

Education

- State University of New York, Buffalo, USA, PDF, (Molecular Genetics) 1994
- University of Wisconsin-Madison, USA, PDF, (Molecular Genetics) 1991-94
- Aligarh Muslim University, India, Ph. D. (Botany) 1986
- Aligarh Muslim University, India, M. Phil. 1976
- Aligarh Muslim University, India, M. Sc. 1973
- University of Delhi, India. B. Sc. 1971

Professional Education

- Passed Certificate of General Course on Intellectual Property Rights in 2004 from World Intellectual Property Organization (WIPO), Geneva, Switzerland.

Training

- "Selective Isolation and Identification of Actinomycetes" Institute of Microbial Technology, CSIR, Chandigarh, India 1990 (2 weeks).
- "Genetic manipulation in Streptomyces," Madurai Kamraj University, Madras, India, 1987 (3 weeks)

- **Research Experience**

1. Post Doctoral Associate, Department of Oral Biology, State University of New York at Buffalo. 1994 Jan-Aug. Full Time job worked with Howard K. Kuramitsu, Ph.D. on sucrose metabolism and regulation of gene expression in *Streptococcus mutans*. This oral microbe is the principal causative agent in the human dental caries.
2. Research Associate, School of Pharmacy, University of Wisconsin-Madison, 1991-1994. Worked full time with C.R. Hutchinson, Ph.D. using techniques of molecular biology to elucidate antibiotic biosynthetic pathways of *Streptomyces glaucusens* and *Streptomyces peucetius*. I published three papers in Gene, Biochemistry and Microbiologia.

Molecular Biological technique includes

- Oligonucleotide synthesis.
- DNA sequencing using dideoxy chain termination.
- DNA amplification using polymerase chain reaction.
- recombinant DNA standard protocols.
- Protein isolation and purification using FPLC
- northern, Southern and western assay
- SI nuclease protection assay
- Primer extension reaction
- Computer analysis of DNA sequences.
- The research work carried out at the University of Wisconsin-Madison has led to:
- cloning and over expressing the gene acyl carrier protein (ACP) in *E. coli*
- cloning and over expressing the gene malonyl CoA:ACP transacylase in *E.coli*.
- purification of ACP to homogeneity using FPLC
- sequencing of 4 kilobases of DNA from *S. peucetius*
- identification, using TFASTA analysis, of significant homology between above ORFs and three distinct genes from the DNA database.
- size of the Ser B gene in *Streptococcus mutans*.
- transcription start site of the Scr B gene.

Teaching Experience

I have an extensive experience of teaching both at undergraduate (B.Sc.) and post graduate (M. Sc.) levels. I started my teaching career as Lecturer (Assistant Professor) of Botany in the Zakir Husain College, University of Delhi in 1974, taught various topics of Botany to B.Sc. students for 11 years and six months before taking up teaching assignment at the Department of Biosciences, Jamia Millia Islamia, New Delhi in 1985.

At the Jamia Millia Islamia I started teaching molecular genetics to M. Sc. students and supervising research to Ph.D. students. Seventeen Ph.D. students have successfully completed their Ph.D. programs under my guidance. Eight students are registered for Ph. D. with me at the moment. I was promoted to the level of Reader (Associate Professor) in March 1987 and then promoted to Full Professor in March 1995 in the same department. A brief sketch of my employment history is given below.

Professor, Department of Biosciences, Jamia Millia Islamia University, New Delhi, 1995 - present. Promoted to full Professor in 1995 and continuing teaching courses in molecular genetics and supervising research at the post graduate level. Twenty Ph. D. students have successfully completed their doctorate programme under my supervision so far and most of them are working as Post Doctoral Fellows in Universities in USA and Europe. I have also supervised over 75 students for their M. Sc. dissertation. Currently I am the Coordinator, Biotechnology Program of the Department.

Reader, Department of Biosciences, Jamia Millia Islamia, New Delhi 1987-1995. Promoted to Associate Professor and continued teaching prokaryotic molecular genetics and topics in microbiology.

Lecturer, Department of Biosciences, Jamia Millia Islamia, New Delhi 1985-1987. Full time position as an Assistant Professor involved teaching of full course of prokaryotic molecular genetics and topics in microbiology to graduate and postgraduate level Biosciences students.

Lecturer, Department of Botany, Zakir Husain College, University of Delhi. 1974-1985. Full time position as an Assistant Professor teaching a variety of topics, including genetics, mycology, microbiology, plant taxonomy, plant anatomy, phycology, history of science and scientific methods. Experience also included the organization and facilitation of number of extensive fifteen-day plant exploration excursions for undergraduate students to acquaint them with the flora of different ecological habitats specially Himalayan regions.

Organizational Experience

All four big conferences that have been organized by the Department of Biosciences were held on my initiative and I arranged the funding and organized them. I was responsible for getting the funding, making the scientific programs, inviting the speakers, keeping accounts of the same, preparing the souvenirs of all the conferences. The details are given below:

Conferences organized

- Agrarian Crisis: Optimism, Despair and GM Technologies. One-day seminar at Jamia Millia Islamia, New Delhi on November 7, 2006.
- Patents are threat to World Peace. One-day seminar at Jamia Millia Islamia, New Delhi on April 22, 2005.
- Organizing Secretary of the Two-day National Symposium on "Intellectual Property Rights and Indian Germplasm Resources: Emerging Challenges" held at the Jamia Millia Islamia, New Delhi on October 20-21, 2000.
- Secretary of the three-day "38th Annual Meeting of Association of Microbiologists of India" and "Conference on Microbes in Sustainable Development" held in December 12-14, 1997 at the Jamia Millia Islamia, New Delhi. Over 700 scientists/ microbiologists attended this meeting from various labs of India. A book of abstracts was published.
- Organized one-day seminar on "Molecular Biology of Microbial Secondary Metabolites" at Jamia Millia Islamia, New Delhi on February 1997.

- I have organized a three-day "National symposium on Frontiers in Modern Biology" at the Department of Biosciences, Jamia Millia Islamia, New Delhi in 1991. As a General Secretary I raised funds and supervised the entire arrangement needed for its successful organization. A book of abstracts was published which included the abstract of over eighty scientists who came to attend from all over the country.

Launching of M. Sc. Biotechnology Program

- After my return from USA, I prepared the vision document for the introduction of M. Sc. Biotechnology Program in the University. This document includes the semester-wise Course structure, course content, the examination rules and other administrative rules. This Program is successfully running for the last five years. So far three batches have obtained their degrees and are very well placed in the prestigious institutions like IIT Bombay, IIT Delhi, Maulana Azad Medical College (University of Delhi), All India Institute of Medical Sciences, New Delhi, National Institute of Communicable Diseases (Indian Council of Medical Research, Ministry of Health). 25 students have qualified for the UGC, CSIR NET JRF.
- I have also authored the document for the creation of an Interdisciplinary Centre of Biotechnology in Jamia Millia Islamia. This proposal was a part of the University's Xth Five-Year Plan Document that was submitted to the UGC. The Visiting Team of the UGC has already recommended the proposal in its visit to the University in January 2003.

Launching of M. Sc. Food Science & Technology Program

- I have also prepared a proposal for launching another two-year M. Sc. Program in Food Science and Technology. The proposal has been approved by different statutory bodies like Board of Studies, Faculty Committee and Academic Council of the University and has been submitted to the Ministry of Food Processing Industries for partial funding and is already under active consideration for the funding. The rest of the funding is being arranged from the Food processing industries (private sector) of India.

Positions held (present & past) in & outside University

- External Member for special knowledge of the subject, Faculty of science, University of Delhi from 2007-2010 (reappointed).
- External Member for special knowledge of the subject, School Board of School for Biosciences & Biotechnology, Babasaheb Bhimrao Ambedkar University, Lucknow from June, 2007 onwards.
- Coordinator, Center for Dental Medicine, Jamia Millia Islamia, New Delhi from December 2006 onwards.
- Member, Advisory Board, Center for Theoretical Physics, Jamia Millia Islamia, New Delhi.
- Member, Board of Studies, School of Biotechnology, Guru Gobind Singh Inderprastha University, Delhi-110007. 2006 for three years.
- Member, Board of Studies, Department of Agricultural Microbiology, Faculty of Agriculture, Aligarh Muslim University, Aligarh from July 2006.
- Provost of the Boy's Hall of Residence, Jamia Millia Islamia, New Delhi where 600 students were residing. From April 2006 –2007.
- Member recently established Board of management of the Center for theoretical Physics, Jamia Millia Islamia, New Delhi.
- Member, Board of Studies, Department of Biochemistry, Faculty of Sciences, Aligarh Muslim University, Aligarh from July 2005.
- Associate Editor, Journal of Microbiology, Association of Microbiologist of India from February 2005.
- Coordinator of Three-week UGC Refresher Course in Biosciences conducted by UGC Academic Staff College from August 18 to September 8, 2005. Over thirty five resource persons were invited to deliver lectures on various topics related to biotechnology, immunology, microbiology, biotechnology of herbal medicines, Climate change, DNA finger printing of crop plants, evolution of cell, bioinformatics, AIDS and sexually transmitted diseases, molecular biology of blood groups, biopesticides etc.
- Member, Board of Studies, Department of Biotechnology, DDU Gorakhpur University from 27.11.04 for one year.

- Member Governing Body, Bhim Rao Ambedkar College, University of Delhi for one year from September 10, 2004- September 9, 2005. The term is extended by one more year by the Executive Council of University of Delhi, Delhi.
- External expert member of the Senate of the Thapar Institute of Engineering & Technology (TIET), Patiala from 1.1. 2004 - 31.12.2007.
- External Member for special knowledge of the subject, Faculty of science, University of Delhi from 15.4.2004 - 2007.
- Member Board of research Studies, Faculty of sciences, Kashmir University, Srinagar, Jammu & Kashmir till date.
- Member Faculty Committee, Faculty of Social Sciences, Jamia Millia Islamia, New Delhi.
- Member Faculty Committee, Faculty of Humanities & Languages, Jamia Millia Islamia, New Delhi.
- Member Faculty Committee, Faculty of Natural Sciences, Jamia Millia Islamia, New Delhi.
- Expert Member, Technical Committee on Flora, Fauna and Biodiversity. Ministry of Environment & Forest, Government of India. (2003 onwards). The task here is to monitor over 82 ENVIS sites spread all over the country specially the ENVIS nodes engaged in documenting the local flora, fauna and diversity including microbial diversity in that region. I am responsible for the nodes located in Southern India, Eastern India and the Central India. This Project is partially funded by the World Bank and executed by the Ministry of Environment & Forests.
- Expert Member, National Expert Committee for monitoring research in "Restoration of Ecosystem Scheme", Ministry of Environment and Forest, Government of India. The task of this committee is to sanction the research grants to the project proposals received from various scientists from all over the country. Also to monitor their research progress.
- Coordinator, Biotechnology Program, Jamia Millia Islamia. A central University. (2001 onwards). The responsibility as a Course Coordinator is to arrange Guest Faculty, arrange theory and practical classes. To prepare timetable both for classes and the semester exams. Get the examination papers made by the examiners, get them moderated and also to act as Examination Superintendent. Prepare the budget for each financial year and spend and keep the account.
- Program In charge, IGNOU Program Study Center 765 (P), Department of Biosciences, Jamia Millia Islamia, New Delhi. (2003 onwards). The job here is to hold the induction meetings, to prepare the schedule for the counseling sessions of B. Sc. students registered under IGNOU. To prepare the schedule for the practical classes and examinations for B. Sc. Life sciences; Physics and Chemistry. To maintain accounts for the Program Study Centre and to correspond with the Regional Centre in Delhi.
- Expert member of the Assessment Committee for promotion of group II and III Officers to the next higher grade, National Institute of Science Communication & Information Resources (NISCAIR), (CSIR), New Delhi-110 012. (2001 onwards). I am supposed to assess the progress of Senior Scientists working in NISCAIR and evaluate their performance. Also to attend the selection committees held by the NISCAIR.
- Member, Editorial Board. Indian Journal of Biotechnology, National Institute of Science Communication & Information Resources (NISCAIR), (CSIR), New Delhi-110 012. (2001 onwards).
- Member, Editorial Board. Journal of Tissue Research (An official Journal of Society of Science and Environment), Department of Biosciences, Saurashtra University, Rajkot-360 005, India.
- Chairman of the task force constituted by the Vice Chancellor, JMI responsible for greening and beautification of the campus, and restructuring the horticulture department of the University. (2000 onwards). This Task Force is responsible for evolving and executing plans for the development of the University Campus that is spread across 56 acres of land.
- Member, National Expert Committee, National Botanic Garden being developed in a 200 acre land, New Delhi at an expenditure of IRS 400 million by the Ministry of Environment and Forest, Government of India.
- Head of the Department, Department of Biosciences, Jamia Millia Islamia, New Delhi. January 19, 1998 for the period of three years. During my tenure as Head II represented the case of the Department in front of a high powered Scientific Committee constituted by the Department of Science & Technology for the up gradation of the Department. My proposal was accepted and the Department became a DST-FIST Sponsored Department. Under this scheme a modern computer lab was developed with its own server.
- Under my Headship a program to launch the M. Sc. Biotechnology was prepared and approved by the Academic Council of the University. This Program has now admitted students in the third batch.
- Assistant coordinator (Sciences) for the Indira Gandhi National Open University programs offered at the IGNOU study center in Jamia Millia Islamia, New Delhi from 1998 - 2002.

- Provost of the Boy's Hall of Residence where 600 students were residing. It had an annual budget of 15 million Indian Rupees. I overhauled the admission process and laid down the foundation of admitting students in the Hall of Residence on merit basis. The quality of food and various hotel amenities were improved. The rules laid down by me are still being practiced with excellent results.

Research Grants

I have been trained in the area of molecular biology of prokaryotes at the School of Pharmacy, University of Wisconsin at Madison, USA. In India, main thrust of my research activities are in the area of environment management at the cellular and molecular levels. All the three of my major research projects deal with the assessment of India fresh water bodies.

In the first R&D project, funded by the Ministry of Environment & Forest, Government of India I evaluated the nitrogenous fertilizer industries effluent that was being released in the rivers. Two students completed their Ph. D. program under this project.

The second R&D project, funded by the Department of Science & Technology, Ministry of Science & Technology, Government of India, I evaluated the microbial populations occurring in the fresh water bodies and collected over 80 E. coli strains that were evaluated for their resistance to mercury. I was looking for the genetic determinants responsible for imparting mercury resistance to them. Thirty-six of them were found to be resistant to mercury. Their genetic make was worked out and genes coding for mercury resistance were cloned sequenced and characterized. The results were presented in various Conferences (refer the CV) and published in American and Indian research journal Current Microbiology. (See the publications attached). Three students completed their Ph. D. program under this project.

The third R&D research project that is currently going on is the largest and is funded by the Department of Biotechnology, Ministry of Science & Technology, Government of India. The project entitles "Genetic Engineering of E. coli mer operon and improvement of mercury tolerance in N. plumbaginifolia" and it deals with the mobilization the characterized merA genes in to wild tobacco plant (Nicotiana plumbaginifolia) thus creating a transgenic wild tobacco. The cost of the project is 28.95 lakhs. This was an invited research project by the Department of Biotechnology. Three students are working under this project.

The fourth R&D research project entitled "Development of Luminescence-based Biosensors for Detection of Mercury Ions in Water Bodies" that has been submitted to the deals with Ministry of Environment & Forest, Government of India, deals with the development of Bioluminescent based biosensors using the genes thus far characterized. It is under active consideration by the Ministry.

The fifth R&D research project entitled "Molecular characterization of the Indian isolates of enteropathogenic E.coli (EPEC) causing epidemic diarrhoea" submitted to the Indian Council of Medical Research (ICMR) deals with the epidemic diarrhoea among infants.

R&D research project submitted

1. An R&D research project entitled "Development of Luminescence-based Biosensors for Detection of Mercury Ions in Water Bodies" has been submitted to the Ministry of Environment and Forests for financial assistance in 2003.
2. An R&D research project entitled "Molecular characterization of the Indian isolates of enteropathogenic E.coli (EPEC) causing epidemic diarrhea" has been submitted to ICMR for financial assistance in 2002.

Current and ongoing R&D project

1. Genetic Engineering of E. coli mer operon and improvement of mercury tolerance in N. plumbaginifolia." funded by DBT. 2003. (Cost: 28.95 lakhs).

2. An R&D research project entitled "Development of diagnostic kit for detection of viruses infecting banana (*Musa spp*) funded by DST 2003 where I am the Co- investigator.

Completed R&D projects

1. In 2002 a research project entitled "Molecular Analysis of the Pattern of Mercury Resistance in Different Indian Isolates of Gram Negative Bacteria" has just concluded in our lab. It dealt with the cloning and nucleotide sequencing of *merA* gene from *E. coli*. The Department of Science and Technology, Ministry of Science and Technology, Government of India, are funding it. Three students are about to complete their Ph. D.
2. Successfully completed a research project entitled "Exploration of Nitrifying and Denitrifying Bacteria for Microbial Treatment of Effluents from Nitrogen Fertilizer Industries". The Department of Environment, Ministry of Environment, Forest and Wildlife, Government of India funded this project. Two students completed their Ph.D. while doing work in this project.

Presentation

"Genetic Variations and resistance to *Callosobruchus maculatus* in *Vigna sublobata*" Abstracts related to this topic presented at different international conferences, including:

- Fifteen international Congress of Genetics, New Delhi, India, 1982.
- Fifteen International Botanical Congress, Berlin, West Germany, 1987.
- Sixteen International Congress of Genetics, Toronto, Canada, 1988.
- Eleventh annual conference of physiological society of India, New Delhi, 1999.

Symposium on the Genetics and Molecular Biology of Industrial Microorganisms, Indiana University, Indiana, Bloomington, 1992. Poster presented on the cloning expression and purification of acyl carrier protein (ACP).

Invited Scientific talk delivered

I have delivered more than fifty invited lectures on topics related to environment covering following topics:

- Human Genome Project: Perils and Promises.
- Recombinant DNA Technology and Bioinformatics.
- Mercury detoxification by bacterial genes.
- Water pollution
- Environment & Women's Health
- Role of microorganisms in water quality
- Biotechnology: A contrivance towards economic freedom of women.
- Biodiversity and Government Initiatives.
- Measurement & Management of Biodiversity.

The details of the talks delivered is given below:

- A lead talk on "Development of transgenic *Nicotiana* plants containing *E.coli* mercury reductase gene from environmental isolates" in 'Symposium-cum-workshop on Application of nanotechnology in microbial & herbal product development' held on March 23-25, 2007, conducted by Amity University, NOIDA, UP.
- Catechol biodegradation: a metagenomic approach. At NIIT, on October 4, 2006, New Delhi.
- Talk on 'HIV/AIDS issues at work place' at Patna, Bihar organized by Women Work Health Initiative on June 18, 2006.
- Vectors: Tools for recombinant DNA technology. Prof S D Shukla Memorial Lecture delivered at the DDU Gorakhpur University as a part of Golden Jubilee Celebrations. on March 7, 2006.
- "New Biomedical technologies vis-à-vis women: The Promises & The Perils" an invited lead lecture was delivered at the IV International Congress on Women Work & Health, Ashok Hotel, New Delhi 27-30 November 2005.

- "Development of Luminescence-based Biosensors for Detection of Mercury Ions in Water Bodies" at the Hamdard University, New Delhi on October 25, 2005.
- A series of three lectures on Biodiversity and molecular bioremediation of heavy metals delivered at the Refresher course conducted by Center for Research & Development and Department of Environmental Sciences, Kashmir University on 26.8.05.
- Four lecture series on Biotechnology and its applications, IASE, Faculty of Education, May 2005
- Four lecture series on Biodiversity and its conservation, IASE, Faculty of Education, June 2005
- Ten lecture series delivered at the Department of Biotechnology, DDU Gorakhpur University from 30.11.04 to 2.12.04 on topics of Genomics, Bioinformatics and molecular Biology.
- Plenary Lecture on "Bioremediation by bacterial enzymes" at the New College, University of Madras, Chennai on October 6, 2004
- Special invited lecture "Mercury can be bioremediated by bacterial genes" at the Department of Zoology, HNB University, Srinagar, Garhwal, on May 7, 2004.
- Resource person to deliver a lecture on "Human Genome: Perils and Promises." At Department of Zoology, DDU Gorakhpur University on March 22, 2004.
- Resource person to deliver a lecture on "Bioinformatics: a tool to data-mine the Genomics." At Department of Zoology, DDU Gorakhpur University on March 23, 2004.
- Lead Lecture on "Bioremediation of metal ions by bacterial genetic determinants" at the National Seminar on State-of-art on conservation of biodiversity in India with particular reference to Himalayas held at Center for Research & Development and Department of Environmental Biology at the Kashmir University on March 28, 2004.
- Chaired a technical session of Biodiversity and Taxonomy on March 27, 2004 in the National Seminar on State-of-art on conservation of biodiversity in India with particular reference to Himalayas held at Center for Research & Development and Department of Environmental Biology at the Kashmir University on March 28, 2004.
- Extension lecture "Skills of Scientific Communication through poster presentation". Institute for Advanced Studies, Faculty of Education, Jamia Millia Islamia, New Delhi. January 27, 2004.
- Plenary lecture "Mercury volatilization by R factor systems in E.coli isolated from aquatic environment of India" delivered at the National Symposium on "Plant Biology and Biodiversity in Changing Environment" held at Hamdard University under the aegis of 26th Indian Botanical Society on December 29, 2003, New Delhi.
- Deliver an invited Keynote address on Health & Environment and chair the following technical session in the International Seminar on "Women and Environment" being held at St. Bede's College, Shimla on 29-30th September, 2003.
- Two Special Extension lecture delivered in the Department of Botany, Kashmir University on Indian Germplasm resource and its management; and Introduction to Bioinformatics on 17 and 18 August, 2003.
- Special extension lecture on Recombinant DNA Technology and Bioinformatics delivered at Department of Zoology, Kashmir University on August 19, 2003.
- Resource Person at the Vishwa-Bharati, Shanti Niketan, West Bengal to deliver a talk on 'Molecular Assessment of Biodiversity' in the UGC sponsored Refresher Course. January 15, 2003.
- Resource Person in the Convention on 'Prevention of Communal Fascism' December 8, 2002 at Hindi Bhawan, New Delhi.
- An Extension Lecture on 'Flexibility of bacterial genome in response to environmental changes' at the DAV College, Amritsar, Punjab on November 30, 2002.
- 'Biotechnology: A Contrivance towards economic freedom of woman' a lead talk delivered at the State Level Seminar on Woman as Resource Manager held at the DAV College of Education for Women, Amritsar, Punjab, November 29-30 2002.
- Invited Lead Talk "Bacterial mercury Operon: a paradigm for bioremediation" in the Three day National Seminar on "Recent Trends in Life Sciences" held at the Centre of Research & Development, Kashmir University. August 26-28 2002.
- Institute of Advanced Studies in Education, Jamia Millia Islamia. Genetic Disorders. September 2002.
- Institute of Advanced Studies in Education, Jamia Millia Islamia, Cell Cycle & Cell Division. September 2002.
- Institute of Advanced Studies in Education, Jamia Millia Islamia. Biomolecules: DNA & RNA. September 2002.
- Invited talk on 'Molecular abatement of mercury pollution by E.coli mer operon' at the Department of Biotechnology, Thapar Institute of Science & Technology, Patiala. April 25, 2002.

- Department of Computer Sciences, Jamia Millia Islamia, New Delhi. "Recombinant DNA Technology and Bioinformatics". March 18, 2002.
- Conducted a two-day workshop in Institute of Advanced Studies in Education" on how to make communicate through posters. February 2002.
- "Bacteria can abate mercury pollution" at the Deen Dayal Upadhyaya College, University of Delhi.. February 2002.
- "Initiatives in Conservation of Biodiversity". Academic Staff College, Aligarh Muslim University, Aligarh. February 2002.
- 'Cloning & expression of antibiotic biosynthetic pathways genes of Strptomyces' at the National Seminar on "Biodiversity, Bioprospecting and Reproductive Biology in Relation to Biotechnology" held at the Zakir Husain College, University of Delhi. February 2000.
- Ranbaxy Research Laboratories, Gurgaon. "Genetic manipulation of antibiotics biosynthesis." November 2000.
- Acharya Narender Dev College, University of Delhi. "Hybrid antibiotics: an answer to the drug resistance". November 2000.
- Academic Staff College, Jamia Millia Islamia, "IPR & Germplasm resources" and November 2000.
- School of Sciences, Indira Gandhi National Open University, "Genetics and Society", May 2000.
- At the Centre for Professional Development in Higher Education, , Department of Zoology, University of Delhi, Current Trends in Molecular Biology. "Cascade of gene expression in Lambda virus". 1998.
- Delivered an inaugural address at the Botanical Society, Zakir Husain College, University of Delhi, Delhi. January 1998.
- At one day Seminar "Thermophiles" organized by the Association of Microbiologists of India, Delhi Unit II held at the Indian Institute of Technology, New Delhi 1996.
- At the Center for Professional Development in Higher Education, University of Delhi, South Campus. Current Trends in Microbiology. "Streptomyces and its Secondary Metabolites" 1996.
- At the Seminar organized by the Association of Microbiologists of India, Delhi Unit II on teaching of Microbiology at the post graduate level in Indian Universities held at University of Delhi South Campus, New Delhi in 1995.
- Inaugural address at the four-week workshop at the National Institute of Communicable Disease, New Delhi 1994.

Academic work outside Jamia Millia Islamia:

- Chaired a technical session entitled "Chemical Exposure & Women Health" in IV International Congress on Women Work & Health, New Delhi 27-30 November 2005.
- Head, Technical Program Committee, IV International Congress on Women Work & Health, New Delhi 27-30 November 2005.
- Member, IV International Congress on Women Work & Health, New Delhi 27-30 November 2005.
- As Panelist and expert of Technical Committee of Flora, Fauna and Conservation: National Workshop of ENVIS Centers and Nodes from June 25-27, 2004 held at Wildlife Institute of India, Dehradun.
- I am on the panel of experts of several Universities like Assam University, Mangalore University, Madras University, Aligarh Muslim University, Kashmir University.
- I review R&D Projects submitted for financial assistance to the Department of Science & Technology, Department of Biotechnology, Ministry of Science & Technology; Ministry of Environment, Government of India.
- Evaluate and conduct viva voce examinations for number of Universities that include Jawahar Lal Nehru University, University of Delhi, Kashmir University, Jamia Hamdard, HNB University, Garhwal, Sardar Patel University, Gujarat etc.

Visiting Faculty:

- Department of Computer Sciences, Jamia Millia Islamia from 2002 –2003.
- Nominated as External Guest Faculty member by the Department of Biotechnology, Govt. of India in the DBT sponsored training program "Genetic Manipulation of Antibiotic Gram-Positive Bacteria" held at the Department of Zoology, University of Delhi, Delhi –110 007, 1996.

- Visiting lecturer at the Department of Microbiology, University of Delhi South Campus for the year 1994-95.
- Visiting lecturer at the Department of Civil Engineering, Jamia Millia Islamia, New Delhi for their course in Environmental Management since 1994-97.

Awards and Recognition

- Awarded Flemish Scholarship by the Inter University Council of Europe to attend International Summer Course on Sustainable Water Management in Urbanized Areas. The Course is being held at University of Antwerp, Antwerp, Belgium from August 22-31, 2006. Flemish Scholarship covers total cost of travel, registration and accommodation
- Elected member of the Editorial Board of Indian Journal of Microbiology, 2006-2008.
- Expert member of the syllabus review committee for the ongoing course of M. Sc. Environmental Studies, School of Environmental Biology, University of Delhi.
- Member National Advisory Committee of 26th Conference of Indian Botanical Society to be held on December 29-31, 2003 at Hamdard University, New Delhi.
- Member National Advisory Committee, National Conference on Conservation of Biodiversity in India with Particular Reference to Himalayas being held at Centre of Research for Development, University of Kashmir, Srinagar on 22-24 October 2003.
- Chaired a technical session in "TB a Global Challenge: an Update" seminar organized by VB Patel Institute, University of Delhi. April 2003.
- Chaired a technical session of 'Woman as Resource Manager' at the State Level Seminar on Woman as Resource Manager held at the DAV College of Education for Women, Amritsar, Punjab, November 29-30 2002.
- Chaired a Session entitled "Reproductive Biology, Ethanobiology, Anatomy, Parasitology & Pathology" in the National Seminar on "Recent Trends in Life Sciences" held at the Centre of Research & Development, Kashmir University. August 26-28 2002.
- Member of Organizing Committees of several International & National scientific conferences & seminars.
- Elected as the Council member of the Association of Microbiology of India Delhi Unit II for the two years in 1995, 97, 99, 2001
- Overseas Biotechnology Associateship, Department of Biotechnology, Ministry of Science and Technology, Government of India, (Sponsored to conduct research on antibiotic biosynthesis in Madison, Wisconsin, for 1991-1993.
- Travel grant, awarded by UNESCO and IDRC to attend the Fifteenth International Botanical Congress, Berlin, West Germany, 1987.
- University Grants Commission (Ministry of Human Resource Development, Government of India) Teacher Fellowship under Faculty Improvement Program: 1981- 1985
- Post graduate Merit Scholarship in M. Sc. Aligarh Muslim University, India (University funded tuition and living expenses for two years of graduate study in Botany 1971-1973.

Membership of the scientific bodies:

- Life member of the Indian Society of Plant Biochemistry and Biotechnology,
- IARI, New Delhi.
- Life member of the Association of Microbiologists of India.
- Life member of the Indian Journal of Microbiology.
- Life member of the Indian Association of Cell Biology.
- Life member of the International Association of Environmental Botanists.
- Life member of the India Association of Plant Genetic Resources.

Recognition accorded by the International Bodies:

- Nominated by Institute's Governing Board of Editors for the biographical inclusion in the 6th edition of FIVE HUNDRED LEADERS OF INFLUENCE by the American Biographical Institute, Inc. Raleigh, North Carolina, USA, 1997.

- Priority nomination for the inclusion in the 6th edition of FIVE THOUSAND PERSONALITIES OF THE WORLD by the American Biographical Institute, Inc. Raleigh, North Carolina, USA. 1997.
- Nomination for the prestigious title "MAN OF THE YEAR 1997" the American Biographical Institute, Inc. Raleigh, North Carolina, USA 1997.
- Selected for the inclusion of my biography in the 26th edition of the DICTIONARY OF INTERNATIONAL BIOGRAPHY" published by the International Biographical Center, Cambridge, England, 1997.
- Selected for the inclusion in the 13th edition by the editors of INTERNATIONAL WHO'S WHO OF INTELLECTUALS" published by the International biographical centre, Cambridge, England 1997.
- Selected for the inclusion in the 2000 OUTSTANDING PEOPLE OF THE 20th CENTURY" published by the International Biographical Center, Cambridge, England, 1997.
- Selected for the inclusion in the English Edition of INTERNATIONAL DIRECTORY OF DISTINGUISHED LEADERSHIP published by the American Biographical Institute, Inc. Raleigh, North Carolina, USA, 1997.

Educational Video Films for the UGC Countrywide Classroom:

I have been the subject expert for around thirty such video films on topic related to the environment, pollution and molecular biology that have been produced by the Mass Communication Research Centre, Jamia Millia Islamia, New Delhi. These films have been telecast on the Doordarshan. The list is provided below:

- Taming the double helix.
- Revealing the lac operon.
- Plasmids: Tools for Recombinant DNA technology.
- Interview with Prof. K. Dharmalingam.
- Interview with Prof. H. K. Das.
- Bio-control of mosquitoes.
- Antibiotics Production Curre

Publications:

1. *Nimisha Patel, Arif Ali* (2014) Chrysene: a carcinogen and its microbial degradation, **Journal of Innovative Biology**, Review Article A ISSN: 2348-6473
2. *Arif Tasleem Jan, Mudsser Azam, Arif Ali & Qazi Mohd. Rizwanul Haq* (2014) Prospects for Exploiting Bacteria for Bioremediation of Metal Pollution, **Critical Reviews in Environmental Science and Technology**, **44:5**, 519-560, DOI: 10.1080/10643389.2012.728811
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List of Ongoing R&D Projects

S. No.	Project Title	Funding Agency	Grant requested	Status of the project
1.	"Comparative study of ESBL producing and PMQR <i>E.coli</i> and <i>K.pneumoniae</i> from purified tap water and unpurified samples of Yamuna"	Ministry of Environment and Forest	33 Lakhs	Approved
2.	"Identification and analysis of genes associated with Nitrogen Use Efficiency (NUE) in <i>Oryza sativa</i> L."	UGC	14 Lakhs	Approved