

DR. AHMAD ALI

University Department of Life Sciences
University of Mumbai, Vidyanagari
Santacruz (East), Mumbai – 400 098, INDIA
Email: ahmadali@mu.ac.in
Phone: - +91 22 26543370
Cell : +91 9870941656

RESEARCH AREA

Molecular Biology and Biochemistry

RESEARCH INTEREST

- Non-enzymatic Glycosylation (Glycation), DNA and protein damage, Oxidative stress, Antiglycating properties of natural products,
- Signal transduction, Metabolic regulation, *Spirulina platensis*

CURRENT POSITION

Assistant Professor in the University Department of Life Science, University of Mumbai, Mumbai, India from 01-09-2012

ACADEMIC QUALIFICATIONS

- **Ph.D.** (Life Sciences) – 2007, University of Mumbai, Mumbai,
 - Thesis entitled “Signaling mechanism in the regulation of nitrate assimilation in *Oryza sativa* (Rice)”
- **MSc.** (Biochemistry) -1998, Jamia Hamdard (Hamdard University), New Delhi

OTHER QUALIFICATIONS

- Qualified the '**National Eligibility Test' (NET)** for Lecturership conducted by **CSIR-UGC** (New Delhi, INDIA) in June 1998.

PROFESSIONAL EXPERIENCE (TEACHING & RESEARCH)

01.09.2012 - till date

: Presently working as **Assistant Professor** in the University Department of Life Sciences, University of Mumbai, Mumbai

28.06.2010-30.08.2012	: Worked as Lecturer in the Dept. of Biotechnology, National Institute of Pharmaceutical Education and Research (NIPER), Hajipur, Bihar
11.06.2007-14.06.2010	: Worked as Lecturer in the Dept. of Biotechnology, Thakur College of Science & Commerce, University of Mumbai
08.02.2007-30.04.2007	: Worked as Lecturer in the Dept. of Biotechnology, Smt. C. H. M. College, Ulhasnagar, University of Mumbai
25.11.2005-07.02.2007	: Worked as Research-cum-Teaching Assistant in the Dept. of Life Sciences, University of Mumbai, Mumbai
07.09.1999-30.07.2002	: Worked as Project Associate for three years on a University Grants Commission, Government of India major research project titled " Molecular Biology of Nitrogen Metabolism in Crop Plants " in the Dept. of Life Sciences, University of Mumbai, Mumbai

RESEARCH PROJECTS

COMPLETED

1. Title: Studies on Non-enzymatic Glycosylation of DNA and Proteins by sugars and dicarbonyls
Funding Agency: UGC, New Delhi (Start up grant)
2. Title: "*In vitro* study on the glycation of DNA by sweeteners"
Funding agency: University of Mumbai, Mumbai (2015-16)
3. Title: *In vitro* study on non-enzymatic glycosylation of protein and DNA
Funding Agency: University of Mumbai, Mumbai (2013-14)

STUDENTS GUIDED

- M. S. PHARM BIOTECHNOLOGY (NIPER, HAJIPUR)
 - RAJEEV SHARMA - A comparative *in vitro* study on glycation of DNA and protein with various sugars (2012)
 - NAGESH KUMAR MEENA - Cloning, expression and purification of Macrophage Inhibitory Factor (MIF) from *Leishmania donovani* (2011)
- M. Sc. (by Research) students enrolled: 01
- Guided 26 students of MSc Part II Life Sciences for their Review of Literature and Project work
- Presently guiding seven students of M. Sc. for their Review of Literature and Project work.

FELLOWSHIPS

- University Grants Commission, Govt. of India, Project Associateship for 3 years.
- AFMI (American Federation of Muslims of Indian Origin) Research Fellowship for 15 months.
- First beneficiary of BANEE Scholarship Scheme by Bihar Anjuman for 1 year.
(http://www.banee.org/BANEE_Beneficiaries.htm#List)
- Several Scholarships from University of Mumbai.

MEMBERSHIPS

- Life Member of Indian Science Congress Association (ISCA)
- Life Member of Society of Biological Chemists (SBC, India)
- Life Member of Research Society for the study of Diabetes in India (RSSDI)
- Member of European Federation of Biotechnology (EFB)
- Member of Bioinformatics Society of India (INBIOS)
- Member of Science Advisory Board (www.scienceboard.net)

REVIEWER OF JOURNALS

Frontiers in Plant Science, Nanotechnology Review, Indian Journal of Biotechnology, Bioscience and Bioengineering Communications, 3 Biotech (Springer Journal), Annals of Phytomedicine, Malaysian Journal of Nutrition

ADMINISTRATIVE RESPONSIBILITIES

- Member of **Organizing Committee** for "National Seminar on Facets of Life Sciences". March 22nd-23rd, 2017. Organized by Department of Life Sciences, University of Mumbai.
- Member of **National Advisory Committee** for "International Conference on Health Implications of Biotechnology". Feb 12th- 14th 2016. Organized by Central University of South Bihar, Patna, Bihar.
- Member of **Screening Committee** of Minor Research Projects, University of Mumbai for the year 2015-16
- Member of **Project Implementation Group** – DST FIST since Nov 2014 (Term – 5 years)
- **Course In charge** – M. Sc. Life Sciences (Spl.: - Biological Macromolecules) since June 2013
- Departmental member of **Purchase Committee** since June 2013
- **Member of Organizing Committee**, one-day National Conference on "Advances in Biological Science". Organized by the Department of Biotechnology, University of Mumbai. Dec. 24th, 2014.

- Departmental **Coordinator for Avishkar** (Annual Research Convention) for Academic Year 2014-15
- **Chairman** – M. Sc. Life Sciences Part I Examinations for Academic Year 2013-14
- Worked as **Resource Person** for Collaborative Undergraduate Biology Education (CUBE) workshop. Organized by Homi Bhabha Center for Science Education (HBCSE), TIFR, Mumbai. June 29th and 30th 2013.
- Worked as Member, **Board of Examiner**, M. Sc. Biotechnology (2nd Semester), Central University of Bihar, 20th and 21st May, 2013.

PUBLICATIONS

- Banan, P., **Ali, A.** 2016. Preventive Effect of Phenolic Acids on in vitro Glycation. **Annals of Phytomedicine**. 5(2):1-5
- **Ali, A.**, Devrukhkar, J. 2016. In vitro study on glycation of plasma proteins with artificial sweeteners (sweeteners induced glycation). **Acta Biologica Szegediensis**. 60(2):65-70.
- **Ali, A.**, Sharma, R. 2015. A comparative study on the role of Lysine and BSA in Glycation-induced damage to DNA. **Biosci. Bioengg. Commun.** 1: 38-43
- **Ali, A.**, Sharma, R., and Sivakami, S. 2014. Role of Natural Compounds in the Prevention of DNA and Proteins damage by Glycation. **Bionano Frontiers**. 7(12). 25-30
- Qazi, F., Varshney, P., **Ali, A.**, Ahmad, A. 2013. Dissecting the role of Glycine Betaine in plants under abiotic stress. **Plant Stress**. 7(1): 8-18
- **Ali, A.**, Sivakami, S., Raghuram, N. 2011. Effect of light, nitrate, and tungstate on the activity of nitrate reductase in Rice. **Res. Dim.** 1(3): 47-55
- **Ali, A.**, Raghuram, N., Sivakami, S. 2010. Differential regulation of nitrate assimilatory enzyme by Methionine sulfoximine in rice. **J. Adv. Sci. Tech.** 1(2): 97-101
- **Ali, A.**, Jha, P., Singh, K. S., Raghuram, N. 2008. Spirulina nitrate-assimilating enzymes (NR, NiR, GS) have higher specific activities and are more stable than those of rice. **Physiol. Mol. Biol. Plants**. 14(3): 179-182.
- **Ali, A.**, Sivakami, S., Raghuram, N. 2007. Effect of Nitrate, Nitrite, Ammonium, Glutamate, Glutamine and 2-oxoglutarate on the RNA Levels and Enzyme

Activities of Nitrate Reductase and Nitrite Reductase in Rice. **Physiol. Mol. Biol. Plants.** 13(1): 17-25.

- Jha, P., **Ali, A.**, Raghuram, N. 2007. Nitrate induction of nitrate reductase and its regulation by downstream N metabolites in *Spirulina platensis*. **Physiol. Mol. Biol. Plants.** 13(2): 163-167.
- **Ali, A.**, Sivakami, S., Raghuram, N. 2007. Regulation of activity and transcript levels of NR in Rice (*Oryza sativa*): Roles of Protein Kinase and G-proteins. **Plant Sci.** 172(2): 406-413.

BOOK CHAPTER

- Lochab, S., **Ali, A.**, Jha, P., Sharma, V., Abbey, D., and Raghuram, N. (2010). Assay methods for nitrate assimilatory enzymes in **Spirulina (Arthrospira)**. In Protocols on Algal and cyanobacterial Research, Bagchi, S.N. Kleinber, D. and Mohanty, P. (Eds). Narosa, New Delhi, Pp. 179-189

COMMUNICATED

- Qazi, F., Varshney, P., and **Ali, A.** Perspective of nitrate assimilation and of bioremediation in *Spirulina platensis* (a non-nitrogen fixing cyanobacterium): an overview. **J Env. Biol.** (Manuscript number - **MS/172**)
- Tariq, M., **Ali, A.** Plant derived natural products as anti-glycating agents (AAP/DRR/2016/AB/35). Accepted provisionally for the upcoming book "Drug Research Reviews" to be published with Apple Academic Press, Ontario, Canada in 2017
- Shah, S. A., Suji, G., **Ali, A.**, Bhor V. M., Sivakami, S. Methyl Glyoxal binding to bovine liver Catalase results in loss of activity and Heme dislocation. Submitted to Chemo-Biological Interactions.
- **Ali, A.**, More, T., Hoonjan, A. K., Sivakami, S., Antiglycating potential of Acesulfame potassium: An artificial sweetener. Submitted to Applied Physiology, Nutrition and Metabolism

SEMINARS/WORKSHOPS ATTENDED/LECTURES DELIVERED

- Delivered a Lecture on "**Biochemistry of Diabetes**" at Shri Shivaji College of Arts, Commerce and Science, Akola, March 12th, 2016.
- Delivered a Lecture on "**Research Misconduct**" at Shri Shivaji College of Arts, Commerce and Science, Akola, March 11th, 2016.

- Participated in 2-weeks **“Science Academies’ Refresher Course on Developmental Biology”**. Organized by NIRRH, Mumbai and Sophia College for Women, Mumbai. 16th-28th November, 2015.
- Attended Education day in the **“Targeted Proteomics Workshop and International Symposium”**. IIT Bombay, Mumbai. December 12th, 2015.
- Participated in 2-days workshop on **“Biostatistics in Teaching and Research”**. Ruparel College, Mumbai. 4th and 5th September, 2015.
- Attended one-day **SBC (I) Mumbai Chapter meet**. NIRRH, Mumbai. August 22nd, 2015.
- Attended one-day International Conference on **“Biomarker for Radiation Exposure & Cancer”**. Organized by the Department of Biotechnology, University of Mumbai. August 1st, 2015.
- Participated in **102nd Indian Science Congress** at University of Mumbai. Jan 3rd- 7th, 2015.
- Attended 4-weeks **Orientation Programme** at UGC-Academic Staff College, Jamia Millia Islamia, New Delhi. August 5th to September 3rd, 2014.
- Attended Six-day workshop on **“Hands on Training for Teachers in Biology”** at Khalsa College. Jointly organized by National Facility for Biopharmaceuticals (NFB) and UGC Academic Staff College, University of Mumbai. March 10th-15th, 2014.
- Attended National Seminar on **“Advances in Bioimaging”** at Department of Biotechnology, University of Mumbai. Feb 28th, 2014.
- Attended two-days workshop on **“Applications in Bioinformatics”** organized by ACTREC, Mumbai, Jan 23rd and 24th, 2014
- National Seminar on **“Biotechnology for sustainable growth and development”** organized by Department of Biotechnology, CKT College, New Panvel, Mumbai. Jan 3-4, 2014.
- Seminar on **“Macromolecular Chemistry and Translational Research”**. SBC (I) Mumbai Chapter meet at ACTREC, Mumbai on Nov. 8th, 2013.
- Refresher Course on **“Advances in Life Sciences”**. Academic Staff College, University of Mumbai, Mumbai. 7th- 26th October 2013.
- Resource Person for Collaborative Undergraduate Biology Education (CUBE) workshop. Organized by Homi Bhabha Center for Science Education (HBCSE), TIFR, Mumbai. June 29- 30, 2013.
- Workshop on **“Research Methodology in Applied and Basic Sciences”** organized by UGC Academic Staff College, University of Mumbai, Mumbai. March, 12-13, 2013.
- Delivered a Lecture on “Research Misconduct” in **Orientation Course** organized by Patna University, Patna, Bihar, December 4th, 2011.

- Delivered a Lecture on “Ecological Risk Assessment and Ecotoxicology” in **Refresher Course** organized by Patna University, Patna, Bihar, September 17, 2011.
- **4th Bihar Vigyan Congress** at Patna, Bihar and delivered a Lecture on “Plagiarism in Science”. June 9-11, 2011.
- **National Conference on Biotechnology for All.** School of Biotechnology, North Maharashtra Jalgaon University, Jalgaon, Maharashtra. December 29-30. 2010.
- **5th International Nitrogen Conference.** Indian Nitrogen Group and International Nitrogen Initiative. New Delhi, December 3 -7. 2010.
- Workshop on “**Applications in Bioinformatics**” organized by ACTREC, Mumbai, Jan 15-16, 2009.
- Workshop on “**Bioinformatics: Basic Tools and Applications**” organized by NIRRH, ICMR, Mumbai. May 21-23, 2008
- National Conference on “**Recent Advances in Drug Discovery Research**”. Department of Chemistry, Poona College of Arts, Science & Commerce, Pune March 15-16, 2008.
- Member of **Technical Committee** for the National Conference on Environmental Technology: Biological Perspectives Issues and Challenges, Dept. of Life Sciences, University of Mumbai, Mumbai, India, Feb. 9-10, 2006.
- Training Program on **Modern Instrumentation Techniques in Biology** at Western Regional Instrumentation Centre, Mumbai, India. May 30th to June 4th, 2005.
- Seminar on **Advances in Molecular Biology**, Modern College, Mumbai. March 30th, 2003.

CONTRIBUTIONS IN SYMPOSIA/CONFERENCES

- **Ali, A.** 2017. (Oral). Acesulfame potassium: An artificial sweetener with antiglycating potential. First Indo-Russian Meet and Second International Conference on Biotechnological Advancements in Free Radical Biology and Medicine. Jan. 23rd – 25th, 2017. Organized by Department of Biosciences, Integral University, Lucknow.
- **Ali, A.** 2016. (Oral). Phenolic acids prevent the process of *in vitro* glycation of proteins. National Conference on “Oriental Medicines & its Role in Human Health (OMIRH -2016). Sept. 2nd- 3rd, 2016. Organized by Smt. C. H. M. College, Ulhasnagar, Thane, Maharashtra.
- **Ali, A.** 2016. (Oral). Artificial sweeteners induced glycation of Proteins. International Conference on Health Implications of Biotechnology. Feb 12th-14th 2016. Organized by Central University of South Bihar, Patna, Bihar.

- Hoonjan, A. K., Momin, A. R., **Ali, A.** 2016. Reversal of glycation mediated DNA damage by Antioxidants. Conference on Health Implications of Biotechnology. Feb 12th- 14th 2016. Organized by Central University of South Bihar, Patna, Bihar.
- **Ali, A.**, Sharma, R., and Sivakami, S. 2014. (Oral). Role of Natural Compounds in the Prevention of DNA and Proteins damage by Glycation. National Seminar on "Biotechnology for sustainable growth and development". Jan 3rd and 4th, 2014. Organized by Department of Biotechnology, CKT College, New Panvel, Mumbai, India.
- **Ali, A.**, Sharma, R., and Sivakami, S. 2013. Structural damage of DNA and Protein by carbonyls and damage reversal by vitamins and natural compounds. National Symposium on "Frontiers of Biophysics, Biotechnology & Bioinformatics" & 37th Annual Meeting of Indian Biophysical Society (IBS). Jan 13-16th, 2013. Jointly organized by Department of Biophysics and Centre for Excellence in Basic Sciences, Univ. of Mumbai, India.
- Sharma, R. and **Ali, A.** 2012. DNA damage by Glycation of Lysine with Methylglyoxal. National Seminar "New Frontiers in Environmental Pollutants, Health & Application of Molecular Genetics", 21st & 22nd January 2012. Mahavir Cancer Sansthan & Research Centre, Patna, Bihar, India.
- **Ali, A.**, Sivakami, S., and Raghuram, N. 2010. Differential regulation of nitrate assimilatory enzymes by methionine sulfoximine in Rice (**Oral**). National Conference on Biotechnology for All. 29th-30th December. School of Biotechnology, North Maharashtra Jalgaon University, Jalgaon, Maharashtra, India.
- **Ali, A.**, Sivakami, S., and Raghuram, N. 2010. Regulation of Nitrate Assimilation and AGPase in Rice by Carbon & Nitrogen Metabolites (**Oral**). 5th International Nitrogen Conference. 3rd -7th December. Indian Nitrogen Group and International Nitrogen Initiative. New Delhi, India.
- **Ali, A.**, Raghuram, N. and Sivakami, S. 2006. Nitrate Assimilation in Rice: Induction and Regulation by Downstream Metabolites (**Oral**). National Conference on Environmental Technology: Biological Perspectives Issues and Challenges. Feb. 9-10, Dept. of Life Sciences, University of Mumbai, Mumbai, India.
- Sarkar, C., **Ali, A.**, Raghuram, N., Sivakami, S. 2006. Role of Protein Kinases and Phosphoinositide Signaling Pathways in the Regulation of NR in Rice. National Conference on Environmental Technology: Biological Perspectives Issues and Challenges. Feb. 9-10, Dept. of Life Sciences, University of Mumbai, Mumbai, India.

- Raghuram, N., **Ali, A.**, Jha, P., Sarkar, C. and Sandhu, K.S. 2003. Exploring nitrate-responsive gene expression in plant metabolic regulation (**Oral**). 26th Conference of the Indian Botanical Society and National Symposium On Plant Biology and Biodiversity in Changing Environment, Dec. 29-31, Jamia Hamdard, New Delhi, India.
- **Ali, A.**, Jha, P., Sandhu, K.S., and Raghuram, N. 2003. Nitrogen metabolism and protein content in rice and *Spirulina*. Jan 8-12. 2nd International Congress of Plant Physiology, Division of Plant Physiology, IARI, New Delhi, India.
- **Ali, A.**, Jha, P., and Raghuram, N. 2002. Nitrate reductase induction and regulation by downstream metabolites in rice and *Spirulina*. 71st Annual Meeting of Society of Biological Chemists (I), Nov. 14-16, Punjab Agricultural University, Ludhiana, India.
- Jha, P., **Ali, A.**, Sandhu, K.S., and Raghuram, N. 2002. High on metabolism, High on Protein: A comparative analysis of N metabolising enzymes in rice and *Spirulina*. 71st Meeting of the Society of Biological Chemists (India), Nov. 14-16, Punjab Agricultural University, Ludhiana.
- Jha, P., **Ali, A.**, Sarkar, C., and Raghuram, N. 2001. Comparative analysis of nitrate induced NR activity in Rice and *Spirulina platensis*". 19th National Symposium on Recent Trends in Life Sciences and Biotechnology, Nov. 20-22, Dept. of Life Sciences, Univ. of Mumbai, Mumbai.