



Nurul Alam, Ph.D.

Home

3434 Bienville Drive
Tyler, Texas 75701
Tel: (903) 330 8263
E.mail: alamnurul@yahoo.com

Work

Texas A&M University-Texarkana
P. O. Box 5518, 2600 N. Robinson Rd.
Texarkana, TX 75505
Tel: (903) 334-6671
Email: nurul.alam@tamut.edu

EDUCATION

- Ph.D., Science of Biological Resources, Gifu University, Japan, 1998.
- M.S., Biotechnology, Shinshu University, Japan, 1995.
- M.Sc., Microbiology, University of Dhaka, Bangladesh, 1988.
- B.Sc. Honors, Botany, University of Dhaka, Bangladesh, 1986.

TRAINING

- Educational Activities on Practical Approaches to the Treatment of Obesity, Harvard Medical School, Boston, Massachusetts, summer 2008.
- Molecular Mechanism of Functions of Human Factor H, Biomedical Research Center, University of Texas Health Science Center, Tyler, Texas, summer 2006-2007.
- Enhancement of Science Education, Baylor College of Medicine (UNCF/BCM), Houston, Texas, summer 2005.
- Effective Teaching Methods for Biology and Environmental Studies, NSF Short Courses for College Teachers, Harvard University, Boston, Massachusetts, summer 2004.

EXPERIENCE

- 2009-present: **Associate Professor of Biology (Tenured)**: College of Science, Technology, Engineering, and Mathematics (STEM), Texas A&M University-Texarkana, Texarkana, Texas.
- 2006-present: **Assistant Professor of Biology**, College of Arts & Sciences and Education (CASE), Texas A&M University-Texarkana, Texarkana, Texas.
- 2002-2006: **Assistant Professor of Biology**, Division of Arts and Sciences, Jarvis Christian College, Hawkins, Texas.

TEACHING

- Jarvis Christian College (2002-2006)
Botany, Microbiology, Cell & Molecular Biology, Biochemistry, General Biology I&II.
- Texas A&M University-Texarkana (2006-present)
Cell & Molecular Biology, Forensic Science, Biotechnology, Ecology, Invertebrate Biology, Biochemistry, Genetics, General Biology I, Advanced Technological Communications (Web-enhanced and Online), Living in the 21st Century (Web-enhanced).

RESEARCH

- **Postdoctoral Research Associate**, Department of Biochemistry, Center for Biomedical Resource, University of Texas Health Science Center at Tyler, Texas, 2001-2002. *Research interest*: Mechanisms of functions of human complement factor H.
- **Postdoctoral Research Associate**, Department of Molecular Biology, Center for Biomedical Resource, University of Texas Health Science Center at Tyler, Texas, 1999-2001. *Research interest*: Regulation of surfactant protein gene expression in lung.
- **Postdoctoral Research Associate**, Department of Food Science and Technology, University of British Columbia, Vancouver, Canada, 1998-1999. *Research interest*: *Research interest*: Vacuum Microwave Drying (VMD) aspects of fruits and vegetables.
- **Doctoral Candidate** United Graduate School of Gifu University, Japan, 1995-98. Mechanistic Behavior of Organic Solvents on Thermolysin Activity.
- **M.S. Candidate**, Shinshu University, Japan, 1993-1995. Kinetic Behavior of Activation of Thermolysin by n-alcohols.
- **R&M Microbiologist**, Rhone-Poulenc-Rorer Pharmaceuticals, Bangladesh, 1989-1993. Quality control, research, and development of pharmaceutical and animals health products.
- **M. Sc. Candidate**, University of Dhaka, Bangladesh, 1986-198. Microbiological Aspects of Radiation Sterilization of Certain Medical Products.

PUBLICATIONS

- Pangburn, M. K., Rawal, N., **Alam, M. N.**, Cortes, C., Ferreria, V., and Atkinson, M. L. K. Polyanion-induced Self Association of Complement Factor H. *The Journal of Immunology*, 182, 1061-1068, 2009.
- **Alam, M. N.**, Haque, A., Sreedhar, M., Pangburn, M. K., A novel vector for the expression of SCR domains in insect cells, *Journal of Immunological Methods*, 293, 107-113, 2004.
- **Alam, M. N.**, Berhane K., Boggaram V., Lung surfactant protein B promoter function is dependent on the helical phasing, orientation and combinatorial actions of cis-DNA elements, *Gene*, 282, 103-111, 2002.
- Adams, C.* **Alam, M. N.*** Starcher, B. and Boggaram, V. Rabbit surfactant protein B genomic regions that confer lung-cell specific and developmentally inducible expression in transgenic mice (*equally contributing authors), *American Journal of Physiology: Lung Cellular and Molecular Physiology*, 280, L724-L731, 2001.
- Margana, R., Kiflu, B. **Alam, M. N.**, Boggaram, V. Identification of functional TTF-1 and Sp1/Sp3 sites in the upstream promoter region of rabbit SP-B gene. *American Journal of Physiology: Lung Cellular and Molecular Physiology*, 278, L477-L484, 2000.
- **Alam, M. N.**, Tadasa, K., Kayahara, H. Organic solvents cause spectral changes and pKa shifts of Thermolysin in peptide synthesis in aqueous-organic one-phase reaction system. *Biotechnology Techniques*, 12, 115-118, 1998.
- Amar, E., Tadasa, K., **Alam, M. N.**, Kayahara, H., Ujihara, A. Acquired Thermolysin stabilization by lowering in pH and dielectric constant resulting from temperature increase in the Z-Phe-Phe-OMe synthesis. *Biotechnology Techniques*, 12, 491-496, 1998.
- **Alam, M. N.**, Koji Tadasa, Tomoyuki Maeda and Kayahara, H. Thermolysin activation by water-miscible organic solvents in aqueous-organic one-phase reaction system is not governed by their physical or physicochemical parameters implying the role of specific groups and/or atoms, *The Journal of Faculty of Agriculture, Shinshu University*, 35, 35-40, 1998.
- **Alam, M. N.**, Tadasa, K., Maeda, T., Kayahara, H. Correlation of inhibition of Thermolysin by water-miscible alcoholic solvents with their physiochemical parameters and the status of monoalcoholic character of water in peptide synthesis of Z-Phe-Phe-Ome in water-organic one-phase reaction system. *Biotechnology Letters*, 19, 1129-1133, 1997.
- **Alam, M. N.**, Tadasa, K., Kayahara, H. Kinetics of inhibition of Thermolysin- catalyzed peptide synthesis in aqueous-organic one-phase reaction system. *Biotechnology Letters*. 19, 563-568, 1997.
- **Alam, M. N.**, Koji Tadasa and Kayahara, H. The effects of ketonic organic solvents on Thermolysin: A Spectrophotometric Approach, *The Journal of Faculty of Agriculture, Shinshu University*, Vol. 34, 31-37, 1997.
- Tadasa, K., **Alam, M. N.**, Kayahara, H. The effect of organic solvents on thermolysin-catalyzed peptide synthesis of Z-Phe-Phe-OMe in aqueous-organic one-phase reaction system. *Research Signpost*, 1, 291-307, 1997.
- **Alam, M. N.**, Tadasa, K., Kayahara, H. Kinetic behavior of activation of Thermolysin by normal alcohols. *Biotechnology Letters*, 18, 45-50, 1996.

ABSTRACTS

International conferences:

- **Alam, M. N.**, Barnes*, Angela, Brannon*, Marcus, Collier*, Ashley, Jackson*, Dawnette Smith*, Rosaylin and Glendora Carter, Microbiological Aspects of Water Quality in an East Texas Creek, 22nd Annual Conference, Bangladesh Society of Microbiologists, May 26-27, 2006, Dhaka, Bangladesh. *UNDERGRADUATE STUDENTS.
- Pangburn, MK, Sreedhar*, M. **Alam, M. N.**, Rawal, N., Herbert, A., and Haque*, A. Functional analysis of each of the three C3b binding sites of factor H and comparison with full length factor H. XXth International Complement Workshop, 13-18th June 2004, Honolulu, Hawaii, USA. *GRADUATE STUDENTS.
- Boggaram, V., **Alam, M. N.**, Adams*, C. and Starcher, B. Rabbit surfactant protein B genomic regions that confer lung-cell specific and developmentally inducible expression in transgenic mice. 2000 FASEB Summer Research Conference, July 1-6, Vermont, USA. *GRADUATE STUDENT.
- **Alam, M. N.**, Madea*. T. Tadasa, K. and Kayahara, H. Correlation of activation or inhibition of Thermolysin by organic solvents with their physicochemical parameters. Annual Conference of the Japan Society for Bioscience Biochemistry and Biotechnology, March 29-31, 1997, Tokyo, Japan. *UNDERGRADUATE STUDENT.
- **Alam, M. N.**, Tadasa, K. and Kayahara, H. Kinetic Behavior of activation of Thermolysin by normal alcohols. International Chemical Congress of Pacific Basin Societies (Pacifichem), December 17-22, Hawaii, USA.

National conferences:

- **Alam, M. N.**, Impact of a community based health information and weight management program on the lifestyle change and prevention of weight gain among Africa American women. The Obesity Society's 2008 Annual Scientific meeting, Phoenix, AZ. October 3-7, 2008, Obesity, Vol. 16, Abstract Supplement, S152.
- Thompon*, A., Simoneau*, D., (*Mentors: Alam, M. N.* and Hearn, M.) Texas A&M University System, Pathways to the doctorate 5th annual student research symposium, November 2-3, 2007, Tarleton State University, Stephenville, Texas, USA. *UNDERGRADUATE STUDENTS.
- Pippens*, E., Ondiek, J., Payne, J., Carter, G., Muniruzzaman, M. and **Alam, M. N.**, Water Quality Monitoring: An Important Tool to Sustain Our Natural Resource, 3rd Annual Undergraduate Science & Engineering Conference (USEC) and NSF Historically Black Colleges and Universities Undergraduate Program (HBCU-UP), November 22-24, 2002. Tuskegee, Alabama, USA. *UNDERGRADUATE STUDENTS.

SERVICE

2003-2006	Awards Committee
2002-2003	Faculty Life Committee
2002-2003	Self Study Committee, Division of Arts and Sciences
2002-current	Faculty Advisor for Pre-med, Biology, and Nursing Students
2006-2007	Curriculum Committee (M.S. in Biology).
2007-2008	Mathematics Faculty Search Committee
2008-2009	Mathematics, Electrical Engineering, and Computer Science Faculty Search Committees
2009-present	Biology Search Committee, Graduate Council, and Faculty Senate

OTHERS

- Text reviewer, Biology by Sylvia Mader, McGraw-Hill, 2002-current.
- CSI Summer Camp Organizer, Texas A&M University-Texarkana, 2008.
- Judge, Student Research Symposia, Texas A&M University System, 2007-2008.
- Judge, NIS/BKK Student Research Symposium, 2008.
- Speaker and Organizer, Community Impact Program, 2005-2008.
- Taught online and web-enhanced courses (WebCT/Blackboard).

AFFILIATIONS

- American Society for Microbiology
- Bangladesh Society of Microbiologists
- Beta Kappa Chi Honors Society
- The Obesity Society

- Japan Society for Bioscience, Biotechnology and Biochemistry

AWARDS

- Japanese Government Scholarship, 1993-1998.
- Teaching Assistantship, Gifu/ Shinshu University, Japan, 1997-1998.
- Graduate Scholarship, University of Dhaka, Bangladesh, 1986-1988.

FUNDING

- Texas A&M University-Texarkana Robert Noyce Scholarship Program (NSF), September 1, 2004-August 31, 2009, \$389,850 (Principal Investigator).
- Indicator Bacterial Source Tracking in Tankersley Creek, Texas A&M University-Texarkana, Faculty Senate Research Enhancement Grant, 2007-2008, \$1,000 (Principal Investigator).
- Community Impact Program (Obesity and Nutrition), United Negro College Fund Special Programs (UNCF-SP), April 14, 2006 - March 13, 2007, \$55,000 (Principal Investigator).
- Bacteriological and Chemical Aspects of Water Quality in Tankersley Creek, Texas A&M University-Texarkana, Faculty Senate Research Enhancement Grant, 2006-2007, \$3,000 (Principal Investigator).
- Identifying Sources of Fecal Bacteria in Selected Bodies of Water in East Texas, UNCF. College Fund/ Henry C. McBay Research Fellowship, June 1, 2006 to December 31, 2006, \$12,000 (Principal Investigator).

SKILLS

Molecular Biology:

- DNA/RNA isolation, purification, gel electrophoresis
- Gene cloning, PCR, site-directed mutagenesis and sequencing
- Eukaryotic Cell/tissue culture and transfection
- Recombinant DNA/protein expression in vitro
- Reporter gene assay, Southern and Northern hybridization
- Tail-DNA dot-blot, animal tissue culture, In vitro transcription
- DNA-protein interaction, Electrophoretic mobility shift assay (EMSA)

Microbiology:

- Isolation, characterization and maintenance of microorganisms
- Microbiological culture techniques
- Clean room practices and Good Manufacturing Practices (GMP)
- API strip and traditional identification methods
- Bioburden tests of pharmaceutical agrochemical raw materials and finished products
- Microbiological quality monitoring of water
- Sterility, Pyrogen and Toxicological tests
- Antibiotic assays and sensitivity tests

Biochemistry/Enzymology:

- Enzymatic peptide synthesis in conventional non-conventional milieus
- Enzyme immobilization, Enzyme kinetics and kineto-mechanistic behavior of enzyme activity, active site microenvironment; Optimization of reaction conditions
- Protein purification, gel-electrophoresis (SDS-PAGE) and characterization

Analytical:

- Spectrophotometric techniques (UV/VIS), Chromatographic techniques (Paper, TLC, HPLC, FPLC, Gel-filtration, Ion-exchange, Affinity) Biomolecular Interaction (BIAcore)

Immunology:

- Enzyme Linked Immunosorbent Assay (ELISA) and Western (protein) Blotting.