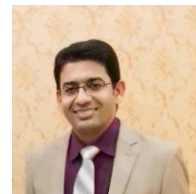


CURRICULUM VITAE

DR. MUHAMMAD SAJID HAMID AKASH



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Scopus ID: <https://www.scopus.com/authid/detail.uri?authorId=35751710600>

Total Impact Factor: 970.8

Total Citations: 12467

h-index: 52

Professional Education

Degree	Specialization	Institution	Year
PhD	Pharmaceutical Analysis	Zhejiang University, Hangzhou, China	2015
MPhil	Pharmacy	Bahauddin Zakariya University, Multan, Pakistan	2008
B. Pharmacy	Pharmaceutical Sciences	Bahauddin Zakariya University, Multan, Pakistan	2005

Employment Record and Experience

- Associate Professor (BPS-20)**
Department of Pharmaceutical Chemistry, Government College University Faisalabad, Pakistan. **From Dec. 12, 2018, to present.**
- Assistant Professor (BPS-19)**
Department of Pharmaceutical Chemistry, Government College University Faisalabad, Pakistan. **From June 7, 2016, to Dec. 11, 2018.**
- Assistant Professor (OPS)**
Department of Pharmaceutical Chemistry, Government College University Faisalabad, Pakistan. **From May 2015 to June 6, 2016.**
- Lecturer (BPS-17)**
Faculty of Pharmaceutical Sciences, Government College University Faisalabad, Pakistan. **From Nov. 2009 to May 2015.**
- Lecturer**
Department of Pharmacy, The University of Lahore, Lahore, Pakistan. **From Aug. 2008 to Nov. 2009.**
- Production Pharmacist**
MediPak Pharma Pvt. Ltd. Lahore, Pakistan. **From March 2005 to Aug. 2006.**
- Production Pharmacist**
Askari Pharmaceuticals, Distt. Kasur, Pakistan. **Oct. 2004 - March 2005.**

Academic & Administrative Contributions to Home Institution

- Chairman**
Department of Pharmaceutical Chemistry, Government College University, Faisalabad, Pakistan. **From 2019 to Jan. 2023**
- Coordinator**
Department of Pharmaceutical Chemistry, Government College University, Faisalabad, Pakistan. **From Oct. 2015 to Jan. 09, 2019.**
- Convener Board of Studies**

Department of Pharmaceutical Chemistry, Government College University, Faisalabad, Pakistan. **From 2019 to 2022.**

4. **Member Board of Studies**

Department of Pharmaceutical Chemistry, Government College University, Faisalabad, Pakistan. **From 2023 to Date.**

5. **Member Board of Studies**

Department of Pharmacy, University of Chenab, Gujrat, Pakistan. **From 2023 to Date.**

6. **Member Board of Faculty**

Faculty of Pharmaceutical Sciences, Government College University Faisalabad, Pakistan. **From 2019 to Date.**

7. **Member Academic Council**

Government College University Faisalabad, Pakistan. **From 2019 to 2022.**

8. **Convener Book Selection Committee**

Department of Pharmaceutical Chemistry, Government College University, Faisalabad, Pakistan. **From 2019 to 2022.**

9. **Convener Purchase Committee**

Department of Pharmaceutical Chemistry, Government College University, Faisalabad, Pakistan. **From 2019 to 2022.**

10. **Manager Research Operations**

Office of Research Innovation and Commercialization (ORIC), Government College University, Faisalabad, Pakistan. **From June 2016 to Nov. 2017.**

National Awards & Honors

1. **PAS Gold Medal in Health Sciences (2019)** — Pakistan Academy of Sciences, Pakistan.
2. **Prof. Dr. A. R. Shakoori Gold Medal in Biological Sciences (2020)** — Zoological Society of Pakistan.
3. **Research Productivity Award (2024)** — ORIC, GCUF.
4. **Outstanding Researcher Award (2023)** — For publishing in high-impact journals during 2022; awarded by ORIC, GCUF.
5. **Research Productivity Award (2023)** — For contributions to research and development at GCUF during 2022; awarded by ORIC, GCUF.
6. **Research Productivity Award (2022)** — ORIC, GCUF.
7. **Outstanding Researcher of the Year (2022)** — ORIC, GCUF.
8. **Distinguished Researcher (2017–2018)** — ORIC, GCUF.
9. **Certificate of Appreciation (2018)** — For winning NRPU project, ORIC, GCUF.
10. **Certificate of Appreciation (2017)** — From Directorate of Students' Affairs, GCUF, for maintaining discipline during the 8th Convocation.
11. **Research Productivity Award (Category C, 2017)** — Pakistan Council for Science and Technology (PCST), Pakistan.
12. **Certificate of Appreciation (2016–2017)** — ORIC, GCUF.
13. **Research Productivity Award (Category B, 2016)** — PCST, Pakistan.
14. **Research Productivity Award (Category B, 2015)** — PCST, Pakistan.
15. **Research Productivity Award (Category C, 2014)** — PCST, Pakistan.

16. **Award of Travel Grant (2015)** — Higher Education Commission (HEC), Pakistan (post-PhD completion).
17. **Dr. Muhammad Ali Talent Award (2015)** — Upon successful completion of PhD.
18. **Partial Support for PhD Study Abroad (2013)** — Higher Education Commission (HEC), Pakistan.
19. **Hijri Meritorious Scholarship (1997)** —securing distinction in the Matriculation Examination, Board of Intermediate and Secondary Education (BISE), Multan, Pakistan.

International Awards & Honors

1. **Top 2% Scientists (Stanford/Elsevier list)** — Listed in the world's top 2% (career-long composite citation indicators) — 2025, 2023, 2022, 2021, 2020.
2. **Bentham Ambassador (2024–2025)** — Selected by Bentham Science Publications.
3. **Top Cited Article (2022–2023)** — *Versatile role of sirtuins in metabolic disorders: From modulation of mitochondrial function to therapeutic interventions. Journal of Biochemical and Molecular Toxicology* 2022; 36(7): e23047. (WILEY).
4. **Top Cited Article (2021–2022)** — *The composite alliance of FTO locus with obesity-related genetic variants. Clinical and Experimental Pharmacology and Physiology* 2021; 48(7): 954–965. (WILEY).
5. **Top Downloaded Article (2022)** — *Genetic mutations of APOEε4 carriers in cardiovascular patients lead to the development of insulin resistance and risk of Alzheimer's disease. Journal of Biochemical and Molecular Toxicology* 2022; 36(2): e22953. (WILEY).
6. **Bentham Ambassador (2018–2019)** — Bentham Science Publications.
7. **Best Research Paper Publications Award (2015)** — From PhD thesis, College of Pharmaceutical Sciences, Zhejiang University, Hangzhou, China.
8. **Best Thesis of the Year Award (2015)** — College of Pharmaceutical Sciences, Zhejiang University, Hangzhou, China.
9. **PhD Scholarship (2010–2014)** — China Scholarship Council (CSC).

Research Projects and Grants

1. **Project title:** Gender-specific association between serum inflammatory biomarkers and insulin resistance in Pakistani diabetic patients. **Awarding Agency:** HEC, Pakistan. **Project#** 21-1061/SRGP/R&D/HEC/ 2016.
2. **Project title:** Bisphenol A-associated type 2 diabetes mellitus: Pathogenesis and prospects for treatment. **Awarding Agency:** HEC, Pakistan. **Project#** 5661/Punjab/RPU/R&D/ HEC/2016.
3. **Project title:** Biochemical investigation of association of endocrine disrupting chemicals with insulin-stimulating and carbohydrate metabolizing hormones in diabetes mellitus and their treatment strategies using plant-based bioactive compounds. **Awarding Agency:** HEC, Pakistan. **Project#** 8365/Punjab/RPU/R&D/ HEC/2017.
4. **Project title:** Investigations of therapeutic potentials of *Allium cepa* and *Zingiber officinale* essential oils on various pathways involved in diabetes mellitus. **Awarding Agency:** GCUF, Pakistan. **Project#** GCUF/Reg/17/3682.
5. **Project title:** Beyond pancreas: Investigation of novel targets and treatment for nicotine-induced diabetes mellitus. **Awarding Agency:** HEC, Pakistan. **Project#** 6429/Punjab/NRPU/R&D/HEC/2016.
6. **Project title:** Evaluation of risk factors associated with the development of prediabetes. **Awarding Agency:** Deanship of Scientific Research, Jouf University, Sakaka, Ministry of Education, Kingdom of Saudi Arabia. **Project#** DSR2022-RG-0144.
7. **Project title:** Heavy Metal Induced Disease Susceptibility. **Awarding Agency:** Saffron Pharmaceuticals (Pvt.) Limited, Faisalabad, Pakistan. **Project#** Saf/024/010.

Editorial Appointments in Scientific Journals

Sr.#	Editorial Role	Journal
1.	Associate Editor	Frontiers in Molecular Biosciences, Section: Cellular Biochemistry.
2.	Associate Editor	Frontiers in Chemistry, Section: Cellular Biochemistry.
3.	Associate Editor	Frontiers in Cell and Developmental Biology, Section: Cellular Biochemistry.
4.	Associate Editor	BMC Endocrine Disorders
5.	Review Editor	Frontiers in Endocrinology, Specialty: Diabetes — Molecular Mechanisms.
6.	Academic Editor	Artificial Cells, Nanomedicine, and Biotechnology
7.	Academic Editor	PLOS ONE
8.	Academic Editor	Biochemical Genetics
9.	Section Editor	Endocrine, Metabolic & Immune Disorders — Drug Targets
10.	Guest Editor	Metabolites (MDPI) — Special Issue: “Biochemical Activation and Functions of Drug-Metabolizing Enzymes”.
11.	Guest Editor	Biocell — Special Issue: “Genetic Polymorphism and Metabolic Inflammation in Development of Insulin Resistance and Metabolic Syndrome”.
12.	Guest Associate Editor	Frontiers in Toxicology — Special Issue: “Potential Neurotoxicity of Emerging Particulate Pollutants”.

Patents Granted/Submitted

1. Kamal S, Babar Q, Ali M, Malik S, **AKASH MSH**, Rehman K, Bibi I, Kiran S. Alcalase Encapsulated Chitosan-Coated Prebiotic Matric with Probiotics for Antibiotic-Free Chick Nutrition. Patent Application No.: **404/2025**. Submitted to the Intellectual Property Organization, **Government of Pakistan**.

Books Published

1. Rehman K, **AKASH MSH**. Biochemical and Molecular Mechanisms of Secondary Metabolites in Metabolic Diseases. Elsevier Academic Press. **2025**; ISBN: 9780443441356.
2. **AKASH MSH**, Rehman K. “Essentials of Pharmaceutical Analysis”. Springer. **2nd Ed.** 2025. ISBN 978-981-96-5996-8. <https://doi.org/10.1007/978-981-96-5996-8>.
3. **AKASH MSH**, Rehman K. “Biochemical Aspects of Metabolic Disorders”. Vol. 1. Elsevier Academic Press. **2025**; ISBN: 978-0-443-36312-2. <https://doi.org/10.1016/C2023-0-52184-6>.
4. **AKASH MSH**, Rehman K. “Biochemical Aspects of Metabolic Disorders”. Vol. 2. Elsevier Academic Press. **2025**; ISBN: 978-0-443-36312-2. <https://doi.org/10.1016/C2023-0-52184-6>.
5. Khurshid M, **AKASH MSH**. Human Microbiome: Techniques, Strategies, and Therapeutic Potential. Springer Nature. **2024**; ISBN: 978-981-97-3790-1. <https://doi.org/10.1007/978-981-97-3790-1>.
6. **AKASH MSH**, Rehman K, Irshad K, Chen S. “Pharmaceutical Biotechnology in Drug Development”. Elsevier Academic Press. **2023**. ISBN: 9780443191350. <https://doi.org/10.1016/C2022-0-01307-6>.
7. **AKASH MSH**, Rehman K. “Biochemistry of Drug Metabolizing Enzymes: Trends and Challenges”. Elsevier Academic Press. **2022**; ISBN: 978-0-323-95120-3. <https://doi.org/10.1016/C2021-0-02690-0>.
8. **AKASH MSH**, Rehman K. “Environmental Contaminants and Neurological Disorders”. Springer Nature. **2021**; ISBN: 978-3-030-66376-6. <https://doi.org/10.1007/978-3-030-66376-6>.
9. **AKASH MSH**, Rehman K. “Drug Stability and Chemical Kinetics”. Springer Nature. **2020**; ISBN: 978-981-15-6426-0. <https://doi.org/10.1007/978-981-15-6426-0>.

10. **AKASH MSH**, Rehman K, Hashmi MZ. "Endocrine Disrupting Chemicals-induced Metabolic Disorders and Treatment Strategies". Springer Nature. 2020; ISBN: 978-981-15-1546-0. <https://doi.org/10.1007/978-3-030-45923-9>.
11. **AKASH MSH**, Rehman K. "Essentials of Pharmaceutical Analysis". Springer Nature. 2020; ISBN: 978-981-15-1546-0. <https://doi.org/10.1007/978-981-15-1547-7>.

Research Publications in Indexed Journals

Total Impact Factor: 970.8	Total Citations: 12467	h-index: 52
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2025

1. Madni S, **AKASH MSH***. Integrated metabolomic insights and biochemical profiling of indole-3-butyric acid hydrazones in mitigating heavy metal-induced oxidative and metabolic dysregulation through Nrf2 pathway activation. *Arab. J. Chem.* 2025; 18(8):5302025. http://dx.doi.org/10.25259/AJC_530_2025. (IF= 5.3, *Corresponding author).
2. Madni S, **AKASH MSH***, Kamal, S. Synthesis and characterization of indole-3-butyric acid-based hydrazones: from multifunctional enzyme inhibition to therapeutic potential for drug development. *Naunyn-Schmiedeberg's Arch Pharmacol.* 2025; <https://doi.org/10.1007/s00210-025-04461-9>. (IF= 3.1, *Corresponding author).
3. Rafique A, **AKASH MSH***, Rehman K. Exploring the therapeutic potential of benzodioxane carboxylic acid-based hydrazones: Structural, computational, and biological insights. *Arab. J. Chem.* 2025; 18(6):1292025. http://dx.doi.org/10.25259/AJC_129_2025. (IF= 5.3, *Corresponding author).
4. Munir MU, **AKASH MSH***, Rehman K. Synthesis, characterization and biological evaluation of indole-3-acetic acid-based hydrazone derivatives. *J Mol Struct.* 2025; 1329: 141442. <https://doi.org/10.1016/j.molstruc.2025.141442>. (IF= 4.0, *Corresponding author).
5. Kamal S, Roheen T, Rehman K, Bibi I, **AKASH MSH***. Development of a robust enzyme cascade system: co-immobilization of laccase and versatile peroxidase on polyacrylamide hydrogel for enhanced BPA degradation. *Biodegradation.* 2025; 36: 34. <https://doi.org/10.1007/s10532-025-10129-1>. (IF= 3.4, *Corresponding author).
6. **AKASH MSH***, Victor F, Rehman K, Hussain A, Shahid M, Shahzad A. Biochemical investigation of *FOXP3* genetic polymorphism and its association with biochemical parameters in pre-eclampsia patients. *Naunyn-Schmiedeberg's Arch Pharmacol* 2025; 398: 4583–4592. <https://doi.org/10.1007/s00210-024-03580-z>. (IF= 3.1, *Corresponding author).
7. Feezan A, Afzal S, Shoaib MS, **AKASH MSH***, Rehman K, Nadeem A, Attia SM, Shahzad A. Impact of lead and nickel contamination on metabolic health: Associations with diabetes mellitus in a Pakistani cohort. *Emerging Contaminants* 11(1): 100419. <https://doi.org/10.1016/j.emcon.2024.100419> (IF= 5.3, *Corresponding author).
8. Shoaib MS, Afzal S, **AKASH MSH***, Rehman K, Hussain A, Nadeem A, Shahzad A, Attia SM. Biochemical Investigation of Association of Arsenic Exposed Polymorphic Variants and Disease Susceptibility. *Emerg Contam.* 2025; 11(1): 100393. <https://doi.org/10.1016/j.emcon.2024.100393>. (IF= 5.3, *Corresponding author).
9. Iqbal H, Ilyas K, Rehman K, Aslam MA, Hussain A, Ibrahim M, **AKASH MSH***, Shahid M, Shahzad A. Metabolomic Analysis of Nicotine-Induced Metabolic Disruptions and Their Amelioration by Resveratrol. *J Biochem Mol Toxicol.* 2025; 39: e70116. <https://doi.org/10.1002/jbt.70116>. (IF= 3.2, *Corresponding author).
10. Aslam MA, Iqbal H, Ilyas K, Rehman K, Hussain A, **AKASH MSH***, Shahid M, Chen S. Metabolomic Insights into Smoking-Induced Metabolic Dysfunctions: A Comprehensive Analysis of Lipid and Amino Acid Metabolomes. *Metabolites.* 2025; 15(2):96. <https://doi.org/10.3390/metabo15020096>. (IF= 3.5, *Corresponding author)

11. Hussain A, Sohail A, **AKASH MSH**, Iqbal S, Rehman K, Imran M, Khan S, Ayub MA, Wang D, Ahmed D, Al-Jumaili MHA, Bashir M, Rasool M. Marine life as a source of anti-prostate cancer agents: an updated overview (2003–2023). *Naunyn-Schmiedeberg's Arch Pharmacol*. 2025; 398(7): 7971–8074. <https://doi.org/10.1007/s00210-025-03886-6>. (IF= 3.1).
12. Jabeen K, Rehman K, **AKASH MSH***, Hussain A, Shahid M, Sadaf B. Biochemical Investigation of the Association of Apolipoprotein E Gene Allele Variations with Insulin Resistance and Amyloid- β Aggregation in Cardiovascular Disease. *Clin Exp Pharmacol Physiol*. 2025;52(1):e70007. <http://dx.doi.org/10.1111/1440-1681.70007>. (IF= 2.4, *Corresponding author).
13. Shaikat R, Hussain A, **AKASH MSH**, Rehman K, Imran M, Ali E, Ali M, Mammadova K, Jan A, Khan A, Khan S, Ayub M, Ullah M, Sohail A, Arshad H. Genome-Wide Study of Diabetes Mellitus (Type 2)–Associated Genes in *Homo sapiens* (Human). *J Gene Med*, 2025; 27: e70025. <https://doi.org/10.1002/jgm.70025>. (IF= 3.2).
14. Hussain A, Attique F, **AKASH MSH**, Ali M, Ayub MA, Ahmed H. Ragab AH, AL-Mhyawi SR, Gumaah NF, Mammadova K, Jan A, Saleh MT. Synthesis, Characterization, and Antibacterial Activity of Cephalosporin-Drugs Loaded Ni-Nanoparticles for Drug Carrier Applications. *BioNanoScience*. 2025;15: 510. <https://doi.org/10.1007/s12668-025-02136-6>. (IF= 3.5).
15. Hussain A, Azam S, Maqsood R, Anwar R, **AKASH MSH**, Hussain H, Wang D, Imran M, Kotwica-Mojzyk K, Khan S, Hussain S, Ayub MA. Chemistry, biosynthesis, and theranostics of antioxidant flavonoids and polyphenolics of genus *Rhododendron*: an overview. *Naunyn-Schmiedeberg's Arch Pharmacol*. 2025; 398: 1171–1214. <https://doi.org/10.1007/s00210-024-03428-6>. (IF= 3.1).
16. Gondal M, **AKASH MSH***, Rehman K. Integrated *in vivo* and *in silico* ADMET and metabolomic profiling of basil seed bioactives Methyl eugenol and linalool. *Pak J Pharm Sci*. 2025; 38(4): 1254–1271. <https://doi.org/10.36721/PJPS.2025.38.4.REG.14703.1>. (IF= 0.8, *Corresponding author).

2024

17. Ilyas K, Iqbal H, **AKASH MSH***, Rehman K, Hussain A. Heavy metal exposure and metabolomics analysis: an emerging frontier in environmental health. *Environ Sci Pollut Res*. 2024; 31:37963–37987. <https://doi.org/10.1007/s11356-024-33735-7>. (IF= 5.4, *Corresponding author).
18. Ilyas K, Rehman K, Iqbal H, Hussain A, **AKASH MSH***, Shahid M, Sadaf B. Metabolomic Analysis and Biochemical Profiling of Cadmium-Induced Metabolic Impairment and Its Amelioration by Resveratrol. *Bioengineering*. 2024; 11(11):1141. <https://doi.org/10.3390/bioengineering1111141>. (IF= 3.8, *Corresponding author).
19. **AKASH MSH***, Yaqoob S, Rehman K, Hussain A, Chaudhary Z, Nadeem A, Shahzad A, Shah MA, Panichayupakaranant P. Biochemical Investigation of Therapeutic Efficacy of Berberine-Enriched Extract in Streptozotocin-Induced Metabolic Impairment. *ACS Omega*. 2024; 9(13): 15677–15688. <https://doi.org/10.1021/acsomega.4c00696>. (IF= 4.1, *Corresponding author).
20. Kamal S, Shahzad A, Rehman K, Tariq K, **AKASH MSH***, Imran M, Assiri MA. Therapeutic Intervention of Serine Protease Inhibitors Against Hepatitis C Virus. *Curr. Med. Chem*. 2024; 31(15): 2052–2072. <https://doi.org/10.2174/0109298673234823230921090431>. (IF= 4.6, *Corresponding author).
21. Irshad K, **AKASH MSH***, Rehman K, Nadeem A, Shahzad A. Biosynthesis and Multifaceted Characterization of *Breynia nivosa*-Derived Silver Nanoparticles: An Eco-Friendly Approach for Biomedical Applications. *ACS Omega*. 2024; 9(13): 15383–15400. <https://doi.org/10.1021/acsomega.3c10119>. (IF= 4.1, *Corresponding author).
22. Iqbal H, Ilyas K, **AKASH MSH***, Rehman K, Hussain A, Iqbal J. Real-time fluorescent monitoring of phase I xenobiotic-metabolizing enzymes. *RSC Adv*. 2024; 14(13): 8837–8870. <https://doi.org/10.1039/D4RA00127C>. (IF= 4.036, *Corresponding author).
23. Khalid MF, **AKASH MSH***, Rehman K, Shahzad A, Nadeem A. Modulation of Metabolic Pathways and Protection against Cadmium-Induced Disruptions with Taxifolin-Enriched Extract. *ACS Omega*.

- 2024; 9(3): 4057–4072. <http://doi.org/10.1021/acsomega.3c08989>. (IF= 4.1, *Corresponding author).
24. Feezan A, Afzal S, Shoaib SM, Rehman K, Hussain A, **AKASH MSH***, Shahid M, Sadaf B. Biochemical Impact of Nickel-Induced Metabolic Impairment and the Protective Effects of Resveratrol and Ascorbic Acid. *J Food Biochem*. 2024; 8607956. <https://doi.org/10.1155/jfbc/8607956>. (IF= 3.5, *Corresponding author).
 25. Hussain A, Azam S, Rehman K, Ali M, **AKASH MSH**, Zhou X, Rauf A, Alshammari A, Albekairi NA, AL-Ghamdi AH, Quresh AK, Khan S, Khan MU. Green synthesis of Fe and Zn-NPs, phytochemistry and pharmacological evaluation of *Phlomis cashmeriana* Royle ex Benth. *Heliyon*. 2024; 10(13): E33327. <https://doi.org/10.1016/j.heliyon.2024.e33327>. (IF= 3.7)
 26. Kamal, S., Babar, S., Ali, W. Rehman K, Hussain A, **AKASH MSH***. Sirtuin insights: bridging the gap between cellular processes and therapeutic applications. *Naunyn-Schmiedeberg's Arch Pharmacol* 2024; 397:9315–9344. <https://doi.org/10.1007/s00210-024-03263-9>. (IF= 3.1, *Corresponding author).
 27. **AKASH MSH***, Afzaal A, Rehman K, Hussain A, Ibrahim M, Shoaib SM, Shahid M, Sadaf B. Identification of Secondary Metabolites of *Cyperus rotundus* L. and Dose-dependent Effects on Antioxidant Activity and Carbohydrate Digestion Enzymes. *Dose-Response*. 2024;22(4): 1-12. <https://doi.org/10.1177/15593258241308724>. (IF= 2.5, *Corresponding author).
 28. Davis M, Rafique S, Meer S, Afzal Z, Qader A, Asghar A, **AKASH MSH**. Evaluation of non-cytotoxic drugs as potential candidates for breast cancer. *J Popul Ther Clin Pharmacol*. 2024;31(1): 90–100. <https://doi.org/10.53555/jptcp.v31i1.3810> (IF= 0.34).
- 2023**
29. **AKASH MSH***, Sumbal R, Rehman K, Ibrahim M, Imran M, Assiri MA. Biochemical Activation and Regulatory Functions of Trans-Regulatory KLF14 and Its Association with Genetic Polymorphisms. *Metabolites*. 2023; 13(2): 199. <https://doi.org/10.3390/metabo13020199>. (IF= 5.581, *Corresponding author).
 30. **AKASH MSH***, Shahid M, Suhail S, Rehman K, Nadeem A, Mir TM. Tetra-ARMS PCR analysis of angiotensinogen AGT T174M (rs4762) genetic polymorphism in diabetic patients: a comprehensive study. *Front. Endocrinol*. 2023; 14:1240291. <https://doi.org/10.3389/fendo.2023.1240291>. (IF= 6.055, *Corresponding author).
 31. **AKASH MSH***, Fatima M Rehman K, Rehman Q, Chauhdary Z, Nadeem A, Mir TM. Resveratrol Mitigates Bisphenol A-Induced Metabolic Disruptions: Insights from Experimental Studies. *Molecules*. 2023; 28(15): 5865. <https://doi.org/10.3390/molecules28155865>. (IF= 4.6, *Corresponding author).
 32. Jabeen K, Rehman K. **AKASH MSH***, Nadeem A, Mir TM. Neuroprotective and Cardiometabolic Role of Vitamin E: Alleviating Neuroinflammation and Metabolic Disturbance Induced by AlCl₃ in Rat Models. *Biomedicines*. 2023; 11(9): 2453. <https://doi.org/10.3390/biomedicines11092453>. (IF= 4.7, *Corresponding author).
 33. **AKASH MSH***, Noureen S, Rehman K, Nadeem A and Khan MA. Investigating the biochemical association of gestational diabetes mellitus with dyslipidemia and hemoglobin. *Front. Med*. 2023; 10:1242939. <https://doi.org/10.3389/fmed.2023.1242939>. (IF= 4.592, *Corresponding author)
 34. Shoaib SM, Afzal S, Feezan A, **AKASH MSH***, Nadeem A, Mir TM. Metabolomics Analysis and Biochemical Profiling of Arsenic-Induced Metabolic Impairment and Disease Susceptibility. *Biomolecules*. 2023; 13(9):1424. <https://doi.org/10.3390/biom13091424>. (IF= 5.5, *Corresponding author).
 35. **AKASH MSH***, Sumbal R, Rehman K, Imran M, Assiri MA. Toxicological evaluation of bisphenol analogues: preventive measures and therapeutic interventions. *RSC Adv*. 2023; 13: 21613–21628. <https://doi.org/10.1039/d3ra04285e>. (IF= 4.036, *Corresponding author).

36. Assiri MA, Ali A, Ibrahim M, Khan MU, Ahmed K, **AKASH MSH**, Abbas MA, Javed A, Suleman M, Khalid M, Hussain I. Potential anticancer and antioxidant lauric acid-based hydrazone synthesis and computational study toward the electronic properties. *RSC Adv.* 2023; 13: 21793–21807. <https://doi.org/10.1039/d3ra02433d>. (IF= 4.036).
37. **AKASH MSH**, Akbar M, Rehman K, Shah MA, Panichayupakaranant P, Imran M, Assiri MA. Biochemical profiling of berberine-enriched extract in aluminum chloride induced oxidative damage and neuroinflammation. *Environ Sci Pollut Res.* 2023; 30: 85263–85275. <https://doi.org/10.1007/s11356-023-28392-1>. (IF= 5. 8)
38. **AKASH MSH**, Yaqoob A, Rehman K, Imran M, Assiri MA, Al-Rashed F, Al-Mulla F, Ahmad R, Sindhu S. Metabolomics: A Promising Tool for Deciphering Metabolic Impairment in Heavy Metal Toxicities. *Front Mol Biosci.* 2023; 10:1218497. <https://doi.org/10.3389/fmolb.2023.1218497>. (IF= 6.13)
39. Alanazi AS, Rasheed S, Rehman K, Mallhi TH, **AKASH MSH***, Alotaibi NH, Alzarea AI, NT, Khan YH. Biochemical association of regulatory variant of KLF14 genotype in the pathogenesis of cardiometabolic patients. *Front. Endocrinol.* 2023; 14: 1176166. <https://doi.org/10.3389/fendo.2023.1176166>. (IF= 6.055, *Corresponding author).
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- treatment strategies". Akash MSH, Rehman K, Hashmi MZ (Eds.). Springer Nature. Switzerland AG. **2020**; 135-145. https://doi.org/10.1007/978-3-030-45923-9_9.
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 43. Jabeen K, **AKASH MSH**, Haider K, Faheem A, Tariq M, Rehman K. "Parabens as endocrine disrupting chemicals and their association with metabolic disorders" in "Endocrine disrupting chemicals-induced metabolic disorders and treatment strategies". Akash MSH, Rehman K, Hashmi MZ (Eds.). Springer Nature Switzerland AG. **2020**; 367-379. https://doi.org/10.1007/978-3-030-45923-9_20.
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59. Rehman K, **AKASH MSH**. "Role of nanoparticles in combating infections" in "Biosensors: Materials and applications". Inamuddin, Rangrez TA, Ahamed MI, Asiri AM (Eds.). Materials Research Forum LLC. **2019**; 47: 211-240. <https://doi.org/10.21741/9781644900130-6>.
60. Rehman K, Jabeen K, **AKASH MSH**. "Stem cells therapy for cardiomyopathy: an emerging paradigm" In: Stem cells for cancer and genetic disease treatment (Stem cells in clinical applications). Pham P, El-Hashash A (Eds.). Springer Nature. Switzerland AG. **2018**; 115-128. https://doi.org/10.1007/978-3-319-98065-2_8.
61. Rehman K, **AKASH MSH**. "Stem cells for the treatment of ovarian cancer" In: Stem cells for cancer and genetic disease treatment (Stem cells in clinical applications). Pham P, El-Hashash A (Eds.). Springer Nature. Switzerland AG. **2018**; pp: 85-97. https://doi.org/10.1007/978-3-319-98065-2_6.
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63. Rehman K, **AKASH MSH**. "Recent advances in lung regeneration" in "Liver, Lung and Heart Regeneration (Stem cells in clinical applications)". Vol. 3rd (Liver, lung and heart regeneration). Pham PV (Ed.). Springer Nature. Switzerland AG. **2017**; 119-123. https://doi.org/10.1007/978-3-319-46693-4_7.
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Courses Taught

1. Drug Stability and Chemical Kinetics	9. Biochemistry of Metabolic Disorders
2. Biotechnology and Drug Development	10. Pharmaceutical Biochemistry
3. Advanced Pharmaceutical Analysis	11. Pharmaceutical Analysis
4. Drug Metabolism	12. Hospital Pharmacy
5. Research Methodology	13. Industrial Pharmacy
6. Biochemistry of Drug Metabolizing Enzymes	14. Natural Product Chemistry
7. Advances in Clinical Chemistry	15. Pharmacology and Therapeutics
8. Chemistry of Secondary Metabolites	16. Physical Pharmacy

Member of Curriculum Review & Accreditation Committees

1. Member, National Curriculum Review Committee (NCRC), Higher Education Commission (HEC), Pakistan. Participated in national-level curriculum review and policy recommendations for pharmacy education.
2. Member, Curriculum development & Review Committee — Doctor of Pharmacy Curriculum, Pharmacy Council of Pakistan. Contributed to curriculum evaluation, competency mapping, and statutory approval processes.

Academic Services Rendered to Home Institution

1. Successfully obtained **NOCs from the Higher Education Commission (HEC)** for the initiation of **MPhil and PhD programs in Pharmaceutical Chemistry** at the Department of Pharmaceutical Chemistry, Government College University Faisalabad (2019).
2. **Developed 18 new courses** to support the launch of the **MPhil and PhD in Pharmaceutical Chemistry** at the Department of Pharmaceutical Chemistry, GCUF.

Sr.#	Course Code	Course Title	Credit Hours
1.	PCH-701	Drug Discovery and Design	3 (3-0)
2.	PCH-702	Drug Stability and Chemical Kinetics	3 (3-0)
3.	PCH-703	Phytochemistry	3 (3-0)
4.	PCH-704	Advances in Clinical Chemistry	3 (3-0)
5.	PCH-705	Advanced Pharmaceutical Analysis	3 (3-0)
6.	PCH-706	Isolation and Characterization of Drugs	3 (3-0)
7.	PCH-707	Quantitative Structure Activity Relationship	3 (3-0)
8.	PCH-708	Research Methodology	3 (3-0)
9.	PCH-709	Polymers in Pharmaceutical Applications	3 (3-0)
10.	PCH-710	Biochemistry of Metabolic disorders	3 (3-0)
11.	PCH-711	Biochemistry of drug metabolizing enzymes	3 (3-0)
12.	PCH-712	Method Development for Pharmaceutical Analysis	3 (3-0)
13.	PCH-713	Chemistry of Secondary Metabolites	3 (3-0)
14.	PCH-714	Stereochemistry of Bioactive Compounds	3 (3-0)
15.	PCH-715	Chemistry of Nutraceuticals	3 (3-0)
16.	PCH-721	Biotechnology and Drug Development	3 (3-0)
17.	PCH-722	Drug Metabolism	3 (3-0)
18.	PCH-723	Combinatorial Chemistry and Drug Synthesis	3 (3-0)

Mentorship Provided to the Students

MPhil Students Supervised = 36

PhD Students Supervised = 12

Fellowships and Memberships in Professional Organizations

1. **Fellow**, Zoological Society of Pakistan
2. **Member**, American Chemical Society
3. **Registered Pharmacist**, Punjab Pharmacy Council, Pakistan
4. **Member**, Pakistan Pharmacist Association
5. **Lifetime Member**, Medical Microbiology Association of Pakistan.
6. **Member**, International Society for Pharmacoeconomics and Outcomes Research
7. **Member**, American Society for Microbiology
8. **Member**, Primary Care Diabetes Society
9. **Lifetime Member**, Pakistan Society for Biochemistry and Molecular Biology

Abstracts Published in Conference Proceedings

1. Rehman K, Qader A, Haq MEU, **AKASH MSH**. Long-term exposure of Bisphenol A impairs metabolism and develop insulin resistance. *Metab.: Clin. Exp.* **2022**; 128(3): 154974. <https://doi.org/10.1016/j.metabol.2021.154974>. (IF = 13.934).
2. **AKASH MSH**, Qader A, Rehman K. Insulin resistance susceptibility is associated with BPA exposure. *Metab.: Clin. Exp.* **2022**; 128(3): 154973. <https://doi.org/10.1016/j.metabol.2021.154973>. (IF = 13.934).
3. Rehman K, Niaz S, Tahir A, Jabeen K **AKASH MSH**. FTO, PPAR- γ and ABCC8 gene variation and hypertension as determinants of cardiometabolic risk in CVD patients. *Metab.: Clin. Exp.* **2022**; 128(3): 154972. <https://doi.org/10.1016/j.metabol.2021.154972>. (IF = 13.934).
4. **AKASH MSH**, Rehman K. Exposure of Endocrine Disrupting Chemical is a Risk Factor for the Pathogenesis and Development of Metabolic Disorders. *Metab.: Clin. Exp.* **2021**; 116(3): 154498. <https://doi.org/10.1016/j.metabol.2020.154498>. (IF = 13.934).
5. Rehman K, **AKASH MSH**. Early Detection of Insulin Resistance and Assorted Metabolic Dysfunctions through MicroRNA-141. *Metab.: Clin. Exp.* **2021**; 116(3): 154518. <https://doi.org/10.1016/j.metabol.2020.154498>. (IF = 13.934).
6. Akbar MU, Rehman K, Zia KM, **AKASH MSH**. "Conjugation of curcumin with pluronic F-127 to enhance the solubility & sustained delivery of curcumin for clinical applications. *Pak J Nucl Med.* **2017**; 7(Supp 1):9.

Abstracts Presented at Professional Conferences

1. Rehman K, **AKASH MSH**, Ikram M, Ameer F. "**Endocrine-Disrupting Chemicals and Metabolic Dysregulation: Insights from Experimental Studies**" presented in "International Sci-Arts Conference ISAC-25 Multan" jointly organized by "The Women University, Multan and Evolution Pakistan" on 17-18 February 2025.
2. Akhtar T, Hassan S, Rehman K, **AKASH MSH**. "**Mitigating Lead and Arsenic Contamination in Water: Metabolic dysfunction and Analytical Techniques**" presented in "International Sci-Arts Conference ISAC-25 Multan" jointly organized by "The Women University, Multan and Evolution Pakistan" on 17-18 February 2025.
3. Hassan S, Akhtar T, Rehman K, **AKASH MSH**. "**Metabolic Disorders and Cardiovascular Diseases: A Bidirectional Pathophysiological Link**" presented in "International Sci-Arts Conference ISAC-25 Multan" jointly organized by "The Women University, Multan and Evolution Pakistan" on 17-18 February 2025.
4. **AKASH MSH**, Rehman K, Shoaib SM, Ibrahim I, Yaqoob. "**Metabolomics Approaches to Endocrine Disrupting Chemicals: Understanding Impact and Natural Remediation**" presented in "1st international Conference on Chemistry of Medicinal Plants" organized by the Department of Chemistry, Karakoram International University, Gilgit, Pakistan on **1st -3rd July 2024**.
5. Rehman K, **AKASH MSH**, Faheem A, Jabeen K. "**Unlocking the Potential of Natural Compounds as Therapeutic Agents in Nicotine-Induced endocrine disruption**" presented in "1st international Conference on Chemistry of Medicinal Plants" organized by the Department of Chemistry, Karakoram International University, Gilgit, Pakistan on **1st -3rd July 2024**.
6. **AKASH MSH**, Suhail S, Rehman K, Ibrahim M, Victor F. "**Biochemical Association of Genetic Polymorphism with Hypertension in Diabetic Patients**" presented in International Brain and Biomedicines Conference (IBBC-2023)" on **May 8-19, 2023**.
7. "**Biochemical role of FOXP3 polymorphism in assessment of pre-eclampsia pathogenesis**" presented in "5th international conference on Gynecology, Midwifery and Women's Health (Gynecology Conference)" on **March 20, 2023**.

8. **AKASH MSH.** “Insulin Resistance Susceptibility is Associated with BPA Exposure” presented in Online “19th Annual World Congress on Insulin Resistance, Diabetes & Cardiovascular Disease (WCIRD C)”. **Dec. 2-4, 2021.**
9. **AKASH MSH.** Rehman K, Haq MEU, Irshad K, Jabeen K. “Environmental contaminants-induced metabolic disorders and their treatment strategies using plant-based bioactive compounds” presented in 7th International Conference on Water Resource and Environment (WRE-2021)”. **Nov. 1-4, 2021.**
10. **AKASH MSH.** “Long-Term Exposure of Bisphenol A Impairs Metabolism and Develop Insulin Resistance” presented in Online “19th Annual World Congress on Insulin Resistance, Diabetes & Cardiovascular Disease (WCIRD C)”. **Dec. 2-4, 2021.**
11. **AKASH MSH.** “FTO, PPAR- γ and ABCC8 Gene Variation and Hypertension as Determinants of Cardiometabolic Risk in CVD Patients” presented in Online “19th Annual World Congress on Insulin Resistance, Diabetes & Cardiovascular Disease (WCIRD C)”. **Dec. 2-4, 2021.**
12. **AKASH MSH.** “Exposure of Endocrine Disrupting Chemical is a Risk Factor for the Pathogenesis and Development of Metabolic Disorders” presented in Online “18th Annual World Congress on Insulin Resistance, Diabetes & Cardiovascular Disease (WCIRD C)”. **Dec. 3-6, 2020.**
13. **AKASH MSH.** “Early Detection of Insulin Resistance and Assorted Metabolic Dysfunctions through MicroRNA-141” presented in Online “18th Annual World Congress on Insulin Resistance, Diabetes & Cardiovascular Disease (WCIRD C)”. **Dec. 3-6, 2020.**
14. Fiayyaz F, Rasool MH, **AKASH MSH.** Khurshid M, Aslam B. “Evaluation of antibacterial effects of *Azadirachta indica* (Neem) extracts against MDR *Acinetobacter baumannii*” presented in “Virtual One Health International Conference” organized by “Department of Microbiology, College of Veterinary and Animal Sciennces, Jhang Campus, UVAS, Lahore, Pakistan”. **November 25-26, 2020.**
15. **AKASH MSH.** Rehman K. “Exposure of heavy metals in Pakistani population and their association with risk factors of metabolic disorders” presented in Online “The 7th Global Conference on Polymer and Composite Materials (PCM-2020)”. **Nov. 1-4, 2020.**
16. **AKASH MSH.** Rehman K. “Biochemical association of endocrine disrupting chemicals with risk factors diabetes mellitus and metabolic disorders” presented in 2nd International Pharmacy Conference & Exhibition organized by Department of Pharmacy, The Islamia University of Bahawalpur, Pakistan. **Feb. 20-21, 2020.**
17. Rehman K, **AKASH MSH.** Jabeen K, Shabbir S. “Frequency of FTO gene rs9939609 (T/A) variation in cardiovascular disease smokers and non-smoker Pakistani population” presented in 2nd International Pharmacy Conference & Exhibition organized by Department of Pharmacy, The Islamia University of Bahawalpur, Pakistan. **Feb. 20-21, 2020.**
18. **AKASH MSH.** “Exposure of bisphenol A is associated with increased levels of proinflammatory biomarkers in Pakistani population” presented in 2nd National Conference on Pharmaceutical Innovations and Future Prospects organized by College of Pharmacy, University of Sargodha, Pakistan. **April 26-27, 2019.**
19. Tariq M, Rehman K, Chohan TA, **AKASH MSH.** Mahmood Q, Yang B. “Lapatinib modulate IL-13 induced M2-like polarization of tumor-associated macrophage in liver cancer” presented in 2nd National Conference on Pharmaceutical Innovations and Future Prospects organized by College of Pharmacy, University of Sargodha, Pakistan. **April 26-27, 2019.**
20. Haq ME, Rehman K, **AKASH MSH.** “Evaluation of nephroprotective effect of methanolic extract of *Cosmos bipinnatus* plant in gentamicin-induced nephrotoxicity” presented in 2nd National Conference on Pharmaceutical Innovations and Future Prospects organized by College of Pharmacy, University of Sargodha, Pakistan. **April 26-27, 2019.**
21. Fiayyaz F, Rehman K, Jabeen K, **AKASH MSH.** “Future therapeutic approaches for maintaining healthy microbiota for prevention of dysbiosis-associated metabolic disorders” presented in

22. **AKASH MSH**, Rehman K, Ul Haq ME. **“Exposure of bisphenol A is associated with oxidative stress and lipid peroxidation in Pakistani population”** presented in “5th Annual International Pharmacy Scientific Symposium” organized by “Faculty of Pharmacy, University of Central Punjab”, Lahore, Pakistan. **March 29-30, 2019.**
23. Ul Haq ME, Rehman K, **AKASH MSH**. **“Nephroprotective activity of methanolic extract of *Cosmos sulphureus* against the gentamicin-induced nephrotoxicity in experimental rats”** presented in “5th Annual International Pharmacy Scientific Symposium” organized by “Faculty of Pharmacy, University of Central Punjab”, Lahore, Pakistan. **March 29-30, 2019.**
24. **AKASH MSH**, Sabir S, Fiayyaz F, Rehman K. **“Role of endocrine disrupting chemicals in the metabolism of carbohydrates: inserting the association into perspectives”** presented in “2nd International Conference of Biochemistry, Biotechnology and Biomaterials” organized by Department of Biochemistry, University of Agriculture, Faisalabad, Pakistan. **Dec. 09-11, 2018.**
25. **AKASH MSH**, Rehman K, Numan M. **“Exposure of endocrine disrupting chemicals and pathogenesis of diabetes mellitus”** presented in “International Conference on Modern Trends in Chemistry and Energy Technologies” organized by “COMSATS University Islamabad, Lahore Campus, Pakistan”. **Oct. 22-23, 2018.**
26. Rehman K, **AKASH MSH**, Shabbir K. **“Recent trends in therapeutic approaches for the treatment of diabetes mellitus”** presented in “International Conference on Modern Trends in Chemistry and Energy Technologies” organized by “COMSATS University Islamabad, Lahore Campus, Pakistan”. **Oct. 22-23, 2018.**
27. **AKASH MSH**, Numan M, ul-Haq M, Ahmad MM, Bukhari SA, Rehman K. **“Bisphenol A exposure in human beings: its diabetogenic role in diabetes mellitus development and effect on liver function biomarkers”** presented in “1st International Conference on Applied Zoology” organized by “Department of Zoology, Government College University Faisalabad, Pakistan. **Oct. 10-11, 2018.**
28. **AKASH MSH**, Rehman K, Numan M, Bukhari SA. **“Exposure of bisphenol A in Pakistani population and its association with glycemic index”** presented in “4th International Multidisciplinary Research Conference Global Prosperity through Research & Development” jointly organized by Sarhad University of Science and Information Technology, Peshawar Pakistan. **Oct. 9-11, 2018.**
29. Rehman K, Jabeen K, Awan FR, **AKASH MSH**. **“Early diagnosis may prevent risk of development of diabetes mellitus in cardiomyopathy patients”** presented in “4th International Multidisciplinary Research Conference Global Prosperity through Research & Development” jointly organized by Sarhad University of Science and Information Technology, Peshawar, Pakistan. **Oct. 9-11, 2018.**
30. **AKASH MSH**, Rehman K, Numan M. **“Interleukin-6 and tumor necrosis factor-alpha are the biomarkers for prediction of insulin resistance in type 2 diabetic patients”** presented in “3rd International Conference on Biosciences” jointly organized by “Biological Society of Pakistan” and “Government College University Lahore, Pakistan. **May 9-11, 2018.**
31. Rehman K, Jabeen K, **AKASH MSH**, Saddique MA, Jamil F. **“Fasting hyperglycemia predicts chances of cardiovascular disorders”** presented in “3rd International Conference on Biosciences” jointly organized by “Biological Society of Pakistan” and “Government College University Lahore, Pakistan. **May 9-11, 2018.**
32. Akbar MU, Rehman K, Zia KM, **AKASH MSH**. **“Development of curcumin-loaded mixed polymeric micelles for its prolonged therapeutic potentials”** presented in “Three days International Conference on Chemical and Pharmaceutical Sciences: Recent Approaches in Research & Applications”, duly organized by “Department of Chemistry and Department of Pharmacy, Forman Christian College (A Chartered University), Lahore, Pakistan. **Jan. 17-19, 2018.**
33. Rehman K, **AKASH MSH**, Fatima, K. **“Impact of cadmium on thyroid functioning and risk of diabetes mellitus”** presented in “Three days International Conference on Chemical and

Pharmaceutical Sciences: Recent Approaches in Research & Applications”, duly organized by “Department of Chemistry and Department of Pharmacy, Forman Christian College (A Chartered University), Lahore, Pakistan. **Jan. 17-19, 2018.**

34. Akbar MU, Rehman K, Zia KM, **AKASH MSH***. “**Conjugation of curcumin with pluronic F-127 to enhance the solubility & sustained delivery of curcumin for clinical applications**” presented in 1st one day symposium on “Drug Development & Radiolabeled Compounds” organized by Department of Chemistry, Government College University Faisalabad, Pakistan. **March 21, 2017.**
35. Ashraf A, **AKASH MSH**, Rehman K. “**Assessment of *in vivo* toxicity of food azo-dye tartrazine on pancreatic functions and glycemic status of experimental animal model**” presented in international conference on “Food and Nutrition Security” organized by “Institute of Home & Food Sciences”, Government College University Faisalabad, Pakistan. **March 7-8, 2017.**
36. Gul J, Rehman K, Hussain I, **AKASH MSH***. “**Influence of pharmaceutical waste on overall growth of carrot**” presented in international conference on “Food and Nutrition Security” organized by “Institute of Home & Food Sciences”, Government College University Faisalabad, Pakistan. **March 7-8, 2017.**
37. **AKASH MSH**, Rehman K. “**Diet-based therapy for treatment of type 2 diabetes mellitus**” presented in “international conference on Global Trends in Safe and Healthy food”, “Institute of Home & Food Sciences”, Government College University, Faisalabad, Pakistan. **March 7-8, 2016.**
38. Rehman K, Mahmood A, **AKASH MSH**. “**Diabetes mellitus and nutraceuticals: an emerging trend from conventional treatment therapy to nutritional-based therapy**” presented in “International Human Nutrition Conference and Expo-2015” “Nutritionists Association of Pakistan” and “University of Veterinary & Animal Sciences”, Lahore, Pakistan. **Nov. 3-4, 2015.**
39. **AKASH MSH**, Rehman K. “**Computational discovery of new dosage forms for effective anti-diabetic protein therapeutics**” presented in “Pharmacy as Profession: Challenges and Opportunities in the New Scenario”. Organized by “Department of Pharmacy, University of Peshawar”, Pakistan. **Aug. 21-23, 2015.**
40. Rehman K, **AKASH MSH**. “**Determination of anti-cancer effects of arsenic compounds through translational bioinformatics**” presented in “Pharmacy as Profession: Challenges and Opportunities in the New Scenario”. Organized by “Department of Pharmacy, University of Peshawar”, Pakistan. **Aug. 21-23, 2015.**

Invited Lectures and Keynote Addresses

1. “International Sci-Arts Conference ISAC-25 Multan” jointly organized by “The Women University, Multan and Evolution Pakistan” on **17-18 February 2025.**
2. “National Conference on Recent Advances in Pharmaceutical Sciences” organized by Faculty of Pharmacy, The University of Lahore, Lahore, Pakistan on **December 17, 2024.**
3. 3rd International Virtual Conference on Applied Chemistry” organized by Department of Applied Chemistry, GCUF, Pakistan on **November 26-27, 2024.**
4. “1st international Conference on Chemistry of Medicinal Plants” organized by Department of Chemistry, Karakoram International University, Gilgit, Pakistan on **1st -3rd July 2024.**
5. “One Day Seminar” organized by “Institute of Pharmaceutical Sciences, UVAS, Lahore, Pakistan on **December 22, 2023.**
6. 5th international conference on Gynecology, Midwifery and Women’s Health (Gynecology Conference)” on **March 20, 2023.**
7. 7th International Conference on Water Resource and Environment (WRE-2021)”. **Nov. 1-4, 2021.**
8. 2nd International Pharmacy Conference & Exhibition organized by Department of Pharmacy, IUB, Pakistan. **Feb. 20-21, 2020.**

9. 2nd National Conference on Pharmaceutical Innovations and Future Prospects organized by College of Pharmacy, UOS, Pakistan. **April 26-27, 2019.**
10. 2nd "National One Day Symposium on One Health" organized by Faculty of Veterinary Science, UAF, Pakistan. **Dec. 12, 2018.**
11. "International Conference on Modern Trends in Chemistry and Energy Technologies" organized by "COMSATS University Islamabad, Lahore Campus". **Oct. 22-23, 2018.**
12. 1st joint Curriculum Review Meeting organized by Faculty of Pharmaceutical Sciences, GCUF, Pakistan. **Aug. 3, 2018.**
13. One-Day Workshop on **"The Art of Wining NRP-HEC Projects"** Organized by "ORIC, UMT, Lahore, Pakistan". **Oct. 4, 2017.**
14. One-day seminar on **"Drug Delivery to Patient Care"**, organized by "Pharmacy Practice Research Group" in Department of Pharmacy, COMSATS Institute of Information Technology, Abbottabad, Pakistan. **May 25th, 2016.**

Technical Sessions Chaired— Professional Conferences

1. Chaired technical session in International Sci-Arts Conference ISAC-25 Multan jointly organized by "The Women University, Multan and Evolution Pakistan" on **17-18 February 2025.**
2. Co-Chaired technical session (Track I-C) on Natural Products in 2nd International Conference and Exhibition organized by Department of Pharmacy, The Islamia University of Bahawalpur, Pakistan. **Feb. 20, 2020.**
3. Chaired technical session on 2nd day of "International Conference on Modern Trends in Chemistry and Energy Technologies" organized by "COMSATS University Islamabad, Lahore Campus". **Oct. 22-23, 2018.**

Participation in Professional Trainings and Workshops

1. **OIC-COMSTECH and Ningbo University Certificate Course on Applied Biomedical AI** organized by OIC-COMSTECH, Held on 23rd - 31st July & 11th - 27th August, 2025.
2. **Role of AI in Open Access Publishing** organized by Wiley Research Training, John Wiley & Sons on Aug. 13, 2025.
3. **"Literature Review: Engaging with the Text of the Research Methodology Course"** organized by Center for Learning and Teaching (CLT), Forman Christian College, University, Lahore, Pakistan on **June 18, 2025.**
4. **"Glomerular Diseases Pathology and Treatment"** organized by Journal of Clinical Medicine, MDPI on **Jan. 20, 2025.**
5. **Shorten your path to publication: Researcher insights from submission to rejection** organized by Researcher Academy-ELSEVIER on Jan. 8, 2025.
6. **How to be realistic about publishing your paper?** organized by Researcher Academy-ELSEVIER on Jan. 8, 2025.
7. **"Review of Institutional Performance & Enhancement (RIPE)"** organized by QEC, GCUF on **Dec. 9, 2024.**
8. **"Certificate In Portfolio Management Professional"** organized by National Productivity Organization, under the Ministry of Industries & Production, Pakistan on **May 30, 2024.**
9. **"Awareness & Implementation of ISO 21500:2021 (E) (Second edition) Project Management"** organized by National Productivity Organization, under the Ministry of Industries & Production, Pakistan on **April 18, 2024.**

10. **"The Potential of AI in Peer Review"** organized by Reviewer Credits with Sven Fund & Avi Staiman on **Feb. 22, 2024**.
11. **"Role of University Teachers in Academic Planning & Teaching"** organized by Department of Education, GCUF on **Dec. 20, 2023**.
12. **Navigating the pathways of publishing in High-quality journals by Using Science Direct** organized by Researcher Academy-ELSEVIER on **Oct. 20, 2023**.
13. **Wolters Kluwer OVID Database** organized by Wolters Kluwer in collaboration with HEC held on **Sep. 21, 2023**.
14. **"PhD Supervisors Capacity Building Program Under "Pak-UK Education Gateway Project" as Master Trainer"** jointly organized by NAHE, HEC and British Council Pakistan on **July 17-21, 2023**.
15. **HEC-BC Reviewers Capacity Building Program** organized by HEC in collaboration with British Council under Pak-UK Education Gateway. **13th-16th February 2023**.
16. **"CRISPR-cas9 Genome Editing of Leishmania and Drug Target Validation"** jointly organized by COMSTECH, Islamabad, Pakistan and York Biomedical Research Institute, University of York, UK on **25th June 2021**.
17. **"How to Access HEC Digital Library Remotely & ProQuest Databases Training"** organized by Training & Consulting Partner – MEA ProQuest in partnership with HEC on **June 8, 2020**.
18. **"Drug Development & Radiolabeled Compounds"** organized by "Department of Chemistry, GCUF" in collaboration with "Pakistan Society of Nuclear Medicine (PSNM)". **March 21, 2017**.
19. **"Implementation of plagiarism policy and Turnitin"** duly organized by HEC at its regional center, Lahore. **Nov. 28, 2016**.
20. **14th national training course on "Modern Techniques in Biotechnology"** organized by "National Institute for Biotechnology and Genetic Engineering", Faisalabad. **April 18-22, 2016**.
21. **"How to Improve Industry-Academia Linkage"** organized by "Pakistan Institute of Entrepreneurship" in collaboration with "Falcon Consulting". **April 16, 2016**.
22. **"Infrared Spectroscopy: Principle & Applications"** jointly organized by "ORIC, GCUF" and "Rays Technologies Lahore, Pakistan". **Feb. 25, 2016**.
23. **"Government-Academia-Industry Linkage"**, organized by "GCUF". **Jan. 25-26, 2016**.
24. **"Project Formulation Workshop"** organized by PSF in collaboration with "GCUF". **Jan. 20-21, 2016**.
25. **"Patent Filing Vs Commercialization"** organized by "Intellectual Property Rights". **Jan. 5, 2016**.
26. **"Intellectual Property rights"** organized by "GCUF" in collaboration with "PASTIC". **Nov. 6, 2015**.
27. **"Advanced Chemical Techniques in Natural and Applied Sciences"** organized by "Department of Chemistry and Central Hi-Tech Lab., UAF, Pakistan." **Sep. 10-12, 2015**.
28. **"Biosafety training workshop for young scientists"** organized by "NAYS" in association with "Department of Biochemistry, UAF, Pakistan". **June 13, 2015**.
29. **"Pre-renewal training program for pharmacy practice"** organized by "Punjab Pharmacy Council" at Lahore, Pakistan. **May 30-31, 2015**.
30. **"Operation and application on HPLC"** at UVAS Lahore, Pakistan. **July 20-22, 2009**.
31. **"Introduction to Laboratory Instrumentation and Their Quality Aspects"** at UVAS Lahore, Pakistan. **July 14-18, 2009**.

32. **“Computer literacy program”** at Department of Computer Science, BZU, Pakistan. **Jan. 4 to Feb. 5, 2001.**
33. **“The National Cadet Corps”** organized by Multan Battalion, National Cadet Corps and Women Guards from Jan. 3 to Oct. 21, 1998.

Professional Events Organized

1. **“Diabetes Prevention & Management”** organized by Department of Public Health, GCUF on **Nov. 26, 2024.**
2. One Day International Symposium on **“Emerging Trends in Herbal Formulation, Standardization and Regulation”** organized by Faculty of Pharmaceutical Sciences, GCUF, Pakistan held on **March 2nd, 2023.**
3. Seminar on **“Prevention & Control on Narcotics; The Role of Pharmacist”** organized by Faculty of Pharmaceutical Sciences & Directorate of Students’ Affairs, GCUF, Pakistan. **April 23, 2019.**
4. 2nd International Symposium on Pharmaceutical Sciences on **“Innovation and integration in pharmaceutical & biomedical sciences, way forward for collaboration”** organized by Faculty of Pharmaceutical Sciences, GCUF, Pakistan. **Jan. 30, 2019.**
5. 1st one-day symposium on **“Drug Development & Radiolabeled Compounds”** organized by **“Department of Chemistry, GCUF”** in collaboration with **“PSNM”**. **March 21, 2017.**
6. One-day workshop on **“Crystal Structure Determination by X-Ray Crystallography”** jointly organized by Office of Research Innovation and Commercialization (ORIC) and Hi-Tech Lab. GCUF. **Nov. 21, 2016.**

Technical Expert for Evaluations of Research Projects

1. **Evaluator — Dasman Diabetes Institute, Kuwait.** Reviewed and assessed submitted research project proposals.
2. **Evaluator — Pakistan Science Foundation.** Reviewed research projects submitted under the Competitive Research Program (CRP) and Competitive Research Grants (CRG).
3. **Evaluator — Higher Education Commission (HEC), Pakistan.** Reviewed project proposals submitted under CPEC and the National Research Program for Universities (NRPU).

Subject Expert — University Faculty Selection Boards

1. **Subject Expert — Selection Board, Bahauddin Zakariya University (BZU), Multan** — Served as subject expert on the faculty selection panel for the recruitment of **Assistant Professors** in *Pharmaceutical Chemistry*.
2. **Subject Expert — Selection Board, University of Agriculture Faisalabad (UAF)** — Served as subject expert on the faculty selection panel, performing technical evaluation of candidates’ dossiers for the recruitment of **Associate Professors** in *Pharmacy*.
3. **Subject Expert — Selection Board, The Islamia University of Bahawalpur (IUB)** — Served as subject expert on the faculty selection panel, performing technical evaluation of candidates’ dossiers for the recruitment of **Associate Professors** in *Pharmaceutical Chemistry*.

Curriculum Review & Accreditation Committees

1. **Member, National Curriculum Review Committee (NCRC), Higher Education Commission (HEC), Pakistan**—national-level curriculum review and provided policy recommendations for pharmacy education.
2. **Member, Curriculum Development and Review Committee — Doctor of Pharmacy, Pharmacy Council of Pakistan** — Evaluated the Doctor of Pharmacy curriculum, performed competency mapping, and supported statutory approval processes.

External Subject Evaluator — Degree Programs (Pharm-D, MPhil, PhD)

1. Department of Pharmacy, University of Health Sciences, Lahore, Pakistan.
2. Punjab University College of Pharmacy, University of the Punjab, Lahore, Pakistan.
3. Faculty of Pharmacy, The University of Lahore, Lahore. Pakistan.
4. Faculty of Pharmacy and Department of Pharmaceutical Chemistry, Bahauddin Zakariya University, Multan, Pakistan.
5. Faculty of Pharmacy and Department of Pharmaceutical Chemistry, The Islamia University of Bahawalpur, Pakistan.
6. College of Pharmacy, University of Sargodha, Sargodha, Pakistan.
7. Faculty of Pharmacy, The University of Faisalabad, Faisalabad, Pakistan.
8. Department of Pharmacy, Riphah International University, Faisalabad Campus, Pakistan.
9. Department of Pharmacy, COMSATS University Islamabad, Lahore Campus, Pakistan.
10. Department of Pharmacy, University of Poonch, Rawalakot, AJ&K, Pakistan.

Conferences and Seminars Attended

1. Awareness Seminar on “Diabetes, Prevention and Management” organized by Department of Public Health, GCUF on **Dec. 7, 2023**.
2. Seminar on Pharmaceutical manufacturing & Quality Assurance, organized by Department of Pharmaceutics, GCUF, Pakistan. **Feb. 27, 2020**.
3. 2nd International Conference on Applied Zoology” organized by Department of Zoology, GCUF, Pakistan. **Dec. 19-20, 2019**.
4. One Day Symposium on “Nanomedicine: Current Scenario and Future Perspectives” organized by Institute of Pharmacy, Physiology and Pharmacology, UAF, Pakistan. **Aug. 06, 2019**.
5. 1st Research Seminar on Innovative Therapeutic Modalities in Cardiovascular Disorders organized by Faculty of Pharmaceutical Sciences, GCUF, Pakistan. **Feb. 20, 2019**.
6. 2nd International Conference on **Biochemistry, Biotechnology and Biomaterials — “Biochemistry for Better Health and Environment in the Developing World”**; organized by the Department of Biochemistry, University of Agriculture, Faisalabad; **9–11 December 2018**.
7. 1st International Conference on Applied Zoology” organized by Department of Zoology, GCUF, Pakistan. **Oct. 10-11, 2018**.
8. 4th International Multidisciplinary Research Conference Global Prosperity through Research & Development” jointly organized by Sarhad University of Science and Information Technology, Peshawar Pakistan. **Oct. 9-11, 2018**.
9. International Conference on Biosciences” jointly organized by “Biological Society of Pakistan” and “Government College University Lahore” in collaboration with “Eco Science Foundation”. **May 9-11, 2018**.
10. **“Cell Culture & Protein Biology Innovations”** organized by “Department of Bioinformatics and Biotechnology, GCUF”, Pakistan. **Feb. 20, 2018**.
11. **“Chemical and Pharmaceutical Sciences: Recent Approaches in Research & Applications”**, duly organized by “Department of Chemistry and Department of Pharmacy, Forman Christian College (A Chartered University), Lahore, Pakistan. **Jan. 17-19, 2018**.

12. **"Awareness Seminar on Technology Development Fund"**, duly arranged by "University of the Punjab", Lahore. **Oct. 26, 2017.**
13. **"Characterization of Biologically Potent isolates"** organized by "Department of Applied Chemistry, GCUF". **Aug. 16, 2017.**
14. **"Food and Nutrition Security"** organized by "Institute of Home & Food Sciences", GCUF, Pakistan. **March 7-8, 2017.**
15. **"One Health"**, organized by U.S.-Pakistan Center for Advanced Studies in Agriculture and Food Security, UAF, Pakistan. **Aug. 8, 2016.**
16. **"Industrial Linkage and Eastern Medicine for the Better Promise of Tomorrow"** organized by Department of Eastern medicine, Directorate of Medical Sciences, GCUF. **May 19, 2016.**
17. **"Global Trends in Safe and Healthy food"**, organized by "Institute of Home & Food Sciences", GCUF, Pakistan. **March 7-8, 2016.**
18. **"Food and Nutrition 2015"** organized by "UVAS" and "Forman Christian College", Lahore, Pakistan. **Nov. 3-7, 2015.**
19. **"International Human Nutrition Conference and Expo-2015"** organized by "Nutritionists Association of Pakistan" and "University of Veterinary & Animal Sciences", Lahore, Pakistan. **Nov. 3-4, 2015.**
20. **"Pharmacy as Profession: Challenges and Opportunities in the New Scenario"**. Organized by "Department of Pharmacy, University of Peshawar", Pakistan. **Aug. 21-23, 2015.**
21. **"Malaria Threat: Present Scenario and Future Prospects"** organized by "Molecular Parasitology Laboratory, Department of Parasitology", UAF, Pakistan. **June 16, 2015.**

Reviewer for International Scientific Journals and Publishers

Reviewed manuscripts for journals published by:

1. **Elsevier:** *Carbohydrate Polymers; Environmental Toxicology & Pharmacology; Food Science & Nutrition; Advanced Medical Sciences; Nanomedicine; Phytomedicine; South African Journal of Botany; Environmental Pollution; Heliyon; Science of the Total Environment; Chemosphere; Bioorganic Chemistry; Journal of Chromatography B; Asian Pacific Journal of Tropical Medicine; Journal of Industrial & Engineering Chemistry; Current Stem Cell Research & Therapy; Respiratory Research; Journal of Traditional & Complementary Medicine; Arabian Journal of Chemistry; Public Health Nutrition; Biomedicine & Environmental Sciences; Journal of Herbal Medicine; International Journal of Biological Macromolecules; Phytotherapy Research; Primary care Diabetes; Reactive and Functional Polymers; Saudi Pharmaceutical Journal.*
2. **Wiley:** *Diabetes, Obesity & Metabolism; Clinical & Experimental Pharmacology & Physiology, Diabetes/Metabolism Research & Reviews, Journal of Cellular Physiology; Journal of Biochemical & Molecular Toxicology; Obesity Medicine; Stem Cells International; Chemistry & Biology Drug Design.*
3. **Springer Nature:** *Molecular Biology Reports; Molecular Medicine Reports; European Journal of Clinical Nutrition; Biocell; Archives of Physiology & Biochemistry; Archives of Environmental Contamination & Toxicology; Environmental Science & Pollution Research; International Journal of Environmental Analytical Chemistry; Mini Reviews in Medicinal Chemistry; Psychoneuroendocrinology; Pharmaceutical Research; Scientific Reports.*
4. **Frontiers:** *Frontiers in Pharmacology; Frontiers in Nutrition; Frontiers in Public Health; Frontiers in Endocrinology; Frontiers in Cellular & Infection Microbiology; Frontiers in Microbiology.*
5. **MDPI:** *Animal; Biology; Biomolecules; Biomedicines; Cells; Gels; Healthcare; International Journal of Environmental Research and Public Health; International Journal of Molecular Sciences; Journal of Clinical Medicine; Journal of Vascular Diseases; Life; Metabolites; Molecules; Nutrients; Pharmaceuticals; Polysaccharides; Sensors.*
6. **Taylor & Francis:** *Expert Opinion on Drug Delivery; Expert Opinion on Pharmacotherapy; Journal of Drug Target; Future Virology; Therapeutic Delivery.*

7. **SAGE Publications:** *SAGE Open Medicine; Clinical Medicine Insights: Endocrinology & Diabetes; Dose-Response; Integrative Cancer Therapies; Environmental Health Insights; International Journal of Immunopathology & Pharmacology.*
8. **ACS Publications:** *ACS Applied Bio Materials; ACS Chemical Neuroscience; ACS Omega.*
9. **BioMed Central Ltd:** *BMC Endocrine Disorders; BMC Complementary & Alternative Medicine; Stem Cell Research and Therapy.*
10. **Others:** *F1000Research; Pakistan Journal of Pharmaceutical Sciences; Pakistan Journal of Zoology; PloS One; Biomedical Reports; International Journal of Industrial Chemistry; Tobacco Induced Diseases; Toxicology Mechanisms and Methods; Toxin Reviews.*