Sulie Lin Chang, Ph.D.

Home Address
28 Hickory Road
Short Hills, NJ 07078
Telephone: (973) 379-0192

Office Address
Seton Hall University
Department of Biology
400 South Orange Avenue
South Orange, NJ 07079
Tel: (973) 761-9456
Fax: (973) 275-2489
E-mail: changsul@shu.edu

Personal Data:

Citizenship: U.S.A.

Education:

1980 - 1984	The Ohio State University, Columbus, Ohio, Ph.D., Biochemistry
1977 - 1980	State University of New York at Albany, New York, M.A., Social Psychology
1971 - 1975	National Chengchi University, Taipei, Taiwan, B.A., Sociology

Professional Experience:

2002 - present	Professor, Department of Biology, Seton Hall University, South Orange, New Jersey
2001- present	Director of Biology Dual Degree Program (Biology/Physical Theraphy; Biology/Physican Assistant; Biology/Athletic Training)
1999 - present	Chair, Department of Biology, Seton Hall University, South Orange, New Jersey
1998 - 2002	Associate Professor, Department of Biology, Seton Hall University, South Orange, New Jersey
1994 - 1998	Assistant Professor, Department of Biology, Seton Hall University, South Orange, New Jersey
1990 - 1993	Assistant Professor-Research, Department of Physiology and Neuroscience Center of Excellence, Louisiana State University Medical Center, New Orleans, Louisiana
1987 - 1990	Research Assistant Professor, Department of Anatomy, and Neuroscience Graduate Program, Tulane Medical School, New Orleans, Louisiana
1985 - 1987	Visiting/Staff Fellow, Section on Organelle Biochemistry, Laboratory of Cell Biology, National Heart, Lung, and Blood Institute, National Institutes of Health, Bethesda, Maryland
1976 - 1977	Teaching Assistant, Department of Sociology, National Chengchi University, Taipei, Taiwan
1975 - 1976	Research Assistant, Department of Ethnology, Academia Sinica, Taipei, Taiwan

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Teaching Experience:

- Introduction to Biology
- Anatomy and Physiology
- Biochemistry
- Medical Histology
- Cell Biology
- Signal Transduction
- Molecular and Cellular Biology
- Cancer Biology
- Methods in Neuroscience
- Senior Biology Seminar

Societies:

- Society on NeuroImmune Pharmacology (Charter member)
- American Association of Immunologist
- Society for Neuroscience
- Women in Neuroscience
  (Local Arrangements, 1991; National Meeting Steering Committee, Fund raiser, 1991-1995)
- Asia Center at Seton Hall University

Honors, Seminars, and Symposia:

- Invited Speaker, Symposium for Neurobiology of Drug Addiction, Southeast Regional Meeting of the Society for Neuroscience, 1989
- Invited Speaker, "Microtubule Corset Proteins of A Trypanosomatid", Department of Parasitology, Tulane School of Public Health, 1989
- Invited Speaker, "The FOS Proto-oncogene Protein: Regulation by Morphine in Rat Brain", Department of Biochemistry, Tulane School of Medicine, 1990
- Invited Speaker, "Morphine Inducible FOS Proto-oncogene Protein", Department of Cellular and Molecular Biology, Tulane University, 1991
- Invited Speaker, "Morphine Modulates Interleukin-1 Activity in the Rat Hypothalamus", Department of Pharmacology, University of Tennessee, 1993
- Invited Speaker, Mini-symposium on Opiates: From Biochemistry to Behavior. Greater New Orleans Society for Neuroscience, 1993
- Independent Reviewer, VA Merit Review Board, 1993-1999
- Invited Speaker, the 3rd Annual Symposium on AIDS, Drugs of Abuse, and the Neuroimmune Axis, 1995
- Invited Speaker, Workshop on Cytokines and Neurodegenerative Diseases, 1995
- Honored guest, reception to recognize outstanding faculty, 1995
- Invited Speaker, the 4th Annual Symposium on AIDS, Drugs of Abuse, and the Neuroimmune Axis, 1996
- Seton Hall University Outstanding Scholar Award, 1996
- Ad hoc Study Section, Biochemical/Clinical Research, National Institute on Drug Abuse, 1996
- Sponsor, UMDNJ-Robert Woods Johnson Medical School Summer Research Fellowship Program, 1996-1997 (receipent: Nilesh A. Patel) and 1999 (receipent: Jitesh A. Patel)
- Member, Editorial Board of the Proceedings Publication of the 5th Annual Symposim on AIDS, Drugs of Abuse, and the Neuroimmune Axis, 1997
- Invited speaker, the 5th Annual Symposium on Drug of Abuse, Immunomodulation, and AIDS, 1997
- Independent Reviewer, Civilian Research & Development Foundation, 1997
- Guest, Faculty Awardee Luncheon, Seton Hall University, 1994-2001
- Member, National Institutes of Health, National Institue on Drug Abuse Site Visit Team, 1997
- Invited speaker and Chair, the 6th Brain Immune Axis Symposium. 1998
- 1998 Who's Who Among American Teachers
- Co-sponsor, Workshop on Developing Professional Interestts for Future Chinese American Leaders, Seton Hall University, 1998
- Member, National Institutes of Health, National Institute on Drug Abuse Study Section (ZDA1-MXS-M-09), 1998-1999
- Honored Lifetime Member, Lexington Who's Who, 2000
- Student's Choice Award from the AED, the premedical student association, at Seton Hall, 2000
- Member, National Institutes of Health, NIDA-K Study Section, 1999-2002
- Ad Hoc Member, National Institutes of Health, AARR5 Study Section, 2003

Grants:

- Louisiana State University Institutional Cancer Research Grant, "Growth Effects of an Opiate Modulating Peptide in Cancer Cell Lines," Cancer Crusaders, Inc. 6/91 - 4/92. Total direct cost: $4,900.00 (P.I.: Sulie L. Chang)
- Louisiana State University Neuroscience Center of Excellence Research Award, "Action Mechanism of Interleukin-1 in the Central Nervous System," 11/91 - 12/93. Total direct cost: $31,811.40 (Co-P.I.s: Sulie L. Chang and James Thompson)
- RO1 (DA05969), "Molecular Neurobiology of Morphine Actions." National Institute on Drug Abuse, 10/89 - 8/94. Total direct cost: $110,180.00 (P.I.: Sulie L. Chang)
- RO1 (DA07058-01-06), "Morphine's Actions on the Immune System," National Institute on Drug Abuse, 3/92 - 2/97. Total cost: $414,021.00 (P.I.: Sulie L. Chang)
- 3 RO1s (DA07058-08S1), Summer research placement for undergraduates to study morphine's actions on the immune system. National Institute on Drug Abuse, 06/98 to 08/98. Total direct cost: $3,672.00 (P.I.: Sulie L. Chang)
- 3 RO1s (DA07058-08S1), Summer research placement for undergraduates to study morphine's actions on the immune system. National Institute on Drug Abuse, 06/99 to 08/99. Total direct cost: $6,042.00 (P.I.: Sulie L. Chang)
- 3 RO1s (DA07058-08S2), Research supplements for under-represented minorities to study morphine's actions on the immune system. National Institute on Drug Abuse, 09/98 to 08/00. Total direct cost: $64,796.00 (P.I.: Sulie L. Chang)
- 3 RO1s (DA07058-09S2), Research supplements for under-represented minorities to study morphine's actions on the immune system. National Institute on Drug Abuse, 02/01 to 12/01. Total direct cost: $20,042.00 (P.I.: Sulie L. Chang)
- RO1 (DA07058-07-11), "Morphine's Actions on the Immune System." National Institue on Drug Abuse, 03/01/97 to 01/31/02. Total cost: $655,909.00 (P.I.: Sulie L. Chang)
- "Program Enhancement for Molecular and Cellular Biology at Seton Hall University." New Jersey Commission on Higher Education, 09/01/01 5o 06/30/02. Total direct cost: $100,000.00 (Porject Leader: Sulie L. Chang)
- RO1 (DA07058-12-16), "Morphine's Actions on the Immune System." National Institue on Drug Abuse, 03/15/02 to 01/31/07. Total cost: $1,066,310.00 (P.I.: Sulie L. Chang)
- KO2 (DA016149-01), "Morphien Actions on the Immune System." National Institue on Drug Abuse, pending with priority score of 133. Total cost: $561,685.00. (P.I.: Sulie L. Chang)

Personnel Sponsorships:

- Dr. Tao Ren — Postdoctoral Fellow (92 - 93)
- Dr. Lee Liang — Research Associate (92 - 93)
- Dr. Frank Y. Niu — Postdoctoral Fellow (93 - 94)
- Mr. Gao-de Wu — Research Associate (94 - 96)
- Mr. Nilesh A. Patel — Research Assistant (94 -97)
- Dr. Hanhua Cheng — Visiting Professor of Wuhan University (98-99)
- Dr. Qunhao Zhang — Senior Postdoctoral Fellow (98-99)
- Dr. Yuhui Jiang — Postdoctoral Fellow (98-00)
- Dr. Maria MacWillliams — Assistant Professor (summer 00)
- Dr. Allan Blake — Assistant Professor (August 00)
- Dr. Linda Hsu — Associate Professor (summer 00)
- Ms. Xin Mao — Visiting Scholar of Wuhan University (00-01)
- Dr. Hsien-Ching Liu — Assistant Professor (fall 02 to present)

Bibliography:

I. Thesis and Dissertation

1. Lin, Sulie. 1980. Theoretical methods underlying the effect of social tolerance on attitude-behavior consistency. Master's Thesis, State University of New York, Albany, New York.
2. Chang, Sulie L. 1984. Studies of a *de novo* pathway for GDP-6-fucose synthesis in porcine thyroid gland. Doctoral Dissertation, The Ohio State University, Columbus, Ohio.

II. Papers

1. Lin, Sulie. 1976. Field methods in the study of organization. The Words and Thought, 13(5): 327-337.
2. Lin, Sulie. 1976. Dilemma of the working girl in industry in Taiwan. Tribune of Opinions in China, 2(6): 47-48.
3. Lin, Sulie. 1977. Leisure activities of workers in the developing industry: a field study report of a textile factory in Kuasang, Taiwan. Tribune of Opinions in China, 3(5): 37-41.
4. Broschat, Kay O., Sulie L. Chang, and George S. Serif. 1985. Purification and characterization of GDP-D-mannose-4,6-dehydratase from porcine thyroid. Eur. J. Biochem., 153: 87-92.
5. Chang, Sulie L., Kay O. Broschat, and George S. Serif. 1985. An assay for GDP-D-mannose-4,6-dehydratase. Analytical Biochem., 144: 253-257.
6. Bramblett, Gregory T., Sulie L. Chang, and Martin Flavin. 1987. Periodic cross-linking of microtubules by cytoplasmic microtubule-associated and microtubule-corset proteins from a *Trypanosomatid*. Proc. Natl. Acad. Sci. USA, 84(10): 3259-3263.
7. Chang, Sulie L., Barbara Duerr, and George S. Serif. 1988. An epimerase-reductase in L-fucose synthesis. J. Biol. Chem., 263(4): 1693-1697.
8. Chang, Sulie L. and Martin Flavin. 1988. Tubulin modification by tyrosination in *Crithidia*. Cell Mol. Cytoskel., 10: 400-409.
9. Chang, Sulie L., Steve P. Squinto, and Richard E. Harlan. 1988. Morphine activation of c-*fos* expression in rat brain. Biochem. Biophys. Res. Comm., 157(2): 698-704.
10. Kambadur, Ravi, Marc Lewis, Sulie L. Chang, and Martin Flavin. 1990. Characterization of putative cytoskeletal proteins from a *Trypanosomatid* and their comparative binding to microtubules and soluble tubulin. J. Biol. Chem., 265(34): 20959-20965.
11. Chang, Sulie L. and Richard E. Harlan. 1990. The FOS proto-oncogene protein: regulation by morphine in the rat hypothalamus. Life Sci., 46(25): 1825-1832.
12. Zadina, James E., Sulie L. Chang, L-J. Ge, Abba J. Kastin, and Richard E. Harlan. 1990. Down-regulation of mu opiate receptors by morphine and presence of Tyr-MIF-1 binding sites in SH-SY5Y human neuroblastoma cells. In: J.M. Van Ree (Ed.), *New Leads in Opioid Research*, Elsevier, Amsterdam, pp. 151-153.
13. Chang, Sulie L., Louaine Spriggs, and James Zadina. 1992. Effects of morphine treatment on mRNA levels of pro-opiomelanocortin and proto-oncogene c-*fos* in a neuroblastoma cell line. NIDA Research Monograph, 119: 264.
14. Chang, Sulie L., James E. Zadina, and Tao Ren. 1993. Interleukin-1 activates c-*fos* proto-oncogene in rat brain. NIDA Research Monograph, 132: 294.
15. Chang, Sulie L., James E. Zadina, Louaine L. Spriggs, and Steve Squinto. 1993. Prolonged activation of c-*fos* and optimal activation of pro-opiomelanocortin mRNA after repeated morphine exposure in SH-SY5Y cells. Mol. Cell. Neurosci, 4: 25-29.
16. Zadina, James E., Sulie L. Chang, L-J. Ge, and Abba J. Kastin. 1993. Mu opiate receptor downregulation by morphine and upregulation by naloxone in SH-SY5Y human neuroblastoma cells. J. Pharmacol. Exp. Ther., 617: 123-130.
17. Chang, Sulie L., Tao Ren, and James E. Zadina. 1993. Interleukin-1 activation of FOS proto-oncogene in the rat hypothalamus. Brain Res., 617: 123-130.

18. Chang, Sulie L., James E. Zadina, Frank Y. Niu, and J. Thompson. 1994. Morphine modulates IL-1 activation of FOS in the rat hypothalamus. Regulatory Peptides, Supl.1: S265-266.
19. Zadina, James E., Abba J. Kastin, Lin-Jun Ge, and Sulie L. Chang. 1994. Novel peptides and mechanisms of opiate tolerance. Regulatory Peptides, Supl. 1: S195-196.
20. Zadina, James E., L.M. Harrison, L-J. Ge, Abba J. Kastin, and Sulie L. Chang. 1994. Differential regulation of mu and delta opiate receptors by morphine, selective agonists and antagonists and differentiating agents in SH-SY5Y human neuroblastoma cells. J. Pharmacol. Exp. Ther., 270: 1086-1096.
21. Chang, Sulie L., Nilesh P. Patel, Alejandro A. Romero, and Velga Kenig. 1994. Ethanol induces FOS immunoreactivity in the rat brain. Regulatory Peptides, 54: 51-52.
22. Liao, Jenny P., Jessica E. Samit, James E. Zadina, Velga Kenigs, Abba J. Kastin, and Sulie L. Chang. 1994. Induction of Fos immunoreactivity in rat brain by a potent analog of the brain peptide Tyr-W-MIF-1. Regulatory Peptides, 54: 163-164.
23. Zadina, James E., Abba J. Kastin, L. Hackler, Lin-Jun Ge,Velga Kenigs, Kerri A. Gergen, K.A. Messenger, and Sulie L. Chang. 1994. Opiate receptor binding, guinea pig ileum activity, and prolonged analgesia induced by the brain peptide Tyr-W-MIF and two potent analogs. Regulatory Peptides, 54: 341-342.
24. Gergen, Kerri A., Sulie L. Chang, Yu-Fei Niu, Abba J. Kastin, and James E. Zadina. 1994. Expression of the Fos proto-oncogene protein in brain after ICV administration of Tyr-W-MIF-1 (Tyr-Pro-Trp-Gly-NH_2). Peptides, 15(8): 1505-1511.
25. Zadina, James E., Abba J. Kastin, L. Hackler, and Sulie L. Chang. 1994. Cyclic analogues of Tyr-W-MIF-1 with prolonged analgesic activity and potency comparable to DAMGO and morphine. Peptides, 15(8): 1567-1569.
26. Chang, Sulie L., Velga Kenigs, Roberta L. Moldow, and James E. Zadina. 1995. Chronic treatment with morphine and ethanol, but not cocaine, attenuates IL-1β activation of FOS expression in the rat hypothalamic paraventricular nucleus. In: Burt Sharp, Herman Friedman, John Madden, and Toby Eisenstein (Eds.), *The Brain Immune Axis and Substance Abuse*, Plenum Publishing Corp., New York and London, pp. 201-208.
27. Zadina, James E., Abba J. Kastin, Laura M. Harrison, Lin-Jun Ge, and Sulie L. Chang. 1995. Opiate receptors changes after chronic exposure to agonists and antagonists. Ann. New York Acad. Sci., 757: 353-361.
28. Chang, Sulie L., Nilesh A. Patel, and Alejandro A. Romero. 1995. Activation and desensitization of Fos immunoreactivity in the rat brain following ethanol administration. Brain Res., 679: 89-98.
29. Chang, Sulie L., James M. Bersig, Gao-de Wu, Nilesh A. Patel, James E. Zadina, and Steven D. House. 1995. Chronic exposure to morphine attenuates leukocyte-endothelial interactions (LEI) in the rat mesentery. NIDA Research Monograph, 162: 189.
30. Patel, Nilesh A., Alejandro A. Romero, James E. Zadina, and Sulie L. Chang. 1996. Chronic exposure to morphine attenuates the expression of interleukin-1β in the rat hippocampus. Brain Res., 712: 340-344.
31. Quercia, Suzanne and Sulie L. Chang. 1996. Antisense oligodeoxynucleotide attenuates in vivo expression of c-*fos* in the paraventricular hypothalamic nucleus of the rat brain. Neurosci. Lett., 209: 98-92.
32. Chang, Sulie L., Roberta L. Moldow, Steven D. House, and James E. Zadina. 1996. Morphine affects the brain-immune axis by modulating an interleukin-1β dependent pathway. In: Herman Friedman, Toby Eisenstein, John Madden, and Burt Sharp (Eds.), *AIDS, Drugs of Abuse, and the Neuroimmune Axis*, Plenum Publishing Corp., New York and London, pp. 35-42.
33. Chang, Sulie L., Nilesh A. Patel, Alejandro A. Romero, James Thompson, and James E. Zadina. 1996. FOS expression induced by interelukin-1 or acute morphine treatment in the rat hypothalamus is attenuated by chronic exposure to morphine. Brain Res., 736: 227-236.

34. Chang, Sulie L., Roberta L. Moldow, Steven D. House, and James E. Zadina. 1996. Chronic exposure to morphine modulates interleukin-1β-mediated actions. J. Neuroimmunol., 69: 31-32.
35. Zhang, Ling, X-H Gan, E. Galen, S. Kang, Sulie L. Chang, Roberta L. Moldow, M. Graves, T. Newton, and Milan Fiala. 1996. Acute effects of cocaine on cytokine profiles in cocaine-dependent subjects. NIDA Research Monograph, 174: 104.
36. Graf, Jennifer A., Jitesh A. Patel, and Sulie L. Chang. 1997. Chronic exposure to morphine, not ethanol, attenuates the expression of interleukin-1β converting enzyme in rat spleen. Immunol. Lett., 58: 153-157.
37. Fiala, Milan, Ling Zhang, Sulie L. Chang, X. Gan, M.C. Graves, and T. Newton. 1997. Cocaine and tumor necrosis factor-α increase inulin and HIV-1 permeability across the blood-brain barrier. NIDA Research Monograph, 178: 117.
38. Vidal, Erich L., Nilesh A. Patel, Gao-de Wu, Milan Fiala, and Sulie L. Chang. 1998. Interleukin-1 induces the expression of mu opioid receptors in endothelial cells. Immunopharmacol., 38: 261-266.
39. Chang, Sulie L., Burt M. Sharp, and John Madden. 1998. Cellular mechanisms involved in the modulation of the immune system by drugs of abuse. In: Herman Friedman, John Madden, and Thomas Klein (Eds.), *Drugs of Abuse, Immunomodulation, and AIDS*, Plenum Publishing Corp., New York and London, pp. 1-12.
40. Chang, Sulie L., Roberta L. Moldow, Gao-de Wu, Erich L. Vidal, and Nilesh A. Patel. 1998. The association between opiates and cytokines in disease. In: Herman Friedman, John Madden, and Thomas Klein (Eds.), *Drugs of Abuse, Immunomodulation, and AIDS*, Plenum Publishing Corp., New York and London, pp. 4-6.
41. Wu, Gao-de, Jennifer A. Graf, James E. Zadina, and Sulie L. Chang. 1998. The expression of interleukin-1 converting enzyme (ICE) in rats is decreased following chronic exposure to morphine. In: Herman Friedman, John Madden, and Thomas Klein (Eds.), *Drugs of Abuse, Immunomodulation, and AIDS*, Plenum Publishing Corp., New York and London, pp. 51-58.
42. Chang, Sulie L., Gao-de Wu, Nilesh A. Patel, Erich L. Vidal, and Milan Fiala. 1998. The effects of interactions between morphine and interleukin-1 on the immune response. In: Herman Friedman, John Madden, and Thomas Klein (Eds.), *Drugs of Abuse, Immunomodulation, and AIDS*, Plenum Publishing Corp., New York and London, pp. 67-72.
43. Fiala, Milan, M., Gan, X-H, Zhang, Steven D. House, T, Newton, M.C. Graves, Paul Shapshak, M. Stins, K.S. Kinm, M. Witte, and Sulie .L. Chang. 1998. Cocaine enhances monocyte migration across the blood-brain barrier: cocaine's connection to AIDS dementia and vasculitis? In: Herman Friedman, John Madden, and Thomas Klein (Eds.), *Drugs of Abuse, Immunomodulation, and AIDS*, Plenum Publishing Corp., New York and London, pp. 199-206.
44. Patel, Nilesh A., Roberta L. Moldow, Jitesh A. Patel, Gao-de Wu, and Sulie L. Chang. 1998. Arachidonylethanolamide (AEA) activation of FOS proto-oncogene protein immunoreactivity in the rat brain. Brain Res., 797(2): 225-233.
45. Chang, Sulie L. 1998. Using e-mail in teaching. In: Karen E. Boroff (Ed.), *Teaching and Learning with Information Technology -- Some thoughts from the Faculty*, Seton Hall University, pp. 3- 5.
46. Gan, Xiaohu , L. Zhang, T. Newton, Sulie L. Chang, W. Ling, V. Kermani, M.C. Graves, and Milan Fiala. 1998. Cocaine infusion increases interferon-γ and decreases interleukin-10 in cocaine-dependent subjects. Clin. Immunol. Immunopathol., 89: 181-190.
47. Zhang, L., D. Taub, D. Looney, Sulie L. Chang, D. Way, M. Witte, M.C. Graves, and Milan Fiala. 1998. Cocaine opens the blood-brain barrier to HIV-1 invasion. J. Neuro. Virol., 4: 619-626.

48. Gan, Xiaohu, Ling Zhang, Omri Berger, Moniaue F. Stins, Dennis Way, Dennis D. Taub, Sulie L. Chang, Kwang Sik Kim, Steven D. House, Martin Weinand, Marlys Witte, Michael C. Graves, and Milan Fiala. 1999. Cocaine enhances brain endothelial adhesion molecules and leukocyte migration. Clin. Immunol., 91(1): 68-76.
49. Chang, Sulie L., James Bersigs, Bernardo Felix, Milan Fiala, and Steven D. House. 2000. Chronic cocaine alters hemodynamics and leukocyte-endothelial interactions in rat mesenteric venules. Life Sci., 66(24): 2357-2369.
50. Jiang, Yuhui, Carla Klodesky, and Sulie L. Chang. 2000. Endomorphin-1 and endomorphin-2 induce the expression of c-Fos immunoreactivity in the rat brain. Brain Res., 873: 291-296.
51. Patel, Nilesh A., Jitesh A. Patel, Monique F. Stins, Kwang S. Kim, and Sulie L. Chang. 2001. Dexamethasone affects cytokine-mediated adhesion of HL-60 human promyelocytic leukemia cells to cultured dermal microvascular endothelial cells. Clin. Immunol., 99: 387-394.
52. Chang, Sulie L. and Milan Fiala. 2001. Impact of cocaine on chemokine receptor-driven HIV neuroinvasion. NIDA Research Monograph, 181: 60-61.
53. Chang, Sulie L. 2001. Morphine affects the neuro-immune axis and enhances the permeability across the vascular endothelial cell barriers. NIDA Research Monograph, 181: 84-85.
54. House, Steven D., Xin Mao, Gao-de Wu, Dino Espinelli, Wen Xin Li, and Sulie L. Chang. 2001. Chronic morphine potentiates the inflammatory response by disrupting interleukin-1β modulation of the hypothalamic-pituitary-adrenal axis. J. Neuroimmunol., 118(2): 277-285.
55. Chang, Sulie L., Bernardo A. Felix, Yuhui Jiang, and Milan Fiala. 2002. Actions of endotoxin and morphine. In: Herman Friedman, Thomas W. Klein, and John Madden (Eds.), *Neuroimmune Circuits, Drugs of Abuse, and Infectious Diseases*, Kluwer Academic/ Plenum Publishers, New York, Boston, Dordrecht, London, and Moscow, In press.
56. Anday, Jenine K., Hsien-Ching Liu, Steven D. House, and Sulie L. Chang. 2002. Liposaccharide-induced permeability and apoptosis of vascular endothelial cells is complicated by morphine, submitted to Cardiovascular Research.
57. Yu, Xin, Allan D. Blake, Xin Mao, Wen-Xin Li, and Sulie L. Chang. 2002. Differential Effects of Morphine and Endomorphins on Mu Opioid Receptor Regulation in SHSY-5Y Human Neuroblastoma Cells, in preparation.

III. Abstracts (representative abstracts in last five years)

1. Chang, Sulie L. 1996. The involvement of the hypothalamic-pituitary-adrenal axis in morphine's effects on leukocyte-endothelial adhesion in the rat mesentery. Fourt Annual Symposium on AIDS, Drugs of Abuse, and the Neuroimmune Axis.
2. Chang, Sulie L., Gao-de Wu, and Roberta L. Moldow. 1996. Intracerebral ventricular infusion of interleukin-1β does not increase plasma corticosterone levels in morphine tolerant rats. Fourth Annual Symposium on AIDS, Drugs of Abuse, and the Neuroimmune Axis.
3. Quercia, Suzanne and Sulie L. Chang. 1996. Attenuation of interleukin-1β-induced expression of c-fos in the rat hypothalamic paraventricular nucleus. 58th Annual Meeting of the Committee on Problems in Drug Dependence.
4. Patel, Nilesh A., Erich L. Vidal, Milan Fiala, and Sulie L. Chang. 1996. Dexamethasone attenuates cytokine-mediated adhesion of HL-60 human promyelocytic leukemia cells to cultured human dermal microvascular endothelial cells. UMDNJ-Robert Woods Johnson Medical School Summer Research Fellowship.
5. Vidal, Erich L., Nilesh A. Patel, Milan Fiala, and Sulie L. Chang. 1996. Interleukin-1 induces the expression of mu opiate receptors in cultured human endothelial cells. UMDNJ-Robert Woods Johnson Medical School Summer Research Fellowship.
6. Chang, Sulie L. 1997. The interaction of morphine and interelukin-1 on the immune response. Fifth Annual Symposium on Drugs of Abuse, Immunomodulation, and AIDS.

7. Graf, Jennifer A., Jitesh A. Patel, and Sulie L. Chang. 1997. Chronic exposure to morphine, not ethanol, attenuates the expression of interleukin-1β converting enzyme in rat spleen. 59th Annual Meeting of the Committee on Problems in Drug Dependence.
8. Shih, Angela and Sulie L. Chang. 1997. The effects of garlic juice on HL-60 human promelocytic leukemia cells. Seton Hall University School of Graduate Medical Education 8th Annual Research Colloquium.
9. Zhang, Ling, X. Gan, Sulie L. Chang, T. Newton, Roberta L. Moldow, M. C. Graves, and Milan Fiala. 1997. Modulation of TH1/TH2 cytokine balance and hypothalamic-pituitary-adrenal axis by cocaine administration to cocaine-dependent subjects. Fifth Annual Symposium on Drugs of Abuse, Immunomodulation, and AIDS.
10. Gan, X., L. Zhang, M. Stins, Sulie L. Chang, T. Newton, K-S.Kim, M.C. Graves, and Milan Fiala. 1997. Cocaine enhancement of monocyte migration across the blood-brain barrier (BBB) with microvascular damage and local induction of adhesion molecules and cytokines. Fifth Annual Symposium on Drugs of Abuse, Immunomodulation, and AIDS.
11. Chang, Sulie L., Monique Stins, Gao-de Wu, Milan Fiala, and K-S Kim. 1997. Morphine activates expression of cellular adhesion molecules in cultured human endothelial cells. 28th Meeting of the International Narcotics Research Conference (INRC).
12. Patel, Nilesh A., Jitesh A. Patel, and Sulie L. Chang. 1997. Lipopolysaccharide induction of mu opioid receptors in rat mesentery. UMDNJ-Robert Woods Johnson Medical School Summer Research Fellowship.
13. Chang, Sulie L., Nilesh A. Patel, Erich L. Vidal, and Milan Fiala. 1997. Glucocorticoid suppression of cytokine-induced adhesion of HL-60 human promyelocytic leukemia cells to cultured human endothelial cells. Society for Neuroscience.
14. Kong, Rong, Nilesh A. Patel, and Sulie L. Chang. 1997. Expression of mu opioid receptors in endothelial cells. Society of Chinese Bioscientists in America (SCBA) Tri-State Regional Symposium.
15. House, Steven D., Dino Espinelli, James Bersig, Gao-de Wu, and Sulie L. Chang. 1998. Morphine alters the balance between interleukin-1β-mediated systemic and local inflammatory responses. Experiemtnal Biology.
16. Chang, Sulie L., James Bersig, Gao-de Wu, Milan Fiala, and Steven D. House. 1998. Chronic treatment with cocaine affects leukocyte-endothelial interactions (LEI) in the rat mesenteric venules. Sixth Annual Symposium on Drugs of Abuse, Immunomodulation, and AIDS.
17. Chang, Sulie L., Rong Kong, Nilesh A. Patel, Bernardo Felix, and James E. Zadina. 1998. Lipopolysaccharide (LPS) increases the expression of mesenteric mu opioid receptors and plasma levels of endomorphin-1. 29th Meeting of the International Narcotics Research Conference (INRC).
18. Jiang, Yuhui H., Carla Klowdesky, and Sulie L. Chang. 1999. Endomorphin-1 and endomorphin-2 induce the expression of FOS-immunoreactivity in the rat brain. Seventh Annual Symposium on Neuroimmune Circuits and Infectious Diseases. Young Investigator Award.
19. Rahimi, Homari, Bernardo A. Felix, Yuhui H. Jiang, Jenine A. Patel, and Sulie L. Chang. 1999. Morphine potentiates lipopolysaccharide-induced cytokine production by HL-60 human leukemia cells. Seventh Annual Symposium on Neuroimmune Circuits and Infectious Diseases.
20. Felix, Bernardo A., Jenine A. Anday, Steven D. House, and Sulie L. Chang. 2000. Synergistic effects of morphine and lipopolysaccharide endotoxin on the permeability of inulin across a microvascular endothelial cell barrier *in vitro*. 62nd Annual Meeting of the Committee on Problems in Drug Dependence.

21. Jiang, Yuhui, Steven D. House, and Sulie L. Chang .2000. Adrenalectomy alters leukocyte-endothelium interactions in rat mesenteric venules following systemic treatment with lipopolysaccharide (LPS) and acute inflammation induced by N-formyl-methionyl-leucyl-phenylalanine (FMLP). 62nd Annual Meeting of the Committee on Problems in Drug Dependence.
22. Chang, Sulie L., Bernardo A. Felix, Jenine K. Anday, Milan Fiala, and Sulie L. Chang. 2000. Morphine enhances permeability across vascular endothelial cell barriers. 30th Annual Meeting of the Society for Neuroscience.
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