CURRICULUM VITAE

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Education:

1971	B.S. (Biochemistry, with honors) Oklahoma State University, Stillwater, Oklahoma
1980	Ph.D. (Neurobiology, minor in immunology) Cornell University, Ithaca, New York

Teaching experience:

1975-76	Teaching Assistant, Cornell University, Ithaca, New York
1977-78	Instructor, Duke University Electron Microscope Institute, Duke University Marine Laboratory (summer sessions), Beaufort, North Carolina
1985-88	Instructor, Department of Pharmacology, Harvard University Medical School; Lecturer, Graduate Course in Neuropharmacology
1988	Lecturer, Graduate Seminar Series on Nicotinic Receptors, SUNY, Stony Brook, New York
1989-	Lecturer, Bouvé College of Pharmacy and Health Sciences, Northeastern University

Awards and Honors:

1983-84	The David Mahoney Fellowship of the National Amyotrophic Lateral Sclerosis Foundation
1985-88	Recipient, New Investigator Research Award, NIH
1988-90	Recipient, FIRST Award, NIH

Professional Societies memberships:

Society for Neuroscience
American Society for Neurochemistry
American Society of Pharmacology and Experimental Therapeutics
American Association for the Advancement of Science
Coordinator of Boston Area Neuroscience Group (1991-2007)--the Boston chapter of the Society for Neuroscience.
The Histochemical Society

Postdoctoral Experience:

1980-84	Fellow, Department of Pharmacology, Harvard University Medical School (R.E. Zigmond)

Professional Experience:

1984-89 Instructor, Department of Biological Chemistry and Molecular Pharmacology, Harvard University Medical School

1989-92 Clinical Associate Professor, Department of Pharmaceutical Sciences, Northeastern University, Boston, MA

1989-96 Lecturer of Neurology, Harvard Medical School at Children's Hospital, Boston, MA

1989-96 Associate of the Program in Neuroscience, Harvard University Medical School, Boston, MA

Student Advising:

Served on graduate thesis committees (not my students at the time):
Julie Stickney, NU Toxicology Ph.D. Student
Tenin Aburto, NU Pharmacology Ph.D. Student
Wang Ni Tian, NU Pharmacology Ph.D. Student
Kamelia Behnia, NU Pharmaceutics Ph.D. Student
Arti Jinsi, NU Pharmacology Ph.D. Student
Gabriela Greif, NU Pharmacology Ph.D. Student
Yong Jian Lin, NU Pharmacology Ph.D. Student
Edward Reverdy, NU Toxicology Ph.D. Student
Christine Weitasch, Harvard University Dept. Neurobiology Ph.D. Student
Sujata Vaidyanthan, NU Pharmaceutics Ph.D. Student
Dana Pedersen, NU Toxicology Ph.D. Student
Maria Carles, NU Interdisciplinary Ph.D. Student
Beom-Young Choi, Harvard University Dept. Neurobiology Ph.D. Student
Megan Pratt, Harvard University Dept. Neurobiology Ph.D. Student
Ruin Moaddel, NU Medicinal Chemistry Ph.D. student
Filbert Hui-Pek Hong, Harvard University Dept. Neurobiology Ph.D. Student
Goldi Kaul, NU Pharmaceutics Ph.D. student
Qinghuan Xiao, NU Pharmacology Ph.D. student
Eunice Stagliola, NU Toxicology Ph.D. student
Sushma Kommareddy, NU Pharmaceutics Ph.D. Student
Jennifer Weissert, NU Toxicology Ph.D. student
Matt Dickerson, NU Pharmacology Ph.D. student
Myank Bhavsar, NU Pharmaceutics Ph.D. Student
Lipa Shah, NU Pharmaceutics MS student
Lillian VanVlerken, NU Pharmaceutics Ph.D. Student
Luis Brito, NU Pharmaceutics Ph.D. Student
Ritu Kaushik, NU Pharmaceutics MS student
Sindhura Ganga, NU Pharmaceutics MS student
Christina Muratore, NU Pharmacology Ph.D. student
Sheba Goklany, NU Chemical Engineering PhD student
Bo Ying, NU Pharmaceutics Ph.D. student
Madhura Deshpande, NU Pharmaceutics MS student
Sean Kokur, NU Pharm. Sci. Interdisciplinary, Ph.D. Student
Shardool Jain, NU Pharmaceutics, Ph.D. student
Brendan Harmon, NU Pharmacology, Ph.D. student
Yiting Li, NU Pharmacology, Ph.D. student
Thom Barchett, NU Interdisciplinary, Ph.D. student

Shilpa Sonti, NU Interdisciplinary PhD. Student
Katlynn Bugda Gwilt, NU Pharmacology Ph.D. student
Lucas Cantwell, NU Medicinal Chemistry, Ph.D. Student
Kevin Craig, NU Pharmaceutics, Ph.D. Student
Lisa Fleischer, NU Pharmacology, Ph.D. Student

Advised graduate students doing laboratory rotations:
Rahul Sharma, MS Student, Pharmacology
Xiaogang Zhang, Ph.D./MS student, Pharmacology
Aviva Blajchman, MS student, Pharmacology
Rashad El-Badrawi, M.S. student, Pharmacology
Alok Sharma, Ph.D. student, Pharmacology
Pi-Shan Hsu, MS student, Pharmacology
Kristen Pavelok, Ph.D. student, Pharmacology
Yu-Yian Wu, MS student, Pharmacology
Tracey Hall, MS student, Pharmacology
Tabassum Husseini, MS student, Pharmacology
Wenbo Tan, Ph.D. student, Pharmacology
Yen-Hua Tang, MS student, Pharmacology
Thanh Tran, Ph.D. student, Pharmacology
Hong Gao, Ph.D. student, Pharmacology
Waleed Swelieh, Ph.D. Student, Pharmacology
Prashanti Modadugu, M.S. Student, Pharmacology
Lavesh Gwalani, M.S. Student, Pharmacology
Negin Behazin, Ph.D. Student, Pharmacology
Scott Leppanen, MS student, Pharmacology
Visalakshi Visalakshi, MS student, Pharmacology
Vishnu Hosur, MS/Ph.D. student, Pharmacology
Onkar Vase, MS student, Pharmaceutics
Hari Chikyala, MS student, Biotechnology
Geeta Gwalani, MS student, Pharmacology
Gaurav Gogri, MS student, Pharmacology
Emily Thomas, MS student, Pharmacology
Priyanka Anandajawali, MS student, Pharmacology
Brijesh Garg, MS student, Pharmacology
Thomas Koperniak, PhD. Student, Pharmacology
Vartika Mishra, MS student, Pharmacology
Nehul Shah, MS student, Pharmacology
Hiral Patel, MS student, Pharmacology
Ketan Deotale, MS Biotechnology
Rohit Vyasamneni, MS Biotechnology
Sangram Yadav, MS Biotechnology
Sharah Ragunathan, MS Biotechnology
Bharti Patel, MS Biotechnology
Vatsal Oza, MS Biotechnology
Salonee Parikh, MS Pharmacology
Pragalath Sundararajan, MS Biotechnology
Abishek Chandrashekar, MS Biotechnology
Sharath Chandra Madasu, MS Pharmacology
Nikhil Soni, MS Biotechnology
Namrata Prasad, MS Biotechnology
Jessica Jimenez, MS Pharmaceutical Science
Guarang Patel, MS Pharmacology

Anagha Sawant, MS Pharmacology
LingLing Guo, MS Pharmaceutics
Dhaval Oza, MS Pharmacology
Ngoc Ha, MS Pharmacology
Michelle Pires, MS Pharmacology
Prerana Malwadkar, MS Pharmaceutics
Tapan Dave, MS Pharmacology,
Ting Wu, MS Pharmacology,
Yichen Chen, MS Pharmaceutics,
Yong Szeto, MS Pharmacology,
Ravi Challa, MS Pharmaceutics,
Yi Xu, MS Pharmaceutics,
Vinita Chaudhari, MS Pharmacology,
Jason Wickman, MS Pharmacology,
Grishma Pawar, MS Pharmacology,
Kiran Deshpande, MS Pharmaceutics
Hangqing Lin, MS Pharmacology
Pavithra Krishnaswami, MS Pharmaceutics
Tam Nguyen, MS Medicinal Chemistry
Trung Nguyen, MS Pharmaceutical Sciences
Vinita Doshi, MS Pharmaceutical Sciences
Shivani Krovvidi, MS Biotechnology
Rucha Adhav, MS Biotechnology
Alexandra Rezvaya, MS Pharmacology
Bhargav Tilak, MS Biotechnology
Bhakti Kadav, MS Biotechnology
Ankita Bhattathiripad, MS Pharmaceutical Sciences
Delong Zhou, MS Pharmaceutical Sciences
Sneha Sukumaran, MS Pharmacology
Sweta Swaminathan, MS Pharmacology
Aditya Ansodaria, MS Biotechnology
Anurag Wadhavkar, MS Pharmacology
Babu Ram Prasad Saravanan, MS Biotechnology
Gauri Mahimkar, MS Pharmaceutical Sciences
Jaya Prakash Thummapudi, MS Biotechnology
Sushma Krishnamurthy, MS Biotechnology
Swetha Iyer, MS Biotechnology
Vijay Ramesh, MS Biotechnology
Zhiyuan Wang, MS Pharmaceutical Sciences
Yaamini Subramanian, MS Biotechnology
Kritika Mukherjee, MS Biotechnology
Xinbo Luo, MS Pharmacology
Madhave Upadhyay, MS Biotechnology
Aayush Pankaj Agarwal, MS Biotechnology
Akshitha Rameshbabu, MS Biotechnology
Anish Deshpande, MS Pharmaceutical Sciences
Parnika Dalvi, MS Biotechnology
Sarulatha Thulasi Raman, MS Biotechnology
Shravani Godkar, MS Biotechnology
Sreeharshini Oruganti, MS Biotechnology
Tanya Shah, MS Biotechnology
Gayatri Patankar, MS Biotechnology
Shradda Kamath, MS Biotechnology
Riya Chhowala, MS Biotechnology

Remitha Mathivani Vinayakamoorthy, MS Biotechnology
Palak Shah, MS Biotechnology
Meghana Bantwal, MS Biotechnology
Shivani Bhawsar, MS Biotechnology
Gargi Ramdasi, MS Biotechnology
Pranjali Rumale, MS Biotechnology
Sayani Mukherjee, MS Biotechnology
Gauri Oza, MS Biotechnology
Nirzari Shah, MS Biotechnology
Mitali Gupta, MS Biotechnology
Khushboo Kadam, MS Biotechnology
Maria Mariadassou, MS Biotechnology
Kushboo Agarwal, MS Biotechnology
Varnika Arora, MS Biotechnology
Anasemon Meshreky, MS Biotechnology
Drishti Parwanda, MS Biotechnology
Hirva Patel, MS Biotechnology
Yash Shrinivash Bichu, MS Biotechnology
Aarsheya Amin, MS Biotechnology
Rewati Gokhale, MS Biotechnology
Aastha Jain, MS Biotechnology
Jazib Khan, MS Biotechnology
Tanya Malpani, MS Biotechnology
Priyanka Sahni, MS Biotechnology
Amrutha Varshini Saravana Kumar, MS Biotechnology
Akshara CP, MS Biotechnology

Major advisor to students completing graduate degrees with theses:
Yu Xie, Ph.D. (Degree received in 1993)
Yamin Dou, MS (Degree received in 1993)
Ruin Moaddel, NU Medicinal Chemistry Ph.D. (with Robert Hanson, Degree received in 1999)
Waleed Sweileh, Ph.D. (Degree received in 2000)
Hee Kyung Lee, MS (Degree received in 2002)
Adham Abutaha, Ph.D. (Degree received in 2003)
Vishnu Hosur, Ph.D. (Degree received in 2010)
Thomas Koperniak, Ph.D., American Foundation for Pharmaceutical Education fellow 2009 (Degree received in 2012)
Hiral Patel, Ph.D. (Degree received in 2017)
Bijesh Garg, Ph.D. (Degree received in 2017)
Anish Deshpande, MS (Degree received in 2020)

Advisor to five undergraduates from the University of Bath (UK) or University College London doing external training research projects towards a B.Sc. in Biochemistry
Ashley Pike, March -September, 1991. Mr. Pike received the Glaxo Placement Award at Bath University in 1992, partly based on work in this laboratory
Christine Rossant, March -September, 1992
Mark Cragg, March -September, 1993
Judith McKay, March-September, 1994 and June-September, 1995
Assad Khan, March-August, 2004, Univ. London

Advisor to undergraduates from Northeastern University doing laboratory rotations:

Abdullah Baaj. 1993-1995. Mr. Baaj was co-winner of the NU Dean's Research Award based on work in this laboratory
Fouzia Abisourour. 1993-1994
Erica Waugh Summer 1997 (Co-advising with Dr. James Stellar during a joint NU RSDF project)
Kristen Danischewski Fall 1997-1999 (Co-advising with Dr. James Stellar during a joint NU RSDF project)
Sean Sherman 2004-2005 (Provost Undergraduate Research Grant)
Jennifer Tarnaki, Spring 2009 (Provost Undergraduate Research Grant)
Joe Musacchia, Summer 2009-Spring 2011 (Matz Co-op Fellowship)
Elizabeth Kyer, Spring 2012
Kyu Won Kim, Summer 2012
Yong Szeto, Fall 2012-13, Mr. Szeto became a MS student in the lab (Provost Undergraduate Research Grant)
Kaci Coveleski, Fall 2013, (Provost Undergraduate Research Grant)
Amro Alhelawe, Spring 2013-14
David Wu, BS Pharm.Sci. Fall 2015-Spring 2016.
Michelle Nguyen, BS Pharm. Sci. Spring 2016
Halldor Arnarson, BS Pharm. Sci. Fall 2016-Spring 2017
Huang Lee BS Pharm. Sci. Fall 2016-Spring 2017
Diana Ghisa, BS Biology Fall 2021
Grant Tucker, BS Biology Fall 2019-Spring 2022 (Provost Summit Award)

Supervised lab volunteers: Jay Boltax, Sheba Goklany

Current students:
Rewati Gokhale, MS Biotechnology
Aastha Jain, MS Biotechnology
Jazib Khan, MS Biotechnology
Yongcheng Lu, MS Pharmaceutical Science
Ashika Saraf, MS Biotechnology
Harshita Shanbog, MS Biotechnology
Jayshree Agarawal, MS Biotechnology
Yash Shrinivas Bichu, MS Biotechnology
Aishwarya Gaikwad, MS Biotechnology
Yongcheng Lu, MS. Pharmaceutical Sciences
Aditi Nimbalkar, Pharm. D.
Rujul Tamhane, MS Biotechnology
Zixuan Yan, MS. Pharmaceutical Sciences

Director, Northeastern University Graduate Program in Pharmacology (A subset of the Biomedical Science Graduate Program) 1994-2003.
Chair, Dept. Pharmaceutical Science Graduate Education Committee 2001-2010
Advisor, MS program in Pharmacology (a specialization of the Pharmaceutical Science Graduate Program) 2003-present

Invited Presentations:
Spring, 1989. Northeastern University Biomedical Science Colloquium Series, Dr. Mehdi Boroujerdi, host

November, 1989. Dept. Pharmacology, Cornell University, Ithaca NY "Nicotinic and NMDA receptors in chick retina", Dr. Robert Oswald, host
June, 1990. Dept. Pharmacology, University College, London. Dr. David Colquhoun, host.
June, 1990. Dept. Biochemistry, University of Bath, Bath, England. Dr. Susan Wonnacott, host
July 23, 1990. European Society for Neurochemistry, Leipzig, German Democratic Republic
August, 1990. Dept. of Physiology, University of Geneva, Geneva Switzerland. Dr. Daniel Bertrand, host
August, 1990. Dept. of Molecular Neurobiology, Pasteur Institute, Paris, France. Dr. Michele Roa, host
Fall 1990, Dept. of Neuroscience, Pfizer Central Research, Groton, Conn. Dr. W.Frost White, host
Spring 1991, Dept. Physiology, University of Pittsburgh, Pittsburgh, PA. Dr. Elias Aizenman, host
Spring 1991, Massachusetts College of Pharmacy, Boston, MA. Dr. Timothy Maher, host
March 22, 1992 Cambridge NeuroScience
May 19, 1992. Dept. of Neurology, Children's Hospital, Boston MA. Dr. Stewart Lipton, host
May 26, 1992 Mailman Research Laboratories, McLean Hospital, Belmont MA. Dr. Sherry Bursztajn, host
March 9, 1994 "Arsenic & old worms; Old reagents as new probes for nicotinic receptors", Biology Dept., Northeastern University, Dr. Sue Powers-Lee, host.
May 9, 1994 Rho Chi Speaker, Northeastern University
November 13, 1995. "Epibatidine, a promising ligand for neuronal nicotinic receptors", Raddison Hotel, San Diego, CA. Sponsored by Research Biochemicals, International and Amersham International.
March 19, 1997. "Roles of Disulfide Bonds in Regulating Ligand Gated Receptor Channel Function." Pharmacology Dept., B.U. School of Medicine, Dr. Susan Leeman, host
November 3, 2000. Invited speaker "Evidence against α4β2 nicotinic receptor stabilization during nicotine-induced up-regulation: Studies with cycloheximide and brefeldin A." *10th Neuropharmacology Conference*, 2000, New Orleans, LA
March 2, 2012. "Investigating Novel Nicotinic Receptor Chaperones and Signaling Systems". Dept. of Pharmacology, University of Florida, Gainesville, FL, Dr. Roger Papke, host.
April 13, 2018. "α7 Nicotinic Receptor Chaperones and Unconventional Signaling." Department of Biochemistry, Oklahoma State University, Stillwater OK, Dr. John Gustafson, host.

Present Position:

1998-Present Associate Professor, Department of Pharmaceutical Sciences, Northeastern University, Boston, MA

Grant History for Ralph Loring

External Funding:

National Institute of Neurological Disorders and Stroke, NS22472, *"Characterization of Neuronal Nicotinic Receptors"*
$54,377 first year direct cost (2/1/89-8/31/89), $30,346 indirect.
$82,387 second year direct cost (9/1/89-8/31/90), and $49,964 indirect.
This was a FIRST award brought from Harvard University Medical School to study the effects of neuronal bungarotoxin on neuronal nicotinic receptors.

Pfizer Central Research, *"Novel excitatory amino acid agents",*
$35,327 for 1 year direct costs (1/1/91-12/31/91). $4,416 indirect.
This was a contract to study the effects of a potential drug that blocks glutamate receptors.

National Institute of Neurological Disorders and Stroke, NS22472*, "Characterization of Neuronal Nicotinic Receptors",*
$877,419 over 5 years (9/1/90-8/31/95).
First year (9/1/90-8/31/91), $120,675 direct, $63,049 indirect.
Second year (9/1/91-8/31/92) $109,708 direct, $62,501 indirect.
Third year (9/1/92-8/31/93) $109,001 direct, $$60,714 indirect.
Fourth year: (9/1/93-8/31/94) $114,404 direct, $61,134 indirect.
Fifth year: (9/1/94-8/31/95) $111,540 direct, $64,693 indirect.
This R01 was a competing renewal of the FIRST award to study the effects of reducing and oxidizing reagents on neuronal nicotinic receptors.

Smokeless Tobacco Research Council, Inc. #0273*, "Novel Probes for Nicotine Binding Sites"* over 3 years (1/1/91-12/31/93).
First year $27,000 direct, 3,375 indirect.
Second year, $28,629 direct, $3579 indirect.
Third year, $30,347 direct, $3,794 indirect.
This grant was to design novel drugs to block the function of neuronal nicotinic receptors. Dr. Gerald S. Jones Jr. was a collaborator on this grant to synthesize novel organochemicals.

Advanced Tobacco Products (ATP), Inc., unspecified and unsolicited grant,
$10,000 with unrestricted dates.
This grant was a technology transfer agreement with ATP Inc., to have a right of first refusal on any patents that might have been discovered during the time of NIH grant NS22472 (9/1/90-8/31/95). Claims on future discoveries have now lapsed.

Research Biochemicals Incorporated (1994) contract for $1,000 to test various batches of the snake toxin α-bungarotoxin for pharmacological activity.

Smokeless Tobacco Research Council, *"Heterobifunctional Ligands for labeling neuronal nicotinic receptors"* (1/1/94 to 12/31/96).
Dr. Gerald S. Jones, Jr. started as the PI on this grant but after Dr. Jones left Northeastern for the Mass. College of Pharmacy, and then left the Mass. College of Pharmacy, I ended up supervising both his student Ruin Moaddel and the research. This grant was to continue drug design for blocking neuronal nicotinic receptors based on the results of the previous Smokeless Tobacco Research Council grant (1/1/91-12/31/93).

National Institute of Neurological Disorders and Stroke, NS22472*, "Characterization of Neuronal Nicotinic Receptors*",
$567,835 over 3 years (1/1/97-12/31/99).
No cost extension completed in 2000.

Internal Funding:
BRSG Instrument Grant (With Jonathan Freedman): $5,195 direct only (1992)

RSDF (Northeastern University Research and Scholarship Development Fund) proposal funded with Dr. James Stellar: *"Nicotine Intracranial Self-Administration (ICSA)"* for $9,999 July 1, 1997-June 30, 1998. The object is to determine if rats will work to self-inject nicotine into various brain sites to test theories of how nicotine acts as an addictive drug.

Bouve Faculty Bridge Award *"A Biological Switch for Amplifying and Retaining Transcription Factor Signaling"*for $3400, 6/1/11-6/30/12

Since 2000, I have funded my laboratory research with honoraria obtained as a consultant evaluating grant applications for a foundation that wishes to remain anonymous. Currently, this amounts to $34,000/year.

Service

1992-2003 Coordinator, Boston Area Neuroscience Group (BANG), the Boston chapter of the Society for Neuroscience and co-organizer (With Dr. James Stellar, NU Psychology) of the Boston Area Neuroscience Group (BANG) meetings for 1992, 1993, and 1996.

Manuscript Reviewer, Journal of Neuroscience, Journal of Neurochemistry, Journal of Physiology, Synapse, Biochemical Pharmacology, Journal of Neuroinflammation

Consultant with Research Biochemicals, International. Produced the Nicotinic Receptor page for the RBI Handbook of Receptor Classifications 1st & 2nd editions.

Consultant with Partidge Films, Ltd., of Bristol, UK for a documentary film on Cobras prepared for the Discovery Channel.

Ad Hoc Reviewer for National Institutes of Health, Israeli Science Foundation, and the National Science Foundation, as well as Reviewer, Research and Scholarship Development Fund for Division of Research Management, Northeastern University

1997-1999 Member, Northeastern University Faculty Senate

1989-2003 Chairman, Dept. of Pharmaceutical Sciences Seminar Committee

1994-Present Program Director, Pharmacology Graduate Program.

1994-Present Member, Pharmaceutical Sciences Graduate Education Committee.

1994-Present Member, University Graduate Council

1998-1999 Member, University Graduate Council Executive Committee

1995-2002 Member, University Graduate Council committee on New Programs

1989-Present Delegate for the Bouvé College of Pharmacy and Health Sciences, Northeastern University Radiation Safety Committee.

1995-1999 Member of Pharmacy Affairs Committee.

1996-1997 Member, Pharmacy Program Academic Standing Appeals Committee

1997-1999 Member, Bouvé College Academic Standing Appeals Committee

1996-1997 Member, Non-traditional Pharm. D. task group

1996 Member, Pharmacy Program Progression Requirements subcommittee

1997-1998 Member, (with Jonathan Freedman and Barbara Waszczak) Special Graduate Program self-study report committee

1997-1999 Member of Neuroscience Task Force to develop a Ph.D. program in Neuroscience at Northeastern University.

1998-2000	Member, (with Barbara Waszczak and Bob Schatz), Pharmaceutical Sciences Graduate Task Force.
2000-2003	Organizer of the Biomedical Science Colloquium Series
2003	Chair of the Pharmacology Core Teaching Initiative Committee
2002-2005	Chair of the Bouve Graduate Curriculum Committee (Responsible for semester conversion oversight of all Bouve Graduate programs in 2003)
2003-2006	Chair or member, Department merit committee
2003-2004	Member, School of Pharmacy Academic Recruiting and Transfer committee
2003-2004	Chair, University Graduate Council Evaluation of the Pharmacy program
2000-2006	Member, University Graduate Council New Programs Committee (Chair, 2004-2006)
2005	Graduate Council Ad Hoc Committee for evaluating graduate programs
2005-2010	Chair, Bouve Graduate Academic Affairs Committee
2007	Chair of ad hoc committee for evaluating Pharmaceutical Science Graduate Curriculum
2008	Chair of ad hoc committee for establishing a Graduate Pharmaceutical Science Laboratory Course.
2009	Member of School of Nursing Dean's Search Committee
2010	Member, Dept. Pharmaceutical Science Medicinal Chemistry faculty Search
2005-2010	Member, University Graduate Council
2010-Present	Member, Bouve Graduate Curriculum Committee
2009-2019	Member, School of Pharmacy Honors and Awards Committee
2009	Member, Provost's ad hoc committee for PhD Thesis Completion awards
2011	Member, Senate Academic Unit Review Committee
2012-2017	Member, School of Pharmacy Academic Affairs Committee
2012-2020	Chair, Bouve College Graduate Curriculum Committee
2012-Present	Chair, Northeastern University Institutional Biosafety Committee
2012-Present	Member, Northeastern University Laboratory Safety Committee
2016-Present	Department Pharmaceutical Sciences Safety Officer
2021	Reviewer, Northeastern Tier1 awards

2021-Present Member, Bouve Faculty Office Task Force

2021-Present Member, COE/Bouve Safety Officer Committee

Bibliography:

Mitchell, E.D., Riquetti, P., Loring, R.H., and Carraway, K.L. Quaternary structure of *B. subtilis* α-amylase: Anomalous behavior in SDS. *Biochimica et Biophysica Acta* **295**:314-322 (l973).

Loring, R.H. and Salpeter, M.M. Denervation increases turnover rate of junctional acetylcholine receptors. *Proc. Natl. Acad. Sci. USA* **77**:2293-2297 (l980).

Levitt, T.A., Loring, R.H. and Salpeter, M.M. Neuronal control of acetylcholine receptor turnover rate at a vertebrate neuromuscular junction. *Science* **210**:550-551 (l980).

Loring, R.H., Jones, S.W., Matthews-Bellinger, J. and Salpeter, M.M. ^{125}I-α-Bungarotoxin: Effects of radiodecomposition on specific activity. *J. Biol. Chem.* **257**:1418-1423 (l982).

Loring, R.H., Chiappinelli, V.A., Zigmond, R.E. and Cohen, J.B. Characterization of a snake venom neurotoxin which blocks nicotinic transmission in the avian ciliary ganglion. *Neuroscience* **11**:989-999 (l984).

Loring, R.H., Dahm, L.M. and Zigmond, R.E. Localization of α-bungarotoxin binding sites in the ciliary ganglion of the embryonic chick: An autoradiographic study at the electron microscopic level. *Neuroscience* **14**:645-660 (l985).

Loring, R.H. A method for recording agonist-induced depolarizations in small autonomic ganglia. *J. Neurosci. Methods* **12**:241-248 (l985).

Salpeter, M.M. and Loring, R.H. Nicotinic acetylcholine receptors in vertebrate muscle: Properties, distribution, and neuronal control. *Progress in Neurobiol.* **25**:297-325 (l986).

Loring, R.H., Andrews, D., Lane, W. and Zigmond, R.E. Amino acid sequence of toxin F, a snake venom toxin that blocks neuronal nicotinic receptors. *Brain Research* **385**:30-37 (l986).

Sah, D.W.Y., Loring, R.H. and Zigmond, R.E. Long-term blockade by toxin F of nicotinic synaptic potentials in cultured sympathetic neurons. *Neuroscience* **20**:867-874 (1987).

Loring, R.H. and Zigmond, R.E. Ultrastructural distribution of ^{125}I-toxin F binding sites on chick ciliary neurons: Synaptic localization of a toxin that blocks ganglionic nicotinic receptors. *J. Neurosci.* **7**:2153-2162 (1987).

Lipton, S.A., Aizenman, E. and Loring, R.H. Neural nicotinic acetylcholine responses in solitary mammalian retinal ganglion cells. *Pfleugers Arch*., **410**:37-43 (1987).

Loring, R.H. and Zigmond, R.E. Characterization of neuronal nicotinic receptors by snake venom neurotoxins. *Trends in Neurosci*., **11**:73-78 (1988).

Loring, R.H., Sah, D.W.Y., Landis, S.C. and Zigmond, R.E. The ultrastructural distribution of putative nicotinic receptors on cultured neurons from the rat superior cervical ganglion. *Neuroscience*, **24**:1071-1080 (1988).

Zigmond, R.E. and Loring, R.H. Characterization and localization of ganglionic nicotinic receptors using neuronal bungarotoxin. In: *NATO advanced research workshop on Nicotinic Acetylcholine Receptors in the Nervous System*, F. Clementi, Editor. Springer Verlag, Berlin, 1988, pp. 31-39.

Aizenman, E., Lipton, S.A. and Loring, R.H. Selective Modulation of NMDA responses by reduction and oxidation. *Neuron*, **2**:1257-1263 (1989).

Loring, R.H., Aizenman, E., Lipton, S.E. and Zigmond, R.E. Characterization of nicotinic receptors in chick retina using a snake venom neurotoxin that blocks neuronal nicotinic receptor function. *J. Neurosci*. **9**:2423-2431 (1989).

Loring, R.H., Schulz, D.W. and Zigmond, R.E. Characterization of neuronal nicotinic receptors using neuronal bungarotoxin. *Progress in Brain Res*. **79**:109-116 (1989).

Loring, R.H. Agmatine acts as an antagonist of neuronal nicotinic receptors. *Brit. J. Pharm.* **99**:207-211 (1990).

Aizenman, E., Loring, R.H., and Lipton, S.E. Blockade of nicotinic responses in rat retinal ganglion cells by neuronal bungarotoxin *Brain Res.* **517**:209-214 (1990).

Aizenman, E., White, W.F., Loring, R.H., and Rosenberg, P.A. A 3,4-dihydroxyphenylalanine oxidation product is a non-NMDA glutamatergic agonist. *Neurosci. Lett.* **116**:168-171 (1990).

Loring, R.H., and Zigmond, R.E. Pharmacological and biochemical properties of nicotinic receptors from chick retina. *Euro. J. Neurosci.* **2**:863-872 (1990).

Schulz, D.W., Loring, R.H., Aizenman, E. and Zigmond, R.E. Autoradiographic localization of putative nicotinic receptors in the rat brain using ^{125}I-neuronal bungarotoxin. *J. Neurosci*. **11**:287-297 (1991).

Oswald, R.E., Sutcliffe, M.J., Bamberger, M., Loring, R.H., Braswell, E., and Dobson, C.M. Solution structure of neuronal bungarotoxin determined by two-dimensional NMR spectroscopy: Sequence specific assignments, secondary structure, and dimer formation. *Biochemistry* **30**:4901-4909 (1991).

Rosenberg, P.A., Loring, R.H., Xie, Y., Zaleskas, V. and Aizenman, E. 2,4,5-Trihydroxyphenylalanine in aqueous solution forms a non-NMDA glutamatergic agonist and neurotoxin. *Proc. Natl. Acad. Sci. USA* **88**:4865-4869 (1991).

Smith, K.E., Wong, V., Kremer, N.E., Loring, R.H. and Kessler, J.A. Differential regulation of muscarinic and nicotinic cholinergic receptor and their mRNAs in cultured sympathetic neurons. *Mol. Brain Res.* **12**:121-129 (1992).

Xie, Y., Jones, G.S. Jr. and Loring, R.H. Effects of oxidizing and reducing analogs of acetylcholine on neuronal nicotinic receptors. *Mol. Pharmacol.* **42**:356-363 (1992).

Loring, R.H., Dou, Y.-M., Lane, W., Jones, G.S. Jr. and Stevenson, K.J. Aromatic trivalent arsenicals: Covalent yet reversible reagents for the agonist binding site of nicotinic receptors. *Mol. Brain Res.* **15**:113-120 (1992).

Pike, A. and Loring, R.H. Effects of p-aminophenyl dichloroarsine on reduced high-affinity [^{3}H]nicotine binding sites from chick brain: A covalent, yet reversible, agent for neuronal nicotinic receptors. *Eur. J. Neurosci.* **4:**1362-1368 (1992).

Xie, Y., Lane, W. and Loring, R.H. Nereistoxin: A naturally occurring toxin with redox effects on neuronal nicotinic acetylcholine receptors in chick retina. *J. Pharmacol. Exper. Therap.* **264**:689-694 (1993).

Loring, R.H. and Schulz, D.W. Autoradiographic localization of putative neuronal nicotinic receptors using snake venom neurotoxins. *Methods Neurosci.* **12:**324-341 (1993).

Fisher,D.H., Xie, Y. and Loring, R.H. Analysis of nereistoxin using HPLC and electrochemical detection. *Analyt. Lett.* **26**:1051-1063 (1993).

Loring, R.H. The molecular basis of curaremimetic snake neurotoxin specificity for neuronal nicotinic receptor subtypes. *J. Toxicol. Toxin Rev.* **12**:105-153 (1993).

Rossant, C.J., Lindstrom, J. and Loring, R.H. Effects of redox reagents and arsenical compounds on [^{3}H]-cytisine binding to α4β2 nicotinic acetylcholine receptors immunoisolated from chick brain. *J. Neurochem.* 62:1368-1374 (1994).

Dou, Y.-M., McHugh, T., Lane, W.V., Rossant, C.J. and Loring, R.H. Interactions of dithiols with p-aminophenyldichloroarsine and nicotinic receptors. *J. Biol. Chem.* **269:**20410-20416 (1994).

Loring,R.H., McHugh, T., McKay, J., and Zhang, X.G. Epibatidine: A potent desensitizing agonist of neuronal nicotinic receptors in the chick nervous system. *Medicinal Chemistry Research*, **4:**517-527 (1994).

McKay, J., Lindstrom, J., and Loring, R.H. Determination of nicotinic receptor subtypes in chick retina using monoclonal antibodies and ^{3}H-epibatidine. *Medicinal Chemistry Research*, **4:**528-537 (1994).

Xie, Y., McHugh, T., Jones, G.S., McKay,J. and Loring, R.H. Evidence that a nereistoxin metabolite, and not nereistoxin itself, reduces nicotinic receptors: Studies in the whole chick ciliary ganglion, on isolated neurons, and immunoprecipitated receptors. *J. Pharmacol. Exper. Therap.* **276:**169-177 (1996).

Moaddel R, Sharma A, Huseni T, Jones GS, Jr., Hanson RN, Loring RH. Novel biotinylated phenyl-arsonous acids as bifunctional reagents for spatially close thiols: studies on reduced antibodies and the agonist binding site of reduced *Torpedo* nicotinic receptors. *Bioconjug Chem* **10**:629-37 (1999).

Sweileh W., Wenberg K., Xu J., Forsayeth J., Hardy S., and Loring, R.H. Multistep Expression and Assembly of Neuronal Nicotinic Receptors is Both Host-Cell and Receptor-Subtype Dependent. *Molecular Brain Research,* **75**:293-302 (2000).

H.K. Lee, L. Gwalani, V. Mishra, P. Anandjiwala, F. Sala, S. Sala, J.J. Ballesta,D. O'Malley, M. Criado, R.H. Loring. Investigating the role of protein folding and assembly in cell-type dependent expression of α7 nicotinic receptors using a green fluorescent protein chimera. *Brain Research,* **1259:**7 – 16 (2009).

S. Goklany , R.H. Loring, J. Glick, C. W.T. Lee-Parsons. Assessing the limitations to terpenoid indole alkaloid biosynthesis in /Catharanthus roseus/ hairy root cultures through gene expression profiling and precursor feeding. *Biotechnology Progress,* **25:**1289-96 (2009).

.

V. Hosur, S. Leppanen, A. Abutaha, and R.H. Loring. Gene regulation of α4β2 nicotinic receptors: Microarray analysis of nicotine-induced α4β2 up-regulation and anti-inflammatory effects. *Journal of Neurochemistry*, **111:** 848-58, (2009).

V. Hosur and R. H. Loring. α4β2 Nicotinic Receptors Partially Mediate Anti-Inflammatory Effects through Janus Kinase 2-Signal Transducer and Activator of Transcription 3 but Not Calcium or cAMP Signaling. *Molecular Pharmacology* **79:**167-74. (2011).

T.M. Koperniak, B.K. Garg, J. Boltax, R.H. Loring. Cell-Specific Effects on Surface α7 Nicotinic Receptor Expression Revealed by Overexpression and Knockdown of Rat RIC3 Protein. *Journal of Neurochemistry* **124:** 300-9, (2013).

S. Goklany, N.F. Rizvi, R.H. Loring, E.J. Cram, C.W. Lee-Parsons. Jasmonate-dependent alkaloid biosynthesis in Catharanthus Roseus hairy root cultures is correlated with the relative expression of Orca and Zct transcription factors. Biotechnol Prog. 2013 Nov-Dec;29(6):1367-76

B.K. Garg, R.H. Loring. Evaluating Commercially Available Antibodies for Rat α7 Nicotinic Acetylcholine Receptors. J Histochem Cytochem. 2017 Sep;65(9):499-512.

Patel H, McIntire J, Ryan S, Dunah A, Loring R. Anti-inflammatory effects of astroglial α7 nicotinic acetylcholine receptors are mediated by inhibition of the NF-κB pathway and activation of the Nrf2 pathway. J Neuroinflammation. 2017 Sep 26;14(1):192-207.

B.K. Garg, R. H. Loring GTS-21 has cell-specific anti-inflammatory effects independent of α7 nicotinic acetylcholine receptors. PLoS One. 2019 Apr 4;14(4):e0214942. doi: 10.1371/journal.pone.0214942. eCollection 2019.

S. Sonti, M. Tolia, R. I. Duclos Jr., R. H. Loring, S. J. Gatley, Metabolic studies of synaptamide in an immortalized dopaminergic cell line. Prostaglandins Other Lipid Mediat. 2019 Apr;141:25-33.

A. Deshpande, R. M. Vinayakamoorthy, B. Garg, J. P. Thummapudi, G. Oza, K. Adhikari, A. Agarwal, P. Dalvi, S. Iyer, S. T. Raman, V. Ramesh, A. Rameshbabu, A. Rezvaya, S. Sukumaran, S. Swaminathan, B. Tilak, Z.Wang, P.V. Tran and R. H .Loring. Why does knocking out NACHO, but not RIC3, completely block expression of α7 nicotinic receptors in mouse brain? Biomolecules. 2020 Mar 19;10(3):470. doi: 10.3390/biom10030470.

Aizenman E, Loring RH, Reynolds IJ, Rosenberg PA. The Redox Biology of Excitotoxic Processes: The NMDA Receptor, TOPA Quinone, and the Oxidative Liberation of Intracellular Zinc. Front Neurosci. 2020 Jul 24;14:778. doi: 10.3389/fnins.2020.00778. eCollection 2020.

RH Loring, Speculation on How RIC-3 and Other Chaperones Facilitate α7 Nicotinic Receptor Folding and Assembly. Molecules. 2022 Jul 15;27(14). doi: 10.3390/molecules27144527. Review. PubMed PMID: 35889400; PubMed Central PMCID: PMC9318448.

****

Abstracts presented at meetings off-campus:

Loring, R.H. and Salpeter, M.M. ^{125}I-α-Bungarotoxin binding to denervated muscle: A survey study using light and EM autoradiography. *Soc. for Neurosci. Abst.* **4**:604 (l978).

Loring, R.H. and Salpeter, M.M. Denervation increases turnover rates at mouse neuromuscular junctions. *J. Cell Biol.* **83**:137a (l979).

Loring, R.H., Levitt, T.A. and Salpeter, M.M. Neuronal control of metabolic turnover of junctional acetylcholine receptors. *Soc. for Neurosci. Abst.* **6**:383 (l980).

Loring, R.H. and Zigmond, R.E. Localization of ^{125}I-α-bungarotoxin binding in chick ciliary ganglia. *Soc. for Neurosci. Abst.* **8**:334 (l982).

Loring, R.H., Chiappinelli, V.A., Zigmond, R.E. and Cohen, J.B. Characterization of a snake venom neurotoxin which blocks nicotinic transmission in autonomic ganglia. *Soc. for Neurosci. Abst.* **9**:1143 (1983).

Loring, R.H. and Zigmond, R.E. Amino Acid sequence of a neurotoxin that blocks neuronal nicotinic receptors and localization of its binding sites in the chick ciliary ganglion. *Soc. for Neurosci. Abst.* **11**:92 (1985).

Loring, R.H., Sah, D.W.Y., Landis, S.C. and Zigmond, R.E. Toxin F selectively blocks nicotinic transmission in cultured sympathetic neurons and binds to sites near synapses. *Soc. for Neurosci. Abst.* **12**:237 (l986).

Loring, R.H., Aizenman, E., Lipton, S.A. and Zigmond, R.E. Characterization of nicotinic receptors in chick retina. *Soc. for Neurosci. Abst.* **13**:795 (1987).

Aizenman, E., Loring, R.H., Zigmond, R.E. and Lipton, S.A. Blockade of nicotinic acetylcholine responses by toxin F in isolated rat retinal ganglion cells and binding of radiolabeled toxin F to rat retinal homogenates. *Soc. for Neurosci. Abst.* **13**:940 (1987).

Zigmond, R.E. and Loring, R.H. The ultrastructural distribution of innervation within the rat pineal gland arising from the two superior cerivical ganglia. *Soc. for Neurosci. Abst.* **13**:1662 (1987).

Loring, R.H., Aizenman, E., Lipton, S.E. and Zigmond, R.E. Characterization of nicotinic receptors in chick retina. *NATO advanced research workshop on Nicotinic Acetylcholine Receptors in the Nervous System*. Program abstracts, p. 36 (l988).

Zigmond, R.E., Loring, R.H., Sah, D.W.Y., Aizenman, E., Lipton, S.A. and Landis, S.C. Characterization of nicotinic receptors in autonomic ganglia and in the CNS using neuronal bungarotoxin. *International Symposium on Nicotinic Receptors in the CNS-Their Role in Synaptic Transmission, Uppsala, Sweden*. Program abstracts, p. 14 (1988).

Loring, R.H., Aizenman, E., Lipton, S.A. and Zigmond, R.E. Properties of neuronal nicotinic receptors from chick retina. *Soc. for Neurosci. Abst*. **14**:231 (1988).

Aizenman, E., Lipton, S.A. and Loring, R.H. NMDA responses are modulated by reduction and oxidation. *Biophys. J.* (abstracts), **55**:64a (1989).

Loring, R.H. Nicotinic receptors characterized by neuronal bungarotoxin. *Trans. American Soc. Neurochem.* **20**:279 (1989).

Oswald, R.E., Bamberger, M., Sutcliffe, M.J., Loring, R.H., Zigmond, R.E. and Dobson, C.M. Solution structure of neuronal bungarotoxin determined by two-dimensional H/NMR spectroscopy. *Soc. for Neurosci. Abst.* **15**:64 (1989).

White, W.F., Senatus, P.B., Lipton, S.A., Loring, R.H. and Aizenman, E. [^{3}H]CGS-19755 binding to NMDA receptors: interactions with the glycine modulatory site. *Soc. for Neurosci. Abst.* **15**:202 (1989).

Loring, R.H. and Xie, Y. Agmatine acts as an antagonist of nicotinic receptors. *Soc. for Neurosci. Abst.* **15**:678 (1989).

Aizenman, E., White, W.F., Loring, R.H. and Rosenberg, P.A. A Dopamine-related substance acts as a glutamatergic agonist. *Soc. for Neurosci. Abst.* **15**:768 (1989).

Loring, R.H. Pharmacological properties of functional neuronal nicotinic receptors. *European Soc. for Neurochem. Abst.* **8**:45 (1990).

Loring, R.H, Xie, Y. and Jones, G.S. Jr. Effects of oxidizing agonists on nicotinic receptors. *Soc. for Neurosci. Abst.* **16**:205 (1990).

Xie, Y., Loring, R.H and Jones, G.S. Jr. Effects of reducing agonists on nicotinic receptors. *Soc. for Neurosci. Abst.* **16**:205 (1990).

Crawford, D.S., Aizenman, E., Loring, R.H. and Rosenberg, P.A. TOPA oxidizes in solution to form an amino acid which is a non-NMDA agonist. *Soc. for Neurosci. Abst.* **16**:1183 (1990).

Xie, Y. and Loring, R.H. Nereistoxin: Redox effects on neuronal nicotinic receptors in chick retina. *Soc. for Neurosci. Abst.* **17**:23 (1991).

Loring, R.H., Lane, W., Dou, Y. and Stevensen, K. Ehrlich's magic bullet revisited: Aromatic arsenoxides as selective reagents for nicotinic receptors. *Soc. for Neurosci. Abst.* **17**:23 (1991).

Loring, R.H., Dou, Y.M., Lane, W., Rossant, C. and Hawrot, E. Interaction of dithiols with reduced or arsenylated nicotinic receptors and receptor peptides. *Soc. for Neurosci. Abst.* **18**:801 (1992).

Xie, Y., Tang, L.-H., Aizenman, E. and Loring, R.H. Redox effects of nereistoxin on neuronal nicotinic acetylcholine receptors (nAChRs) of chick ciliary ganglion. *Soc. for Neurosci. Abst.* **18:**801 (1992).

Loring, R.H., Q.-B. Zhu, X.-G. Zhang and J. Lindstrom Reduced α7-containing nicotinic receptors from chick brain are not arsenylated with high affinity by aromatic arsenoxides. *Soc. for Neurosci. Abst.* **19**:465 (1993).

Xie, Y., Loring, R.H. and Jones, G.S.Jr. The reduced form of nereistoxin is responsible for redox effects on neuronal nicotinic receptors (nAChRs). *Soc. for Neurosci. Abst.* **19**:1534 (1993).

Loring,R., McHugh,T., Zhang,X., and McKay,J. Epibatidine is a more potent desensitizer of neuronal nicotinic receptors than nicotine. *International Symposium on Nicotine.* P35 (1994).

Loring,R., McHugh,T., Zhang,X., and McKay,J. Epibatidine: A promising ligand for neuronal nicotinic receptors. *Soc. for Neurosci. Abst.* **20:** 1135 (1994).

Loring R.H., Zhang X.-G., Sharma A., Baaj A., Moaddel R. and Jones G.S., Jr. Biotinylated arsenicals: Probes for the agonist binding site of Torpedo nicotinic receptors. *Soc. for Neurosci. Abst.* **21:**1582 (1995).

Zhang X.-G., McHugh T., Moadel R., Jones G.S., Jr. and Loring, R.H. Effects of a biotinylated arsenical on neuronal nicotinic receptors. *Soc. for Neurosci. Abst.* **21:**1583 (1995).

Loring, R.H., Moaddel, R., McHugh, T., Zhang, X.G. Wu, Y.Y., and Jones, G.S. Jr. Effects of N-(4-arsenosophenyl)succinamic hydrazide on nicotinic receptors. *Soc. for Neurosci. Abst.* **22:**1266 (1996).

Loring, R.H., Zhang, X.G., and McHugh, T. Arsenylation blocks nicotinic receptor function in isolated ciliary neurons, but not in intact ganglia. *Abst. Soc. Neurosci*. **23:**388 (1997).

Moaddel, R., Hanson, R., Loring, R.H., and Jones, G.S. Jr. Synthesis and evaluation of novel bifunctional probes for the neuronal nicotinic receptor. *American Chemical Soc. Abst.* (1997).

The non-equivalency of homomeric rat α7 neuronal nicotinic receptor binding sites demonstrated using p-aminophenyl arsonous acid (p-APA). T.H. Tran, K. Wenberg, M. Quik, and R.H. Loring, *Society for Neurosciences Abstract* (1998) **24:**831.

The disulfide bond of the nicotinic receptor agonist binding site is located at least 15 Å from the receptor surface, R. Moaddel, T. Huseni, R.N. Hanson, G.S. Jones, Jr., and R.H. Loring, *Society for Neuroscience Abstract* (1998) **24:** 1340

Expression and assembly of neuronal nicotinic receptors are both host-cell and receptor-subtype dependent: Results with human adenovirus. W. Sweileh, K. Wenburg, J.Xu, J. Forsayeth, and R.H. Loring, *Society for Neuroscience Abstract* (1998) **24:**839

Virally Transfected α4β2 Nicotinic Receptors are Downregulated by Chronic Nicotine. W. Sweileh, R. Ghosh, P. Modadugu, R.W. Finberg, and R.H. Loring. *Society for Neuroscience Abstract* (1999) **25**: 1492.

Novel Radiolabeled Arsenylating Agents for Nicotinic Receptors. R. Moaddel, J. Najim, P. Modadugu, R. Hanson, and R.H. Loring. *Society for Neuroscience Abstract* (1999) **25:** 979.

The Effects of PKC Modulators on Nicotine-Induced α4β2 Up-regulation. W. Sweileh and R.H. Loring. ASPET June 2000 meeting in Boston.

Nicotine-Induced Downregulation of α4β2 Receptors in Adenovirus-Infected Cells can be reversed with Okadaic Acid. W. Sweileh, D. Armentano, R. Gregory, Y. Zhang, P.A. Rosenberg, J. Forsayeth, and R.H. Loring. *Society for Neuroscience Abstract*, #138.10, 2000.

Effects of Cycloheximide & Brefeldin A on Nicotine-Induced Upregulation of α4β2 Nicotinic Receptors: Evidence against Receptor Stabilization. R.H. Loring and W. Sweileh. *Society for Neuroscience Abstract*, #138.9, 2000.

The effects of adenoviral infection on nicotine-induced up-regulation of nicotinic receptors are receptor subtype specific. W. Sweileh, Y. Zhang, J. Forsayeth, D. Armentano, P.A. Rosenberg, R.H. Loring et al. *10th Neuropharmacology Conference*, 2000.

Evidence against α4β2 nicotinic receptor stabilization during nicotine-induced up-regulation: Studies with cycloheximide and brefeldin A. R.H. Loring and W. Sweileh, *10th Neuropharmacology Conference*, 2000.

Surface expression of chimeric α7-GFP nicotinic receptors is cell type specific. R.H. Loring, H. Lee, W. Chen, F. Sala, S. Sala, J.J. Ballesta, M. Criado. *Society for Neuroscience Abstract*, #145.8, 2001.

Agonist-induced internalization of α4β2 nicotinic receptors R.H. Loring, A. Abutaha. . *Society for Neuroscience Abstract*, #432.6. 2002.

Genechip® analysis of nicotine-induced upregulation of human α4β2 nicotinic receptors in SH-EP1 cells. S. Leppanen, A. Abutaha, R. Kolouch, R.H. Loring. *Society for Neuroscience Abstract*, #681.16. 2003.

Gene analysis of nicotine-induced upregulation of human α4β2 nicotinic receptors. R.H. Loring, V. Visalakshi, S. Leppanen. *Society for Neuroscience Abstract*, #723.22. *2005.*

Gene Analysis of nicotine-induce regulation of human α4β2 nicotinic receptors. V.Hosur, R.H. Loring, V. Visalakshi, S. Leppanen. *New England Pharmacologists, Waltham, MA Feb. 10th, 20, 2006* Note: Vishnu Hosur was awarded a monetary prize for one of the best presentations at the meeting.

Cloning rat Ric-3, a protein putatively involved in α7 nicotinic receptor expression. R.H. Loring, S.P. Sherman *Society for Neuroscience Abstract, #5429 2006.*

Human α4β2 nicotinic acetylycholine receptors modulate pro-inflammatory genes upon chronic exposure to nicotine. V. Hosur, R.H. Loring, *Society for Neuroscience Abstract, #675.1 2007.*

Monitoring α7 nicotinic receptor protein folding, assembly and expression using GFP-tagged chimeric proteins. R.H. Loring, P. Anandjiwala, L. Gwalani, H.-K. Lee, D.O'Malley. *Society for Neuroscience Abstract*, #31.6. *2008.*

Do genes play a role in nicotine-induced α4β2 receptor upregulation? V. Hosur and R.H. Loring. *Society for Neuroscience Abstract*, # 233.22. *2008.*

Anti-inflammatory effects of α4β2 nicotinic receptor activation revealed through microarray analysis of nicotine-induced gene changes. V. Hosur, S. Leppanen, A. Abutaha, M. Marks, and R.H. Loring. *Biochemical Pharmacology v78, p924 2009.*

Anti-inflammatory a4b2 nicotinic receptors block NFkB activation through JAK-STAT signaling. R.H. Loring, V. Hosur. *American Society for Neurochemistry, March 8, 2010,* Santa Fe, New Mexico

Stability of rat Ric3 after RNAi: Evidence for additional α7 nicotinic receptor chaperone activity in GH4C1 cells. R.H. Loring, T. Koperniak, B. Garg, J. Boltax. *Wellcome Trust's nAChR Symposium 2011*, Hinxton, UK, May 18-21

Investigations into nicotinic Stat3 signaling using a luciferase reporter plasmid. R.H.Loring, A. Chandrashekar, T. Koperniak, and S. Madasu *Nicotinic Acetylcholine Receptors as Therapeutic Targets: Basic Research and Clinical Sciences*, Satellite meeting of the Society for Neuroscience, Hyatt Dulles in Herndon, Virginia November 9-11, 2011, Published in *Biochemical Pharmacology* (2011), **82:** 1034-1035

Evidence for additional α7 nicotinic receptor chaperones in GH4C1 cells after knocking down rat Ric3 protein, T. Koperniak, B.Garg, J. Boltax, R.Loring, *Society for Neuroscience* 2011, Washington, D.C. November 12-16, Program#/Poster#: 442.14/C43 (2011)

Investigating whether nicotinic α7 receptor-STAT3 immune signaling is metabotropic. T. Koperniak, S. Madasu, A. Sawant, A. Chandrashekar, N. Soni, P. Naiki, C. Peng, R.H. Loring. *Society for Neuroscience* 2012, New Orleans, LA. (2012)

TNF and IL-6/STAT3 crosstalk revealed in a commercially-available cell line, Ralph H Loring, Pranitha Naiki, Ting Wu, and Brijesh Garg, ASPET meeting, Boston MA (2013) Published in FASEB J April 9, 2013 27:lb552

Biphasic effects of anatabine on nicotinic receptors and NFkB signaling R.H. Loring, Y. Szeto, L. Guo, M. Pires, R. Papke. *Society for Neuroscience* 2013, San Deigo, CA. (2013)

Nov 18, 2014, Society for Neuroscience, Washington DC. S. Sonti, S. J. Gatley, R. I. Duclos, R. H. Loring, K. Qian #493.13. Docosahexaenoic acid and its ethanolamide in the brain: Possible role in early development and neuroprotection of the dopaminergic system

Nov 18, 2014, Society for Neuroscience, Washington DC H. Patel, A. Dunah, R.H. LORING #509.10 Investigating the effect of microglial α7 nicotinic receptor activation on lipopolysaccharide mediated tumor necrosis factor-α secretion

Nov 19, 2014, Society for Neuroscience, Washington DC R.H. Loring, B. Garg, A. Kulkarni, G. Thakur; #807.16 Studying anti-inflammatory signaling by alpha7 nicotinic receptors in heterologous expression systems

April 1, 2015 ASPET, Boston, R.H. Loring, B. Garg, Abstract 101619. Studying α7 nicotinic receptor anti-inflammatory signaling.

Nov 13, 2016 Society for Neuroscience, San Diego, CA H. Patel, A.W. Dunah, R.H. Loring. #128.12 Role of astroglial α7 nicotinic acetylcholine receptors in neuroinflammation and oxidative stress

Nov 16, 2016, Society for Neuroscience, San Diego, CA R.H. Loring, B. Garg, H. Lin, A. Rezvaya, B. Tilak, # 682.06. Cell type-dependent TMEM35 expression and its effects on surface α7 nicotinic acetylcholine receptors

May 9, 2017 R.H. Loring, B. Garg, H. Lin, A. Rezvaya, R. Adhav, H. Arnarson, B. Tilak, Cell type-dependent NACHO expression and its effects on surface α7nicotinic acetylcholine receptors, Nicotinic Receptor Conference, Chania, Crete

Nov 14, 2017, Society for Neuroscience, Washington DC, B.K. Garg, R.H. Loring #465.10. GTS-21 has cell-specific anti-inflammatory effects that are independent of α7 nicotinic receptors

Nov 5, 2018. Society for Neuroscience, San Diego CA. R.H. Loring, S. Sukumaran, J.P. Thummapudi, Z. Wang. #283.06. Evaluating commercially available antibodies for RIC3

Oct 23, 2019 Society for Neuroscience, Chicago Il. R.H. Loring, S.K. Iyer, K. Adhikari, Z. Wang, S. Oruganti, L. Hansen, V. Ramesh. #644.01. TMEM35/NACHO recognizes α7 nicotinic receptor transmembrane domains but cannot rescue mixed chimeras.

Nov. 10, 2021 Society for Neuroscience, Online. R.H.Loring, K. Agarwal, M. Gupta. #P086.07 - Speculation on how RIC3 assists alpha7 nicotinic receptor pentameric assembly.