

Dr. Asghar Ali

Young Scientist (DHR-YS)

PI: ICMR-DHR Project (Grant: above ₹ 50 lacs)



Research Experience (9 Years)

December 2022 to present.

Young Scientist • Postdoctoral • Jamia Hamdard, Delhi, India.

June 2022–December 2022.

Research Associate • Postdoctoral • AMU-Aligarh, India.

April 2019–March 2022.

SRF • Ph.D. • Jamia Millia Islamia, Delhi, India.

April 2017–March 2019.

JRF • Ph.D. • Jamia Millia Islamia, Delhi, India.

October 2014–Mar 2017.

Research Fellow • Ph.D. • Jamia Millia Islamia, Delhi, India.

December 2013–June 2014.

Dissertation Trainee • M.Sc. • Jamia Millia Islamia, Delhi, India.

Publications (18)

Cumulative IF: **84.401**

h-index: **10**

i10-index: **10**

Articles: **18**

Book Edited: **01**

Chapters: **13**

Technical Skills

Microbiological techniques, Molecular biology, Biotechnology
Mouse handling, Basic Biostatistics, Bioinformatic tools, Flow
Cytometry, and Cell culturing.

Awards (6)

Young Scientist, Young Researcher, Best Researcher, Best
Poster Presentation, UGC-MANF-SRF, UGC-MANF-JRF.

Education (Ph. D.)

Ph.D. in Biosciences (Microbiology), **M. Sc.** (Biosciences)

B. Sc. (Chemistry, Botany, and Zoology)

National Exams (3)

NET (Agricultural Biotechnology)

GATE (Life Sciences)

NET (Plant Physiology)

Contact



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[LinkedIn](#) [ResearchGate](#)

[ORCID](#) [Google Scholar](#)

[Scopus](#) [SciProfiles](#)

[WebofScience](#) [Loop](#)

Scientific Affiliations

Lifetime member
NESA, IIP

Editorial Board Member
JTMID and IIP

Reviewer
Frontier, MDPI

Mentored

24 Students (PG & UG Grade)

References

Prof. Qazi Mohd. Rizwanul Haq
qhaque@jmi.ac.in

Prof. Nikhat Manzoor
nmanzoor@jmi.ac.in

Dr. Mohd Salik Noorani
saliknoorani@jamiahamdard.ac.in

RESEARCH EXPERIENCE (9 years)

Young Scientist, Project Sanctioned by ICMR-DHR, at Department of Biochemistry, Jamia Hamdard, New Delhi-11062, India. From December 2022.

Research Associate, under the DBT-funded Research project entitled “**ResPharm: Resolving the fate and studying the impact of pharmaceutical waste local community of a pharmaceutical manufacturing hub**” at the department of Agricultural Microbiology, Aligarh Muslim University, Aligarh- India. (June 2022 to December 2022).

Ph. D. thesis entitled, “**Studies on molecular, structural and functional aspects of CTX-M type β -lactamase**” under the supervision of Prof. Qazi Mohd. Rizwanul Haque, Department of Biosciences, Jamia Millia Islamia, New Delhi, India. (October 2014 to September 2020).

Post-graduation project on “**Evaluation of trans-Anethole, an essential oil component, for its potential antifungal properties against different *Candida spp.***” under the guidance of Prof. Luqman A. Khan and Prof. Nikahat Manzoor (Medical Mycology Lab) Department of Biosciences, Jamia Millia Islamia New Delhi, India. (December 2013 to June 2014).

EDUCATION

Ph. D. (2021)	Title- Studies on molecular, structural and functional aspects of CTX-M type β-lactamase Microbiology Research Lab, Department of Biosciences Jamia Millia Islamia, New Delhi, India-110025. Date of Award: June 24, 2021.
P.G. (2014)	M. Sc. in Biosciences (CGPA-8.4) Jamia Millia Islamia, New Delhi.
U.G. (2005)	Botany, Zoology, Chemistry D.D.U. Gorakhpur University, Gorakhpur, Uttar Pradesh. India.
S.S.S. (2002)	Class 12th Board of High School & Intermediate Education, Uttar Pradesh. India.
Qualifications	Diploma in computer application Certificate and Diploma in the Italian language Certificate in Modern Persian

TECHNICAL SKILLS

Microbiological techniques: Isolation and enumeration of bacteria from diverse samples, culture preservation, microscopy, bacterial staining, biochemical characterization, conjugation assay, antibiotic susceptibility tests (AST), Biofilm assay, Serial Dilution, and Plating.

Molecular biology: Genomic and plasmid DNA extraction, Primer designing, Sequencing, sequences analysis, cloning, Transformation, Gel Electrophoresis, SDS PAGE, Polymerase Chain Reaction, Reverse Transcription Polymerase Chain Reaction (RT-PCR), Real-time

PCR (qPCR).

Biotechnology: Recombinant DNA Technology, Gene Cloning, DNA Sequencing Site-Directed Mutagenesis (SDM), Chromatin Immunoprecipitation (ChIP), Protein Expression and purification, Western Blotting.

Bioinformatic software: BLAST (Basic Local Alignment Search Tool), DNA Genetic analyzer (ABI), GeneMapper, Gene runner, ClustalW, BioEdit, Mega for phylogenetic analysis, MEGA (Molecular Evolutionary Genetics Analysis and Statistical software like Prism GraphPad.

Others: Worked on Cell Lines, Cell Viability Assays, MTT assays, Flow Cytometry, and Mouse handling.

AWARDS/ NATIONAL EXAMS

Young Scientist -2022 (Project Sanctioned: > ₹ 50 Lakhs)

Department of Health Research
ICMR- India
File No.R.12014/61/2022-HR

Young Researcher Award 2022

Award ID: 20222YRA28
INSC International Publishers

Best Researcher Award

National Environmental Science Academy

Best Poster presentation award

DBT, Biotechnology popularization programmed, Miranda House, New Delhi
India, August 02, 2019.

UGC MANF JRF: April 01, 2017- March 31, 2019.

UGC MANF SRF: April 01,2019- September 10, 2020

ASRB (ICAR)-NET Qualified in

Agricultural Biotechnology (Aug-2016)
Plant Physiology (May-2017)

GATE Qualified (2014)

GATE Score-523
All India Rank- 410

AFFILIATION/MEMBERSHIP IN SCIENTIFIC SOCIETIES

Reviewer

Frontier Microbiology
MDPI (Antibiotics, Pharmaceutics & Medicina)
Biomedical Sciences (BS)
Science Publishing Group

Editorial Board Member

Journal of Tropical Medicine and Infectious Diseases
[EB Members](#)

Lifetime Member

InSc International Publisher (IIP)

ID-20222YRA28, [Membership Detail](#), [Profile Detail](#)

Lifetime Member

National Environmental Science Academy (NESAs)

ID-L/M No. 2341

PUBLICATIONS (Total Impact Factor: 84.4, h-index-10, i10-index-10)

1. **Ali, A.**, Zahra, A., Kamthan, M., Husain, F.M., Albalawi, T., Zubair, M., Alatawy, R., Abid, M., Noorani, M.S (2023). Microbial Biofilms: Applications, Clinical Consequences, and Alternative Therapies. *Microorganisms*, 11 (8), 1934. <https://doi.org/10.3390/microorganisms11081934>. (IF: 4.5)
2. Irfan, I., **Ali, A.**, Ubaid, A., Sherwani, Y., Arora, B., Khan, M. M., Joshi, M. C., & Abid, M. (2023). Synergistic antimicrobial activity, MD simulation studies and crystal structure of natural alcohol motif containing novel substituted cinnamates. *Journal of Biomolecular Structure and Dynamics*, 0 (0). 1–20. <https://doi.org/10.1080/07391102.2023.2194004>. (IF: 4.4)
3. Sultana, R., **Ali, A.**, Twala, C., Mehandi, R., Rana, M., Yameen, D., Abid, M & Rahisuddin. (2023). Synthesis , spectral characterization of pyrazole derived Schiff base analogs : molecular dynamic simulation , antibacterial and DNA binding studies. *Journal of Biomolecular Structure and Dynamics*, 0(0), 1–28. <https://doi.org/10.1080/07391102.2023.2179541>. (IF: 4.4)
4. **Ali, A.**, Irfan, I., Reddi, B., Khan, M. A., Hasan, P., Ahmed, S., Uddin, A., Piatek, M., Kavanagh, K., Haque, Q. M. R., Singh, S., Addlagatta, A., and Abid, M, (2022). Design, Synthesis and Mechanistic Studies of Novel Isatin-Pyrazole Hydrazone Conjugates as Selective and Potent Bacterial MetAP Inhibitors. *Antibiotics*, 11(8). <https://doi.org/10.3390/antibiotics11081126>. (IF: 4.8)
5. Abass, S., Zahiruddin, S., **Ali, A.**, Irfan, M., Jan, B., Haq, Q. M. R., Husain S. A., Ahmad, S. (2022). Development of synergy-based combination of methanolic extract of *Andrographis paniculata* and *Berberis aristata* against *E. coli* and *S. aureus*. *Curr Microbiol* 79, 223. <https://doi.org/10.1007/s00284-022-02911-8>. (IF: 2.6)
6. Yousuf, M., **Ali, A.**, Khan, P., Anjum, F., Elsbali, A.M., Islam, A., Yadav, D.K., Shafie, A., Haque, Q.M. R., Hassan, M.I. (2022). Insights into the Antibacterial Activity of Prolactin-Inducible Protein against the Standard and Environmental MDR Bacterial Strains. *Microorganisms*, 10, 597. <https://doi.org/10.3390/microorganisms10030597>. (IF: 4.5)
7. Gogry, F. A., Siddiqui, M. T., Sultan, I., Fohad, M., Al-Kheraif, A. A., **Ali, A.**, & Haq, Q. M. R. (2022). Colistin Interaction and Surface Changes Associated with *mcr-1*

Conferred Plasmid Mediated Resistance in *E. coli* and *A. veronii* Strains. *Pharmaceutic*, 14(295). <https://doi.org/10.3390/pharmaceutics14020295>. (IF: 5.4)

8. Zhou, Q., Rather, L. J., Mir, S. S., **Ali, A.**, Haque, Q. M. R., & Li, Q. (2021). Biocolourants from the waste leaves of *Ginkgo biloba* L. tree: Wool dyeing and antimicrobial functionalization against some antibiotic-resistant bacterial strains. *Sustainable Chemistry and Pharmacy*. 25, 100585. <https://doi.org/10.1016/j.scp.2021.100585>. (IF: 6)
9. **Ali, A.**, Hasan, P., Irfan, M., Uddin, A., Khan, Saraswat, J., Maguire, R., Kavanagh, K., Patel, R., Joshi, M., Azam, A., Mohsin, M., Haq, Q. M. R. & Abid, M. (2021). Development of oxadiazole-sulfonamide based compounds as potential antibacterial agents. *ACS Omega*. 6 (42), 27798–27813 <https://doi.org/10.1021/acsomega.1c03379>. (IF: 4.1)
10. Lathwal, A., **Ali, A.**, Uddin, A., Khan, N. S., Sheehan, G., Kavanagh, K., Haq Q. M. R., Abid, M. & Nath, M. (2021). Assessment of Dihydro[1,3]oxazine-Fused Isoflavone and 4-Thionoisoflavone Hybrids as Antibacterials. *ChemistrySelect*, 6(29), 7505–7513. <https://doi.org/10.1002/slct.202101364>. (IF: 2.1)
11. **Ali, A.**, Sultan, I., Mondal, A. H., Siddiqui, M. T., Gogry, F. A., & Haq, Q. M. R. (2021). Lentic and effluent water of Delhi-NCR: a reservoir of multidrug-resistant bacteria harbouring bla CTX-M, bla TEM and bla SHV type ESBL genes. *Journal of Water and Health*, 19(4), 592–603. <https://doi.org/10.2166/wh.2021.085>. (IF: 2.3)
12. Rather, L. J., Zhou, Q., **Ali, A.**, Haque, Q. M. R., & Li, Q. (2021). Valorization of Agro-industrial Waste from Peanuts for Sustainable Natural Dye Production: Focus on Adsorption Mechanisms, Ultraviolet Protection, and Antimicrobial Properties of Dyed Wool Fabric. *ACS Food Science & Technology*, 1(3), 427–442. <https://doi.org/10.1021/acscfoodscitech.1c00005>. (IF: 2.3)
13. Sultan, I., **Ali, A.**, Gogry, F. A., Rather, I. A., Sabir, J. S. M., & Haq, Q. M. R. (2020). Bacterial isolates harboring antibiotics and heavy-metal resistance genes co-existing with mobile genetic elements in natural aquatic water bodies. *Saudi Journal of Biological Sciences*, 27(10), 2660–2668. <https://doi.org/10.1016/j.sjbs.2020.06.002>. (IF: 4.4)
14. Mondal, A. H., Yadav, D., **Ali, A.**, Khan, N., Jin, J. O., & Haq, Q. M. R. (2020). Anti-bacterial and anti-candidal activity of silver nanoparticles biosynthesized using *Citrobacter* spp. Ms5 culture supernatant. *Biomolecules*, 10(6), 1–15. <https://doi.org/10.3390/biom10060944>. (IF: 5.5)
15. Rather, L. J., **Ali, A.**, Zhou, Q., Ganie, S. A., Gong, K., Rizwanul Haque, Q. M. R. & Li, Q. (2020). Instrumental characterization of merino wool fibers dyed with *Cinnamomum camphora* waste/fallen leaves extract: An efficient waste management alternative. *J. Clean. Prod.* 273, 123021. <https://doi.org/10.1016/j.jclepro.2020.123021>. (IF: 11.1)
16. Zhou, Q., Rather, L. J., **Ali, A.**, Wang, W., Zhang, Y., Rizwanul Haque, Q. M. R. & Li, Q. (2020). Environmental friendly bioactive finishing of wool textiles using the tannin-rich extracts of Chinese tallow (*Sapium sebiferum* L.) waste/fallen leaves. *Dye. Pigment*.

17. Rather, L. J., Zhou, Q., Ali, A., Haque, Q. M. R., & Li, Q. (2020). Valorization of Natural Dyes Extracted from Mugwort Leaves (*Folium artemisiae argyi*) for Wool Fabric Dyeing: Optimization of Extraction and Dyeing Processes with Simultaneous Coloration and Biofunctionalization. *ACS Sustainable Chemistry & Engineering*. 8(7), 2822-2834. <https://doi.org/10.1021/acssuschemeng.9b06928>. (IF: 8.4)
18. Siddiqui, M. T., Mondal, A. H., Sultan, I., Ali, A., & Haq, Q. M. R. (2019). Co-occurrence of ESBLs and silver resistance determinants among bacterial isolates inhabiting polluted stretch of river Yamuna, India. *International Journal of Environmental Science and Technology*, 16(10), 5611–5622. <https://doi.org/10.1007/s13762-018-1939-9>. (IF: 3.1)

Book Chapters (13)

S. No.	Title of the Chapter	Year
1.	Advanced uses of quantum dots in medical imaging	2023
2.	Understanding the Risks of Bacterial Pathogens in Food and Environment	2023
3.	Advancements in cardiac bioengineering: Bridging the gap between medicine and engineering	2023
4.	Cell Fusion: A promising target for cancer immunotherapy	2023
5.	Significance of biomarkers in intestinal disorders and cancers	2023
6.	The intersection of biotechnology and anti-Aging: Pioneering the future of youthful living	2023
7.	The evolving role of biotechnology in education	2023
8.	Biofuels: A sustainable energy solution for the future	2023
9.	Harnessing the potential of biomarkers as powerful tools for plant performance	2023
10.	Emerging Trends and Innovations in Bioprocessing Techniques	2023
11.	An assessment of different dietary approaches for the management of diabetes	2023
12.	Environmental antimicrobial resistant community analysis in wastewater/sediment Cultural to molecular approaches	2022
13.	Resuscitating and repurposing older antibiotics for combating infections of MDR bacteria	2022

Book Edited

Futuristic Trent in Biotechnology

IIP proceedings, Volume 2, Book 27, Part 3

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Link: <https://www.iiproceedings.org/fullviewdetails.php?id=72&title=iip-v2-2022-bs-17-11-futuristic-trends-in-biotechnology>

ABSTRACT PUBLISHED (Selected)

- **Ali, A.,** Sultan, I., Haq, Q.M.R (2019). High prevalence of CTX-M type of extended-spectrum beta-lactamase-producing bacteria in urban lentic and efflux water. Antibiotics and Antibiotic Resistance 36th Euro-Global Summit and Expo on Vaccines & Vaccination, London, UK, June 03-04. *J. Clin. Cell Immunol.* 2019, Volume 10, Page 62.
- **Ali, A.,** Sultan, I., Gogry, F. A., Haq, Q.M.R (2020). Occurrence of ESBL producers among bacterial isolates in an urban water. NCRABS-2020, Department of Biosciences, Jamia Millia Islamia, New Delhi, India, March.5.
- **Ali, A.,** Sultan, I., Gogry, F. A., Haq, Q.M.R (2019). Dominance of blaCTX-M type ESBL producing isolates of bacteria in the aquatic environment of Delhi-NCR. DBT, Biotechnology popularization programme, Miranda House, New Delhi, India, Aug.20.
- **Ali, A.,** Sultan, I, Gogry, F. A., Haq, Q.M.R (2018). Prevalence of blaCTX-M type ESBL producing isolates of bacteria in the aquatic environment of Delhi-NCR. 59th Annual conference of Association of Microbiologists of India (AMI-2018) & International Symposium on Host-Pathogen Interactions University of Hyderabad, India, December 09-12.
- **Ali, A.,** Siddiqui, M.T. and Haq, Q.M.R. (2017). Antibiotic resistance among bacterial inhabitants of lentic water bodies of Delhi. National Seminar on Recent Advances in Environment toxicology, 2017, February 13-14. Held at Jamia Millia Islamia, New Delhi. (PP-47).
- **Ali A.,** Siddiqui K. and Haq Q.M.R.(2017). Prevalence of ESBL producing isolates of bacteria in different water bodies of Delhi NCR and molecular characterization of resistance determinants. 58th Annual conference of Association of Microbiologists of India (AMI-2017“Microbes for sustainable development: Scope & Applications” at Department of Environmental Microbiology, Baba saheb Bhimrao Ambedkar University (A Central University), Lucknow, Uttar Pradesh, India., November 16-19.

MENTEES DETAILS

S. No.	Student Name	Class	Affiliation	Dissertation/Project title	Year
[1]	Swati Lakshmi	M. Sc. (Microbiology)	Jamia Millia Islamia, Delhi.	Evaluation of Novel Quinoline Based Derivatives as Selective Anti-Bacterial Agents.	2023
[2]	Iqra Hakeem	M. Sc. (Microbiology)	Jamia Millia Islamia, Delhi.	Screening of the synthetic compounds as an antibacterial agent.	2023
[3]	Andaleeb Zahra	M.Sc. (Botany)	Jamia Hamdard, Delhi	Microbial Biofilms: Applications, Clinical Consequences, and Alternative Therapies.	2023
[4]	Preeti Sai	M.Sc. (Botany)	Jamia Hamdard, Delhi	Plant-Based methods for Boosting Immunity.	2023
[5]	Shilpa Manna	M.Sc. (Botany)	Jamia Hamdard, Delhi	Green Therapy: Therapeutic Plants for Treatment of hair loss.	2023

[6]	Riya Sharma	M.Sc. (Botany)	Jamia Hamdard, Delhi	An assessment of different dietary approaches for the management of diabetes	2023
[7]	Shradha Vasisht	M.Sc. (Botany)	Jamia Hamdard, Delhi	Green Therapy: Therapeutic Plants for Treatment of hair loss	2023
[8]	Neha Roy	M.Sc. (Botany)	Jamia Hamdard, Delhi	Anti-Aging Arsenal: Exploring Plant-Based Remedies for Age-Related Factors	2023
[9]	Akansha Yadav	M.Sc. (Botany)	Jamia Hamdard, Delhi	The gut microbiota: A hidden and accidental target of pesticides	2023
[10]	Muskan Verma	M.Sc. (Biotechnology)	IMS University Courses Campus, Ghaziabad	Identification and Mechanistic Studies of Novel Heterocyclic Compounds as Antimicrobial Agents	2023
[11]	Sanju Yadav	M. Sc. (Microbiology)	Jamia Millia Islamia, Delhi.	Screening of the synthetic compounds as an antibacterial agent	2022
[12]	Kirti Singh	M. Sc. (Biochemistry)	Jamia Millia Islamia, Delhi.	<i>In vitro</i> screening of cinnamic acid derivatives having different natural alcohols as a potential antibacterial agent	2022
[13]	Ayesha Obaid	M. Sc. (Microbiology)	Jamia Millia Islamia, Delhi.	Synergistic antimicrobial activity, MD simulation studies and crystal structure of natural alcohol motif containing novel substituted cinnamates.	2022
[14]	Sufia Sadaf	M. Sc. (Biosciences)	Jamia Millia Islamia, Delhi.	Biofilm: Composition, Mechanisms, Effect and Treatment	2022
[15]	Yashfeen Sherwani	M. Sc. (Biotechnology)	Jamia Millia Islamia, Delhi.	Synergistic antimicrobial activity, MD simulation studies and crystal structure of natural alcohol motif containing novel substituted cinnamates.	2022
[16]	Sarita Malik	Ph. D.	Dr. Yashwant Singh Parmar University of Horticulture & Forestry, Solan, Himachal Pradesh.	Harnessing the Potential of Biomarkers as Powerful Tools for Plant Performance	2022
[17]	Mohd Farhan	M. Sc. (Biosciences)	Jamia Millia Islamia, Delhi.	A study on mobile colistin resistance gene (mcr-1) among ESBL producing isolates of bacteria	2020
[18]	Ashba Khan	B. tech Biotech	Amity Noida, Uttar Pradesh.	Development of Oxadiazole-Sulfonamide-Based Compounds as 2 Potential Antibacterial Agents	
[19]	Abdul Basit	M. Sc. (Biochemistry)	Jamia Millia Islamia, Delhi.	A study on CTX-M type ESBL producing bacterial isolates from Shaheen Bagh drain Delhi	2020
[20]	Nimishi Arvind	B. Tech (Biochemical Engineering)	Harcourt Butler Technical University Kanpur, Uttar Pradesh	A training in Microbiology Laboratory	2019
[21]	Qazi Mohd Qubais Haq	B. Tech (Biotechnology)	Integral University Lucknow, Uttar Pradesh.	A training in Microbiology Laboratory	2019
[22]	Farhan Ahmad	M. Sc. (Biochemistry)	Jamia Millia Islamia, Delhi.	A study on CTX-M type ESBL producing bacterial isolates from Lentic Water Body of Delhi.	2019
[23]	Kavita	M. Sc. (Biochemistry)	Jamia Millia Islamia, Delhi.	A study on CTX-M type ESBL producing bacterial isolates from Hauz Khas Lake of Delhi.	2018
[24]	Neha Kaushik	M. Sc. (Biosciences)	Jamia Millia Islamia, Delhi.	Phenotypic and molecular detection of CTX-M-type β -Lactamases producing bacteria from Ghazipur slaughter house effluents.	2017