

CURRICULUM VITAE

Satu M. Somani, Ph.D.

PERSONAL

Date of Birth: March 14, 1937, Naturalized Citizen of U.S.A. 1979.

Deceased: October 29, 2002

EDUCATION

B.Sc., Osmania University, Hyderabad, India, Chemistry and Biology, 1956

B.Sc. (Honors), Poona University, Poona, India, Chemistry, 1958

M. Sc., Poona University, Poona, India, Biochemistry, 1959

M.S., Duquesne University, School of Pharmacy, Pittsburgh, PA., Pharmaceutical Chemistry/Pharmacy, 1964

Ph.D., Liverpool University, Department of Pharmacology and Therapeutics, Liverpool, England, Pharmacology, 1969

PROFESSIONAL EXPERIENCE

1982-2002	Professor of Pharmacology/Toxicology, Southern Illinois University School of Medicine
1974-1982	Associate Professor of Pharmacology/Toxicology, Southern Illinois University School of Medicine
1971-1974	Assistant Professor of Pharmacology, University of Pittsburgh School of Medicine, Member of Graduate Faculty
1970-1971	Instructor, Department of Pharmacology, School of Medicine, University of Pittsburgh
1969-1970	NIH Training Grant Research Fellow in Clinical Pharmacology, Department of Medicine, School of Medicine, University of Pittsburgh
1967-1969	Ellis T. Davies Research Fellow, University of Liverpool, Department of Pharmacology and General Therapeutics, Liverpool, England
1964-1966	Scientist, Biomedical Department, Nuclear Science and Engineering corporation, Pittsburgh, Pennsylvania
1964	Research Assistant, University of Pittsburgh, Graduate School of Public Health, Department of Biochemistry and Nutrition
1962-1964	Graduate Assistant, School of Pharmacy, Duquesne University, Pittsburgh, Pennsylvania
1960-1961	Lecturer, Chemistry Department, Vivek Vardhini College, Hyderabad, India
1959-1960	Research Fellow, Regional Research Laboratory, Hyderabad, A.P., India

TEACHING EXPERIENCE

Teaching Interests and Specialties: Biochemical Pharmacology/Toxicology/Antibiotics/ Anticancer agents

Participation in Graduate Courses at SIU

Pharmacology 550a,b-Principles of Pharmacology: Includes drug absorption, distribution, metabolism, excretion and pharmacokinetics; drug-drug interaction; general toxicology; antibiotics and anticancer agents.

Pharmacology 551 - Methods in Pharmacology

Pharmacology 555 - Cardiovascular Pharmacology (Free Radicals)

Pharmacology 574 – Neuropharmacology (Neurodegenerative diseases; alcohol)

Pharmacology 565 - Principles of Toxicology

Pharmacology 590 - Readings in Current Pharmacological Topics

Pharmacology 500 - Pharmacology Seminar

Development, Delivery and Evaluation of Teaching Material for Medical Students at SIU

Antibiotics, Pharmacokinetics of Antibiotics, Antifungal, Antimalarial, Antiviral, Antibacterial, Antiparasitic Agents

Cancer Chemotherapeutic Agents

Toxicology

Drug-Drug Interactions, Adverse Drug Reactions

Anticoagulants, Antianemics, Radioisotopes as Drugs and Diagnostic Aids

Other Biochemical pharmacology Related Topics

Lectures to Neurology Residents

Drug Disposition and Pharmacokinetics of Anticonvulsants
Drug-Drug Interactions of Anticonvulsants
Pharmacokinetics and Pharmacodynamics of Anticholinesterases
Advanced therapeutic course: lectures on Antibiotics and HIV.

Participation in Continuing Medical Education for Practicing Physicians

Pharmacology of Antibiotics
Basics of Drug-Drug Interactions
Drug Metabolism and Disposition
Use of Drug Serum Levels in Clinical Practice
Pesticides Toxicity

Organized Workshops on PBLC at J. N. Medical College, Aligarh Muslim University, Aligarh, and at All India Institute of Medical Sciences, New-Delhi, India from November 10-18, 1997. Six of our PBLC students and Dean and myself participated in the workshops. This was the first International workshop on PBLC in India and was attended by more than 70 faculty members from many medical colleges. SIU thus introduced PBLC to Indian Medical Curriculum.

Organized Workshop on PBLC at Osmania Medical College, Hyderabad, India from January 21st to January 25th, 1999. Dean Carl Getto, Dr. Earl Loschen, Dr. Patricia Hopkins and Ms. Kristin Herman MS IV year student, Dr. and Dr. (Mrs.) Singhal and myself acted as tutors.

Served on masters and Ph.D. committees and worked as supervisor of doctoral and postdoctoral candidates and visiting faculty.

Graduate Students Supervisor

Angela Tin, M.S.
Ann Boyer, M.S.
Gary Kamermori, Ph.D.
Ron Hetzler, Ph.D.
Radhika Ravi, Ph.D.
Eric Schlorff M.S.
Ramesh Jagannathan, M.S.

Post-doctoral Supervisor

Zuzur Kaka, Ph.D.
Bill Glave, Ph.D.
Latha Unni, Ph.D.
Marta Hallak, Ph.D.
Abdul Khalique, Ph.D.
S. N. Dube, Ph.D.
S. R. Babu, Ph.D.
Abdul Rashid, Ph.D.
S. B. Maggirwar, Ph.D.
Kazim Husain, Ph.D.
Satya Vellu Reddy Ph.D.
Asha Thota, M.D.

UNIVERSITY SERVICE

Departmental Committees

Department of Medical Sciences

- Committee Considering Cross-appointments to Medical sciences (1975)
- Committee on Bio-Hazards, Medical Sciences, School of Medicine (1975-76)
- Member, Scientific Research Committee, SIU School of Medicine (this committee finally became CRC) (1976)

Department of Pharmacology

- Research Committee (1979, 1980, 1982-Chairman)
- Tenure and Promotion Committee (1979-Present)
- Search Committee for Assistant Professor of Pharmacology (1979)
- Medical Education Committee (Co-Coordinator Sequence II, 1981-82 and Coordinator Sequence II, 1982-83)
- Seminar Coordinator (1981-82, 1984-85)
- Graduate Program Committee (Chairman Elect 1989-90, Chairman 1990-91, 1991-92)
- Coordinator: problem based learning curriculum (1992-1995)
- Co-coordinator: Sophomore curriculum (1993-1994)
- Coordinator, Sophomore curriculum (1994-1995)
- Coordinator, Graduate Program (1997-1999, 2001-2002)

School of Medicine Committees

- Acting Radiological Control Officer, SIU School of Medicine, Springfield, Illinois (1975-77)
- Radiological Control Committee, SIU, School of Medicine was established to apply for radioisotope licensure for the Springfield campus. Charter member and Chairman of this committee which prepared the document and administered the program (1977-1983)
- Admissions Committee (1980-84)
- Institutional Review Committee for Accreditation, Dr. Ronald Keeney, Chairman (1976)
- Sequence II Committee (1981-82, 1982-83), coordinator, 1982-83
- Energy Committee
- Member, Review Committee for Department of Obstetrics and Gynecology
- Member, Tenure and Promotion Committee
- Institutional Review Committee for Accreditation: Member, Graduate Education, Medical Education and Continuing Education Committee (1985)
- Director, Graduate Program in Pharmacology (1989-1992)
- Member, Sophomore problem based learning curriculum committee (1992-1994)
- Member, Sophomore curriculum committee (1994-1995)
- Member, International Advisory committee (1995-1999)
- Member, Committee on Clerkships and electives (1995-99)
- Member, Central Research Committee (1993-continue)
- Member, Admissions Committee (1998-continue)
- Member, Research Policy Committee (1998-continue)

University Committee

- Radiological Control Committee, SIU Carbondale (1974-77)
- Member of "1999 Outstanding Scholar Award Selection Committee"
- Member, Honorary Degree and Distinguished Service Award Committee 1999-continue)

Hospital Committees

- Advisor, Poison Control Center, St. John's Hospital, Springfield
- Radiological Drug Control Committee for Human Use at St. John's Hospital
- Member, Institutional Review Committee, St. John's Hospital, Springfield
- Radiation Safety Committee of School of Medicine and Hospitals at Springfield

PROFESSIONAL ASSOCIATIONS

- American Society for Pharmacology and Experimental Therapeutics (1976-Present)

American Society for Clinical Pharmacology and Therapeutics (1975-1990)
 Society of Toxicology (1973-Present)
 Sigma Xi (1972-76) (1979-Present)
 New York Academy of Science (1965-1980)
 American Association for the Advancement of Science (1972-1992)
 American Chemical Society (1964-Present)
 American Mutagen Society (1978)
 Member, Section on Toxicology, International Union of Pharmacology (1978-Present)
 American Society for Testing and Material (1978-79)
 Indian Pharmacological Society (Life Member)
 American College of Toxicology (1978-1979)
 Indian Academy of Neurosciences (Life Member)
 American College of Sports Medicine (1988-1992)
 Oxygen Society (1996-Present)

Offices Held in Professional Associations

Treasurer: (1979), Chairman Elect (1980), Chairman (1981), Decatur-Springfield Section of American Chemical Society
 President: Toastmaster's Club, 1982
 Chairman Elect and Chairman: Association of Scientists of Indian Origin in America, 1986-87, 1987-88

Referee Service to Scholarly Publications

Journal of Pediatrics (Pharmacology Section)	Developmental Pharmacology and Therapeutics
Science	Biopharmaceutics and Drug Disposition
Life Sciences	Fundamental and Applied Toxicology
International Journal of Neurobiology	Drug Development and Research
Toxicology	Pharmacology & Toxicology
Journal of American Medical Association	The International Journal of Biochemistry and Cell Biology
Cancers Letters	Toxicological Sciences
Neurosciences Letters	

HONORS

Ellis T. Davies Fellowship, University of Liverpool (1967-69)
 Chairman of the Session on "Toxicology" at the 7th International Congress of Pharmacology in Paris, France, July 1978
 Appointed Ph.D. Examiner, Marathwada University, Aurangabad, India, Sept., 1979
 Invited to participate in Symposium "Determinants of Drug Metabolism in the Immature Human" in conjunction with the World Conference on Clinical Pharmacology and Therapeutic held in London, August 3-9, 1980
 Invited to participate in the 6th conference on "Myasthenia Gravis" by New York Academy of Sciences, December 1980
 Program Chairman of Symposium on "Environmental Toxicology, Principles and Policies" sponsored by Decatur/Springfield Section of the American Chemical Society on October 31, 1980 at SIU School of Medicine, Springfield
 Listed in the "American Men and Women of Sciences" since 1974, in Who's Who in the Midwest in 1981, and Frontiers in Science and Technology in 1985
 Outstanding Performance Award for the Chairman of a local chapter of the American Chemical Society
 Invited to chair session at the International Brain Research Organization Symposium in Lucknow, India, February 1984
 Appointed Visiting Professor for two years at Sun Yat Sen University of Medical Sciences, Guangzhou, People's Republic of China
 Elected as Chairman, Association of Scientist of Indian Origin in America, 1988
 Invited by the United Nations Development Program to transfer knowledge/know how through expatriate at various National Research Institutes and Universities in India
 Invited to present "Interaction of Exercise, Drugs and Antioxidant System" in the symposium "Oxygen, Antioxidants and Exercise" at International Congress of Physiological Sciences, St. Petersburg, Russia, June 30-July 5, 1997.
 Invited to give a seminar at Russian Academy of Sciences, Moscow, Russia.
 Advisor & Reviewer: Advisor and reviewer of the progress on research at the International Science and Technology Centre, Moscow, Russia; Dr. D. Giebink, Senior Project Manager, ISTC Project #162 "Biomedical and Analytical Aspects of Chemical Safety of Biosphere," and other two projects.
 Invited by U.S.Congress to testify on "Gulf War Syndrome", April 1997.
 Included in Who's Who in the world.
 Invited to participate in a Research Planning Conference on "The health Impact of Chemical Exposures During the Gulf war" at Centers for Disease Control and Prevention, from February 28 to March 2, 1999.

Invited to give seminars at several Universities and research institutions in USA, India, England, Indonesia, Japan during my academic carrier.

RESEARCH

Research Interests and Specialties

Effect of Exercise on Absorption, Distribution, Metabolism, Excretion and Pharmacokinetics drugs in Animal and Man.

Pharmacokinetics and Pharmacodynamics modelling in animal and man.

Toxicology: Environmental Toxicology.

Cisplatin Oto- and Nephrotoxicity Relationship to Antioxidant System.

Age-Related Effect of Exercise on Cardiac Mitochondria and Cytosolic Antioxidant System.

Interaction of exercise, drugs and antioxidant system in tissues.

Sarin and Pyridostigmine Interaction under Physical Stress: Neurotoxic effects in Mice.

Research Grants Received

"Competition of Salicylate and Phenylbutazone, Indomethacin and Cortisol for Binding Sites on Human Serum Albumin." Grant funded by Health Research and Science Foundation, Pittsburgh, PA. Amount \$8,470, 1/71-12/71. Principal Investigator.

"Correlation Studies on Drug Dependence." Funded by NIH, Grant No. MH20121, Amount \$462,604, 9/1/72-2/28/76. Principal Investigator: G. Werner, M.D., Co-investigator: Satu M. Somani, Ph.D. (one of the four).

"Neostigmine Metabolism and Its Relationship to Cholinergic Crises." Funded by Health Research Science Foundation, Pittsburgh, PA. Amount \$13,244 1/73-12/74. Principal Investigator.

"Narcotic Drug Action on Neurobehavioral Correlates." NIH Grant. Funded, Amount \$219,642, 3/1/73-2/28/76. Principle Investigator: G. Werner, M.D., Co-investigator: Satu M. Somani, Ph.D. (one of the four).

"Assessment of Toxic Organic Waste Problems in Illinois". Funded by Amendment No. 2 of Grant No. 100517077 from the U.S. Environmental Protection Agency to the Illinois E.P.A., Contract Received. Amount \$64,000, 11/1/77-9/30/78; \$49,264, 10/1/78-6/30/79; \$23,000, 7/1/79-9/30/79, Principal Investigator.

"Toxicokinetic Studies of 2,4-Dimethylphenol. B. Mutagenicity and Toxicity in the Mixture of Compounds", funded by Central Research Committee, SIU School of Medicine, CRC 17-80-1, 7/1/80-6/30/81, amount \$2,500.

Metabolism of 2,4-Dichlorophenol to Dioxin and Fatty acid Conjugates, funded by Central Research Committee, SIU School of Medicine 7/1/81-6/30/82, amount \$3,600.

U.S. Army; "Mechanism of Action and Pharmacokinetics of Physostigmine in Relation to Acute Intoxication by Organofluorophosphate", Principal Investigator; 30% Effort; \$533,976 (9/1/83-12/31/87).

"Methylxanthine Pharmacokinetics in Relation to Bradycardia and Apnea" (N-12), American Heart Association/Illinois Affiliate; 7/1/82-6/30/84, Principal Investigator, 15% Effort, \$25,000.

"Effect of Furosemide on the Hearing of Newborn Infants", Co-Investigator, The Deafness Research Foundation, New York, NY; 1/184-12/31/84, 1984 DRF Grant, \$10,000, funded.

"Effect of Furosemide and Its Metabolites on the Hearing in Newborn Infants", Co-Investigator, Central Research Committee, SIU-SM; 7/1/83-6/30/84, CRC 14-84, \$4,500.

"Effect of Exercise on Glutathione of Heart Mitochondria", Central Research Committee, SIU-SM; 7/1/91-6/30/92, \$4,500.

"Distribution of Physostigmine in Rat", Principal Investigator, Central Research Committee SIU-SM, 7/1/83-6/30/84, CRC 6-84, \$2,450.

"Effect of Exercise on Propranolol Pharmacokinetics in Humans", American Heart Association/Illinois Affiliate, 7/1/86-6/30/88; Co-Principal Investigator, \$29,981.

"Aging of the Brain and Dementia: Early Detection", National Institute of Aging, 12/1/85-11/30/88, Co-investigator, \$249,399.

"The Effects of Exercise on Pharmacokinetics and Pharmacodynamics of Physostigmine in Rats, U.S. Army, Principal Investigator, 30% effort \$373,630 (Nov. 15, 1987 - June 15, 1990).

"Effect of Exercise on Antioxidant System: American Heart Association, Illinois Affiliate, Principle Investigator, 20% Effort, \$40,000, 7/1/91-6/30/93.

"The Possible Cardioprotective Effects of Captopril Against Ischemic Reperfusion Induced Injury in Acute Myocardial Ischemia," Principal Investigator, SIU-SOM, Student Project, \$4,200, 07/02/92-06/30/93.

"Mechanisms of Chemoprotectants in Cisplatin Nephro- and Ototoxicity," Principal Investigator, CRC SIU-SOM, \$5,000, 07/01/92-06/30/93.

"Role of Antioxidant System in Cisplatin Ototoxicity and Treatment by Chemoprotectants," Deafness Research Foundation, \$15,000, 01/01/94-12/31/94.

Interaction of exercise and alcohol on subcellular rat heart antioxidant enzymes. CRC SIU-SOM - \$6,616, July 1, 1994-June 30, 1996.

Interaction of Exercise and Ethanol on Antioxidant System of Rat Heart, CRC, Principal Investigator, 15%, \$4,000. July 31, 1996-June 30, 1997

NIH: Endogenous modulation of ototoxicity of cisplatin, P.I. Leonard P. Rybak, Co-Investigator - S.M. Somani, \$703,661 direct costs 7/1/94-6/30/98.

"Interaction of Exercise and Ethanol/Nicotine on Myocardial Antioxidant System", American Heart Association-Illinois Affiliate, Principal Investigator, 20%, 07/01/97 - 06/30/99, \$49,990.

"Growth and Development of Mammary and Prostate tumors in vivo by Vitamin E succinate", Excellence in Academic Medicine Award, SIU School of Medicine, Principle Investigator, Dr. Mokenge Malafa; Amount \$71310 from 10/1/97 to 6/30/99, Coinvestigator 5%, (Somani's share \$19,525).

"Sarin and Pyridostigmine Interaction Under Physical Stress: Neurotoxic Effects in mice", United States Army, Principal Investigator, 20%, 10/01/97-08/31/00, \$200,833.

National Organization of Hearing Research Grant: Effect of blood brain barrier disruption on carboplatin-induced hearing loss and protection by lipoic acid. \$10,000, PI Dr. K. Husain.Co-Investigator S. Somani, 1999-00

National Organization of Hearing Research Grant: The effect of D-Methionine on Cochlear Oxidative State with and without Cisplatin Administration. \$10,000, PI: Dr. Kathleen C.M.Campbell., Satu M. Somani Co-Investigator, 1999-00

"Role of Free Radicals in Alteration of Blood-Brain Barrier Permeability Under Physical Stress," SIU-SOM Excellence in Academic Medicine, PI: Satu M. Somani 20% \$44,448 from 10/1/99 to 6/30/01

Pharmacokinetic and Pharmacodynamic Modeling of Pyridostigmine under Physical Stress in Rat and Human. Applying in coordination with USArmy-Medical Research Institute of Chemical Defense, Gulf War Syndrome, \$661,598; PI Satu M. Somani, 20% Effort 10/1/01-9/30/03 (pending).

PUBLICATIONS

Books

Satu M. Somani and Finis L. Cavender, Editors. Environmental Toxicology: Principles and Policies, Charles B. Thomas, Publishers, November, 1981.

Satu M. Somani, Editor. Chemical Warfare Agents, Academic Press, San Diego, CA, 443 pp 15BN:0-12-654620-7 (June 1992).

Satu M. Somani, (Ed.) Pharmacology in Exercise and Sports. CRC Press Inc.: Boca Raton, FL. Pp. 1-359, 1996. ISBN 0-8493-8540-7.

Satu M. Somani and James A. Romani, (Eds) Chemical Warfare agents: Low Level Toxicity Nerve Agents, CRC Press, Inc. Boca Raton, FL. Pp. 1-447, January, 2001.

Publications

Somani, S.M., Synthesis of disulphides of ephedrine and its analogs, M.S. Thesis, Duquesne University, Pittsburgh, PA, 1964.

Somani, S.M., Isolation of metabolites of pyridostigmine and neostigmine, Ph.D. Thesis, University of Liverpool, England, 1969.

Somani, S.M., Calvey, T.N., Wright, A. The excretion of hydroxyphenyltrimethylammonium in bile. *Br. J. Pharmacol.* 37: 528P-529P, 1969.

Somani, S.M., Calvey, T.N., and Wright, A., The biliary excretion of trimethyl-¹⁴C-(3-hydroxyphenyl) ammonium iodide and its metabolic products, *Eur. J. Pharmacol.*, 12:109-113, 1970.

Somani, S.M., Roberts, J.B., Thomas, B.H., and Wilson, A., Isolation and characterization of metabolites of neostigmine from rat urine. *Eur. J. Pharmacol.*, 12:114-119, 1970.

Calvey, T.N., Somani, S.M., and Wright A., Differences between the biliary excretion of trimethyl-¹⁴C-(3-hydroxyphenyl) ammonium iodide in Wistar and Gunn rats, *Biochem. J.*, 119:659-663, 1970.

Sapira, J.D., Somani, S.M., Shapiro, A.P., and Scheib, E.T., Some observations concerning mammalian indoxyl metabolism and its relationship to the formation of indigo pigments, *Metabolism*, 20:474-486, 1971.

Somani, S.M., Roberts, J.B., and Wilson, A., Metabolites of pyridostigmine in man, *Clin. Pharmacol. Therap.*, 13:393-399, 1972.

Moskowitz, B., Somani, S.M., and McDonald, R.H., Jr., Salicylate interaction with ¹⁴C-Penicillin and ¹⁴C-Secobarbital binding sites on human serum albumin, *Clin. Toxicology*, 6:247-256, 1973.

Somani, S.M. and Khurana, R.C., Mechanism of estrogen-imipramine interaction, *J. Amer. Med. Assoc.*, 223:560, 1973.

Somani, S.M., Distribution of neostigmine and its metabolites in rat tissues after acute and chronic administration, *Eur. J. Pharmacol.*, 30:336, 1975.

Somani, S.M., Schumacher, D., and McDonald, R.H., Jr., Pharmacokinetics of secobarbital in rabbit, *Arch. Int. Pharmacodyn.*, 215:301-317, 1975.

Somani, S.M. and Anderson, J.H., Hepatic sequestration of neostigmine and metabolites. *Drug Metabolism and Disposition: The biological fate of chemicals*, 3:275-282, 1975.

Somani, S.M. and Anderson, J.H., *In vitro* glucuronidation of 3-hydroxyphenyltrimethyl ammonium by rat liver microsomes, *Drug Metabolism and Disposition*, 5:15-18, 1977.

Bowser, D.V., Teece, R.G., and Somani, S.M., Identification of amino sugars in bacterial lipopolysaccharides by gas chromatography/electron impact and chemical ionization mass spectrometry. *Biomedical Mass Spectrometry*, 5:627-633, 1978.

Tin, A., Somani, S.M., Bada, H.S., and Khanna, N.N., Caffeine, theophylline and theobromine determinations in serum, saliva and spinal fluid, *Analytical Toxicology*, 3:26-29, 1979.

Bada, H.S., Khanna, N.N., Somani, S.M., and Tin, A.A., Interconversion of theophylline and caffeine in newborn infants, *J. Pediatrics*, 94:993-995, 1979.

Khanna, N.N., Bada, H.S., and Somani, S.M., Use of salivary concentrations in the prediction of serum, caffeine and theophylline concentrations in premature infants, *J. Pediatrics*, 96:494-499, 1980.

Somani, S.M., Teece, R.G., and Schaeffer, D.J., Identification of co-carcinogens and promoters from the environment: Industrial effluents and surface waters, *J. Toxicology and Environmental Health*, 6:317-333, 1980.

- Janardan, K.G., Schaeffer, D.J., and Somani, S.M., Efficiencies of liquid-liquid extraction, carbon and XAD-2 absorption in isolating organic compounds from environmental sources, *Bulletin Environmental Contamination and Toxicology*, 24:145-151, 1980.
- Somani, S.M., Khanna, N.N., and Bada, H.S., Caffeine and theophylline: Serum/CSF correlation in premature infants, *J. Pediatrics* 96, 1091-1093, 1980.
- Somani, S.M., Chan, K., Dehghan, A., Calvey, T.N. Kinetics and metabolism of intramuscular neostigmine in myasthenia gravis. *Clin. Pharmacol. Ther.* 28: 64-68, 1980..
- Schaeffer, D.J., Janardan, K.G., Somani, S.M., Easton, D., and Sherman, D., Multivariate statistical methods in toxicology: application to the analysis of outpatient clinical data of diphenylhydantoin and phenobarbital in the treatment of epilepsy, *Toxicol. and Appl. Pharmacol.*, 53:354-364, 1980.
- Somani, S.M., Bajaj, R.A., and Calvey, T.N., Effect of phenobarbitone on the elimination of neostigmine and its metabolites in bile, *Biochem. Pharmac.*, 29:2256-2257, 1980.
- Somani, S.M., Calvey, T.N., Chan, K., and Dehghan, A., Kinetics and metabolism of intramuscular neostigmine in Myasthenia Gravis, *Clin. Pharmac. Thera.*, 28:64-68, 1980.
- Schaeffer, D.J., Tigwell, D.C., Somani, S.M., Glave, W. B., and Janardan, K.G., Efficiencies of liquid-liquid extraction and XAD-4 and XAD-7 resins in collecting organic compounds from a coke plant effluent, *Bulletin Environmental Contamination and Toxicology*, 25:569-573, 1980.
- Somani, S.M., Schaeffer, D.J., and Mack, J.O., Quantifying the toxic and mutagenic activity of complex mixtures using *S. typhimurium*, *J. Toxicol. Environment. Hlth.*, 7:643-653, 1981.
- Somani, S.M. and Khanna, N.N., Methylxanthines in serum, saliva and spinal fluid of premature infants, *Seminars in Perinatology*, 5:346-350, 1981.
- Calvey, T.N., Chan, K., Dehghan, A., Somani, S.M., and Williams, N.E., Plasma concentration and urinary elimination of neostigmine after intramuscular administration to myasthenic patients, 6th Conf. on Myasthenia Gravis, *Annals of New York Acad. of Sci.*, 377:816-817, 1981.
- Khanna, N.N., Somani, S.M., Boyer, A., Miller, J., Chua, C., and Menke, J.A., Cross-validation of serum to saliva relationships of caffeine, theophylline and total methylxanthines in neonates, *Developmental Pharmacology and Therapeutics*, 4:18-27, 1982.
- Kaka, J.S., Somani, S.M., and Schaeffer, D.J., Metabolism and distribution of 2,4-Dimethylpneonal in rat, *Ecotoxicology and Environmental Safety*, 6:35-40, 1982.
- Somani, S.M. and Khalique, A., Distribution and Metabolism of 2,4-Dichlorophenol in Rat, *J. Toxicol. Environment. Hlth.*, 9:889-897, 1982.
- Somani, S.M., Smart, T., and Khalique, A., Metabolism of 2,4-Dichlorophenol by isolated perfused rat liver, *J. Toxicol. Environm. Hlth.*, 13:787-798, 1984.
- Khanna, N.N. and Somani, S.M., Maternal coffee drinking and unusually high concentrations of caffeine in the newborn, *J. Toxicol. Clin. Toxicol.*, 22:473-483, 1985.
- Somani, S.M. and Khalique, A., Physostigmine determination in plasma and brain by HPLC, *J. Analyt. Toxicol.*, 9(2):71-75, 1985.
- Unni, L. and Somani, S.M., Binding of physostigmine to rat and human plasma and crystalline human serum albumin, *Life Sci.*, 37:1389-1396, 1985.
- Boyer, A.W. and Somani, S.M., Pharmacokinetics of biliary excretion of ^3H -physostigmine in rat, *Inter. de Pharm. de Therapie*, 278:180-192, 1985.

- Somani, S.M. and Boyer, A., Urinary pharmacokinetics of physostigmine in rat, *Eur. J. Drug Metabol. Pharmacokinet.*, 10(4):343-394, 1985.
- Somani, S.M. and Khalique, A., Distribution and pharmacokinetics of physostigmine in rat after i.m. administration, *Fundamental and Appl. Toxicol.*, 6:327-334, 1986.
- Kamimori, G.H., Somani, S.M., Knowlton, R.G., and Perkins, R.M., Effects of obesity and exercise on the pharmacokinetics of caffeine in lean and obese volunteers, *Eur. J. Clin. Pharmacol.*, 31:595-600, 1987.
- Unni, L. and Somani, S.M., Hepatic and muscle clearance of physostigmine in the rat, *Drug Metabolism and Disposition: The Biological Fate of Chemicals*, 14(2):183-189, 1986.
- Somani, S.M., Unni, L.K., and McFadden, D.L., Drug Interaction for plasma protein binding: Physostigmine and other drugs, *Int. J. Clin. Pharmacol. Therap. Toxicol.*, 25:412-416, 1987.
- Giacobini E., Somani, S., McIlhany, M., Downen, M., and Hallak, M., Pharmacokinetics and pharmacodynamics of physostigmine after i.v. administration in beagle dogs, *Neuropharmacology*, 26:831-836, 1987.
- Somani, S.M. and Khalique, A., Pharmacokinetics and pharmacodynamics of physostigmine in rat after i.v. administration, *Drug Metabolism and Disposition: The Biological Fate of Chemicals*, 15:627-633, 1987.
- Somani, S.M., Effect of routes of administration on pharmacokinetics and pharmacodynamics of physostigmine in rat, *Proc. of the Sixth Medical Chemical Defense Bioscience Review*, pp. 715-718, 1987.
- King, B.F. and Somani, S.M., Distribution of physostigmine and metabolites in brain subcellular fractions of the rat, *Life Sci.*, 41:2007-2015, 1987.
- Somani, S.M., Pharmacokinetics and pharmacodynamics of physostigmine in the rat after oral administration, *Biopharmaceutics and Drug Disposition*, 10(2):187-203, 1989.
- Somani, S.M. and Dube, S., *In Vivo* dose and concentration response relationship between physostigmine and cholinesterase activity in RBC and tissues of rat, *Life Sci.*, 44:1907-1915, 1989.
- Scremin, O.U., Scremin, A.M.E., Somani, S.M., and Giacobini, E., Brain regional distribution of physostigmine and its relation to cerebral blood flow following intravenous administration in rats, *J. Neuroscience Research*, 26:188-195, 1990.
- Frank, S., Somani, S.M., and Kohnle, M., Effect of exercise on pharmacokinetics of propranolol in man, *Eur. J. Clin. Pharmacol.*, 39: 391-394, 1990.
- Hetzler, R.K., Knowlton, R.G., Somani, S.M., Brown, D.D., and Perkins, R.M., Effects of paraxanthine on free fatty acid mobilization after intravenous caffeine administration in humans, *J. Applied Physiol.*, 68(1):44-47, 1990.
- Somani, S.M. and Dube, S.M., Interaction of exercise and physostigmine on ChE activity in RBC and tissues of rat, *Proceedings of the Seventh Medical Chemical Defense Bioscience Review*, 537-544, August, 1989.
- Babu, S.R., Garcia, V., Dube, S.N., and Somani, S.M., Interaction of exercise and physostigmine on lactate, pyruvate and hemoglobin of rat, *Proceedings of the Seventh Medical Chemical Defense Bioscience Review*, 531-536, August, 1989.
- Dube, S.N., Colliver, J.A., and Somani, S.M., Interactive effects of physostigmine and exercise on cholinesterase activity in RBC and tissues of rat, *Archives Int. Pharmacology* 307:71-82, 1990.
- Somani, S.M., Kutty, K.R., and Krishna, G., Eseroline, a metabolite of physostigmine, induces neuronal cell death, *Toxicol. and Appl. Pharmacol.*, 106:28-37, 1990.
- Somani, S.M. and Dube, S.N., Effect of acute and trained exercise on the rate of decarbamylation of ChE in RBC and tissues of rat after physostigmine administration, *proceedings of Third International Meeting on Cholinesterases*, American Chemical Society (1991).
- Somani, S.M., Babu, S.R., Arneric, S.P., and Dube, S.N., Effect of cholinesterase inhibitor and exercise on cholineacetyltransferase and acetylcholinesterase activities in rat brain regions, *Pharmacol. Biochem. Behavior*, 39:337-343, 1991.

- Somani, S.M., Gupta, S.R., Khalique, A., and Unni, L.K., Physiological pharmacodynamic model of physostigmine in the rat, *Drug Metabolism and Disposition*, 19:655-660, 1991.
- Somani, S.M. and Dube, S.N., Endurance training changes central and peripheral responses to physostigmine, *Pharmacol. Biochem. Behavior*, 41:773-781 (1992).
- Somani, S.N., Dube, S.N., Garcia, V., Buckenmeyer, P., Mandalaywala, R.H., Verhulst, S.J., and Knowlton, R.G., Influence of age on caloric expenditure during exercise, *Int. J. Clin. Pharmacol. Ther. Toxicol.*, 30:1-6, 1992.
- Babu, S.R., Buckenmeyer, P., Knowlton, R.G., and Somani, S.M., Effect of physostigmine on plasma lactate and pyruvate in untrained/trained rats, *Pharmacol. Biochem. Behavior*, 41:67-73, 1992.
- Dube, S.N., Somani, S.M., and Babu, S.R., Concurrent acute exercise alters central and peripheral responses to physostigmine, *Pharmacol. Biochem. and Behavior*, 46, 1993.
- Babu, S.R., Somani, S.M., and Dube, S.M., Effect of physostigmine and exercise on choline acetyltransferase and acetylcholinesterase activities in fast and slow muscles of rat, *Pharmacol. Biochem. Behavior*, 45:713-717, 1993.
- Buckenmeyer, P., Babu, S.R., Knowlton, R., and Somani, S.M., Effect of concurrent exercise and physostigmine on lactate and pyruvate in plasma, muscle and brain tissue of rats, *Pharmacol. Biochem. Behavior*, 47:779-788, 1994.
- Maggirwar, S.B., Dhanraj, D.N., Somani, S.M., and Ramkumar, V., Adenosine acts as an endogenous activator of the cellular antioxidant defense system. *Biochem. Biophys. Res. Comm.* 201:508-515, 1994.
- Somani S.M., Rybak L.P., and Ravi R.P., Effect of exercise training on antioxidant system in brain regions of rat. *Pharmacol. Biochem. Behav.* 50:635-639, 1995.
- Somani S.M., Rybak L. P., and Frank S., Effect of acute and trained exercise on antioxidant system in rat heart subcellular fraction. *Pharmacol., Biochem., Behavior* 51:627-634, 1995.
- Somani S.M. and Arroyo C.M., Endurance training generates ascorbate free radicals in rat heart. *Ind. J. Physiol. Pharmacol.* 39:323-329, 1995.
- Rybak, L.P., Ravi R., and Somani S.M., Mechanism of protection by diethylthiocarbamate against cis-platin ototoxicity: Antioxidant system. *Fund. Appl. Toxicol.* 26:293-300, 1995.
- Ravi R., Somani S.M., and Rybak L.P., Mechanism of cisplatin ototoxicity: Antioxidant System. *Pharmacol. & Toxicol.* 76, 386-394, 1995.
- Somani S.M., Ravi R., and Rybak L.P., Role of antioxidant enzymes in cisplatin nephrotoxicity and DDTC protection. *Drug and Chemical Toxicity.* 18:151-170, 1995.
- Somani, S.M. and Husain, K., Exercise training alters kinetics of antioxidant enzymes in rat tissues. *Biochem. and Molecular Biol. International* 38:587-595, 1996.
- Husain, K., Morris, C., Whitworth, C., Trammell, G.L., Rybak, L.P., and Somani, S.M., 4-methyl-thiobenzoic acid protection against cisplatin nephrotoxicity: Antioxidant system. *Fund. Appl. Toxicol.* 32:278-248, 1996.
- Husain, K., Dube, S.N., Sugerdran, K., Singh, R., DasGupta, S., and Somani, S.M., Effect of topically applied sulfur mustard on antioxidant enzymes in blood cells and body tissues of rats. *J. Appl. Toxicol.* 16:245-284, 1996.
- Somani, S.M., Husain, K., Diaz-Phillips, L., Lanzotti, D.J., Kareti, K.R., and Trammell, G.L., Interaction of exercise and ethanol on antioxidant enzymes in brain regions of rat. *Alcohol.* 13: 603-610, 1996.
- Somani, S.M. and Rybak L.P., Comparative effects of exercise training on transcription of antioxidant enzyme and the activity in old rat heart. *Indian J Physiol Pharmacol.* 40:205-212, 1996.
- Husain, K. and Somani, S.M., Response of cardiac antioxidant system to chronic alcohol and exercise training in rat. *Alcohol* 14: 301-307, 1997.

- Husain, K. and Somani, S.M., Interaction of exercise and ethanol on hepatic and plasma antioxidant system in rat. *Pathophysiology*. 4: 69-74, 1997.
- Husain, K. and Somani, S.M., Interaction of exercise training and chronic ethanol ingestion on hepatic and plasma antioxidant system in rat. *J. Appl. Toxicol.* 17: 189-194, 1997.
- Rybak, L.P., Husain, K., Evenson, L., Morris, C., Whitworth, C., and Somani, S.M., Protection by 4-methylthiobenzoic acid against cisplatin induced ototoxicity: Antioxidant system. *Antioxidant system. Pharmacology & Toxicology*, 81, 173-179, 1997.
- Somani, S.M. and Husain, K., Interaction of exercise training and chronic ethanol ingestion on antioxidant system of rat brain region. *J. Applied Toxicology* 17: 329-336 1997.
- Husain, K. and Somani, S.M., Influence of exercise and ethanol on cholinesterase activity and lipid peroxidation in blood and brain region of rat. *Prog. Neuro-Psychopharmacol. Biol. Psychiat.* 21: 659-670, 1997.
- Husain, K. and Somani, S.M., Effect of exercise training and chronic ethanol ingestion on cholinesterase activity and lipid peroxidation in blood and brain regions of rat. *Prog Neuro- Psychopharmacol Biol Psychiat*, 22: 411-423,1998.
- Dube, S.N., Husain, K., Sugendran, K. Vijayaraghavan,R. And Somani, S.M. Dose response of sulphur mustard : Behavioral and toxic signs in rats. *Ind. J. Physiol.Pharmacol.* 42: 389-394, 1998.
- Husain, K and Somani, S.M. Interaction of exercise training and chronic ethanol ingestion on testicular antioxidant system in rat. *J. Appl. Toxicol.* 18: 421-429,1998.
- Husain, K., Morris, C, Whitworth, C., Trammel, G.L., Rybak, L.P., and Somani, S.M., Protection by ebselen against cisplatin induced nephrotoxicity: Antioxidant system. *Molecular and Cell Biochemistry*, 178,127-133, 1998.
- Somani, S.M., Husain, K., and Schlorff, E.C. Interaction of ethanol and nicotine on antioxidant enzymes and lipid peroxidation in subregions of rat brain. *Res. Commun. Alcohol & Subs. Abuse.* 19: 75-90, 1998.
- Schlorff, E.C., Husain, K. And Somani, S.M. Dose and time dependent effects of ethanol on plasma antioxidant system in rat. *Alcohol*, 17: 97-105, 1999.
- Rybak, L.P., Husain, K., Whitworth, C., and Somani, S.M. Dose dependent protection by lipoic acid against cisplatin-induced ototoxicity in rats: Antioxidant defense system. *Toxicol. Sci.* 47: 195-202, 1999.
- Struble, R.S., Husain, K., and Somani, S.M. Response of the olfactory bulb antioxidant system following diethylkthiocarbamate (DDTC) administration in rat. *J. Appl. Toxicol.* 19: 221-228, 1999.
- Schlorff, E.C., Husain, K. and Somani, S.M. Dose and time dependent effects of ethanol on antioxidant system in rat testes. *Alcohol*, 18: 203-214, 1999
- Reddy, K.S., Husain, K., Schlorff, E.C., Scott B. and Somani, S.M. Dose Response of Ethanol Ingestion on Antioxidant Enzyme System in Rat Brain Subcellular Fraction, *Neurotoxicology* 20: 977-987, 1999.
- Scott, R.B. Reddy, K.S., Husain, K. and Somani, S.M. Time Course Response of Ethanol on Hepatic Antioxidant system and Cytochrome P-450II E1 in Rat. *Environ. Nutr. Int.* 3: 217-231, 1999.
- Rybak, L.P., Somani, S. Ototoxicity. Amelioration by protective agents. *Ann. NY Acad .Sci* 884: 143-151, 1999.
- Rybak, L.P., Whitworth, C., Somani, S. Application of antioxidants and other agents to prevent cisplatin ototoxicity. *Laryngoscope* 109: 1740-1744, 1999.
- Somani, S.M., Husain, K, Whitworth, C., Trammell, F.L., Malafa, M. and Rybak, L.P. Dose Dependent Protection by Lipoic Acid Against Cisplatin-induced Nephrotoxicity in Rats: Antioxidant Defense System. *Pharmacol. & Toxicol.* 86: 234-241, 2000.
- Rybak, L.P., Husain, K., Morris, C., Whitworth, C., Somani, S. Effect of protective agents against cisplatin ototoxicity. *Am. J. Otol.* 21: 513-520, 2000.

Somani, S.M., Husain, K., Asha, T., Helfert, R. Interactive and delayed effects of pyridostigmine and physical stress on biochemical and histological changes in peripheral tissues of mice. *J. Appl. Toxicol.* 20: 327-334, 2000.

Scott, R.B., Reddy, K.S., Husain, K., Schlorff, E.C., Rybak, L.P. and somani, S.M. Dose response of ethanol on antioxidant defense system of liver, lung and kidney in rat. *Pathophysiology*, 7: 25-32, 2000.

Ahuja-Verma, S., Husain, K. Verhulst, S., Espinosa, J.A. and Somani, S.M. Delayed effects of pyridostigmine and exercise training on acetylcholinesterase and muscle tension in mouse lower extremity. *Arch.Toxicol.* 74; 539-546, 2000.

Husain, K., Scott, R.B., Whitworth, C., Rybak, L.P. and Somani, S.M. Dose response of carboplatin-induced hearing loss in rats: Antioxidant defense system. *Hear. Res.* 151: 71-78, 2001.

Jagannathan, R., Husain, K. and Somani, S.M. Interaction of pyridostigmine and physical stress on antioxidant defense system in skeletal muscle of mice. *J. Appl. Toxicol.* 21, 341-348, 2001.

Husain, K., Scott, R.B., Reddy, K.S. Somani, S.M., Chronic ethanol and nicotine interaction on rat tissue antioxidant defense system. *Alcohol*, 25: 89-97, 2001.

Husain, K and Somani, S. M.. Delayed/persistent effect of low dose sarin, pyridostigmine and physical stress in mice, *Indian J. Pharmacology and Physiology*, Submitted 2002

Husain, K., Whitworth, C., Somani, S.M., and Rybak, L.P. Carboplatin-induced oxidative stress in rat cochlea. *Hear. Res.* 158: 14-22, 2001.

Klemens, J.J., Campbell, K.C.M., Meech, R.P., Hughes, L.F., and Somani, S.M. Changes in cochlear anti-oxidant status correlate with amikacin-induced ototoxicity, *Hearing Reserach*, (In Press) 2002.

Jagannathan, R. Husain, K., Reddy, K.S. and Somani, S.M. Pyridostigmine and exercise interaction on cardiac antioxidant defense system in mice. *Environmental and Nutritional Interaction*, (submitted) 2000.

Abstracts and Presentations

Somani, S.M., Roberts, J.B., and Wilson, A., Isolation and characterization of pyridostigmine and its metabolite from urine of myasthenia gravis patients, *Fed. Proc.*, 29:2435, 1970.

Somani, S.M. and McDonald, Jr., R.H., Cross competition for protein binding sites by warfarin and salicylates, *Pharmacologist*, 12:244, 1970.

Somani, S.M., Schumacher, D.P., Thompson, R., and McDonald, Jr., R.H., Characterization of the distribution of secobarbital and compartmental stimulation, *Fed. Proc.*, 30:798, 1971.

Somani, S.M. and Anderson, J.H., Neostigmine metabolism in the perfused rat liver, *Fed. Proc.*, 32:2998, 1973.

Somani, S.M., Effect of acute and chronic administration of neostigmine on its metabolism, *Pharmacologist*, 15:415, 1973.

Somani, S.M., Binding of ¹⁴C-neostigmine and ¹⁴C-3-hydroxy-phenyl-trimethyl ammonium to chondroitin sulfate, human serum albumin and liver subcellular fractions, *Fed. Proc.*, 33:1708, 1974.

Somani, S.M., Woodford, B., and Moore, R., Effect of chronic administration of pyridostigmine on its disposition in rat, *Soc. of Toxicology, Fifteenth Annual Meeting*, 54, 1976.

Somani, S.M. and Teece, R., Mass spectrum assays of neostigmine, pyridostigmine, and their metabolites, *Fed. Proc.*, 36:3648, 1977.

Smith, K.P. and Somani, S.M., Uptake of neostigmine in rat liver slices, *Pharmacologist*, 19:206, 1977.

Somani, S.M., Binding of quaternary amines to cellular constituents, *Indian J. of Pharmacology*, 10:55, 1978.

Bowser, D.V., Teece, R.G. and Somani, S.M., Aminosugars detected in microbial polysaccharides by gas chromatography/mass spectrometry (EI/CI), *Illinois Society for Microbiology, Chicago, October, 1977.*

Teece, R.G., Bowser, D.V., and Somani, S.M., Identification of aminosugars in bacterial lipopolysaccharides (LPS) by gas chromatography/E.I. and C.I. mass spectrometry, 26th Annual Conference on Mass Spectrometry and Allied Topics, RP 37, May, 1978.

Somani, S.M., Johnston, J., and Schaeffer, D.J., A model program for assessing the toxicity of trace organics in water, 7th International Congress of Pharmacology, IUPHAR< Abstract No. 648, Paris, France, July, 1978.

Somani, S.M., Tin, A., Bada, H., and Khanna, N., Correlation of plasma, saliva and spinal fluid levels of caffeine and theophylline in premature infants, *Pharmacologist*, 20:256, 1978.

Khanna, N., Bada, H., Somani, S., and Tin, A., Caffeine and theophylline: serum and salivary levels in premature infants, Symposia presented in Chicago on Developmental Pharmacology Organized by University of Illinois, Abraham Lincoln School of Medicine, Chicago, September 29, 1978.

Somani, S.M., Teece, R.G., and Schaeffer, D., Some non-priority pollutants commonly found in industrial effluents, *Toxicology and Applied Pharmacology*, 48:A24, 1979.

Somani, S.M., Mack, G.O., and Schaeffer, D., Mutagenicity testing of industrial waste water effluents by Ames' S. typhimurium method, *Toxicology and Applied Pharmacology*, 48:A132, 1979.

Somani, S.M., Khanna, N., and Bada, H., Salivary and spinal fluid methylxanthine concentrations and their relationship to serum levels in neonates, *Fed. Proc.*, 38:265, 1979.

Khanna, N.N., Bada, H.S., and Somani, S.M., Use of salivary levels in the prediction of serum caffeine (C) and theophylline (T) concentrations in premature infants, American Pediatric Society, Atlanta, Georgia, May, 1979.

Teece, R.G., Somani, S.M., and Schaeffer, D.J., Ubiquitousness of long chain hydrocarbons in derivatives in industrial waste waters by G.C.M.S., American Society for Mass Spectrometry, 27th Annual Conference on Mass Spectrometry and Allied Topics, Seattle, Washington, June, 1979.

Somani, S.M., Khanna, N.N., and Bada, H.S., Theophylline and caffeine studies on neonates, Presented to Down-State Illinois Pediatric Society Scientific Meeting, Springfield, IL, March 29-30, 1980.

Somani, S.M., Calvey, T.N., Chan, K., and Dehaghan, A., Pharmacokinetics by intramuscular neostigmine in Myasthenia Gravis, *Federation Proceedings*, 39:850, 1980.

Somani, S.M., Glave, W.B., and Schaeffer, D.J., Mutagenicity in waste water discharges of a coking plant, *Toxicology Letters*, Abstract 242, July, 1980.

Schaeffer, D.J., Janardan, K.G., and Somani, S.M., Use of multivariate regression analysis in prediction of dilantin and phenobarbital plasma concentration in epileptic patients, *Federation Proceedings*, 39:1100, 1980.

Tigwell, D.C., Schaeffer, D.J., and Somani, S.M., Trace organic residues: composite sampling and analysis of coke plant effluent, Abstracts of 14th Great Lake Regional Meeting of American Chemical Society, Macomb, Illinois, June 4-6, 1980.

Somani, S.M. and Schaeffer, D.J., Estimates of mutagenicity and toxicity in the mixture of compounds, *Pharmacologist*, 22:283A, 1980.

Tin, A., Somani, S.M., and Schaeffer, D.J., Estimation of organic pollutants in industrial waste water by M.S. using external standardization, *Pharmacologist*, 22:279A, 1980.

Glave, W.B., Somani, S.M., and Schaeffer, D.J., Compound identification and mutagenicity of a fractionated coking plant effluent, *Pharmacologist*, 22, 214A, 1980.

Somani, S.M., Kaka, J.S., and Smart, T.A., Disposition of 2,4-dimethylphenol and 2,4-dichlorophenol in rat, *Fed. Proc.*, 40:2676A, 1981.

Boyer, A.W., Somani, S.M., Khanna, N.N., Tin, A., and Miller, J.E., Cross-validation of relationships between serum and saliva methylxanthines levels in neonates, *Fed. Proc.*, 40:23707A, 1981.

- Khanna, N.N., Somani, S.M., and Boyer, A., Cross-validation of serum to saliva relationships of theophylline and total methylxanthines in neonates, American Pediatric Soc., May, 1981.
- Somani, S.M., Boyer, A., Smart, T., and Khanna, N.N., Uptake of caffeine by the isolated perfused rat liver, 8th Int. Congr. of Pharmacol., Tokyo, Japan, Abst. 1101, July 19-24, 1981.
- Somani, S.M., Smart, T., and Kaka, J., Metabolism and tissue distribution of 2,4-Dichlorophenol and 2,4-Dimethylphenol in rat, 8th Int. Congr. of Pharmacol., Tokyo, Japan, Abst. 490, July 19-24, 1981.
- Somani, S.M., Effect of dose of caffeine metabolism by the isolated perfused rat liver, Toxicologist, 2:438, 1982.
- Somani, S.M. and Khanna, N.N., Relationship of salivary caffeine and theophylline concentrations to the control of apnea of prematurity, FASEB, 41:4602, 1982.
- Khalique, A., Smart, T., and Somani, S., Uptake and subcellular distribution of 2,4-dichlorophenol in isolated perfused rat liver, Pharmacologist, 24:433, 1982.
- Somani, S.M., Smart, T., and Khalique, A., Characterization of metabolites of 2,4-dichlorophenol from isolated perfused rat liver, Fed. Proc., 42:369, 1983.
- Somani, S.M., Metabolism and pharmacokinetics of pyridostigmine in rat after multiple dosing, Pharmacologist, 25:97, 1983.
- Somani, S.M., Khalique, A., and Smart, T., Isolation and characterization of unusual metabolites of 2,4-dichlorophenol from isolated perfused rat liver, Toxicology Letters, 18(1):9, 1983.
- Somani, S.M., Disposition of neostigmine and pyridostigmine and their binding to intracellular constituents, ITRC-IBRO Symposium on Neurotoxic Substances and their Impact on Human Health, February 4-6, 1984, Lucknow, India.
- Somani, S.M., Khalique, A., and Giacobini, E. Comparison of UV and electrochemical detectors in determination of physostigmine by HPLC, Fed. Proc., 43(3):1610, 1984.
- Boyer, A. and Somani, S.M., Biliary excretion of physostigmine in rat, Fed. Proc., 43(3):353, 1984.
- Unni, L., Somani, S., and Giacobini, E., *In vitro* binding of physostigmine to human and rat plasma proteins, Pharmacologist, 26:248, 1984.
- Hallak, M., Giacobini, E., and Somani, S.M., Dose-dependent effect of physostigmine on cholinesterase activity of different regions, Pharmacologist 26:507A, 1984.
- Somani, S.M., Boyer, A., and Giacobini, E., Pharmacokinetics of biliary excretion of physostigmine in the rat, International Congress of Pharmacology, London, July 29-August 4, 1984.
- Somani, S.M. and Unni, L., Importance of plasma protein binding studies in therapeutics, International Symposium on Impact of Clinical Pharmacology in Developing Countries at Topiwala National Medical College, Bombay, India, December 12, 1984.
- Somani, S.M., Khalique, A., and Giacobini, E., Distribution and metabolism of physostigmine in rat after i.m. administration, Asian Congress of Pharmacology, Abstract 058, New Delhi, India, January 16, 1985.
- Somani, S.M., Identification of toxic compounds from industrial waste water, Symposium on Problems of Environmental Toxicology in Developing Countries at the Asian Congress of Pharmacology, Abstract S-045, New Delhi, India, January 17, 1985.
- Somani, S.M. and Unni, L.K., Time course of physostigmine metabolism in rat liver, Asian Congress of Pharmacology, Abstract P-174, New Delhi, India, January 18, 1985.
- Somani, S.M., Hallak, M., and Giacobini, E., Time course of physostigmine and cholinesterase inhibition in plasma and brain of the rat, Fed. Proc., 44:4183, 1985.
- Kamimori, G., Somani, S., Knowlton, R., and Perkins, R., Effect of exercise on serum time course of caffeine and free fatty acid concentration in obese and lean volunteers, Fed. Proc., 44:3528, 1985.

Khalique, A., Somani, S., and Unni, L., Distribution of physostigmine and metabolites in rat tissues after i.m. administration, *Fed. Proc.*, 44:583, 1985.

Unni, L. and Somani, S.M., Physiological pharmacokinetic model for physostigmine distribution in rat, *Fed. Proc.*, 44:4155, 1985.

Somani, S.M., Giacobini, E., Hallak, M., Unni, L., and Khalique, A., Time course of physostigmine distribution, metabolism and ChE inhibition in rat after i.m. administration, U.S. Army Bioscience Review Conference, May-June, 1985.

Kamimori, G.H., Knowlton, R.G., Brown, D., Perkins, R., and Somani, S.M., Effect of caffeine ingestion on metabolism and free fatty acid mobilization at rest and in recovery from exercise in lean and obese volunteers, *Midwest Student Medical Research Forum XVI*, Columbus, Ohio, April 2-4, 1985.

Hallak, M., Unni, L., Boyer, A., Khalique, A., Giacobini, E., and Somani, S.M., Correlation of physostigmine concentration with cholinesterase inhibition in plasma, brain and muscle after i.v. administration, *Pharmacologist* 27:525, 1985.

Unni, L. and Somani, S.M., Metabolism and distribution of physostigmine after i.v. infusion in rat, *Pharmacologist* 27:395, 1985.

Somani, S.M., Unni, L., and Khalique, A., Time course of physostigmine metabolism in plasma and tissues after i.v. administration, *Pharmacologist*, 27:396, 1985.

Khalique, A. and Somani, S.M., Pharmacokinetics and tissue distribution of physostigmine in rat after i.v. administration, *Pharmacologist*, 27:841, 1985.

Boyer, A. and Somani, S.M., Urinary pharmacokinetics of physostigmine in rat after i.v. administration, *Pharmacologist*, 27:840, 1985.

Kamimori, G.H., Somani, S.M., Knowlton, R., and Perkins, R., Pharmacokinetics of caffeine in lean and obese volunteers at rest and in exercise, *Pharmacologist*, 27:839, 1985.

Khalique, A. and Somani, S.M., Kinetics and metabolism of physostigmine in rat in the presence of soman, *Fed. Proc.*, 45:291, 1986.

McFadden, D.L., Unni, L.K., and Somani, S.M., Effect of some drugs on the plasma protein binding of physostigmine, *Fed. Proc.*, 45:275, 1986.

Unni, L.K. and Somani, S.M., Simultaneous pharmacokinetic and pharmacodynamic modelling of physostigmine, *Fed. Proc.*, 45:290, 1986.

Somani, S.M. and Unni, L.K., Hepatic and muscle clearance of physostigmine in the rat after i.v. administration, *Fed. Proc.*, 45:300, 1986.

Giacobini, E., Boyer, A., and Somani, S.M., Time course of cholinesterase activity in plasma, brain and muscle of rat pretreated with physostigmine, and then soman, *Fed. Proc.*, 45:5245, 1986.

Kamimori, G., Hetzler, R., Knowlton, R., Somani, S., and Perkins, R., Effect of pre-exercise caffeine ingestion of FFA mobilization and metabolism in obese males during prolonged treadmill walking, *Fed. Proc.*, 45:4755, 1986.

McFadden, D.L., Unni, L.K., and Somani, S.M., Drug-drug interaction for plasma protein binding: Physostigmine and other drugs, *Midwest Student Medical Research Forum XVII: Clinical Research*.

Kamimori, G.H., Hetzler, R.K., Knowlton, R.G., Somani, S.M., and Perkins, R.M., The relationship between prolonged submaximal exercise, caffeine kinetics, and FFA metabolism in obese volunteers, *American College of Sports Medicine Annual Meeting*, 1986.

Somani, S.M., Khalique, A., Boyer, A., and Giacobini, E., Time course of physostigmine concentration and cholinesterase activity in plasma, brain and muscle of rat pretreated with physostigmine, and then soman, *Ninth Annual Midwest Neurobiology Meeting*, Springfield, Illinois, April 4-6, 1986.

Somani, S.M. and Giacobini, E., Pharmacokinetics of physostigmine and cholinesterase activity in plasma, brain and muscle of rat pretreated with physostigmine, and then soman, IV International Congress of Toxicology, Tokyo, Japan, July 21-25, 1986, Toxicology 31S:167, 1986.

Giacobini, E. and Somani, S.M., Species differences in pharmacokinetics, metabolism and pharmacodynamics of physostigmine, III World Conf. Clin. Pharmacology and Therapeutics, Stockholm, Sweden, July 27 - August 1, 1986.

Somani, S.M., Importance of plasma protein binding studies in drug toxicology, International Symposium on Drug Toxicology from the Point of View of Safety Studies at National Institute of Materia Medica, Jeijing, People's Republic of China, July 29-31, 1986.

Khalique, A. and Somani, S.M., Time course of physostigmine concentration and ChE activity in plasma, brain and muscle after oral administration, Pharmacologist, 28:227, 1986.

Somani, S.M. and Khalique, A., Disposition of physostigmine in rats after oral administration, Pharmacologist, 28:251, 1986.

Wall, H.G. (Spon.: L. Harris) and Somani, S.M., Histology of rat liver following soman and physostigmine treatment, Pharmacologist, 28:611, 1986.

Hetzler, R.K., Somani, S.M., Knowlton, R.G., and Perkins, R.M., The effects of exercise on caffeine pharmacokinetics and metabolism, Pharmacologist, 28:611, 1986.

Somani, S.M. and Giacobini, E., Comparison of the time course of Bu ChE and ChE activity and physostigmine concentrations in plasma, brain and muscle of rat after i.v., i.m. and oral administration, Soc. Neuroscience, 12:244-247, 1986.

McIlhany, M. Downen, M., Hallak, M., Khalique, A., Somani, S.M., and Giacobini, E., Time course of physostigmine and its metabolism and ChE activity in plasma of dog after i.v. administration, Soc. Neuroscience, 12:244, 1986.

Somani, S.M., Time course of physostigmine concentration and ChE activity in plasma and tissues of rat pretreated with oral physostigmine, and then soman, Fed. Proc., 46:4842, 1987.

Hetzler, R.K., Kamimori, G.H., Somani, S.M., Knowlton, R.G., and Perkins, R.M., The effect of route of administration of caffeine on free fatty acid mobilization during exercise in lean and obese volunteers, Fed. Proc., 46:2136, 1987.

King, B.F. and Somani, S.M., Subcellular distribution of physostigmine and metabolites in rat brain, Fed. Proc., 46:4842, 1987.

Hetzler, R.K., Knowlton, R.G., Somani, S.M., Brown, D.D., and Perkins, R.M., Influence of paraxanthine on plasma free fatty acid concentrations, Medicine and Science in Sports and Exercise, 19:1450, 1987.

Kamimori, G.H., Hetzler, R.K. Somani, S.M., Knowlton, R.G., and Perkins, R.M., The interactive effects of obesity and route of administration on caffeine metabolism during prolonged submaximal exercise, Medicine and Science in Sports and Exercise, 19, 1987.

Somani, S.M., Pharmacokinetics and pharmacodynamics of anticholinesterase carbamates with special reference to Physostigmine, Indian Academy of Neurosciences, March 7, 1988.

Matoi-Baer, S.H., Hurley, E., and Somani, S.M., Time course of ChE in diaphragm of rat pretreated with physostigmine then soman, FASEB J., 2880A, pg. 115, 1988.

Frank, S., Kohnle, M., Hurley, E., Pence, S., and Somani, S.M., Effect of exercise on propranolol pharmacokinetics in humans, FASEB J., 7326A, pg. 277, 1988.

Somani, S.M., Effect of soman on pharmacokinetics on physostigmine after i.v., i.m. and oral route of administration, FASEB J., 479A, pg. 25, 1988.

Somani, S.M. and Dube, S.N., *In vivo* dose-response of physostigmine and metabolite concentration vs. cholinesterase activity in RBC and tissues of rats, Pharmacologist, 30:59.18A, 1988.

Scremin, O.U., Scremin, A.M.E., Somani, S.M., and Giacobini, E., Autoradiographic analysis of physostigmine distribution in rat brain, *Pharmacologist*, 30:59.19A, 1988.

Dube, S.N., Buckenmeyer, P., Garcia, V., Somani, S.M., and Knowlton, R.G., Relationship of oxygen consumption to heat production in rats during an incremental treadmill exercise, *Pharmacologist*, 30:76.5A, 1988.

Garcia, V., Dube, S.N., and Somani, S.M., Effects of physostigmine administration and concurrent acute exercise on blood biochemical parameters in rats, *FASEB Journal*, 3:4446A, 1989.

Rashid, A., Dube, S.N., and Somani, S.M., *In vitro* and *in vivo* comparison of cholinesterase inhibition kinetics by physostigmine in RBC and tissues of rat, *FASEB Journal*, 3:3870A, 1989.

Babu, S.R., Dube, S.N., Garcia, V., and Somani, S.M., Time dependent effect of physostigmine on biochemical parameters in chronically exercised rats, *FASEB Journal*, 3:4445A, 1989.

Somani, S.M. and Dube, S.N., Effects of physostigmine and concurrent acute exercise on the cholinesterase activity in RBC and tissues of rats, *FASEB Journal*, 3:912A, 1989.

Dube, S.N. and Somani, S.M., Time course of cholinesterase activity in RBC and tissues after physostigmine administration in chronically exercised rats, *FASEB Journal*, 3:911A, 1989.

Somani, S.M. and Babu, S.R., Effect of exercise on distribution of radioactivity after ³H-Physostigmine administration, *Toxicologist*, 10(1):962, 1990.

Somani, S.M. and Dube, S.N., Effects of acute exercise after physostigmine administration on ChE activity, lactate, pyruvate and Hb in rats. V Intl. Congress of Toxicology, Brighton, England, July 16-21, 1989.

Babu, S.R. and Somani, S.M., Physostigmine and concurrent exercise induced alterations in lactate and pyruvate concentrations in plasma and tissues of rat. *FASEB J.*, 4:3459, 1990.

Somani, S.M., Babu, S.R. and Rashid, A., Effect of endurance training on pharmacokinetics and distribution of ³H physostigmine in rats, *Eur. J. Pharmacol.*, 183:1988-89, 1990.

Dube, S.N. and Somani, S.M., Interaction of physostigmine and concurrent acute exercise on time course of cholinesterase activity in rats, *FASEB J.*, 4:1177, 1990.

Dube, S.N. and Somani, S.M., Interactive effects of physostigmine acute and trained exercise on AChE activity in brain and muscle of rat, *Society of Neuroscience*, 15:226.13, 1989.

Babu, S.R., Arneric, S.P., Dube, S.N., and Somani, S.M., Effect of subacute physostigmine and subacute exercise on choline acetyltransferase and acetylcholinesterase activities in brain regions of rat. 118-A, 3rd Intl. Meeting on Cholinesterases, Montpellier, France, May 12-17, 1990.

Somani, S.M. and Dube, S.N., Effect of acute and trained exercise on the rate of decarbamylation of ChE in RBC and tissues of rat after physostigmine administration. 125-A, 3rd Intl. Meeting on Cholinesterases, Montpellier, France, May 12-17, 1990.

Dube, S.N. and Somani, S.M., Interaction of physostigmine and concurrent acute exercise on time course of cholinesterase activity in rats, *FASEB J.*, 4(3):1177-A, 1990.

Kutty, R.K., Somani, S.M., and Krishna, G., Eseroline, a metabolite of physostigmine, induces neuronal cell death, *Pharmacologist*, 32(3):248-A, pg. 163, 1990.

Somani, S.M., Babu, S.R., Arneric, S.P., Dube, S.N., and Evans, S., Effect of physostigmine and exercise on choline acetyltransferase and acetylcholinesterase activities in brain regions of rat, *Soc. Neurosci.*, 16(2):434-7, 1990.

Dube, S.N. and Somani, S.M., Effect of acute and trained exercise on time course of cholinesterase activity in RBC and tissues of rat after physostigmine administration, *Eur. J. Pharmacol.*, 183:1986-87, 1990.

Dube, S.N. and Somani, S.M., Modulatory effect of acute and endurance trained exercise on time course of ChE activity in RBC and tissues of rat after physostigmine administration, *Indian Pharmacological Society*, Bombay, India, December 6-8, 1990.

Somani, S.M. and Dube, S.N., Comparison of concurrent and post exercise effects on time course of ChE activity in physostigmine administered rats, *FASEB J.*, 1991.

Ravi, R.P., Rybak, L.P., and Somani, S.M., Relationship of pharmacodynamic effects of cisplatin to the glutathione levels in cochlea, inferior colliculus and kidney, *Pharmacologist* 33,402A (1991).

Somani, S.M. and Dube, S.N., Physostigmine as a pretreatment drug for organophosphate intoxication, *International J. Toxicol., Occup. Env. Health* 1,53.6 (1991).

Somani, S.M., Rybak, L.P., Ravi, R.P., and DaSilva, M., Effect of trained exercise on antioxidant system in rat brain regions, *Pharmacologist* 34:115 (1992).

Marlow, M., Somani, S.M., Rybak, L.P., and Frank, S., Effect of acute exercise on antioxidant system in rat heart mitochondria, *Pharmacologist* (1992).

Rybak, L.P., Ravi, R., and Somani, S.M., Pharmacodynamics and biochemical basis for protection of cisplatin oto and nephrotoxicity by DDTC, *Pharmacologist* (1992).

Ravi, R., Rybak, L.P., and Somani, S.M., Role of antioxidant enzymes in cisplatin nephrotoxicity and DDTC protection, *Pharmacologist* (1992).

Ferry, T.J., Johnson, C.B., Iwamoto, G.A., Marlow, M.J., and Somani, S.M., Captopril and antioxidant enzymes in myocardial ischemic reperfusion injury, 34th Annual National Student Research Forum, Page 135 (1993).

Ravi, R., Somani, S.M., and Rybak, L.P., Comparison of antioxidant system of the kidney and cochlea of rats in cisplatin toxicity and protection by DDTC, *Pharmacologist* 35:370 (1993).

Somani, S.M., Marlow, M.J., Rybak, L.P., and Frank, S., Responses of antioxidant system to acute and trained exercise in rat heart subcellular fraction, *Pharmacologist*, 35:290 (1993).

Ferry, T.G., Johnson, C.B., Marlow, M.J., Iwamoto, G.A., and Somani, S.M., Response of antioxidant enzymes to captopril in cat heart regions and subcellular fractions during ischemic reperfusion injury, *Pharmacologist* 35:284 (1993).

Johnson, C.B., Ferry, T.G., Marlow, M.J., Iwamoto, G.A., and Somani, S.M., Response of glutathione to captopril in cat heart regions during ischemic reperfusion injury, *Pharmacologist* 35:285 (1993).

Somani, S.M., Effect of physostigmine infusion on antioxidant enzymes in brain regions of rats. Third International Springfield Alzheimer Symposium, Springfield, IL, May 11-15 (1994).

Maggirwar, S.B., Arroyo, C.M., Somani, S.M., and Buckenmeyer, P.M., Ascorbate free radical as a marker of exercise training in rat heart. Amer. Coll. Sports Meeting, Indianapolis, IN, June 1-4 (1994)

Maggirwar, S.B., Somani, S.M., and Ramkumar, V., Activation of an A₃ adenosine receptor stimulates malate dehydrogenase in intact cells. Experimental Biology Meeting, April 24-28 (1994).

Chandak, R., Jain, M., Rybak, L.P., Somani, S.M., and Trammel, G., Correlation of platinum and MDA levels in dose response studies with cisplatin and diethyldithiocarbamate. VII International Congress of Toxicology, Seattle, WA, 1995.

Somani, S.M., Husain, K., and Rybak, L. P., 4-methylthiobenzoic acid protection against cisplatin nephrotoxicity: antioxidant enzymes and lipid peroxidation. VII International Congress of Toxicology, Seattle, WA, 1995.

Diaz-Phillips, L., Lanzotti, D.J., Husain, K., Kareti, K.R., Trammel, G.L., and Somani, S.M., The effect of ethanol after acute exercise on antioxidant enzymes and MDA in brain regions of rat. Experimental Biology 95, Atlanta, GA, 1995.

Husain, K., Lanzotti, D., and Somani, S.M., Effect of exercise training on antioxidant. Ame. Col. Sports Medicine Meeting, Minneapolis, MN, 1995.

Rybak, L.P., Husain, K., and Somani, S.M., Influence of acute exercise and ethanol on hepatic antioxidant enzymes and lipid peroxidation in rats. Am. Col. Sports Medicine Meeting, Minneapolis, MN, 1995.

Morris, C., Husain, K., Somani, S.M. and Rybak, L.P. 4-methylthiobenzoic acid and protection against cisplatin ototoxicity: correlation of auditory brainstem responses and the antioxidant system. Society for Neuroscience, November, 1995.

Husain, K., Rybak, L.P., Somani, S.M. and Elble, R.J., Influence of exercise and ethanol on acetylcholinesterase activity and lipid peroxidation in brain regions of rat. Society for Neuroscience, November, 1995.

Somani, S.M. and Kazim Husain. Brain Response to Exercise: Antioxidant System. Indian Academy of Neuroscience Bombay, February 8 - 10, 1996. Invited Speaker.

Rybak, L.P., K. Husain, C. Morris, C. Whitworth and S.M. Somani. Efficacy of 4-Methylthiobenzoic Acid Against Cisplatin Induced Nephro-- and Ototoxicity: Antioxidant System. Experimental Biology '96.

Husain, K. and S.M. Somani. Interaction of Exercise and Alcohol on Cholinesterase in Blood and Brain Regions of Rat. Experimental Biology '96.

Somani, S.M. and K. Husain. Interactive Effects of Exercise Training and Ethanol on Cardiac Antioxidant System of Rat. Experimental Biology '96.

Husain, K., S.M. Somani and S. Talcherkar. Interaction of Exercise Training and Chronic Ethanol on Antioxidant System of Rat Brain Regions. 1996 American College of Sports Medicine Annual Meeting, May 29, 1996.

Talcherkar, S., K. Husain, D. Ocbamichael, L.P. Rybak, G.L. Trammell and S.M. Somani. Effect of Exercise Training and Chronic Ethanol Intake on Hepatic Antioxidant System of Rat. 1996 American College of Sports Medicine Annual Meeting, May 29, 1996.

Schlörff, E.C., Husain, K. and Somani, S.M. Cerebral and cardiac antioxidant response to nicotine in rat. Presented at Oxygen '96 Meeting, Miami Beach, FL.

Somani S.M., Schlörff E.C. and Husain K. Effect of ethanol and nicotine on the antioxidant system in rat brain regions. Presenting at Society of Toxicology Meeting, March, 1997, Cincinnati, OH.

Husain K., Trammell G.L., Rybak L.P. and Somani S.M. Ebselen protection against cisplatin-induced nephrotoxicity: Antioxidant system. Presenting at Society of Toxicology Meeting, March, 1997, Cincinnati, OH.

Schlörff E.C., Husain K., Brown D.J. and Somani S.M. Dose dependent effect of ethanol on hepatic antioxidant system in rats. Presenting at Society of Toxicology Meeting, March, 1997, Cincinnati, OH.

Brown D.J., Husain K., Schlörff E.C. and Somani S.M. Dose response of ethanol on plasma antioxidant system in rats. Presenting at Society of Toxicology Meeting, March, 1997, Cincinnati, OH.

Rybak L.P., Husain K. and Somani S.M. Cisplatin-induced ototoxicity protected by ebselen: Antioxidant System. Presenting at Society of Toxicology, March, 1997, Cincinnati, OH.

Struble R.G., Husain K. and Somani S.M. Diethyldithiocarbamate (DDTC)-induced changes in antioxidant system of rat olfactory bulb. Presenting at Society of Toxicology Meeting, March, 1997, Cincinnati, OH.

Struble, R.G., Husain, K., and Somani, S.M. Evidence of elevated reactive oxygen species during olfactory nerve regeneration. Society of Neuroscience Meeting, Nov.1997.

Whitworth C., Rybak, L.P., Somani S.M. Protective effect of lipoic acid on cis-platin induced ototoxicity, Society of Neuroscience Meeting, Nov.1997.

Somani, S.M., Husain, K., Rybak, L. P. And Lee, T. J.-F. Modulation of antioxidant system by plant products and drugs. TC/DC International workshop cum training program on herbal drugs, RRL (CSIR), Jammu, India, September, 1997.

Husain, K. and Somani, S.M. Interaction of exercise training and chronic ethanol ingestion on testicular antioxidant system in rat. Experimental Biology Meeting 98, April 18, 1998

Somani, S.M., K. Husain., Schlörff, E.C. Dose and time dependent effects of ethanol on plasma antioxidant system in rat; Experimental Biology Meeting 98, 1998

Somani, S.M., and Husain K., Invited to present “Interaction of Exercise, Drugs and Antioxidant System” in the symposium “Oxygen, Antioxidants and Exercise” at International Congress of Physiological Sciences, St. Petersburg, Russia, June 30-July 5, 1997.

Husain, K., Whitworth, C., Rybak, L.P. and Somani, S.M. Dose dependent protection by lipoic acid against cisplatin-induced nephrotoxicity in rats: Antioxidant defense system. *Toxicologist* 48: 934A, 1999.

Jagannathan, R. Husain, K., Reddy, K.S. and Somani, S.M. Pyridostigmine and exercise interaction on cardiac antioxidant defense system in mice. *Toxicologist*, 48: 960A, 1999.

Scott, R.B., Husain, K., Reddy, K.S., Rybak, R. and Somani, S.M. Dose response of ethanol in relation to the antioxidant defense system of the liver, lung and kidney in rats. *Toxicologist*, 48: 925A, 1999.

K.S. Reddy, R.B. Scott and S. M. Somani Time course of response of ethanol on antioxidant defense system of brain, heart and liver of rat. *Toxicologist*, 48: 926A, 1999.

Somani, S.M., Husain, K., Whitworth, C. and Rybak, L.P. Dose dependent protection by lipoate against cisplatin induced ototoxicity in rats: Antioxidant defense system. *Toxicologist*, 48: 929A, 1999.

Husain, K. and Somani, S.M. Influence of physical stress and pyridostigmine on cholinesterase activity in blood and brain regions of male and female mice. *FASEB J.* 13: 818.3A, 1999.

Somani, S.M., Husain, K., Scott, B., Verhulst, S. Reddy, K.S., Montrey, R. and Helfert, R. Delayed and interactive effects of pyridostigmine and physical stress on biochemical indices in peripheral and cerebral tissues of mice. *FASEB J.* 13: 818.4A, 1999.

Verma-Ahuja, S, Husain, K., Verhulst, S., Espinosa, J.A. and Somani, S.M. Delayed effects of pyridostigmine and exercise training on muscle tension in mouse lower extremity. *FASEB J.* 13: 818.5A, 1999.

Scott, R.B. Reddy, K.S. , Husain, K. and Somani, S.M. Chronic and withdrawal effects of ethanol and nicotine on the antioxidant defense system in rat. *FASEB J.* 13: 666.7A, 1999.

Reddy, K.S., Husain, K., Schlorff, E.C., and Somani S.M., Dose response of ethanol on antioxidant defense in brain subcellular fractions of rat. *FASEB J.* 13: 666.6A, 1999.

Somani, S.M. and Husain, K. Oxidative stress and neurodegenerative diseases. Neuroscience 2000 and Beyond Conference, Gwalior, India, December, 6, 1999. *(Invited to give plenary lecture at this conference).*

Somani, S.M., Husain, K. and Rybak, L.P. Role of natural and synthetic compounds as protectors of antioxidant defense system against cisplatin-induced nephro and ototoxicity. International Congress on Frontiers in Pharmacology and Therapeutics in 21st Century, December 1-5, 1999, New Delhi, India. *(Organized and Participated in the symposium entitled “Antioxidants in cancer prevention and treatment” at this congress)*

Husain, K., Scott, R.B., Somani, S.M. and Rybak, L.P. Dose response of carboplatin- induced ototoxicity in rats. Society of Toxicology meeting, March 21, 2000, Philadelphia, PA.

Husain, K., Somani, S. Scott, R.B. Whitworth, C. A.. and Rybak, L.P. Carboplatin-induced hearing loss in a rat model : An electrophysiological and biochemical study. The Association for Research in Otolaryngology Midwinter meeting, February, 2000, Tampa Bay, Florida.

Asha, T., Husain, K., Helfert, R., Verhulst and Somani, S.M. Delayed interactive effects of sarin, pyridostigmine and exercise on the biochemical and histopathological changes in mice. Society of Toxicology meeting, March 2000, Philadelphia, PA.

Somani, S.M. and Husain, K. Delayed and interactive effects of sarin, pyridostigmine and exercise on biochemical indices in mice. US Army Bioscience Review meeting, June, 2000, Hunt Valley, Maryland. *(Invited by U.S. Army to speak for 20 minutes followed by 10 minutes discussion/questions at this meeting). I consider, it is an honor to be invited to speak at this meeting which is attended by experts in the field.*

Jagannathan, R., Husain, K. and Somani, S.M. Interaction of pyridostigmine and physical stress on antioxidant defense system in skeletal muscle of mice. Conference on Illnesses Among Gulf war Veterans: A decade of Scientific Research, Alexandria, Virginia, January, 2001.

Husain, K., Rybak, L.P. and Somani, S.M. Carboplatin-induced oxidative stress in rat cochlea. Society of Toxicology Meeting, March 2001, San Francisco, CA.

Jagannathan, R., Minocha, A. Husain, K., Verhulst, S. and Somani, S.M. Interaction of ethanol and theophylline on cardiac antioxidant defense system in rats. FASEB J. 15: A922, 2001.

Minocha, A. Jagannathan, R., Husain, K., Verhulst, S. and Somani, S.M. Interaction of exercise training with ethanol and theophylline on cardiac antioxidant defense system in rats. American College of Sports Medicine Meeting, May-June, 2001, Baltimore, MD.

R. Jagannathan, K. Husain, Z. Hasan, G.L. Trammell, L.P. Rybak and S.M. Somani. Dose response of carboplatin-induced nephrotoxicity in rats. Combined Research Symposium, SIU School of Medicine, Springfield, IL April 18, 2001.

Somani S.M., Husain, K. Rybak L.P., Amelioration of cisplatin induced oto and nephrotoxicity by protective agents, Invited to speak on at Indian Academy of Neurosciences, Lucknow, India in January 28-30, 2001.

Chapters and Review Articles in Professional Books and Journals

Pharmacology modules for teaching medical students: material included in Curricular Objectives, Southern Illinois University School of Medicine, 1977.

Somani, S.M. and Khanna, N.N., Correlation of plasma, saliva and spinal fluid concentrations in methylxanthines in neonates. In: *Drug Metabolism in the Immature Human*, L.F. Soyka and G.P. Redmond, Editors, Raven Press, pp. 199-215, October, 1981.

Somani, S.M., Metabolism and disposition of chemicals in relation to toxicity. In: *Environmental Toxicology: Principles and Policies*, S.M. Somani and F.L. Cavendar, Editors, Charles C. Thomas, pp. 11-28, November, 1981.

Somani, S.M., Identification and mutagenicity of toxic compounds from industrial waste water, Proceedings of the Asian Congress of Pharmacology, Allied Publishers, New Delhi, 1986, pp. 533-545.

Somani, S.M. and Gupta, P., Caffeine: a new look at the age-old drug, *Intl. J. Clin. Pharmac. Therapy and Toxicology*, 26:521-533, 1988.

Somani, S.M. and Babu, S.R., Toxicodynamics of mustard, *Int. J. Clin. Pharmac. Therapy and Toxicology*, 27:419-435, 1989.

Somani, S.M. and Dube, S.N., Physostigmine - an overview as pretreatment drug for organophosphate intoxication, *Intl. J. Clin. Pharmac. Therapy and Toxicology*, 27:367-387, 1989.

Somani, S.M., Gupta, S.K., Frank, S., and Corder, C.N., Effect of exercise on disposition and pharmacokinetics of drugs, *Drug Development Research*, 20:251-275, 1990.

Somani, S.M., Solana R.P., and Dube, S.N., Toxicodynamics of nerve agents, In: *Chemical Warfare Agents*, Satu M. Somani Editor, Academic Press, Ltd., SanDiego, CA 1992, pp 67-123.

Corder, C.N., Strickland, J.A., and Somani, S.M., Toxicodynamics of herbicides (defoliating agents), In: *Chemical Warfare Agents*, Satu M. Somani, Editor, Academic Press, Ltd., SanDiego, CA 1992, pp 289-321.

Somani, S.M., Toxicokinetics and Toxicodynamics of Sulphur Mustard, In: *Chemical Warfare Agents*, Satu M. Somani, Editor, Academic Press, Ltd., San Diego, CA 1992, pp 13-50.

Somani, S.M., Influence of exercise induced oxidative stress on the central nervous system, In: *Exercise and Oxygen Toxicity*, Eds.: C.K. Sen, L. Packer, O. Hanninen, Elsevier Publisher, pp. 463-477, 1994.

Somani, S.M. and Kamemori, G.H., Exercise and absorption, distribution, metabolism, excretion and pharmacokinetics of drugs and chemicals, In: Pharmacology in Exercise and Sports, Satu M. Somani (Ed.), CRC Press, Inc., Boca Raton, FL, pp. 1-38, 1996.

Buckenmeyer, P.J. and Somani, S.M., Exercise and Pharmacodynamics of Drugs, In: Pharmacology in Exercise and Sports, Satu M. Somani (Ed.), CRC Press, Inc., Boca Raton, FL, pp. 39-56, 1996.

Somani, S.M. Exercise, Drugs and Tissue Specific Antioxidant System, In: Pharmacology in Exercise and Sports, Satu M. Somani (Ed.), CRC Press, Inc., Boca Raton, FL, pp. 57-96, 1996.

Somani, S.M. and Husain, K., Role of Adenosine in Exercise, In: Pharmacology in Exercise and Sports, Satu M. Somani (Ed.), CRC Press, Inc., Boca Raton, FL, pp. 169-190, 1996.

Somani, S.M., Bhat, S.G., and Bera, T.K., Pharmacological Aspects of Yoga, In: Pharmacology in Exercise and Sports, Satu M. Somani (Ed.), CRC Press, Inc., Boca Raton, FL, pp. 329-346, 1996.

Somani, S.M. and Husain, K., Exercise, Drugs, and Cholinergic system, In: Pharmacology in Exercise and Sports, Satu M. Somani (Ed.), CRC Press, Inc., Boca Raton, FL, pp. 263-288, 1996.

Somani S.M., Husain K., and Schlorff E.D. Response of antioxidant system to physical and chemical stress. In: Oxidants, Antioxidants and Free Radicals, Eds: S. Baskin and H. Salem, Taylor and Francis In. Publ., Washington, DC, pages, 125-137, 1997. *Gulf War Veterans' Illnesses: VA, DOD continue to resist strong evidence linking toxic causes to chronic health effects; Second Report by the Committee on Government Reform and Oversight; Somani's report on Pages 34,35, 87--Union Calender No. 228, 105th Congress, House Report 105-388, Nov. 7, 1997, U. S . Government Printing Office, Washington DC.*

Rybak, Leonard P., Whitworth, Craig., Somani, Satu M. Application of Antioxidants and other agents to prevent cisplatin ototoxicity. *The Laryngoscope*, 109, 1740-1744 1999.

Rybak, Leonard P. and Somani, Satu M. Amelioration by Protective Agents; *Annals of New York Academy of Sciences; Ototoxicity, Basic and Clinical Applications, Volume 884, 143-151, 1999.*

Somani, S.M. and Husain, K. Influence of exercise induced oxidative stress on the central nervous system. *Exercise and Oxygen Toxicity*. Sen, C.K., Packer, L. and Hanninen, O (Eds), 2nd edition, Elsevier Science B.V. Amsterdam, pp 713-754, 2000.

Rybak, L.P., Husain, K., Morris, C., Whitworth, C. and Somani, S.M. Effect of protective agents against cisplatin ototoxicity. *Amer. J. Otol.* 21: 513-520, 2000.

Somani, SM and K. Husain, Low Dose Nerve Agents Toxicity under normal and Stressful Condition; in *Chemical War Fare Agents: Low Level Toxicity*; CRC Press, Editors: Satu M. Somani and James A. Romano, Pages 83-120, 2001.

Somani, SM, R. Jaganathan and K. Husain: Pharmacokinetics and Pharmacodynamics of Carbamates as Pretreatment against Nerve Agents, in *Chemical War Fare Agents: Low Level Toxicity*; CRC Press, Editors: Satu M. Somani and James A. Romano, Pages 145-190, 2001.

Somani, SM, Jagannathan, R. Husain K. and Rybak, LP; Amelioration of cisplatin induced oto and nephro toxicity by protective agents; *Annals of Neurosciences* 8:101-113, 2001.

Research Contract Reports While Working at Other Institutions

I am the co-author of the following reports to granting agencies while working in an industry (1964-1966). This work was not published.

Bonger, R.L., Hood, S.L., Somani, S.M., and Battaglila, P., Radiotracer studies of the Fate of Antimalarials.

- I. Chloroquine-C₁₄
Diamino diphenyl sulfone-S-35
3-Piperonyl-syndrome-4-C₁₄

Reports submitted to the Department of Army, U.S. Army Medical Research and Development Command, Preventive Medicine, Research Branch, Washington, D.C., June, 1966.

Hood, S.L., Somani, S.M., Zink, V.R., and Bogner, R.L., Radiotracer studies of cyclamate-C₁₄ in experimental animals, Report submitted to Abbott Laboratories, Chicago, May, 1966.

Bonger, R.L., Hood, S.L., White, E.R., and Somani, S.M., A study on the role of radioactivity and hydrothermal processes in protobiochemistry. Two reports (June, 1965, P. 63 and March, 1967, p. 48) submitted to office of Space Science and Applications, National Aeronautics and Space Administration.

Research Contract Reports Since Joining SIU School of Medicine (part of this work was published)

The following reports have been submitted to agency as per Contract Research Terms.

Environmental Protection Agency

Somani, S.M., Teece, R.G., Mack, J.O., and Hiltibran, R.G., Reports submitted to IEPA: Assessment of Toxic Organic Waste Problems in Illinois, Report 1, 88 pages and Report 2, 136 pages, April, 1978.

Somani, S.M., Teece, R.G., Mack, J.O., and Hiltibran, R.G., "Assessment of toxic organic waste problems in Illinois", Report 323 pages, 11/01/77 to 12/31/78, Submitted to Dr. David Schaeffer, Illinois Environmental Protection Agency.

Somani, S.M., Glave, W.B., Teece, R.G., and Mack, J.O., Report submitted to Illinois Environmental Protection Agency under Contract entitled "Assessment of Toxic Organic Waste Problems in Illinois", 84 pages, 01/01/79 to 06/30/80.

U.S. Army

Somani, S.M., Giacobini, E., Boyer, A., Hallak, M., Khalique, A., Unni, L., Hannant, M., and Hurley, E., Reports submitted to U.S. Army Medical Research and Development Command, Fort Detrick, Frederick, MD on "Mechanisms of Action and Pharmacokinetics of Physostigmine in Relation to Acute Intoxication by Organofluorophosphates:

176 pages, September 12, 1984;
152 pages, September 1985;
102 pages, October 30, 1986;
143 pages, June 1988;
47 pages, July 1988.

Somani, S.M., Dube, S.N., Buckemeyer, P., Babu, S.R., Garcia, V., Rashid, A., and Knowlton, R.G., "Effect of exercise on pharmacokinetics and pharmacodynamics of physostigmine," Report submitted to U.S. Army Medical Research and Development Command, Fort Detrick, Frederick, MD, 167 pages, May, 1989.

Somani, S.M., Babu, S.R., Buckemeyer, P., DaSilva, M., Dube, S.N., Fitzpatrick, L., Garcia, V., Klinger, K., Knowlton, R., McCoy, J., Rashid, A., Rybak, M., and Sunderam, S., "Effect of exercise on pharmacokinetics and pharmacodynamics of physostigmine in rats," Report submitted to U.S. Army Medical Research and Development Command, Fort Detrick, Frederick, MD, 135 pages, February, 1991.

Somani, S.M., Ahuja-Verma S., Helfert R., Husain K., Jagannathan R., Montrey R., Reddy K.S., Scott B., and Verhulst S. "Sarin and Pyridostigmine Interaction Under Physical Stress: Neurotoxic Effects in Mice". Reports submitted to U.S. Army Medical Research and Materiel Command, Fort Detrick, Frederick, MD.

41 pages, October 1998
95 pages, April, 2000
37 pages, August, 2000