

Dr. Mohd. Tashfeen Ashraf

Assistant Professor, School of Biotechnology
Gautam Buddha University

AREA OF RESEARCH

Our lab is focused on exploring the potential of Algae as a source of bioactive compounds and renewable feedstock for biofuels. Understanding the molecular basis of human diseases is another area we work in, under which we are currently investigating the phenomenon of muscle dystrophy in Diabetes Mellitus 2. Besides, I am also curious about the folding behavior of proteins, their structure-function relationship and protein-protein interactions under normal and disease conditions.

PROFESSIONAL QUALIFICATION

Ph.D. in Biotechnology from Aligarh Muslim University (AMU), India in 2008.
Title: Spectroscopic characterization of folding intermediates of various proteins and purification of lectin from *Trigonella foenumgraecum*.

EDUCATIONAL QUALIFICATION

M.Sc.-Biochemistry (1999), AMU.*

B.Sc. (Hons.)-Biochemistry (1997), AMU. *

Higher Secondary Certificate (1994), AMU. #

Secondary School Certificate (1992), AMU. \$

*Passed with I Division.

Passed with I Division and distinction in Chemistry.

\$ Passed with I Division and distinction in Mathematics, Science, Physical & Health Education and Theology.

WORK EXPERIENCE- Approx. 15 Years as on December 14, 2018

ACADEMICS

1. Currently working as Assistant Professor (Regular Grade), School of Biotechnology, Gautam Buddha University since July 23, 2011.
2. Assistant Professor (Consolidated Salary), School of Biotechnology, Gautam Buddha University, from July 01, 2010 to July 22, 2011.
3. Research Associate, School of Biotechnology, Gautam Buddha University, from March 02, 2009 to June 30, 2010.
4. Senior Research Fellow, School of Biotechnology, Jawaharlal Nehru University, in a research project entitled "High precision microcalorimetry facility for monitoring biomolecular stability and interactions" from Jun. 08, 2008 to Feb. 28, 2009. The project involved biophysical characterization of macromolecules through Calorimetry (ITC & DSC).

INDUSTRY

1. Publishing Executive, Chemical Industry Digest- India's leading Chemical & Engineering Journal, from Feb.06, 20016 to Mar. 11, 2008
2. Business Executive, Lilac Medicare Pvt. Ltd- a multinational Immunodiagnostic company, from Oct. 25, 1999 to Jan. 01, 2002.

ADMINISTRATIVE POSITIONS HELD

- Head, Department of Biotechnology, Gautam Buddha University.
- Chairman, Academia-Industry Coordination Committee, SoBT, Gautam Buddha Dy. Coordinator, Examinations, Gautam Buddha University.
- Proctor, University Proctorial Board, Gautam Buddha University.
- Member, University Sports Council, Gautam Buddha University.
- Member, Research Committee, SoBT, Gautam Buddha University.

CONTRIBUTION TO E-PG PATHSHALA, MHRD, GOVERNMENT OF INDIA

Contributed a Module on "Collection and Purification Process of Recombinant Proteins" for M.Sc. Biotechnology students for e-PG Pathshala initiative of MHRD, Government of India under its National Mission on Education through ICT.

RESEARCH PUBLICATIONS

1. Mohd. Tashfeen Ashraf, Rizwan Hasan Khan. "Effect of metal ions and EGTA on the optical properties of concanavalin A at alkaline pH" *Protein and Peptide Letters* (2005), 12, 203-206.
2. Mohd. Tashfeen Ashraf, Rizwan Hasan Khan. "Mitogenic Lectins"- A review article *Medical Science Monitor* (2003), 9(11), RA 265-269.
3. Aabgeena Naeem, Mohd. Tashfeen Ashraf, Mohd Akram, Rizwan Hasan Khan. "Comparative study of effects of polyols, salts, and alcohols on trichloroacetic Acid-induced state of cytochrome C" *Biochemistry-Moscow* (2006) 71 (10):1101-9.
4. Farah Naseem, Basir Ahmad, Mohd. Tashfeen Ashraf and Rizwan Hasan Khan. "Molten globule-like intermediate of asialofetuin at acidic pH" *Biochimica ET Biophysica Acta* (2004), 1699, 191-199.
5. Aabgeena Naeem, Ejaz Ahmad, Mohd. Tashfeen Ashraf, Rizwan Hasan Khan. "Purification and Characterization of Mannose/Glucose-Specific Lectin from Seeds of *Trigonella foenumgraecum*" *Biochemistry -Moscow* (2007) 72 (1):44-8
6. Manpreet Kaur, Kuljinder Singh, Pushpinder J Rup, A K Saxena, Rizwan H Khan, Mohd. Tashfeen Ashraf, Sukhdev Singh Kamboj, Jatinder Singh. "A tuber lectin from *Arisaema helleborifolium schott* with anti-insect activity against melon fruit fly, *Bactrocera cucurbitae* (Coquillett) and anti-cancer effect on human cancer cell lines" *Arch. Biochem. Biophys.* (2006) 445 156-165.
7. Ejaz Ahmad, Gulam Rabbani, Nida Zaidi, Saurabh Singh, Mohd. Rehan, Mohd. Moin Khan, Shah Kamranur Rahman, Zainuddin Qadri, Mohd. Shadab, Mohd.

- Tashfeen Ashraf, Naidu Subbarao, Rajiv Bhat and Rizwan Hasan Khan. "Stereo-Selectivity of Human Serum Albumin to Enantiomeric and Isoelectronic Pollutants Dissected by Spectroscopy, Calorimetry and Bioinformatics". PLoS One. 2011; 6(11): e26186.
8. Gulam Rabbani, Ejaz Ahmad, Mohsin Vahid Khan, Mohd. Tashfeen Ashraf, Rajiv Bhat and Rizwan Hasan Khan "Impact of structural stability of cold adapted *Candida antarctica* lipase B (CaLB): in relation to pH, chemical and thermal denaturation". RSC Adv., 2015,5, 20115-20131.
 9. Vishal Chand, Sipahsee Lal Patel, Rachana Mishra, Baishnab C Tripathy, Jaya Prakash, Md. Tashfeen Ashraf and Varsha Gupta "Molecular signatures in peripheral blood mononuclear cells with osteoarthritis". Int. J. Clin. Rheum. (2016) Vol. 11, Issue 6.
 10. Chand V, Prakash J, Ashraf T, Gupta V. Can Vitamin D Slow Progression of Osteoarthritis? J Arthritis (2017); 6: 232. doi: 10.4172/2167-7921.1000232.
 11. Srishti Jha and Mohd. Tashfeen Ashraf (2017). *Acutodesmus dimorphus*: A Promising Alga for Commercial Scale Cultivation for Biofuels and Biomass. IJPB; 3(1): 29-33.
 12. Srishti Jha and Mohd. Tashfeen Ashraf (2017). Resource Utilization in Algal Cultures: Synergistic Effect of Biodiversity and Genetic Modification on Biomass Production. IJMB; 3(1): 1-8.
 13. Abdul Arif Khan, Zakir Khan, Abdul Malik, Mohd Abul Kalam, Phillip Cash, Mohd. Tashfeen Ashraf, Aws Alshamsan. Colorectal cancer-inflammatory bowel disease nexus and felony of *Escherichia coli*- Review Article. Life Sciences(1 July 2017); Volume 180: 60-67.
 14. Vishwas Tripathi, Anjana Singh, Mohd. Tashfeen Ashraf (2018). Avenanthramides of Oats: Medicinal importance and future perspectives. Pharmacognosy Reviews: DOI: 10.4103/phrev.phrev_34_17

RESEARCH SUPERVISION

- Student: Vishal Chand (Year of Award- 2018)
Title: A Prospective Study to Identify and Characterize any Novel Biomarker for Early Diagnosis of Osteoarthritis.
- Supervised 4 students for M.Tech-Biotechnology Dissertation.

BOOK CHAPTERS

1. Srishti Jha , Abdul Arif Khan , Rizwan Hasan Khan and Mohd. Tashfeen Ashraf : *Designing of Artificial Metalloenzymes: From Concept to Applications*. Biocatalysis - Enzymatic Basics and Applications. Springer. *In Press*.
2. Bhaswati Banerjee, Gauri Misra and Mohd. Tashfeen Ashraf. *Circular Dichroism*. Data Processing Handbook for Complex Biological Data Sources. Academic Press- An imprint of Elsevier. Copyright 2019.

INVITED LECTURES

- Lecture on "Entrepreneurship Opportunities for Science Graduates" organised by ZENITH- The Life Sciences and Physical Sciences Society, Department of Zoology, Gargi College, University of Delhi on September 19, 2018.
- Lecture on "Technology Showcase" at India-France Technology Summit 2013

jointly organised by DST, CII and French Embassy in India in New Delhi from Oct. 23-24, 2013.

- Lecture on “Cytochrome c exists as different molten globule states in the presence of trichloroacetic acid, alcohols, polyols and salts” at the annual meeting of Indian Biophysical Society held at University of Pune from Jan. 22-25, 2005.

COURSES TAUGHT AT UG, PG AND PHD (COURSEWORK) LEVEL

Theory Courses: Biochemistry, Biomolecules, Bioenergetics, Biophysical Chemistry, Bioanalytical Techniques, Principles of Biochemical Engineering, Fermentation and Downstream Processing, Entrepreneurship Development and Research Methodology.

Lab Courses: Fundamentals of Biochemistry, Biochemistry, Biochemistry and Cell Biology, Biophysical Chemistry, Biochemical Engineering, Fermentation & Downstream Processing and Immunotechnology.

ACADEMIC & EXTRACURRICULAR EVENTS ORGANIZED

A. Organised Industry visits to following Biotech Companies/Institutes for students of School of Biotechnology, GBU:

1. Yakult Danone India Pvt. Ltd., Sonipat, Haryana.
2. Panacea Biotec, Lalru, Punjab
3. Jubilant Life Sciences, Gajraula, UP.
4. Advanced Instrumentation Research Facility (AIRF), JNU, New Delhi.
5. Gogia Chemical Industries, Dadri, UP.

B. Organised following workshops/seminar at School of Biotechnology, GBU:

1. Seminar on “*Proteomics*” at SoBT, GBU in association with GE Healthcare, India.
2. Workshop on “*Entrepreneurship*” at GBU in association with the National Small Industries Corporation (NSIC), New Delhi, India.
3. Workshop on Flow Cytometry at BD BioSciences Application Centre at Jamia Hamdard University, New Delhi.

C. Organised following Lectures by Industry Experts at SoBT, GBU:

1. “*Role of redox mediators in peroxidase mediated treatment of aromatic pollutants*” at Gautam Buddha University by Prof. Qayyum Husain, Deptt. of Biochemistry, Aligarh Muslim University.
2. “*Good Ethical Practices in Medicine*” at Gautam Buddha University by Prof. Premashish Kar, Director Professor, Maulana Azad Medical College, University of Delhi.
3. “*Career Roadmap: Prospects and Competencies*” at Gautam Buddha University by Mr. Supratik Chakraborty, MD, Lilac Group, Mumbai.
4. “*Protein Folding and Disease*” at Gautam Buddha University by Prof. Rajiv Bhat, Dean, School of Biotechnology, JNU, New Delhi.

CONTRIBUTION IN ACADEMICS IN SoBT, GBU

1. Actively involved in design of course structure and course contents of all the programmes of SoBT, GBU right from the inception of School in 2009.
2. Member of following school-level committees at SoBT, GBU: Academia-Industry Coordination Committee, Time Table Committee, Faculty In-Charge for Research Labs (Basic Lab. I), Faculty In-Charge for Bioprocess & Fermentation Laboratory.

FACULTY REFRESHER/ORIENTATION COURSE

- Attended a five day *National Workshop on Modeling, Simulation and optimization of Bioprocesses using Superpro Designer and Berkeley Madonna Software* at National Institute of Technology, Warangal (NITW) organised during December 10-14, 2018 by School of Biotechnology, NITW under Continuous Education Programs sponsored by TEQIP-III.
- Attended *23rd Refresher Course in Life Sciences & Biotechnology* organized by the Academic Staff College of Jawaharlal Nehru University, New Delhi from October 8 to November 2, 2018.
- Faculty Development Program (TEQIP) organized by IILM Academy of Higher Learning, College of Engineering & Technology, Greater Noida on “Approaches for Insilico Drug Designing” from July 3 to July 7, 2018.
- Attended a short term course on “Artificial Intelligence in Engineering Applications (AIEA- 2016)” organised by NSIT, Delhi during December 26-30, 2016.
- *UGC-Orientation Programme* organized by HRD Centre of Jawaharlal Nehru University, New Delhi from August 24 to September 18, 2015.
- *UGC-Refresher Course in Biotechnology* organized by the Academic Staff College of Jawaharlal Nehru University, New Delhi from July 28 to August 22, 2014.

CONFERENCE PROCEEDINGS

- M.T. Ashraf, F. Naseem and R.H. Khan. *A comparative study of legume and non-legume lectins in the presence of TFE and HFIP*. 30th FEBS Congress and 9th IUBMB International Conference held at Budapest, Hungary from Jul. 2-7, 2005. *The FEBS Journal, Vol. 272, Suppl. 1, July 2005*.
- Akash Chaudhary, Shakeel Ahmad, Shadab Ahmad and Mohd. Tashfeen Ashraf. “Improving the Efficiency of Concanavalin A as Affinity Ligand in Alkaline pH Range”.
Proceedings of the 28th Annual Symposium of the Protein Society. *The Protein Science, Vol. 2, Suppl 1, July 2014*.
- Shakeel Ahmad, Akash Chaudhary, Shadab Ahmad and Mohd. Tashfeen Ashraf “In Silico And Kinetic Studies To Verify The Potency Of α -Glucosidase Inhibitors Isolated From *Morus alba* L.”.
Proceedings of the 28th Annual Symposium of the Protein Society. *The Protein Science, Vol. 2, Suppl 1, July 2014*.

- Srishti Jha, Vishwas Tripathi, Abdul Arif Khan, Mohd. Tashfeen Ashraf. Engineering Nanoparticles for Enhanced Production of Algal Biofuels: A Review. *NanofIM 2017*.

CONFERENCES/WORKSHOPS ATTENDED

- *41st Annual Conference of Research Society for Study of Diabetes in India*, held during November 8-10, 2013 at India Expo Centre, Greater Noida, India.
- Workshop on “*Entrepreneurship*” held on February 4, 2012 at Gautam Buddha University in association with the National Small Industries Corporation, New Delhi, India.
- Workshop on “*Proteomics*” held on April 17, 2012 at Gautam Buddha University in association with GE Healthcare, India.
- *L4C63-A face to face workshop on "Open Educational Resources & Wikieducator"* held on June 9-11, 2010, by Gautam Buddha University.
- *Recent Trends in Bioinformatics with Special Reference to Biotechnology Resources*, a workshop held on March 4-6, 2003 at Gautam Buddha University, and sponsored by Department of Biotechnology, Govt. of India
- *EVOLUTIONS 2014* organized by GE Healthcare Life Sciences, India.

MEMBERSHIP OF PROFESSIONAL ORGANIZATION

Life Member, Indian Biophysical Society.

CONTACT

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