

CURRICULUM VITAE

(Nawab Ali, Ph.D.)

Graduate Institute of Technology
University of Arkansas at Little Rock
2801 South University, Little Rock, AR 71104
Email: nail@ualr.edu, Phone 501 569 8003 / Fax 501569 8039

EDUCATION

1987	Ph.D. (Biochemistry), Aligarh Muslim University, Aligarh, India
1985	M.Phil. (Biochemistry), Aligarh Muslim University, Aligarh, India
1982	M.Sc. (Biochemistry), Aligarh Muslim University, Aligarh, India
1980	B.Sc., Chemistry (Honors), Aligarh Muslim University, Aligarh, India

PROFESSIONAL EXPERIENCE

2002-Present	Research Assistant Professor, Graduate Institute of Technology, University of Arkansas at Little Rock, Little Rock, AR 72212.
1999-2002	Biotechnology Specialist, Graduate Institute of Technology, University of Arkansas at Little Rock, Little Rock, AR 72212.
1997-1999	Assistant Research Scientist, Medical College of Georgia, Department of Biochemistry and Molecular Biology, Augusta, GA 30912
1995-1997	Postdoctoral Associate, Yale University School of Medicine, Department of Internal Medicine, Nephrology Section, New Haven, CT 06520.
1991-1994	Visiting Associate, National Institute of Environmental Health Sciences, NIH, Laboratory of Cellular and Molecular Pharmacology, Research Triangle Park, North Carolina
1990-1991	Postdoctoral Fellow, Creighton University School of Medicine, Department of Internal Medicine, Omaha, Nebraska
1987-1989	Visiting Worker, National Institute for Medical Research, Laboratory of Protein Structure, Mill Hill, London, United Kingdom

PROFESSIONAL HONORS AND AWARDS

2003	The Northup Young Researcher Award by the Graduate Institute of Technology, University of Arkansas at Little Rock.
2002	Siemens Westinghouse Mentor Recognition Award by Siemens Foundation.

- 1991 American Academy of Allergy and Immunology Travel Grant to attend and present the research work in the form of oral presentation in the Academy's annual meeting, San Francisco, CA, U. S.A.
- 1988 Wellcome Trust Fellowship grant by the Wellcome Foundation, U. K.
- 1987 Commonwealth scholarship by the Association of Commonwealth Universities and the British Council, U. K.
- 1986 Travel grant by the organization committee of International Symposium on "Biochemical Role of Eukaryotic Cell Surface Macromolecules" to attend and present the data in the meeting, New Delhi, India.
- 1985 Travel grant by Madurai Kamaraj University, School of Biological Sciences, to attend the workshop on "Organelles and Biomembranes", Madurai, Dec 1-24, India.
- 1983 Doctoral Research Fellowship by the Council of Scientific and Industrial Research India.
- 1980 Postgraduate merit scholarship by Aligarh University, Aligarh, India.

RESEARCH GRANTS

Study of subcellular compartmentation of signalling systems in liver. Wellcome Foundation, London, U.K., 1988, Principal Investigator, £19,137.

Expression and pharmacological characterization of a new vasotocin receptor gene. ORSP seed grant, University of Arkansas at Little Rock, Little Rock, 2000-2001, Principal Investigator, \$4000.

Cloning and functional characterization of an avian pituitary gland vasotocin receptor, NSF, Co-Principal Investigator, \$508,000, 2002-2005.

Development of an encased stent for rapid endothelialization to prevent restenosis, University of Arkansas for Medical Sciences, Principal Investigator, \$50,000, 2002-2003.

Studies on Gene Expression and Signal Transduction in Human Endothelial Cells Under Simulated Microgravity Environment, Arkansas Space Grant Consortium, Principal Investigator, \$21,800 per year, 2004--2007.

TEACHING INTERESTS

Recombinant DNA Methods and Applications (ASCI 7386)

Biomaterials Science and Applications (ASCI 7399)

Biochemistry of Biological Molecules (ASCI 7375)

Membrane and Receptor Biology

Signal Transduction, Second Messenger Systems and Intracellular Trafficking

SPECIAL WORKSHOPS AND COURSES

Workshop on protein biochemistry organized by the Society of Biological Chemists, India, 53rd Annual meeting, New Delhi, 1984.

International workshop on “Organelles and Biomembranes” co-sponsored by UNESCO, FERRO of USDA, ANBS, DST and organized by Madurai Kamaraj University, Madurai, India, Dec.1-24, 1985.

American Association for the Advancement of Science workshop on Career Development, Baltimore, Maryland, USA, 1996.

A series of courses and lectures on Ethical Issues in Biomedical Research organized by Yale University School of Medicine, New Haven, CT, USA, 1997.

The National Center for Biotechnology Information (NCBI) workshop on GenBank and molecular biology tools, Sponsored by MidSouth Computational Biology and Bioinformatics Society, University of Arkansas at Little Rock and University of Arkansas for Medical Sciences, Little Rock, November 16, 2003.

MEMBERSHIPS OF THE SCIENTIFIC ASSOCIATIONS

American Society for Biochemistry and Molecular Biology

American Association for the Advancement of Science

PUBLICATIONS

1. ALI, N., Upreti, R. K., Baijal, M., and Kidwai, A. M.: Isolation and characterization of basement membrane from frog skeletal muscle. *Prep. Biochem.* 17(4): 349-358, 1987.
2. ALI, N., Upreti, R. K., and Kidwai, A. M.: Skeletal muscle basement membrane: Isolation and chemical composition. *Biol. Mem.* 13(2): 145-151, 1987.
3. ALI, N., Upreti, R. K., and Kidwai, A. M.: Sarcolemma as a model for testing toxicity of chemicals. *Indian J. Biochem. Biophys.* 25(1-2): 209-214, 1988.
4. ALI, N., Upreti, R. K., and Kidwai, A. M.: Interaction of some toxicants with skeletal muscle sarcolemma. *J. Environ. Biol.* 10: 319-326, 1989.
5. ALI, N., Milligan, G., and Evans, W. H.: Distribution of G-proteins in rat liver plasma membrane domains and endocytic pathways. *Biochem. J.* 261: 906-912, 1989.
6. ALI, N., Milligan, G., and Evans, W. H.: G-proteins of rat liver membranes. Subcellular compartmentation and its disposition in the plasma membrane. *Mol. Cell. Biochem.* 91: 75-84, 1989.

7. Evans, W. H., ALI, N., and Enrich, C.: Membrane compartmentation and trafficking in hepatocytes. *Biochem. Soc. Trans.* 18: 137-139, 1989.
8. ALI, N., Aligue, R., and Evans, W. H.: Highly purified bile canalicular vesicles and lateral plasma membranes isolated from rat liver on Nycodenz gradients: Biochemical and immunolocalization studies. *Biochem. J.* 271: 185-192, 1990.
9. ALI, N., and Evans, W. H.: Priority targeting of glycosylphosphatidylinositol anchored proteins to the bile canalicular (apical) plasma membrane of hepatocytes: Involvement of "late" endosomes. *Biochem. J.* 271: 193-199, 1990.
10. ALI, N., and Evans, W. H.: Distribution of polypeptide binding guanosine-5'[35S]thio]triphosphate and anti-(ras-protein) antibodies in liver subcellular fractions. *Biochem. J.* 271: 179-183, 1990.
11. ALI, N., and Evans, W. H.: A possible role for GTP-binding and ras-related proteins in endocytic trafficking in liver. *Biochem. Soc. Trans.* 18: 458-459, 1990.
12. ALI, N., Upreti, R. K., Srivastava, L.P., Misra, R.B., Joshi, P.C. and Kidwai, A. M.: Membrane damaging potential of photosensitized riboflavin: Involvement of active oxygen radicals. *Indian J. Exp. Biol.* 29(9): 818-822, 1991.13. ALI, N. and Agrawal, D. K.: Liver microsomes contain multiple forms of inositol 1,4,5-trisphosphate binding proteins. Identification by nitrocellulose blot overlay. *J. Pharmacol. Toxicol. Methods* 27: 79-83, 1991.
14. Evans, W. H. and ALI, N.: Subcellular distribution of trimeric and low molecular weight G-proteins in liver. In: Reid, E., Cook, G. M. W. and Luzio, J. P. (Eds.): *Cell Signaling: Experimental Strategies*. Wiltshire, United Kingdom, Published by the Royal Society of Chemistry, Redwood Press, pp. 423-428, 1992.
15. Agrawal, D. K., ALI, N., and Numao, T.: PAF receptors and G-proteins in human blood eosinophils and neutrophils. *J. Lipid Mediators* 5(2): 101-104, 1992.
16. ALI, N., Cheung, P. H., and Agrawal, D. K.: Subcellular localization of GTP-binding proteins in rat parotid gland: Distinct G-proteins present in secretory granule membranes. *Mol. Cell. Biochem.* 115(2): 155-162, 1992.17. ALI, N., Craxton, A. and Shears, S. B.: Hepatic Ins(1,3,4,5)P₄ 3-phosphatase is compartmentalized inside endoplasmic reticulum. *J. Biol. Chem.* 268(9): 6161-6167, 1993.
18. ALI, N. and Agrawal, D. K.: Guanine nucleotide binding regulatory proteins: their characteristics and identification (a review article). *J. Pharmacol. Toxicol. Methods* 32: 187-196, 1994.
19. ALI, N., Craxton, A., Sumner, M. and Shears, S. B.: Effects of aluminum on the hepatic inositol polyphosphate phosphatase. *Biochem. J.* 305, 557-561, 1995.
20. Craxton, A., ALI, N. and Shears, S.B.: Comparison of the activities of a multiple inositol polyphosphate phosphatase obtained from several sources: a search for heterogeneity in this enzyme. *Biochem. J.* 305, 491-498, 1995.

21. Ye, W., ALI, N., Bembenek, M. E., Shears, S. B. and Lafer, E. M.: Inhibition of clathrin assembly by high-affinity binding of specific inositol polyphosphates to the synapse-specific clathrin assembly protein AP-3. *J. Biol. Chem.* 270, 1564-1568, 1995.
22. Shears, S.B., ALI, N., Craxton, A. and Bembenek, M.E.: Synthesis and metabolism of bis-diphosphoinositol tetrakisphosphate in vitro and in vivo. *J. Biol. Chem.* 270, 10489-10497, 1995.
23. ALI, N., Duden, R., Bembenek, M.E. and Shears S.B.: The interaction of coatomer with inositol polyphosphates is conserved in *Saccharomyces cerevisiae*. *Biochem. J.*, 310, 279-284, 1995.
24. ALI, N. and Agrawal, D.K.: Enhanced expression of GTP-binding proteins in differentiated of U937 monocytic cells: possible involvement of tyrosine kinase and protein kinase C. *Molec. Cell. Biochem.* 152, 113-120, 1995.25. Abebe, W., ALI, N., and Agrawal, D.K.: Platelet activating factor-induced 1,4,5-trisphosphate generation in undifferentiated and differentiated U937 cells. Role of tyrosine kinase. *International J. Immunopharmacology* 18, 173-181,1996.
26. ALI, N., Macala, L.J. and Hayslett, J.P.: Identification and characterization of MARCKS in *Xenopus laevis*. *Biochem. Biophys. Res. Commun.*, 234, 143-146, 1997.
27. ALI, N., Kantachuvesiri, S., Smallwood, J.S., Macala, L.J., Isabelle, C. and Hayslett, J.P.: Vasopressin induced activation of protein kinase C in renal epithelial cells. *Biochim. Biophys. Acta*, 1402, 188-196, 1998.
28. Ding, K-H., ALI, N. and Abdel-Latif, A.A.: Atrial natriuretic peptide provokes a dramatic increase in cyclic GMP formation and markedly inhibits muscarinic-stimulated Ca²⁺ mobilization in SV-40 transformed cat sphincter smooth muscle (SV-CISM-2) cells. *Cell. Signal.* 11, 87-94, 1999.
29. Yousufzai, S.Y.K., ALI, N. and Abdel-Latif, A.A.: Effects of adrenomedullin on cyclic AMP formation and on relaxation in iris sphincter smooth muscle. *Invest. Ophthalmol. Vis. Sci.* 40, 3245-3253, 1999.
30. ALI, N., Yousufzai, S.Y.K. and Abdel-Latif, A.A.: Activation of particulate guanylate cyclase by adrenomedullin in cultured SV-40 transformed cat iris sphincter smooth muscle (SV-CISM-2) cells. *Cell Signal.* 12, 491-498, 2000.
31. Wyse B. D., ALI, N. and Ellison, D. H.: Interaction with grp58 increases activity of the thiazide sensitive Na-Cl cotransporter. *Am. J. Physiol. Renal Physiol.*, 282, F424-30, 2002.
32. Cornett, L.E., Kirby, J.D., Vizcara, J.A., Ellison, J.F., Thrash, J., Mayeux, P.R., Crew, M.D., Jones, S.M., ALI, N. and Baeyens, D.A.: Molecular cloning and functional characterization of a vasotocin receptor subtype expressed in the pituitary gland of the domestic chicken (*Gallus domesticus*): Avian homolog of the mammalian V1b-vasopressin receptor. *Regul. Pept.* 110, 231-291, 2003.
33. Mazumder, M.M., De, S., Trigwell, S., Ali, N, Mazumder, M.K. and Mehta, J.L. Corrosion resistance of polyurethane-coated Nitinol cardiovascular stents. Corrosion resistance of polyurethane-coated Nitinol cardiovascular stents. *Journal of Biomaterials Science, Polymer Edition*, 14(12), 1351-1362, 2003.

34. Ahangar, R., Ali, N., Iqbal K. and Altmayer, K. Biodynamic Modeling and Simulation of Multistage Cell Mutations. *DNA and Cell Biology*, 23 (10), 625-633, 2004.
35. De, S., Sharma, S., Trigwell, S., Laska, B., Ali, N., Mazumder, M. K. and Mehta, J. L. Endothelial Cell Growth Studies on Plasma-Treated Polyurethane Coatings for a Long Term Biocompatibility. *Journal of Biomaterials Science, Polymer Edition.*, 2004 (in press).

ABSTRACTS

1. ALI, N., and Kidwai, A. M.: Studies on frog skeletal muscle sarcolemma basement membrane. 53rd Annual Meeting of the Society of Biological Chemists, New Delhi, India, 1984.
2. ALI, N., Upreti, R. K., and Kidwai, A. M.: Sarcolemma as a model for testing toxicity of chemicals. International Symposium on "Biochemical Role of Eukaryotic Cell Surface Macromolecules," New Delhi, India, 1986.
3. ALI, N., Milligan, G., and Evans, W. H.: G-protein distribution in rat liver plasma membrane and endosome fractions. International Conference on "Biomembranes in Health and Disease", Lucknow, India, 1988, (oral presentation).
4. Evans, W. H., ALI, N., and Enrich, C.: Biochemistry and cell biology of receptor-mediated endocytosis. 632nd Meeting of the Biochemical Society, Cork, Ireland, 1989, (oral presentation).
5. ALI, N., and Evans, W. H.: Identification of a family of GTP-binding and ras-oncoproteins in rat liver membranes. 633rd Meeting of the Biochemical Society, London, England, 1989.
6. ALI, N., and Agrawal, D. K.: Modulation of G-proteins and platelet activating factor (PAF) receptor during differentiation of U937 cells: Role of protein kinase C and tyrosine kinase. *J. Allergy Clin. Immunol.* 87: 164 (#101), 1991, (oral presentation).
7. Agrawal, D. K., ALI, N., and Numao, T.: GTP-binding proteins (G-proteins) in human blood eosinophils. Platelet activating factor (PAF) couples to a Gi-protein. *J. Allergy Clin. Immunol.* 87: 347 (#830), 1991.
8. Agrawal, D. K., ALI, N., and Numao, T.: Platelet-activating factor and guanine-nucleotide binding proteins in human blood eosinophils. Tokyo PAF Symposium on Allergic, Respiratory and Cardiovascular Diseases, Tokyo, Japan, 1991.
9. ALI, N., Cheung, P., Dowd, F., and Agrawal, D. K.: Identification of G-proteins in rat parotid gland plasma membrane and secretory granules: Distinct components present in granule membranes. *FASEB J.* 5: A1067 (#4043), 1991.
10. Agrawal, D. K., and ALI, N.: Signal transduction phenomenon during differentiation of U937 cells is regulated by tyrosine kinase and protein kinase C. *FASEB J.* 5: A1339 (#5615), 1991.
11. Agrawal, D. K., and ALI, N.: Guanine nucleotide regulatory proteins (G-proteins) in human blood eosinophils and neutrophils. *Am. Rev. Respir. Dis.* 143: A230, 1991.

12. ALI, N., and Agrawal, D. K.: Effect of genistein on the expression of G-proteins and PAF receptors during differentiation in U937 cells. 14th International Congress of Allergy and Clinical Immunology, Kyoto, Japan, 1991.
13. Agrawal, D. K., ALI, N., and Numao, T.: Coupling of PAF receptors to "Gi-like" G-proteins in human blood eosinophils. 14th International Congress of Allergy and Clinical Immunology, Kyoto, Japan, 1991, (oral presentation).
14. ALI, N., Craxton, A. and Shears, S. B.: Compartmentalization and signal transduction II. Hepatic inositol 1,3,4,5-tetrakisphosphate phosphatase is sequestered inside endoplasmic reticulum. *J. Cell. Biochem.* 17C: 33, 1994.
15. ALI, N., Glennon, M. C. and Shears, S. B.: New territory for inositol phosphate biochemistry: Cellular regulation of the rapid turnover of inositol phosphates. DuPont Poster Session on Protein Phosphorylation. Society for Neuroscience Meeting, 1993.
16. ALI, N., Kantachuvesiri, S., Smallwood, J., Macala, L. J., Isales, C. and Hayslett, J. P.: Protein kinase C activation in vasopressin-induced sodium transport. 29th Annual Meeting of the American Society of Nephrology, New Orleans, published in *J. Am. Soc. Nephrol.* 7(9): 1627 (A1889), 1996.
17. Kunchaparty, S., ALI, N., Bernstein, P. L., Desir, G. V. and Ellison, D. H.: Carboxyterminal mutation of mouse thiazide-sensitive Na-Cl cotransporter abolishes function. 29th Annual Meeting of the American Society of Nephrology, New Orleans, published in *J. Am. Soc. Nephrol.* 7(9): 1284 (A0184), 1996, (oral presentation).
18. ALI, N., Wakui, H. and Ellison, D.: The thiazide-sensitive Na-Cl cotransporter (NCC) interacts with a member of the protein disulfide isomerase family in distal nephron. 30th Annual Meeting of the American Society of Nephrology, San Antonio, Published in *J. Am. Soc. Nephrol.* 1997, (oral presentation).
19. Ahangar, R., Ali, N., Iqbal, K., and Altmayer, K.: Biodynamic Modeling and Simulation of Multistage Cell Mutations. First Annual Conference of the MidSouth Computational Biology and Bioinformatics Society, University of Arkansas at Little Rock, November 14-16, 2003.