SHAKIR AHAMAD

ASSISTANT PROFESSOR,
DEPARTMENT OF CHEMISTRY,
C. M. SCIENCE COLLEGE,
LNMU, DARBHANGA-846004

ABOUT ME

Ph.D. in Organic Chemistry:

To work with a reputed institution as an assistant professor/research scientist, where I can effectively apply my skills in research, teaching, and administrative responsibilities.

SKILLS

- Mass spectrometery
- IR
- NMR
- Cell Culture
- PXRD
- HPLC

Google Scholar

- Published Articles = 51,
- Submitted Articles = **8**,
- Book Chapters = **4**,
- Avg. IF = **5.7**
- Citation = **1150**,
- H-index = **21**,
- i10-index = **34**

CONTACT

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C. M. Science College, LNMU,
Darbhanga-846004

EDUCATION

CSIR-Central Drug Research Institute, Lucknow

2013 - 2018 | Ph.D. Organic Chemistry

Aligarh Muslim University, Aligarh, UP, India

2011 - 2013 | M.Sc. Organic Chemistry | 75%

Kurukshetra University, India

2008 - 2011 | B.Sc. Chemistry | 70%

RESEARCH AND TEACHING EXPERIENCE

Since 2025 **Assistant Professor**
C. M. Science College, LNMU, Darbhanga-846004

2019-2025 **Assistant Professor**
Department of Chemistry, AMU, Aligarh-202002

2018 - 2019 **Project Assistant**
Molecular & Structural Biology division, CSIR Central Drug Research Institute, Lucknow - 226031, India

2015 - 2018 **Senior Research Fellow**
Medicinal & Process Chemistry Division, CSIR-Central Drug Research Institute, Lucknow-226031

2013 - 2015 **Junior Research Fellow**
Medicinal & Process Chemistry Division, CSIR-Central Drug Research Institute Lucknow-226031

AWARDS, DISTINCTIONS AND FELLOWSHIPS

2020 : CSIR-CDRI Incentive award for publication - 2020
2017 : CSIR-CDRI Incentive award for publication - 2017
2013 : Qualified UGC/CSIR-**JRF**, AIR-33.
2013 : Qualified **GATE**-2013, AIR-221

RESEARCH INTERESTS

Organic Synthesis and Medicinal Chemistry

PUBLICATIONS

Published Research Articles

1. S. Ahamad et al. Recent Advances in the Total Synthesis of Coumarin-Based Natural Products, **Org. Biomol. Chem**. (**2026**, Accepted).
2. S. Ahamad et al. Imidazole Scaffolds against Staphylococcus aureus and MRSA: A Medicinal Chemistry Review, **Molecular Diversity**, (**2026,** Accepted)
3. A. Kumar, P. Akshinthala, M. H. Khan, A. Harinath, N. Kumar, M. K. Hussain and S. Ahamad, **Org. Biomol. Chem**., (**2026**), DOI:10.1039/D6OB00419A.
4. S. Khan, Prinsa, N. Bano, S. Ahamad. Integrated network pharmacology, molecular docking and MD simulation unravel neuroprotective phytochemicals from aframomum melegueta targeting microglial neuroinflammation in Alzheimer's disease. ***Netw Model Anal Health Inform Bioinforma*** 15, 87 (**2026**).
5. F. Fazal, N.J. Dar, S. Ahamad, S. Khan, N. Bano, S. Saha, A. Nazir, S.A. Bhat, cGAS-STING signaling in Alzheimer's disease: Microglial mechanisms and therapeutic opportunities, ***Mol. Aspects Med***. 107 (**2026**) 101444.
6. S. Ahamad, P. Akshinthala, F. Fazal, G.K. Sah, M.H. Khan, A. Upadhyay, S.A. Bhat, M.K. Hussain, Small-molecule-based activation of Wnt/β-catenin signaling: An underexplored yet promising strategy for neuroprotection, ***Bioorg. Chem.*** (**2026**) 109540.
7. H. Tariq, S. Khan, K. Miyan, S.N. Qidwai, S. Ahamad, M. Saquib, M.K. Hussain, Exploring Natural Coumarins in Antiprotozoal Drug Discovery: A Comprehensive Review, Chem. Biodivers. 22 (**2025**) e01964.
8. M. Ahmad, A. Kumar, S. Ahamad, K. Mohanan, Harnessing the power of α-diazo compounds: emerging strategies and expanding applications, ***Chem. Commun***. 61 (**2025**) 14823–14842.
9. S. Ahamad, M. Saquib, M.K. Hussain, S.A. Bhat, Targeting Wnt signaling pathway with small-molecule therapeutics for treating osteoporosis, ***Bioorg. Chem***. 156 (**2025**) 108195.
10. K. Khan, R.Ali, S. Khatoon, A. Khan, P. Kumar, S. Ahamad, M. K.Hussain, The Groebke–Blackburn–Bienaymé (GBB) reaction: A powerful tool for generating diverse heterocyclic scaffold libraries in anticancer drug discovery, **European Journal of Medicinal Chemistry**, 291, (**2025)**, 117629.
11. S. Khatoon, R. Naaz, U. Khan, F. Qayyum, S. Ahmad, M. Saquib, M.K. Hussain, Natural coumarins as anti-diabetic agents: Mechanisms, therapeutic potential, and amelioration of diabetic complications, ***Phytomedicine*** (**2025**) 157339.
12. H. Firoz, R. Ali, F.A. Khan, P. Kakkar, R.K. Soni, M.A. Assiri, S. Ahamad, M. Saquib, M.K. Hussain, Coumarins as Versatile Scaffolds: Innovative Synthetic Strategies for Generating Diverse Heterocyclic Libraries in Drug Discovery, ***J. Mol. Struct***. (**2025**) 144426.
13. S. Ahamad, M. Saquib, M.K. Hussain, Pseudo-natural products as next-generation scaffolds: redefining the future of medicinal chemistry, ***Future Med. Chem***. (**2025**) 1–15.
14. U. Khan, M. Ahmad, M. Tuba, R. Naaz, F. Qayum, S. Khatoon, S. Ahamad, M. Saquib, M.K. Hussain, Natural Alkaloids with Therapeutic Potential against Alzheimer's Disease through Cholinesterase Inhibition, ***Eur. J. Med. Chem***. (**2025**) 118371.
15. S.K. Mohd AqibMujahid Ali, Shabana Sajid, Mohammed Ali Assiri, Shakir Ahamad, Mohammad Saquib, Mohd Kamil Hussain, M. Aqib, S. Khatoon, M. Ali, S. Sajid, M.A. Assiri, S. Ahamad, M. Saquib, M.K. Hussain, Exploring the anticancer potential and mechanisms of action of natural coumarins and isocoumarins, ***Eur. J. Med. Chem***. 282 (**2025**) 117088.
16. S. Khan, N. Bano, S. Ahamad, N.J. Dar, A. Nazir, S.A. Bhat, Advances in nanotherapeutic strategies for Huntington's disease: Design, delivery, and neuroprotective mechanisms, ***Coord. Chem. Rev.*** 522 (**2025**) 216206.
17. N. Bano, S. Khan, S. Ahamad, N.J. Dar, H.H. Alanazi, A. Nazir, S.A. Bhat, Microglial NOX2 as a therapeutic target in traumatic brain injury: Mechanisms, Consequences, and Potential for Neuroprotection, ***Ageing Res. Rev***. (**2025**) 102735.
18. N. Bano, S. Khan, S. Ahamad, N.J. Dar, H.H. Alanazi, A. Nazir, S.A. Bhat, Microglial Autophagic Dysregulation in Traumatic Brain Injury: Molecular Insights and Therapeutic Avenues, ***ACS Chem. Neurosci.*** 16 (**2025**) 543–562.
19. N. Khan, A. Gupta, S. Ahamad, M.K. Hussain, M.U. Khan, Z.N. Siddiqui, Functionalized Biochar Catalysts: Advancing Green Chemistry in Synthesis of O-and N-Heterocycles, ***Environ. Res***. (**2025**) 122136.
20. M.K. Hussain, M. Ahmad, S. Khatoon, M.V. Khan, S. Azmi, M. Arshad, S. Ahamad, M. Saquib, Phytomolecules as Alzheimer's therapeutics: A comprehensive review, ***Eur. J. Med. Chem.*** 288 (**2025**) 117401.
21. Therapeutic Targeting of Wnt Antagonists by Small Molecules for Treatment of Osteoporosis. ***Biochem. Pharmacol. 2024***, 230, 116587.
22. Microglia and Gut Microbiota: A Double-Edged Sword in Alzheimer's Disease. ***Ageing Res. Rev., 2024***, 101, 102515.
23. State-of-the-art in ZnS-based nanoarchitects for visible-light photocatalytic degradation of antibiotics and organic dyes. . *J. **Water Process Eng. 2024***, 67, 106151.
24. for visible-light photocatalytic degradation of antibiotics and organic dyes "Unraveling the Puzzle of Therapeutic Peptides: A Promising Frontier in Huntington's Disease ***J. Med. Chem. 2024*****,** 67, 783−815.
25. Appraisal of folate functionalized bosutinib cubosomes against hepatic cancer cells: In-vitro, In-silico, and in-vivo pharmaco kineticstudy. ***International Journal of Pharmaceutics, 2024*****,** 654, 123975.
26. Excitotoxicity, Oxytosis/Ferroptosis, and Neurodegeneration: Emerging Insights into Mitochondrial Mechanisms. ***Aging and Disease, 2024***, 10.14336/ad.2024.0125-1
27. Pseudo-Natural Products: Expanding chemical and biological space by surpassing natural constraints. ***Bioorganic Chemistry, 2024***, 150, 1075252024.
28. Coumarins as versatile therapeutic phytomolecules: A systematic review. ***Phytomedicine, 2024***, 134, 155972.
29. Unleashing the power of bio-adsorbents: Efficient heavy metal removal for sustainable water purification. ***Journal of Water Process Engineering, 2024***, 64, 105705.
30. Activated Green Tamarind Pulp (AGTP) as an efficient adsorbent for removal of Pb2+, Cu2+, Zn2+ & Ni2+ from contaminated water. **Journal of Water Process Engineering, 2024**, 59, 105048.
31. Trifluoromethylnitrone: a versatile building block for synthesizing trifluoromethyl-containing heterocyclic compounds. ***Org. Biomol. Chem. 2024***, 22, 5242**.**
32. Synthesis & spectral studies of organotin(IV) dithiocarbamates derived from 2-aminoethyl piperazine: Anticancer & anti-nematode activity. ***Journal of Molecular Structure, 2023***, 1294, 136462.

33. A Direct Silver-Catalyzed Three-Component Approach to Trifluoromethylated Cyanopyrazoles and Cyanopyrazolines. Adv. Synth. Catal. 2023, 365, 2218.
34. An ultrasound-assisted, ionic liquid-molecular iodine synergy driven efficient green synthesis of pyrrolobenzodiazepine-triazole hybrids as potential anticancer agents. Frontiers in Pharmacology, 2023, 14.
35. The Emerging Landscape of Natural Small-Molecule Therapeutics for Huntington's Disease. ***Current Neuropharmacology*****, 2023**, 21, 4, 867.
36. Efficient Removal of Pb2+, Cu2+, and Zn2+ by Waste Tea-Derived Cost-Effective Bioadsorbent. ***Chemistryselect,*** **2023**, 8, e202300944.
37. Recent Update on the Development of PCSK9 Inhibitors for Hypercholesterolemia Treatment. ***Journal of Medicinal Chemistry*** **2022** 65 (23), 15513.
38. The Emerging Landscape of Small-Molecule Therapeutics for the Treatment of Huntington's Disease. ***Journal of Medicinal Chemistry*****, 2022,** 65 (24), 15993-16032.
39. Development of small-molecule PCSK9 inhibitors for the treatment of hypercholesterolemia, ***Drug Discovery Today***, **2022**. (IF = 8.3)
40. 36. Trifluorodiazoethane: A versatile building block to access trifluoromethylated heterocycles, ***J. Heterocycl. Chem***. **2021**, 1. (IF = 2.4)
41. Understanding the guest binding in the cucurbit[7]uril inclusion complexes of CDK4/6 inhibitors, palbociclib, and ribociclib from a combined experimental and computational study, ***Journal of Molecular Structure***, **2021**, 1241, 130637. (IF = 3.8).
42. Additive-Free Synthesis of Trifluoromethylated Spiro Cyclopropanes and Their Transformation into Trifluoromethylated Building Blocks. ***Asian J. Org. Chem***. **2021**, 10, 6, 1536-1541. (IF = 3.6).
43. Primed for Global Coronavirus Pandemic: Emerging Research and Clinical Outcome. Shakir Ahamad el al, **Eur. J. Med. Chem**, **2021**, 209 ,112862. (IF = 7.1)
44. Silver-Catalyzed Three-Component Route to Trifluoromethylated 1,2,3-Triazolines Using Aldehydes, Amines, and Trifluorodiazoethane. ***Org. Lett.,*** **2019**, 21, 2962. (IF = 6.0)
45. Metal-Free three-component assembly of fully-substituted 1,2,3-triazoles. Asian J. Org. Chem, 2018, 7, 1698. (IF = 3.6)
46. Base-mediated 1,6-conjugate addition reaction of Seyferth-Gilbert reagent to para-quinone methides. ***Org. Biomol. Chem***. **2018**, 16, 4623. (IF = 3.2)
47. Three-component synthesis of 3,4-disubstituted pyrazoles using diazosulfone as a diazomethane surrogate. ***ChemistrySelect*** **2017**, 2, 11995. (IF = 2.3)
48. Three-component domino HWE olefination/1,3-dipolar cycloaddition/oxidation strategy for the rapid synthesis of trisubstituted pyrazoles. **ChemistrySelect 2016**, 1,5276. (IF = 2.3)
49. Metal-Free three-component domino approach to phosphonylated triazolines and triazoles. ***Org. Lett.*** **2016**, 18, 280. (IF = 6.0)
50. Substrate-controlled product-selectivity in the reaction of the Bestmann–Ohira reagent with N-unprotected isatin-derived olefins. ***Org. Biomol. Chem*****. 2015**, 13,9783. (IF = 3.2)
51. Domino reaction involving the Bestmann–Ohira reagent and unsaturated aldehydes: efficient synthesis of functionalized pyrazoles. ***Org. Biomol. Chem.*** **2015**, 13, 1492. (IF = 3.2)

Research Articles Under Preparation

8

Book Chapters

1. Advances in Small Molecule Delivery Systems for the Treatment of Neurodegenerative Disease, **Small Molecules in Neurodegeneration**, **CRC Press, 2025**. DOI:10.1201/9781003520610-10
2. The Huntington's Disease Drug Pipeline: A Review of Small Molecules and Their Therapeutic Targets. **Progress in Molecular Biology and Translational Science**. **Elsevier, 2024.** DOI: 10.1016/bs.pmbts.2024.08.006.
3. Chapter 40016, Diazo Functions with a Heteroatom (RC(X)N2), **Comprehensive Organic Functional Group Transformations III, Elsevier, 2024.** DOI:10.1016/B978-0-443-31482-7.00010-2
4. Ivermectin: A Potential Repurposed Anti-Cancer Therapeutic. **Chemistry and Biological Activities of Ivermectin, John Wiley & Sons, Inc. 2023,** DOI: 10.1002/9781394168033.ch6

ORAL AND POSTER PRESENTATION, AND PARTICIPATION IN CONFERENCES/SYMPOSIA/WORKSHOP

- Poster presentation at the national conference on interdisciplinary approaches in chemical science at JMI, 2023
- Poster presentation in national seminar on biophysics at JMI, 2023.
- Participated and delivered an oral talk in “The International Conference on the Emerging Trends in Chemical Sciences at Aligarh Muslim University, 2020.
- Completed the CSIR-Summer Research Training Program for Faculties (CSIR-SRTP) from June to August 2020
- Attended the workshop organised by Wiley and CSIR-CDRI on 16th April 2019.
- Attended the Faculty Development Program organized by TEQIP-III on the 21st – 25th of 2020.
- Attended the workshop organized by DST and ACS on 30 October 2020.
- Participated and delivered an oral talk at “XII J-NOST Conference for Research Scholars” at CSIR-CDRI, Lucknow, from 24th to 27th November 2016.
- Participated and delivered an oral talk at the “International Conference on Recent Advances in Chemical Science” at Aligarh Muslim University, 29th to 30th March 2016
- Participated and presented a poster in the One Day Symposium on “Drug Discovery in India: Past, Present and Future af CSIR-Central Drug Research Institute, Lucknow, 1st January 2015.
- Volunteered in “The First CDRI and NRDC-Industry Conclave”, at CSIR-CDRI Lucknow, 15th-16th September 2017.
- Volunteered in “6th International Symposium On Current Trends In Drug Discovery And Research” (CTDDR-2016) held at CSIR-Central Drug Research Institute, 25th – 28th February 2016, Lucknow.
- Participated in “HPLC/UPLC training program” organized by Waters India (p) Ltd., at SAIF, CSIR-CDRI, Lucknow, 5th-6th September 2017.
- Participated in Workshop on “The Application of MS and LC-MS/MS Instrument for Identification and Characterization of Small Molecules” at SAIF, CSIR-CDRI, Lucknow 29th September to 1st October, 2015.

UNDERGRADUATE TRAININGS AND PROJECTS

- One-month project on the “production of ethanol from sugarcane molasses'' at department of biotechnology, GNKC
- Yamuna Nagar, 135001, Haryana, India, 2011.
- One month of training in pathology at city pathology lab, Saharanpur-247001, Uttar Pradesh, India 2010.
- One month industrial training on fermentation technology at Pilkhani Distillery & Chemical Works, Saharanpur 247001, Uttar Pradesh, India, 2009.

PERSONAL DETAILS

Father’s Name: Zaheer Ahamad

Date of Birth: 20th July 1991

Nationality/Sex/Marital Status: Indian/Male/ Married

Languages known: Hindi/Urdu/English

Residential Address: Islamngar, Saharanpur, UP, India, PIN-247451