



Dr. Basharat Ali (HEC Approved Supervisor)

Assistant Professor of Chemistry

SA-Centre for Interdisciplinary Research in Basic Sciences (SA-CIRBS)

International Islamic University, Islamabad.

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Specialization: Organic, Bioorganic and Medicinal Chemistry

Education and Training:

Post-Doctorate: Department of Medicinal Chemistry, Soochow University, China (June 2019-May 2020)

Research Assistant: Department of Polymer Science and Engineering, Zhejiang University, China (October 2017-December 2018)

Ph.D. in Organic Chemistry: H. E. J. Research Institute of Chemistry, University of Karachi, Pakistan (2018)

M.Sc. in Chemistry: Department of Chemistry, Federal Urdu University of Arts, Science, and Technology, Karachi (2012)

Profile:

Dr. Basharat Ali joined Centre for Interdisciplinary Research in Basic Sciences (CIRBS), International Islamic University, Islamabad in February 2021. He completed his PhD in Organic Chemistry from HEJ Research Institute of Chemistry, ICCBS, University of Karachi. During his PhD he worked on synthesis of hydrazones, thiosemicarbazides, 1,2,4-triazoles and other heterocyclic compounds. He worked as Research Assistant at Department of Polymer Science and Engineering in Zhejiang University, China. He worked on organometallic catalysis for polymer synthesis, and synthesis of Organic Solar Cells. During Post-Doctorate in the Department of Medicinal Chemistry, Soochow University, China he worked on synthesis of chemiluminescent dioxetane probes, fluorescent probes, and synthesis of anthraquinone (Rhein and Emodin Natural Products) derivatives.

Research Interests and Focus:

My research focuses on design, synthesis, characterization and biological evaluation of medicinally important synthetic small molecules, particularly, in the field of heterocyclic chemistry. My research focus also includes design and synthesis of probes for diagnosis of human diseases and detection of toxic compounds and metals.

Research Grants:

SRGP research grant (Rs. 1.0 million) from Higher Education Commission, *Synthesis, Characterization, and Evaluation of 1,3-Thiazole Derivatives as Antimicrobial and Bioactive Agents.*(P.I: Dr. Basharat Ali, Co-PI: Prof. Dr. Muhammad Riaz)

Research Students:

MS Research Student

Student name	Status
Kiran Fatima Iqbal	Completed
Sammiah Tariq	Completed
Sunmbal Shaheen	Completed
Muhammad Ishaq	Completed
Nabeel Ahmed	Completed
Bibi Hadiqa	Completed
Fareeha Khan	Completed
Zunaira Rehman	Completed
Muhammad Masood	Completed
Nadir Rasheed	Completed
Muhammad Mueen	Completed
Mansoor Hussain	Completed
Ikram Ullah	Research
Kamran Sadiq	Research

Selected Research Publications:

1. Zhou, S., Mou, Y., Liu, M., Du, Q., Ali, B., Jurupula, R., Qiao, C., Hu, L.F. and Ji, X. (2020). Insights into the Mechanism of Thiol Triggered COS/H₂S Release from N-Dithiasuccinoyl Amines. *The Journal of Organic Chemistry*, 85(13), 8352-8359
2. Ali, I., Rafique, R., Khan, K. M., Chigurupati, S., Ji, X., Wadood, A., Rehman, A., Perveen, S., Ali, B. Potent α -Amylase Inhibitors and Radical (DPPH and ABTS) Scavengers based on Benzofuran-2-yl(phenyl)methanone Derivatives: Syntheses, In Vitro, Kinetics, and In Silico Studies, (2020). *Bioorganic chemistry*, 104, 104238
3. Naz, F., Kanwal, Latif, M., Salar, U., Khan, K. M., al-Rashida, M., Ali, I., Ali, B., Taha, M., and Perveen, S. (2020). 4-Oxycoumarinyl Linked Acetohydrazide Schiff bases as Potent Urease Inhibitors. *Bioorganic Chemistry*, 104365
4. Abbas, A., Ali, B., Khan, K. M., Iqbal, J., ur Rahman, S., Zaib, S., and Perveen, S. (2019). Synthesis and in vitro urease inhibitory activity of benzohydrazide derivatives, in silico and kinetic studies. *Bioorganic chemistry*, 82, 163-177
5. Ali, B., Khan, K. M., Salar, U., Hussain, S., Ashraf, M., Riaz, M., Wadood, A., Taha, M. and Perveen, S. (2018). 1-[4'-Chlorophenyl] carbonyl-4-(aryl) thiosemicarbazide derivatives as potent urease inhibitors: Synthesis, in vitro and in silico studies. *Bioorganic chemistry*, 79, 363-371
6. Ali, B., Khan, K.M., Hussain, S., Hussain, S., Ashraf, M., Riaz, M., Wadood, A. and Perveen, S., (2018). Synthetic nicotinic/isonicotinic thiosemicarbazides: In vitro urease inhibitory activities and molecular docking studies. *Bioorganic chemistry*, 79, 34-45
7. Li, S., Zhan, L., Zhao, W., Zhang, S., Ali, B., Fu, Z., Lau, T.K., Lu, X., Shi, M., Li, C.Z. and Hou, J., (2018). Revealing effects of molecular packing on the performances of polymer solar cells based on ADCDA type non-fullerene acceptors. *Journal of Materials Chemistry A*, 6, 12132-12141
8. Hashim, J., Arshad, N., Khan, I., Nisar, S., Ali, B. and Choudhary, M. I. (2014). Preparation of dihydrotetrazolo [1, 5-a] pyrimidine derivatives from Biginelli 3, 4-dihydropyrimidine-2-thiones. *Tetrahedron*, 70(45), 8582-8587.