18 Feb 2025 – Present
Khyber Medical University, Kohat, Pakistan

Relevant Experience:

- Head of the Department of Biochemistry at KMU Institute of Medical Science
- Head of the Department of Biochemistry at KMU Institute of Dental Science
- In charge of Medical Education and research cell department at KMU Institute of Dental Science
- Secretary of Research ethical committee of KMU Institute of Medical Sciences
- 18 years of teaching experience at Biochemistry department. Instruct courses in fundamentals of biochemistry, clinical biochemistry, genetics, and molecular biology to classes of 150-200 graduate and undergraduate students.
- Emphasize critical thinking, problem-based approaches, and interdisciplinary learning through interactive teaching methods.
- Develop course syllabi, lecture materials, assessments, and lab protocols aligning with institutional objectives
- Supervise and mentor 12 MS scholars; approved as research supervisor by Higher Education Commission (HEC)
- Member of Research ethical committee of KMU Institute of Medical Sciences and KMU Institute of Dental Science.
- Member of various academic committees including Curriculum Committee, Scholarships Committee, Examinations Committee, scrutiny Committee.

RESEARCH & PUBLICATIONS

- Published 70+ peer-reviewed research articles in impactful journals on novel genetic mutations, biological activities, and nanomedicine
- Presented research at national and international medical and scientific conferences.
- Total impact factor of publications: 190
- Merit Scholarships for outstanding academic performance throughout academics.

COMPUTER SKILLS:

- MS Office.
- MS Word.
- MS Excel.
- Power Point.

SKILLS & EXPERTISE

- Biochemistry
- Human Molecular Genetics
- BLAST

- Bio editing
- Mutation Analysis
- PCR
- DNA Sequencing
- Medical Genetic
- Primer Designing
- Biological activities
- Nanomedicine

HOBBIES

- Reading books
- Travelling
- Cooking

LANGUAGES:

- English,
- Urdu,
- Pashto.
- Hindko

List of Publications (DR. FOZIA)

1.	Prevalence and <i>emm</i> typing of Multi-Drug Resistant <i>Streptococcus pyogenes</i> in Tertiary Care Health Settings BMC Microbiology
2.	Exploring the molecular mechanisms of multiple antifungal drug-resistant genes expression in <i>Candida tropicalis</i> : an emerging threat in vulvovaginal candidiasis patients International Microbiology https://doi.org/10.1007/s10123-025-00657-4
3.	Eco benign synthesis of silver nanoparticles using <i>Matthiola incana</i> 's extract for heightened biomedical applications Biotechnology and Bioprocess Engineering https://doi.org/10.1007/s12257-025-00193-y

4.	Green Synthesis of Pure and Zirconium-Doped Cerium Oxide Nanoparticles Using Aqueous Extract of <i>Sanvitalia procumbens</i> , Its Characterization, Antiplatelet and Cytotoxic Activities Nanomaterials and Nanotechnology, Volume 2025, Article ID 4276075, 12 pages. https://doi.org/10.1155/nax2/4276075
5.	Discovery of Selective β -Secretase (BACE-1) Inhibitors by the Solid-Phase Synthesis of Small Molecular-sized Peptides Current Alzheimer Research, 2024,21, 723-734. DOI: 10.2174/0115672050336253241227102506
6.	Wastewater microbiology: occurrence and prevalence of antibiotic-resistant extended-spectrum β -lactamase producing Enterobacteriaceae in the district wastewater system J Water Health jwh2024268. https://doi.org/10.2166/wh.2024.268
7.	Effect of antenatal use of high energy nutritional supplements on cardio metabolic risk markers in underweight primi gravidas; a randomized controlled trial, BMC Pregnancy and Childbirth (2024) 24:695 https://doi.org/10.1186/s12884-024-06868-3
8.	Green synthesized AgNPs of the <i>Anchusa arvensis</i> aqueous extract resulting in impressive protein kinase, antioxidant, antibacterial, and antifungal activities Zeitschrift für Naturforschung C https://doi.org/10.1515/znc-2024-0148
9.	SELECTIVE SWEEP AND PHYLOGENETIC MODELS FOR THE EMERGENCE AND SPREAD OF SULFADOXINE-RESISTANCE MUTATION IN PLASMODIUM FALCIPARUM MALARIA WITHIN THE TRIBAL AREAS OF KHYBER PAKHTUNKHWA PAKISTAN. <i>Journal of Population Therapeutics and Clinical Pharmacology</i> , 31(9), 1547-1560. https://doi.org/10.53555/68jvyq41
10.	Green chemistry approach to synthesize titanium dioxide nanoparticles using Fagonia Cretica extract, novel strategy for developing antimicrobial and antidiabetic therapies Green Processing and Synthesis 2024; 13: 20240134
11.	Antimicrobial Resistance and associated risk factors for <i>Clostridium difficile</i> in Patients Attending Tertiary Care Settings Journal of Tropical Medicine Volume 2024 6613120 https://doi.org/10.1155/2024/6613120
12.	Incidence of Helminthic and Viral Coinfections in Malaria Patients in the Tertiary Care Hospital Setup Journal of Tropical Medicine, Volume 2024, Article ID 8529788, 10 pages https://doi.org/10.1155/2024/8529788
13.	Multiple-Drug Resistant Shiga Toxin-Producing E. coli in Raw Milk of Dairy Bovine, Trop. Med. Infect. Dis. 2024 , 9, 64. https://doi.org/10.3390/tropicalmed9030064
14.	Lipid-based nutritional supplement impact on energy intake, appetite, glucose and insulin levels in under-weight pregnant and lactating women with preeclampsia Bioscience Reports (2024) 44 BSR20231344 https://doi.org/10.1042/BSR20231344
15.	Synthesis of Plant-Mediated Iron Oxide Nanoparticles and Optimization of Chemically Modified Activated Carbon Adsorbents for Removal of As, Pb, and Cd Ions from Wastewater <i>ACS Omega</i> 2024, 9, 1, 317–329 https://doi.org/10.1021/acsomega.3c05299
16.	Characterization and Antibacterial Potential of Iron Oxide Nanoparticles in Eradicating Uropathogenic E. coli <i>ACS Omega</i> 2024, 9, 1, 166–177 https://doi.org/10.1021/acsomega.3c03078
17.	Bioaccumulation and Mobility of Heavy Metals in the Soil-Plant System and Health Risk Assessment of Vegetables Irrigated by Wastewater <i>Sustainability</i> 2023 , 15(21), 15321; https://doi.org/10.3390/su152115321
18.	Phytosynthesized Iron Oxide Nanoparticles Using Aqueous Extract of <i>Saccharum arundinaceum</i> (Hardy Sugar Cane), Their Characterizations, Antiglycation, and Cytotoxic Activities <i>ACS Omega</i> 2023, 8, 44, 41214–41222 https://doi.org/10.1021/acsomega.3c04484
19.	Revolutionizing Nanotechnology with <i>Filago desertorum</i> Extracts: Biogenic Synthesis of Silver Nanoparticles Exhibiting Potent Antioxidant and Antibacterial Activities <i>ACS Omega</i> 2023, 8, 38, 35140–35151 https://doi.org/10.1021/acsomega.3c04373
20.	GC-MS Analysis and Biological Effects of Essential Oil from <i>Trachyspermum ammi</i> L. Journal of the Chemical Society of Pakistan Volume Detail: VOLUME 45, NO4, AUG-2023 doi.org/10.52568/001281/JCSP/45.04.2023
21.	6-Aminoflavone Activates Nrf2 to Inhibit the Phospho-JNK/TNF- α Signaling Pathway to Reduce Amyloid Burden in an Aging Mouse Model <i>ACS Omega</i> 2023 Jul 19;8(30):26955-26964. doi: 10.1021/acsomega.3c01781. eCollection 2023 Aug 1.
22.	Green synthesis of Kickxia elatine-induced silver nanoparticles and their role as antiacetylcholinesterase in the treatment of Alzheimer's disease Green Processing and Synthesis 2023; 12: 20230060 doi.org/10.1515/gps-2023-0060

23.	Antiplatelet, cytotoxic activities and characterization of green-synthesized zinc oxide nanoparticles using aqueous extract of <i>Nephrolepis exaltata</i> Environmental Science and Pollution Research https://doi.org/10.1007/s11356-023-27483-3
24.	Biofabrication of Titanium Dioxide Nanoparticles Catalyzed by <i>Solanum surattense</i> : Characterization and Evaluation of their Antiepileptic and Cytotoxic Activities <i>ACS Omega</i> 2023, 8, 19, 16948–16955 https://doi.org/10.1021/acsomega.3c00858
25.	Antialzheimer, antioxidants, Glucose-6-phosphate dehydrogenase effects of <i>Taverniera glabra</i> mediated ZnO and Fe ₂ O ₃ Nanoparticles in Alloxan-Induced Diabetic Rats Open Chemistry (ISSN 2391-5420) 2023; 21: 20220299 https://doi.org/10.1515/chem-2022-0299
26.	Biallelic Mutations in FLG, TGM1 and STS Genes Segregated with Different Types of Ichthyoses in Eight Families of Pakistani Origin International Journal of Dermatology doi: 10.1111/ijd.16614
27.	Antimicrobial, Antiasthmatic, Cytotoxic Activities and Characterization of Green Fabricated Silver Nanoparticles using an Aqueous Extract of Zingiber officinale Crystals 2023, 13, 333. https://doi.org/10.3390/cryst13020333
28.	WHOLE EXOME SEQUENCE ANALYSIS FOR INBORN ERRORS OF IL -12/INF- γ AXIS IN PATIENTS WITH RECURRENT TYPHOID FEVER BioMed Research International Volume 2023 Article ID 1761283 https://doi.org/10.1155/2023/1761283
29.	Assessment of Geographical Distribution of Emerging Zoonotic <i>Toxoplasma gondii</i> Infection in Women Patients Using Geographical Information System (GIS) in Various Regions of Khyber Pakhtunkhwa (KP) Province, Pakistan <i>Trop. Med. Infect. Dis.</i> 2022, 7, 430. doi: 10.3390/tropicalmed7120430
30.	Effect of Lipid-Based Multiple Micronutrients Supplementation in Underweight Primigravida Pre-Eclamptic Women on Maternal and Pregnancy Outcomes: Randomized Clinical Trial <i>Medicina</i> 2022, 58, 1772. https://doi.org/10.3390/medicina58121772
31.	"Comparative Study of Antimicrobial Activity of Silver, Gold, and Silver/Gold Bimetallic Nanoparticles Synthesized by Green Approach" <i>Molecules</i> 2022, 27, 7895. https://doi.org/10.3390/molecules27227895
32.	THP-1 cells line cytotoxicity, Antileishmanial activity, Brine shrimp lethality and characterization of silver nanoparticles synthesized using <i>Anchusa arvensis</i> aqueous extract Journal of Biomedical Nanotechnology 2022, Vol. 18, No. 5 1550-7033/2022/18/1434/009 doi:10.1166/jbn.2022.3350
33.	Prevalence of Quinolone Resistance Genes gyrA and gyrB in Bacteria Isolated from Urinary Tract Infections International Journal of Current Research and Review DOI: https://doi.org/10.31782/IJCRR.2022.141505
34.	Assessment of Antidiabetic Potential and Phytochemical Profiling of Viscum album, a Traditional Antidiabetic Plant Journal of Food Quality Volume 2022, Article ID 5691379, 9 pages https://doi.org/10.1155/2022/5691379
35.	Characterization, Antiplasmodial and Cytotoxic Activities of Green Synthesized Iron Oxide Nanoparticles Using <i>Nephrolepis exaltata</i> Aqueous Extract <i>Molecules</i> 2022, 27, 4931. https://doi.org/10.3390/molecules27154931
36.	Characterization and Evaluation of Antimicrobial Potential of Trigonella incise (Linn) Mediated Biosynthesized Silver Nanoparticles <i>Molecules</i> 2022, 27, 4618. https://doi.org/10.3390/molecules27144618
37.	Detection of novel biallelic causative variants in <i>COL7A1</i> gene by whole exome sequencing, resulting in congenital recessive dystrophic epidermolysis bullosa in three unrelated families Diagnostics, Manuscript ID: 1747314 Diagnostics 2022, 12, 1525. https://doi.org/10.3390/diagnostics12071525
38.	Protein Kinase Inhibition, Antibacterial Activity, and Characterization of Phytoextract-Mediated Silver Nanoparticles Using Aqueous Extracts of <i>Ifloga spicata</i> Journal of Nanomaterials Volume 2022, Article ID 4447857, 9 pages https://doi.org/10.1155/2022/4447857
39.	Urease, α -chymotrypsin Inhibitory activities and Molecular Docking Studies of Alkaloids Isolated from Medicinal Plant <i>Isatis minima</i> Bunge Evidence-Based Complementary and Alternative Medicine Volume 2022, Article ID 1904874, 10 pages https://doi.org/10.1155/2022/1904874
40.	Profile of Medicinal Plants Traditionally Used for the Treatment of Skin Burn Evidence-Based Complementary and Alternative Medicine Volume 2022, Article ID 3436665, https://doi.org/10.1155/2022/3436665

41.	Chemical Composition, Antioxidant, Insecticidal Activity, and Comparative Analysis of Essential Oils of Leaves and Fruits of <i>Schinus molle</i> and <i>Schinus terebinthifolius</i> Evidence-Based Complementary and Alternative Medicine Volume 2022, Article ID 4288890, 12 pages https://doi.org/10.1155/2022/4288890
42.	Bioassay's directed Isolation-Structure Elucidation and Molecular Docking of triterpenes from <i>Persea duthiei</i> against Biologically Important Microbial Proteins Evidence-Based Complementary and Alternative Medicine Volume 2022 Article ID 3839271 https://doi.org/10.1155/2022/3839271
43.	C-Reactive Protein and High-Sensitive Cardiac Troponins Correlate with Oxidative Stress in Valvular Heart Disease Patients Oxidative Medicine and Cellular Longevity Volume 2022, Article ID 5029853, 10 pages https://doi.org/10.1155/2022/5029853
44.	Lipid Profiles and Its Association with Pre-Eclampsia and Eclampsia in Nulliparous Pregnant Women Journal of Rawalpindi Medical College (JRMCI); 2022; 26(1): 46-51
45.	Health risk assessment and multivariate statistical analysis of heavy metals in vegetables of Khyber Pakhtunkhwa Biological Trace Element Research doi.org/10.1007/s12011-021-02892-y
46.	Green Fabrication of Silver Nanoparticles using <i>Euphorbia serpens</i> Kunth Aqueous Extract, Their Characterization, and Investigation of Its <i>In Vitro</i> Antioxidative, Antimicrobial, Insecticidal, and Cytotoxic Activities Biomed Research International Volume 2022 Article ID 5562849 https://doi.org/10.1155/2022/5562849
47.	"Novel Splice-site mutation in DCAF17 gene causing Woodhouse-Sakati Syndrome in a Large consanguineous Family" Journal of Clinical Laboratory Analysis. https://doi.org/10.1002/jcla.24127
48.	Phyto-Extract-Mediated Synthesis of Silver Nanoparticles Using Aqueous Extract of <i>Sanvitalia procumbens</i> , and Characterization, Optimization and Photocatalytic Degradation of Azo Dyes Orange G and Direct Blue-15. Molecules (ISSN 1420-3049) October 2021, 26, 6144
49.	Effective Antiplasmodial and Cytotoxic Activities of Synthesized Zinc Oxide Nanoparticles Using <i>Rhazya stricta</i> Leaf Extract Evidence-Based Complementary and Alternative Medicine Volume 2021, Article ID 5586740, https://doi.org/10.1155/2021/5586740
50.	"Whole exome sequencing confirms molecular diagnostics of three Pakhtun families with autosomal recessive epidermolysis bullosa Frontiers in pediatrics doi: 10.3389/fped.2021.727288
51.	Antinematode Activity of Abomasum Bacterial Culture Filtrates against <i>Haemonchus contortus</i> in Small Ruminants <i>Animals</i> 2021, 11(6), 1843; doi.org/10.3390/ani11061843
52.	Green Synthesis of Copper Oxide Nanoparticles Using <i>Aerva javanica</i> Leaf Extract and Their Characterization and Investigation of In Vitro Antimicrobial Potential and Cytotoxic Activities Evidence-Based Complementary and Alternative Medicine doi.org/10.1155/2021/5589703
53.	Efficacy of <i>Silene arenosa</i> extract on acetylcholinesterase in Bungarus sindanus (krait) venom J Tradit Chin Med 2021 June 15; 41(3): doi.10.19852/j.cnki.jtcm.2021.03.001
54.	Isolation, Structure Elucidation and In Silico Prediction of Potential Drug-Like Flavonoids from <i>Onosma chitralicum</i> Targeted towards Functionally Important Proteins of Drug Resistant Bad Bugs Molecules 2021, 26, 2048. https://doi.org/10.3390/molecules26072048
55.	Ballodiolic Acid A and B: Two New ROS, (•OH), (ONOO) Scavenging and Potent Antimicrobial Constituents Isolated from <i>Ballota pseudodictamnus</i> Pharmaceuticals 2021, 13, 402. https://doi.org/10.3390/pharmaceutics13030402
56.	Novel Homozygous Mutations in the Genes TGM1, SULT2B1, SPINK5 and FLG in Four Families Underlying Congenital Ichthyosis Genes 2021, 12, 373. https://doi.org/10.3390/genes12030373
57.	Green synthesis, Characterization, Enzyme Inhibition, Antimicrobial Potential, and Cytotoxic Activity of Plant Mediated Silver Nanoparticle Using <i>Ricinus communis</i> Leaf and Root Extracts. Biomolecules 2021, 11, 206. https://doi.org/10.3390/biom11020206
58.	Seasonal Variations in Diversity and Distribution of Avian Fauna in Trimmu Barrage at District Jhang Punjab, Pakistan <i>International Journal on Emerging Technologies</i>
59.	Effect of different Storage time on External and Internal Characteristics of Eggs of Hen (<i>Gallus Gallus Domesticus</i>) <i>International Journal on Emerging Technologies</i>
60.	INVESTIGATION OF PHYTOCHEMICAL, ANTI MICROBIAL ACTIVITIES OF <i>JUSTICIA GENDARUSSA</i> AND <i>JUSTICIA ADHATODA</i> <i>Pakistan Journal of Botany. (ISSN:0556-3321)</i>

61.	"Epidemiology and clinical manifestation of Hereditary Primary Microcephaly of General Population of Districts Karak and Bannu, Khyber Pakhtunkhwa (KP), Pakistan." <i>Biological Forum- An International Journal (ISSN 0975-1130)</i>
62.	<i>In vitro antimicrobial, antiprotozoal activities and heavy metals toxicity of different parts of Ballota pseudodictamnus (L.) Benth Pakistan Journal of Pharmaceutical Sciences, Pakistan (ISSN 1011-601X) 30(6), 2203-2209</i>
63.	Anti-inflammatory constituents from <i>Perovskia atriplicifolia</i> <i>Pharmaceutical Biology, UK (ISSN 1388-0209)</i> Pharm Biol, 2015; 53(11): 1628–1631 DOI: 10.3109/13880209.2014.997250
64.	Comparative study of heavy metals content in cosmetic products of different countries marketed in Khyber Pakhtunkhwa, Pakistan <i>Arabian Journal of Chemistry (ISSN 1878-5352)</i> 10,10-18
65.	Estimation of Uranium concentration in drinking water sources of Tehsil Takt-e-Nasrati, District Karak, Khyber Pakhtunkhwa, Pakistan using Fissioning Track Technique <i>Journal of the Chemical Society of Pakistan.(ISSN 0253-5106)</i> 35 (3), 999-1003
66.	"Antimicrobial activity of <i>Malva neglecta</i> and <i>Nastrium microphyllum</i> " <i>International Journal of Research in Ayurveda and Pharmacy, India.</i> 3 (6), 808-810
67.	"Physico-chemical analysis of drinking water sources at sampling point of billitang, KDA, Nasrat Khel and Chongee of district Kohat, K.P.K., Pakistan" <i>International Journal of Science Innovations and Discoveries, India.</i> 2 (6), 598-609
68.	"Comparative antibacterial study of <i>Convolvulus arvensis</i> collected from different area of Khyber Pakhtunkhwa, Pakistan" <i>International Research Journal of Pharmacy, India,</i> 3 (10), 220-222
69.	"Antioxidative iridoid glycosides from Sky Flower (<i>Duranta repens</i> Linn.)" <i>Journal of Enzymes Inhibition & Medicinal Chemistry, UK (ISSN 1475-6366)</i> 26 (1), 88-92
70.	"Two new antiplasmodial flavonoid glycosides from <i>Duranta repens</i> " <i>Journal of Enzymes Inhibition & Medicinal Chemistry, UK (ISSN 1475-6366)</i> 25 (6), 773-778
71.	"Xanthine Oxidase\Tyrosinase inhibiting and antifungal oxindole alkaloids from <i>Istais costata</i> ". <i>Pharmaceutical Biology, UK (ISSN 1388-0209)</i> 48(6), 716–721
72.	"Repenins A-D, four new antioxidative coumarinolignoids from <i>Duranta repens</i> Linn." <i>Bioorganic & Medicinal Chemistry Letter(ISSN 0960-894X)</i> 19, 35213524

Total Impact Factor = 192.6

REFERENCES:

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3. **Prof. Dr. Abdul Waheed**
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