

CHRISTIAN J. PIKE, PH.D.

PRESENT POSITION:

Professor
USC Davis School of Gerontology
University of Southern California

PRESENT ADDRESS:

USC Davis School of Gerontology
Andrus Gerontology Center
University of Southern California
3715 McClintock Avenue
Los Angeles, CA 90089-0191 U.S.A.

Telephone: (213) 740-4205
Fax: (213) 740-4787
Email: cjpike@usc.edu

EDUCATION:

- B.S., University of Southern California, Los Angeles, CA; Biological Sciences (*magna cum laude*) 1981 – 1985
- Ph.D., University of California, Irvine, CA; Biological Sciences (Dissertation advisor: Dr. Carl W. Cotman), 1989 – 1994
- Postdoctoral fellow, Irvine Research Unit in Brain Aging, University of California Irvine, 1994 – 1995

APPOINTMENTS:

- Assistant Research Professor, Institute for Brain Aging and Dementia and Department of Psychobiology, University of California Irvine, 1995 – 1999
- Assistant Professor, USC Davis School of Gerontology, University of Southern California, 1999 – 2005
- Voting member, USC Neuroscience Program, University of Southern California, 2002 – present
- Associate Professor, USC Davis School of Gerontology, University of Southern California, 2005 – 2012
- Professor, USC Davis School of Gerontology, University of Southern California, 2012 – present

AWARDS & HONORS:

- Trainee, National Institutes of Mental Health Predoctoral Training Grant (T32 MH-14599), 1991 – 1993
- University of California, Faculty Career Development Award, 1996
- Fellow, John Douglas French Alzheimer's Foundation, 1998 – 2000
- Andrus Center Associates, Small Grant Award, 1999
- Turken Award, Alzheimer's Association, 2000
- Hanson Family Trust Assistant Professor of Gerontology, 2000 – 2005

FUNDING:

COMPLETED FUNDING

- Alzheimer's Association, Pilot Research Grant (PRG-95-066), 1995 – 1996
Possible Regulation of Apoptotic Factors by Estrogen
Role: Principal Investigator
Total direct costs = \$30,000
- John Douglas French Alzheimer's Foundation, Fellowship, 1998 – 2000
Hormonal Regulation of Neuronal Apoptosis in Alzheimer's Disease
Role: Principal Investigator
Total direct costs = \$60,000
- National Institute on Aging, James A. Shannon Director's Award (R99 AG15961), 1998 – 2000
Mechanism of Estrogen Neuroprotection in Alzheimer's Disease
Role: Principal Investigator
Total direct costs = \$100,000
- National Institutes on Aging, ADRC Pilot Project Grant (P01 AG05142), 1999 – 2000
Evaluation of Testosterone Neuroprotection and Its Relationship with Alzheimer's Disease Neuropathology
Role: Principal Investigator
Total direct costs = \$30,000
- State of California Department of Health Services, Alzheimer's Disease and Related Disorder Research Fund (98-15721), 1999 – 2001
Estrogen Neuroprotection: Cellular, Pathological and Behavioral Correlates in Alzheimer's Disease and the Canine Model of Age-Related Dementia
Role: Principal Investigator
Total direct costs = \$225,000
- National Institutes on Aging (T32 00037), 1999 – 2009

Training in Neurobiology and Endocrinology of Aging

Role: Preceptor (PI: Caleb Finch)

- Alzheimer's Association, Investigator Initiated Research Grant (IIRG-99-1637), 1999 – 2002

Neuroprotective Actions of Steroid Sex Hormones and Their Therapeutic Relevance to Alzheimer's Disease

Role: Principal Investigator

Total direct costs = \$180,000

- National Institutes on Aging (P01 AG14751), 2001 – 2004

Testosterone Neuroprotection in vivo

Role: Project Leader (PI: Caleb Finch)

Total direct costs for project = \$334,000

- National Institutes on Aging, (R01 AG15961), 2000 – 2005

Mechanism of Estrogen Neuroprotection in Alzheimer's Disease

Role: Principal Investigator

Total direct costs = \$588,139

- National Institutes on Aging (T32 00032), 2002 – 2008

Multidisciplinary Research Training in Gerontology

Role: Preceptor (PI: Vern Bengtson, Eileen Crimmins)

- National Institutes of Mental Health, (R01 MH59776), 2004 – 2007

Physical Activity, Antidepressants, and BDNF Induction

Role: Subcontractor

Total direct costs (subcontract) = \$55,797

- Alzheimer's Association, Investigator Initiated Research Grant (IIRG-04-1274), 2004 – 2007

The Role of Age-Related Testosterone Depletion in AD

Role: Principal Investigator

Total direct costs = \$240,000

- National Institutes on Aging, ADRC Pilot Project Grant (P50 AG05142), 2008 – 2009

SARMs and Alzheimer's Disease.

Role: Project Leader (PI: Helena Chui)

Total direct costs for project = \$35,000

- National Institutes on Aging (R01 AG23739), 2005 – 2010

Androgens and Alzheimer's Disease

Role: Principal Investigator

Total direct costs = \$779,530

- National Institutes on Aging (P01 AG26572), 2006 – 2011

Progesterone in Brain Aging and Alzheimer's Disease - Project 5: Progesterone Regulation of Alzheimer Neuropathology,

Role: Project Leader (PI: Roberta Brinton)

Total direct costs for project \$490,200

ACTIVE FUNDING

- National Institutes on Aging (P50 AG05142), 2010 – 2015
Alzheimer Disease Research Center - Project 2: Novel NeuroERMs and NeuroARMs for Protection Against Alzheimer Pathology
Role: Project Leader (PI: Helena Chui)
Total direct costs for project = \$675,000
- Alzheimer's Association, Investigator Initiated Research Grant (IIRG-10-174301), 2010 – 2013
NeuroSARMs in the Prevention of Alzheimer's Disease
Role: Principal Investigator
Total direct costs = \$200,000
- National Institutes on Aging (R01 AG034103), 2011 – 2016
Interactions between Testosterone and Type 2 Diabetes in Alzheimer's Disease
Role: Principal Investigator
Total direct costs = \$1,020,000
- National Institutes on Aging (P01 AG26572), 2011 – 2016
Perimenopause in Brain Aging and Alzheimer's Disease - Project 3: Perimenopause, ovarian hormones, and obesity: interactive regulators of Alzheimer pathology.
Role: Project Leader (PI: Roberta Brinton)
Total direct costs for project \$931,235

PENDING FUNDING

- National Institutes on Aging, (R01) 2014-2019
Evaluation of TSPO as a Therapeutic Target for Alzheimer's Disease
Role: Principal Investigator
Total direct costs = \$1,250,000

PUBLICATIONS:

CITATION REPORT

- **h-index = 39**
- **total citations = 7,725**
- **average citations per article = 103**

REFEREED JOURNAL ARTICLES

1. **Pike CJ**, Walencewicz AJ, Glabe CG and Cotman CW (1991) Aggregation-related toxicity of synthetic β -amyloid protein in hippocampal cultures. *European Journal of Pharmacology*, **207**: 367-368.
2. **Pike CJ**, Walencewicz AJ, Glabe CG and Cotman CW (1991) In vitro aging of β -amyloid protein causes peptide aggregation and neurotoxicity. *Brain Research*, **563**: 311-314.

3. **Pike CJ**, Cummings BJ and Cotman CW (1992) β -Amyloid induces neuritic dystrophy *in vitro*: similarities with Alzheimer pathology. *Neuroreport*, **3**: 769-772.
4. Cotman CW, **Pike CJ** and Copani A (1992) β -Amyloid neurotoxicity: a discussion of *in vitro* findings. *Neurobiology of Aging*, **13**: 587-590.
5. **Pike CJ**, Burdick D, Walencewicz AJ, Glabe CG and Cotman CW (1993) Neurodegeneration induced by β -amyloid peptides *in vitro*: the role of peptide assembly state. *Journal of Neuroscience*, **13**: 1676-1687.
6. Loo DT, Copani A, **Pike CJ**, Whitemore ER, Walencewicz AJ and Cotman CW (1993) Apoptosis is induced by β -amyloid in cultured CNS neurons. *Proceedings of the National Academy of Sciences USA*, **90**: 7951-7955.
7. Cotman CW, **Pike CJ** and Cummings BJ (1993) Adaptive versus pathological plasticity: possible contributions to age-related dementia. *Advances in Neurology*, **59**: 35-45.
8. **Pike CJ** and Cotman CW (1993) Cultured GABA-immunoreactive neurons are resistant to toxicity induced by β -amyloid. *Neuroscience*, **56**: 269-274.
9. Korotzer A, **Pike CJ** and Cotman CW (1993) β -Amyloid peptides induce degeneration of cultured rat microglia. *Brain Research*, **624**: 121-125.
10. Stenger DA, **Pike CJ**, Hickman JJ and Cotman CW (1993) Surface determinants of neuronal survival and growth on self-assembled monolayers in culture. *Brain Research*, **630**: 136-147.
11. Weiss JH, **Pike CJ** and Cotman CW (1994) Ca^{2+} channel blockers attenuate β -amyloid peptide toxicity to cortical neurons in culture. *Journal of Neurochemistry*, **62**: 372-375.
12. **Pike CJ**, Cummings BJ, Monzavi R and Cotman CW (1994) β -Amyloid-induced changes in cultured astrocytes parallel reactive astrocytosis associated with senile plaques in Alzheimer's disease. *Neuroscience*, **63**: 517-531.
13. Watt JA, **Pike CJ**, Walencewicz AJ and Cotman CW (1994) Ultrastructural analysis of β -amyloid-induced cell death in cultured hippocampal neurons. *Brain Research*, **661**: 147-156.
14. Hickman JJ, Bhatia SK, Quong JN, Shoen P, Stenger DA, **Pike CJ** and Cotman CW (1994) Rational pattern design for *in vitro* cellular networks using surface photochemistry. *Journal of Vacuum Science Technology*, **12**: 607-616.
15. **Pike CJ**, Cummings BJ and Cotman CW (1995) Early association of reactive astrocytes with senile plaques in Alzheimer's disease. *Experimental Neurology*, **132**: 172-179.
16. **Pike CJ** and Cotman CW (1995) Calretinin-immunoreactive neurons are resistant to β -amyloid toxicity *in vitro*. *Brain Research*, **671**: 293-298.
17. **Pike CJ**, Walencewicz-Wasserman AJ, Kosmoski J, Cribbs DH, Glabe CG and Cotman CW (1995) Structure-activity analyses of β -amyloid peptides: contributions of the β 25-35 region to aggregation and neurotoxicity. *Journal of Neurochemistry*, **64**: 253-265.

18. Anderson AJ, **Pike CJ** and Cotman CW (1995) Differential induction of immediate early gene proteins in cultured neurons by β -amyloid ($A\beta$): Association of c-Jun with $A\beta$ -induced apoptosis. *Journal of Neurochemistry*, **65**: 1487-1498.
19. **Pike CJ**, Overman MJ and Cotman CW (1995) Amino-terminal deletions enhance aggregation of β -amyloid peptides *in vitro*. *Journal of Biological Chemistry*, **270**: 23895-23898.
20. Vaughan PJ, **Pike CJ**, Cotman CW and Cunningham DD (1995) Thrombin receptor activation protects neurons and astrocytes from cell death produced by environmental insults. *Journal of Neuroscience*, **15**: 5389-5401.
21. Cummings BJ, **Pike CJ**, Shankle R and Cotman CW (1996) β -Amyloid deposition and other measures of neuropathology predict cognitive status in Alzheimer's disease. *Neurobiology of Aging*, **17**: 921-933 [see also: Authors' response to commentaries, *Neurobiology of Aging*, **17**: 945-947].
22. Deng G*, **Pike CJ*** and Cotman CW (1996) Alzheimer-associated presenilin-2 confers increased sensitivity to apoptosis in PC12 cells. *FEBS Letters*, **397**: 50-54 (*contributed equally to the study).
23. **Pike CJ**, Balázs R and Cotman CW (1996) Attenuation of β -amyloid neurotoxicity *in vitro* by potassium-induced depolarization. *Journal of Neurochemistry*, **67**: 1774-1777.
24. **Pike CJ**, Ramezan-Arab N, Miller S and Cotman CW (1996) β -Amyloid increases enzyme activity and protein levels of glutamine synthetase in cultured astrocytes. *Experimental Neurology*, **139**: 167-171.
25. **Pike CJ**, Vaughan PJ, Cunningham DD and Cotman CW (1996) Thrombin attenuates neuronal cell death and modulates astrocyte reactivity induced by β -amyloid *in vitro*. *Journal of Neurochemistry*, **66**: 1374-1382.
26. Donovan FM, **Pike CJ**, Cotman CW and Cunningham DD (1997) Thrombin induces apoptosis in cultured neurons and astrocytes via a pathway requiring tyrosine kinase and Rho A activities. *Journal of Neuroscience*, **17**: 5316-5326.
27. Cribbs DH, **Pike CJ**, Weinstein SL, Velasquez P and Cotman CW (1997) All-D-enantiomers of β -amyloid exhibit similar biological properties to all-L-enantiomers. *Journal of Biological Chemistry*, **272**: 7431-7436.
28. **Pike CJ**, Ramezan-Arab N and Cotman CW (1997) β -Amyloid neurotoxicity *in vitro*: evidence of oxidative stress but not protection by antioxidants. *Journal of Neurochemistry*, **69**: 1601- 1611.
29. **Pike CJ** (1999) Estrogen modulates neuronal Bcl-x_L expression and β -amyloid-induced apoptosis: relevance to Alzheimer's disease. *Journal of Neurochemistry*, **72**: 1552-1563.
30. **Pike CJ** (2001) Testosterone attenuates β -amyloid toxicity in cultured hippocampal neurons. *Brain Research*, **919**: 160-165.

31. Stoltzner SE, Berchtold NC, Cotman CW and **Pike CJ** (2001) Estrogen regulates *bcl-x* expression in rat hippocampus. *NeuroReport*, **12**: 2797-2800.
32. Berchtold NC, Kessler J.P., **Pike CJ**, Adlard PA and Cotman CW (2001) Estrogen and exercise interact to regulate brain-derived neurotrophic factor (BDNF) gene expression in the hippocampus. *European Journal of Neuroscience*, **14**: 1992-2002.
33. Soreghan B, **Pike CJ**, Kaye R, Tian W, Milton S, Cotman C and Glabe CG (2002) The influence of the carboxyl terminus of the Alzheimer A β peptide on its conformation, aggregation, and neurotoxic properties. *NeuroMolecular Medicine*, **1**: 81-94.
34. Cordey M, Gundimenda U, Gopalakrishna R, and **Pike CJ** (2003) Estrogen activates protein kinase C in neurons: role in neuroprotection. *Journal of Neurochemistry*, **84**: 1340-1348.
35. Ramsden M, Berchtold NC, Kessler JP, Cotman CW and **Pike CJ** (2003) Exercise increases the vulnerability of rat hippocampal neurons to kainate lesion. *Brain Research*, **97**: 239-244.
36. Ramsden M, Nyborg AC, Murphy MP, Chang L, Stanczyk FZ, Golde TE and **Pike CJ** (2003) Androgens regulate β -amyloid levels in male rat brain. *Journal of Neurochemistry*, **87**: 1052-1055.
37. Ramsden M, Shin TM, and **Pike CJ** (2003) Androgens modulate neuronal vulnerability to kainate lesion. *Neuroscience*, **122**:573-578.
38. Rosario ER, Chang L, Stanczyk FZ, and **Pike CJ** (2004) Age-related testosterone depletion and the development of Alzheimer's disease. *Journal of the American Medical Association (JAMA)* **292**: 1431-1432. [see also correspondence and author's reply *JAMA* **293**: 551-552]
39. Yao M, Nguyen T-V, and **Pike CJ** (2005) β -Amyloid-induced neuronal apoptosis involves c-Jun N-terminal kinase-dependent downregulation of Bcl-w. *Journal of Neuroscience* **25**: 1149-1158.
40. Cordey M, Gundimenda U, Gopalakrishna R, and **Pike CJ** (2005) The synthetic estrogen 4-estren-3 α ,17 β -diol (estren) induces estrogen-like neuroprotection. *Neurobiology of Disease* **19**:331-339.
41. Cordey M and **Pike CJ** (2005) Neuroprotective properties of selective estrogen receptor agonists in cultured neurons. *Brain Research* **1045**: 217-223.
42. Nguyen TV, Yao M, and **Pike CJ** (2005) Androgens activate mitogen activated protein kinase signaling: role in neuroprotection. *Journal of Neurochemistry* **94**:1639-1651.
43. Cordey M and **Pike CJ** (2006) Conventional protein kinase C isoforms mediate phorbol ester and estrogen neuroprotection. *Journal of Neurochemistry* **96**: 204-217.
44. **Pike CJ**, Rosario ER, and Nguyen TV (2006) Androgens, aging, and Alzheimer's disease. *Endocrine* **29**: 233-241.
45. Rosario ER, Ramsden M, and **Pike CJ** (2006) Progestins inhibit estrogen neuroprotection against kainate lesion in female rats. *Brain Research* **1099**:206-210.

46. Rosario ER, Carroll JC, Oddo S, LaFerla FM, and **Pike CJ** (2006) Androgens regulate development of neuropathology in a triple transgenic mouse model of Alzheimer's disease. *Journal of Neuroscience* **26**: 13384-13389.
- Recommended by *Faculty of 1000 Biology*
 - Highlighted in *This Week in the Journal*
47. Chen MJ, Nguyen TV, **Pike CJ**, and Russo-Neustadt AA (2007) Norepinephrine induces BDNF and activates the PI-3K and MAPK cascades in embryonic hippocampal neurons. *Cellular Signalling* **19**: 114-128.
48. Yao M, Nguyen TV, and **Pike CJ** (2007) Estrogen prevents β -amyloid peptide induced neuronal death by regulating Bcl-w and Bim expression. *Journal of Neuroscience*, **27**: 1422-1433.
49. Nguyen TV, Yao M, and **Pike CJ** (2007) Flutamide and cyproterone acetate exert agonist effects: induction of androgen receptor-dependent neuroprotection. *Endocrinology* **148**:2936-2943.
50. Carroll JC, Rosario ER, Chan L, Stanczyk FZ, Oddo S, LaFerla FM, and **Pike CJ** (2007) Progesterone and estrogen regulate Alzheimer-like neuropathology in female 3xTg-AD mice. *Journal of Neuroscience* **27**:13357-13365.
- Highlighted in *This Week in the Journal*
51. Rosario ER and **Pike CJ** (2008) Androgen regulation of β -amyloid protein and the risk of Alzheimer's disease. *Brain Research Reviews* **57**: 444-453. PMID: PMC2390933
52. Carroll JC and **Pike CJ** (2008) Selective estrogen receptor modulators differentially regulate Alzheimer-like changes in female 3xTg-AD mice. *Endocrinology* **149**: 2607-2611. PMID: PMC2329277
53. Yao M, Nguyen TV, Rosario ER, Ramsden M, and **Pike CJ** (2008) Androgens regulate neprilysin expression: Role in reducing β -amyloid levels. *Journal of Neurochemistry* **105**: 2477-2488.
54. **Pike CJ**, Nguyen TV, Yao M, Murphy MP, and Rosario ER (2008) Androgen cell signaling pathways involved in neuroprotective actions. *Hormones and Behavior* **53**: 693-705. PMID: PMC2424283
55. Brinton RD, Thompson RF, Foy MR, Baudry M, Wang J, Finch CE, Morgan TE, **Pike CJ**, and Nilsen J. (2008) Progesterone receptors: Form and function in brain. *Frontiers in Neuroendocrinology* **29**: 313-339. PMID: PMC2398769
- Included in the journal's 2012 Virtual Issue of most outstanding articles published during the past five years

56. Carroll JC, Rosario ER, and **Pike CJ** (2008) Progesterone blocks estrogen neuroprotection from kainate in middle-aged female rats. *Neuroscience Letters* **445**: 229-232. PMID: PMC2591925
57. Jayaraman A and **Pike CJ** (2009) Progesterone attenuates oestrogen neuroprotection by downregulation of oestrogen receptor expression in cultured neurones. *Journal of Neuroendocrinology* **21** (1): 77-81. PMID: PMC2692678
58. **Pike CJ**, Carroll JC, Rosario ER, and Barron A (2009) Protective actions of sex steroid hormones in Alzheimer's disease. *Frontiers in Neuroendocrinology*. **30**(2): 239-58. PMID: PMC2728624
- Included in the journal's 2012 Virtual Issue of most outstanding articles published during the past five years
59. Rosario ER, Chang L, Beckett TL, Carroll JC, Murphy MP, Stanczyk FZ, and **Pike CJ** (2009) Age changes in serum and brain levels of androgens in male brown Norway rats. *NeuroReport* **20** (17): 1534-1537.
60. Nguyen TV, Yao M, and **Pike CJ** (2009) Dihydrotestosterone activates CREB signaling in cultured hippocampal neurons. *Brain Research* **1298**: 1-12. PMID: PMC2775803
61. Carroll JC, Rosario ER, Villamagna A, and **Pike CJ** (2010) Continuous and cyclic progesterone differentially interact with estradiol in the regulation of Alzheimer-like pathology in female 3xTg-AD mice. *Endocrinology* **151** (6): 2713-2722. PMID: PMC2875823
- Selected as 'Must Read' by *Faculty of 1000 Biology*
 - Highlighted in *Endocrine News*
62. Nguyen TV, Jayaraman A, and **Pike CJ** (2010) Androgens selectively protect against apoptosis in hippocampal neurones. *Journal of Neuroendocrinology* **22** (9): 1013-1022. PMID: PMC2924915
63. Rosario ER, Carroll JC, and **Pike CJ** (2010) Testosterone regulation of Alzheimer-like neuropathology in male 3xTg-AD mice involves both estrogen and androgen pathways. *Brain Research* **1359**: 281-290. PMID: PMC2993873
64. Carroll JC, Rosario ER, Kreimer S, Villamagna A, Gentschein E, Stanczyk FZ, and **Pike CJ** (2010) Sex differences in β -amyloid accumulation in 3xTg-AD mice: Role of neonatal sex steroid hormone exposure. *Brain Research* **1366**: 233-245 PMID: PMC2993873
65. Aguirre C, Jayaraman A, **Pike C**, and Baudry M (2010) Progesterone inhibits estrogen-mediated neuroprotection against excitotoxicity by down-regulating estrogen receptor- β . *Journal of Neurochemistry* **115** (5): 1277-1287. PMID: PMC3010223
66. Rosario ER, Chang L, Head EH, Stanczyk FZ, and **Pike CJ** (2011) Brain levels of sex steroid hormones in men and women during normal aging and in Alzheimer's disease. *Neurobiology of Aging* **32** (4): 604-613. PMID: PMC2930132

67. Barron AM, and **Pike CJ** (2012) Sex hormones, aging, and Alzheimer's disease. *Frontiers in Bioscience* **4**: 976-997.
68. Zhao L, Morgan TE, Mao Z, Lin S, Cadenas E, Finch CE, **Pike CJ**, Mack WJ and Brinton RD (2012) Continuous versus cyclic progesterone exposure differentially regulates hippocampal gene expression and functional profiles. *PLoS ONE* **7**(2): e31267. PMID: PMC3290616
69. Aras R, Barron AM, and **Pike CJ** (2012) Caspase activation contributes to astrogliosis. *Brain Research* **1450**: 102-115. PMID: PMC3319728
70. Rosario ER, Carroll JC, and **Pike CJ** (2012) Evaluation of the effects of testosterone and luteinizing hormone on regulation of β -amyloid in male 3xTg-AD mice. *Brain Research* **1466**: 137-145. PMID: PMC3399667
71. Ling D, **Pike CJ**, and Salvaterra PM (2012) Deconvolution of RT-qPCR confounding variations by separate analysis of biological replicates. *Analytical Biochemistry* **427**: 21-25. PMID: PMC3427637
72. Jayaraman A, Carroll JC, Morgan TE, Lin S, Zhao L, Arimoto JM, Murphy MP, Beckett TL, Finch CE, Brinton RD, and **Pike CJ** (2012) 17β -Estradiol and progesterone regulate expression of β -amyloid clearance factors in primary neuron cultures and female rat brain. *Endocrinology* **153** (11): 5467-5479. PMID: PMC3473201
73. Vest RS and **Pike CJ** (2013) Gender, sex steroids, and Alzheimer's disease. *Hormones and Behavior* **63**: 301-307. PMID: PMC3413783
74. Caruso D, Barron AM, Brown MA, Abbiata F, Carrero P, **Pike CJ**, Garcia-Segura LM, Melcangi RC (2013) Age-related changes in neuroactive steroids in 3xTg-AD mice. *Neurobiology of Aging* **34** (4): 1080-1089. PMID: PMC3545103
75. Barron AM, Garcia-Segura LM, Caruso D, Jayaraman A, Lee JW, Melcangi RC, and **Pike CJ** (2013) Ligand for translocator protein reverses pathology in a mouse model of Alzheimer's disease. *Journal of Neuroscience* **33** (20): 8891-8897. PMID: PMC3733563
76. Barron AM, Rosario ER, Brown MA, Eltereifi R, and **Pike CJ** (in press) Sex-specific effects of high-fat diet on indices of metabolic syndrome in 3xTg-AD mice: Implications for Alzheimer's disease. *PLoS ONE*.

SUBMITTED MANUSCRIPTS

77. Jayaraman A and **Pike CJ** (in revision) Differential effects of synthetic progestagens on neuron survival and estrogen neuroprotection in cultured neurons. *Molecular and Cellular Endocrinology*.
78. Jayaraman A and **Pike CJ** (submitted) Alzheimer's disease and type 2 diabetes: Multiple mechanisms contribute to interactions. *Current Diabetes Reports*.

79. Jayaraman A, Christensen A, Moser VA, Vest RS, Miller CP, Hattersley G, Pike CJ (submitted) Selective androgen receptor modulator RAD140 is neuroprotective in cultured neurons and kainate-lesioned male rats. *Endocrinology*.
80. Yao MZ, Rosario ER, Carroll JC, and **Pike CJ** (submitted) Androgens regulate the phosphorylation of tau through PI3 kinase-Akt-GSK3 β signaling. *Journal of Neuroscience*.

EDITED BOOK CHAPTERS

81. Cotman CW, Cummings BJ and **Pike CJ** (1993) Molecular cascades of adaptive versus pathological plasticity. In: *Neuroregeneration* (editor, Gorio A) pp 217-240, Raven Press, Ltd., New York.
82. Cotman CW, Bridges R, **Pike C**, Kesslak J, Loo D and Copani A (1993) Mechanisms of neuronal cell death in Alzheimer's disease. In: *Alzheimer's disease: Advances in clinical and basic research* (editors, Corain B, Iqbal K, Nicolini M, Winblad B, Wisniewski H and Zatta H) pp 281-289, John Wiley and Sons, Ltd., Sussex, England.
83. Cotman CW and **Pike CJ** (1994) β -Amyloid and its contributions to neurodegeneration in Alzheimer's disease. In: *Alzheimer's disease* (editors, Terry RD, Katzman R, and Bick K) pp 305-315, Raven Press, Ltd., New York.
84. **Pike CJ**, Cummings BJ and Cotman CW (1995) Contributions of β -amyloid to reactive astrocytosis in Alzheimer's disease. In: *Research Advances in Alzheimer's Disease and Related Disorders* (editors Iqbal K, Mortimer J, Winblad B and Wisniewski H) pp 619-627, John Wiley and Sons, Ltd., Sussex, England.
85. Cotman CW, Cribbs DH, **Pike CJ** and Ivins KJ (1998) Cell death in Alzheimer's death. In: *When Cells Die: A Comprehensive Evaluation of Apoptosis and Programmed Cell Death* (editors, Lockshin RA, Zakeri Z and Tilly JL) pp 385-409, Wiley-Liss, Inc., New York.
86. Cotman CW and **Pike CJ** (1998) Apoptosis in Alzheimer's disease – Inductive agents and antioxidant protective factors. In: *Progress in Alzheimer's and Parkinson's disease*. Book Series: *Advances in Behavioral Biology*, **49**: 45-51.
87. **Pike CJ** and Carroll JC (2009) Progesterone regulation of neuroprotective estrogen actions. In: *Hormones, Cognition and Dementia: State of the Art and Emergent Therapeutic Strategies* (editors, Hogervorst E, Henderson VW, Gibbs RB, Brinton RD). Cambridge University Press, pp 101-109.
88. **Pike CJ** and Rosario ER (2009) Testosterone regulates Alzheimer's disease pathogenesis. In: *Hormones, Cognition and Dementia: State of the Art and Emergent Therapeutic Strategies* (editors, Hogervorst E, Henderson VW, Gibbs RB, Brinton RD). Cambridge University Press, pp 242-250.

PUBLISHED CONFERENCE ABSTRACTS

- A1.** **Pike CJ**, Walencewicz AJ, Glabe CG and Cotman CW (1991) Synthetic β -amyloid is neurotoxic in vitro following aging of peptide. *Society for Neuroscience Abstracts*, **17**: 1445.

- A2.** Pike CJ, Burdick D, Walencewicz AJ, Glabe CG and Cotman CW (1992) Neurodegenerative and aggregative properties of β -amyloid peptides in vitro. *Society for Neuroscience Abstracts*, **18**: 1442.
- A3.** Korotzer AR, Pike CJ and Cotman CW (1992) β -Amyloid peptides induce morphological changes in cultured rat microglia. *Society for Neuroscience Abstracts*, **18**: 1441.
- A4.** Copani A, Loo DT, Pike CJ, Walencewicz AJ and Cotman CW (1992) Neurodegeneration induced by β -amyloid peptides *in vitro* may follow an apoptotic pathway. *Society for Neuroscience Abstracts*, **18**: 1439.
- A5.** Cotman CW, Kesslak JP, Copani A, Pike CJ, Miller S and Bridges RJ (1992) Mechanisms and risk factors in neuronal degeneration: implications in Alzheimer's disease. *Neurobiology of Aging*, **13**: S43.
- A6.** Pike CJ and Cotman CW (1993) Cultured GABA-immunoreactive neurons are resistant to β -amyloid-induced toxicity. *Society for Neuroscience Abstracts*, **19**: 1250.
- A7.** Weiss JH, Pike CJ, Lu D, Lamberta R and Cotman CW (1993) Ca^{2+} channel blockers attenuate β -amyloid neurotoxicity to cultured cortical neurons. *Society for Neuroscience Abstracts*, **19**: 398.
- A8.** Anderson AJ, Cummings BJ, Pike CJ, Loo DT and Cotman CW (1993) Jun and Fos immunoreactivity in Alzheimer's brain and induction by β -amyloid in cultured neurons. *Society for Neuroscience Abstracts*, **19**: 1251.
- A9.** Pike CJ, Cummings BJ and Cotman CW (1994) Aggregated β -amyloid induces reactive astrocytosis both in vitro and in Alzheimer's brain. *Society for Neuroscience Abstracts*, **20**: 1247.
- A10.** Anderson AJ, Pike CJ and Cotman CW (1994) β -Amyloid induced expression of immediate early genes in cultured neurons. *Society for Neuroscience Abstracts*, **20**: 1246.
- A11.** Cummings BJ, Afagh AJ, Pike CJ, Head E, Milgram W, Russell M and Cotman CW (1994) Astrocytic association with different plaque subtypes: evidence from Alzheimer's, Down's and canine tissue. *Society for Neuroscience Abstracts*, **20**: 604.
- A12.** Lieberman DN, Mody I, Pike C and Cotman CW (1994) β -Amyloid (25-35) prolongs openings of NMDA channels through an intracellular pathway. *Society for Neuroscience Abstracts*, **20**: 602.
- A13.** Vaughan PJ, Pike CJ, Cotman CW and Cunningham DD (1994) The protease thrombin induces morphological degeneration and cell death in cultures of astrocytes and neurons. *Society for Neuroscience Abstracts*, **20**: 641.
- A14.** Weinstein SL, Cribbs DH, Pike CJ and Cotman CW (1994) β -Amyloid stereoisomers exhibit similar structural and biological properties: implications for mechanism of toxicity. *Society for Neuroscience Abstracts*, **20**: 1247.

- A15.** Pike CJ, Cummings BJ, Monzavi R and Cotman CW (1994) β -Amyloid-induced reactive changes in cultured astrocytes parallel astrocytosis associated with senile plaques in Alzheimer's disease. *Neurobiology of Aging*, **15**(S1): S71.
- A16.** Cummings BJ, Pike CJ and Cotman CW (1994) PHF-1 immunopositive dystrophic neurites are preferentially associated with thioflavine positive β -pleated plaques and not diffuse amyloid plaques. *Neurobiology of Aging*, **15**(S1): S152.
- A17.** Cotman CW, Cribbs D, Pike CJ and Watt J (1994) Apoptotic cell death in Alzheimer's disease. *Neurobiology of Aging*, **15**(S1): S30.
- A18.** Pike CJ and Cotman CW (1995) β -Amyloid peptides with amino-terminal deletions exhibit neurotoxicity and increased aggregation in vitro. *Society for Neuroscience Abstracts*, **21**: 1011.
- A19.** Cummings BJ, Pike CJ and Cotman CW (1995) β -Amyloid accumulation within entorhinal cortex predicts severity of dementia in Alzheimer's disease. *Society for Neuroscience Abstracts*, **21**: 1500.
- A20.** Weinstein SL, Pike CJ, Cummings BJ and Cotman CW (1995) Reactive astrocytes and APP-immunoreactive dystrophic neurites are independently associated with amyloid plaques. *Society for Neuroscience Abstracts*, **21**: 1479.
- A21.** Pike CJ, Balázs R and Cotman CW (1996) Potassium-induced depolarization protects cultured neurons from β -amyloid toxicity. *Society for Neuroscience Abstracts*, **22**: 197.
- A22.** Donovan FM, Pike CJ, Goldin AL and Cunningham DD (1996) Protein tyrosine kinases and rho A implicated in thrombin-induced toxicity. *Society for Neuroscience Abstracts*, **22**: 1917.
- A23.** Pike CJ and Cotman CW (1996) β -Amyloid toxicity in vitro: Examination of potential contributions by oxidative pathways. *Journal of Neurochemistry*, **17**(4S): S106.
- A24.** Cummings BJ, Pike CJ and Cotman CW (1996) Multiple neuropathological variables are correlated with the level of cognitive impairment in Alzheimer's disease. *Journal of Neurochemistry*, **17**(4S): S179.
- A25.** Pike CJ (1997) Estrogen increases neuronal expression of Bcl-x: relevance to Alzheimer's disease pathology. *Society for Neuroscience Abstracts*, **23**.
- A26.** Pike CJ, Head E and Milgram NW (1998) Estrogen neuroprotection and Bcl-x_L expression: studies from neuronal culture, aged canines and Alzheimer's disease tissue. *Society for Neuroscience Abstracts*, **24**: 1456.
- A27.** Burling LK, Moon WD, Pike CJ, Nowick J, Plotner RG, Goyarzu P, Warner R, Cotman CW and Malin DH (1998) In vivo toxicity of A β 1-40 and 1-42 and in vivo and in vitro toxicity of an aggregating dimer of A β 25-35. *Society for Neuroscience Abstracts*, **24**: 731.
- A28.** Pike CJ (1998) Estrogen modulates neuronal Bcl-x_L expression and vulnerability to apoptosis: A potential protective role in Alzheimer's disease. *Neurobiology of Aging*, **19**(4S): S119.

- A29.** Cotman CW, **Pike CJ**, Su JH, Anderson AJ (1998) Convergence of oxidative and apoptotic pathways in neurodegeneration of Alzheimer's disease. *Neurobiology of Aging*, **19** (4S): S5.
- A30.** **Pike CJ**, Nichol, KE, Cribbs DH, and Cotman CW (1999) GFAP is a caspase target in vitro and in aged human brain. *Society for Neuroscience Abstracts*, **25**.
- A31.** Berchtold NC, **Pike CJ**, Kesslak JP, and Cotman CW (2000) Estrogen and exercise interact to regulate BDNF mRNA in the rat hippocampus. *Society for Neuroscience Abstracts*, **26**: 680.7.
- A32.** **Pike CJ** (2000) Testosterone attenuates β -amyloid-induced neurotoxicity. *Society for Neuroscience Abstracts*, **26**: 680.7.
- A33.** Nguyen Tv, Shin TM, and **Pike CJ** (2001) Androgens modulate vulnerability to kainate-induced injury. *Society for Neuroscience Abstracts*, **27**: 627.15.
- A34.** Aras RV, Tu C, Shin TM and **Pike CJ** (2001) Role of caspase activation in astrogliosis. *Society for Neuroscience Abstracts*, **27**: 595.23.
- A35.** Cordey M and **Pike CJ** (2001) Evaluation of the role of the MAPK pathway in estrogen neuroprotection. *Society for Neuroscience Abstracts*, : 627.14.
- A36.** Berchtold NC, Adlard PA, Kesslak JP, **Pike CJ**, and Cotman CW (2001) Estrogen and exercise interact to Hippocampal BDNF protein is increased by exercise and estrogen in the rat hippocampus. *Society for Neuroscience Abstracts*, **27**.
- A37.** Ramsden M, Cordey M, Quagliano A and **Pike CJ** (2002) Role of androgen receptors in modulating vulnerability to kainate in vivo. *Society for Neuroscience Abstracts*.
- A38.** Ngyuen T-V and **Pike CJ** (2002) The mitogen-activated protein kinase (MAPK) pathway mediates androgen neuroprotection in cultured hippocampal neurons. *Society for Neuroscience Abstracts*.
- A39.** Cordey M, Gundimenda U, Gopalakrishna R, and **Pike CJ** (2002) Protein kinase C mediates estrogen neuroprotection against β -amyloid in vitro. *Society for Neuroscience Abstracts*, 272.12.
- A40.** Quagliano AE and **Pike CJ** (2002) Characterization of estrogen neuroprotection: evaluation of possible mechanisms of action. *Society for Neuroscience Abstracts*, 470.4.
- A41.** **Pike CJ**, Berchtold NC, Kesslak JP, Cotman CW and Ramsden M (2002) Exercise increases the vulnerability of rat hippocampal neurons to kainate lesion. *Society for Neuroscience Abstracts*, 298.16.
- A42.** Aras R, T. Varteresian, and Pike CJ (2002) Characterization of caspases involved in astrogliosis. *Society for Neuroscience Abstracts*, 823.10.
- A43.** Ramsden M, Nyborg AC, Murphy MP, Chang L, Stanczyk F, Golde TE and **Pike CJ** (2003) Androgens modulate β -amyloid levels in male rat brain. *Society for Neuroscience Abstracts*, 523.13.

- A44.** Cordey M, Ramsden M, Quaglini A, Rosario ER, Shim TM and **Pike CJ** (2003) Estrogen and androgen neuroprotection against kainate lesion in male and female rats. *Society for Neuroscience Abstracts*, 505.16.
- A45.** Ngyuen T-V and **Pike CJ** (2003) Androgen neuroprotection is mediated by MAPK-dependent Rsk phosphorylation of Bad. *Society for Neuroscience Abstracts*, 505.9.
- A46.** Ramsden M, Nyborg AC, Murphy MP, Chang L, Stanczyk F, Golde TE and **Pike CJ** (2003) Androgens modulate β -amyloid levels in male rat brain. *Journal of Neurochemistry*, **85** (S1): 42.
- A47.** Rosario ER, Chang L, Stanczyk F, and **Pike CJ** (2003) Analysis of androgens in brain tissue from normal aging and Alzheimer's disease. *Society for Neuroscience Abstracts*, 505.10.
- A48.** Shin TM, Ramsden M, and Pike CJ (2003) Estradiol and DHT modulate neuronal vulnerability to kainate in the female rat brain. *Journal of Investigative Medicine* **51**: 110 (S1).
- A49.** Chen MJ, Ngyuen T-V, **Pike CJ**, and Russo-Neustadt A (2003) Norepinephrine enhances BDNF expression in cultured hippocampal neurons. *Society for Neuroscience Abstracts*, 145.15.
- A50.** Rosario ER, Chang L, Stanczyk F, and **Pike CJ** (2004). Age-related testosterone depletion in brain increases the risk of Alzheimer's disease. *Society for Neuroscience Abstracts*, 255.7.
- A51.** Nguyen TV, Yao MZ, and **Pike CJ** (2004) Testosterone neuroprotection is mediated by androgen receptor-dependent MAPK signaling. *Society for Neuroscience Abstracts*, 887.2.
* **Mini-Symposium.**
- A52.** de Lacalle S, **Pike CJ**, Shapiro RA, Singh M, Sohrabji F, Wilson ME (2004) Gonadal hormone modulation of brain vulnerability. *Society for Neuroscience Abstracts*, 929.
- A53.** Aras R and **Pike CJ** (2004) Non-apoptotic role for caspase activation in an ex-vivo model of astrogliosis. *Society of Neuroscience Abstracts* 460.15.
- A54.** Yao MZ, Nguyen TV, and **Pike CJ** (2004) β -amyloid induced cell death is mediated by JNK-dependent downregulation of Bcl-w and consequent Smac release. *Society for Neuroscience Abstracts*, 218.6 .
- A55.** Cordey M, Gundimenda U, Gopalakrishna R, and **Pike CJ** (2004). The synthetic estrogen 4-estren-3 α ,17 β -diol (estren) induces estrogen-like neuroprotection. *Society for Neuroscience Abstracts*, 757.11.
- A56.** Ramsden M, Rosario ER, Nyborg AC, Murphy MP, Golde TE and Pike CJ (2004) Regulation of β -amyloid levels by estrogen and progesterone. *Society for Neuroscience Abstracts*, 674.15.
* *Selected for press conference*

- A57.** Chaikittisilpa S, Chang L, Rosario E, Silverberg A, **Pike CJ**, and Stanczyk FZ (2004) Brain levels of sex steroid hormones in normal aging and Alzheimer's disease. *Journal of the Society for Gynecological Investigation*.11: 380A.
- A58.** Nguyen TV, Quaglino A, and **Pike CJ** (2005) Androgens are neuroprotective against apoptosis but not necrosis. *2005 Abstract Viewer/Itinerary Planner*. Program No. 634.16. Washington, DC: Society for Neuroscience. Online.
- A59.** Cordey M and **Pike CJ** (2005) Conventional PKC isoforms mediate neuroprotection induced by phorbol ester and estrogen. *2005 Abstract Viewer/Itinerary Planner* Program No. 633.16. Washington, DC: Society for Neuroscience. Online.
- A60.** Rosario ER, Murphy P, and **Pike CJ** (2005) Role of sex steroid hormone receptors in estrogen and androgen regulation of β -amyloid levels. *2005 Abstract Viewer/Itinerary Planner Program* No. 633.2. Washington, DC: Society for Neuroscience, 2005. Online.
- A61.** Yao M, Nguyen, TV and **Pike CJ** (2005) Estrogen prevents β -amyloid peptide induced neuronal death by regulating Bcl-w and Bim expression. *2005 Abstract Viewer/Itinerary Planner* Program No. 586.13. Washington, DC: Society for Neuroscience. Online.
- A62.** Rosario ER, Carroll JC, Chang L, Stanczyk FZ, Oddo S, LaFerla FM, and **Pike CJ** (2006) Androgens regulate development of neuropathology in a model of Alzheimer's disease. *2006 International Conference on Alzheimer's Disease*.
- A63.** Rosario ER, Carroll JC, Chang L, Stanczyk FZ, Oddo S, LaFerla FM, and **Pike CJ** (2006) Androgen depletion accelerates development of neuropathology in a triple transgenic mouse model of AD *2006 Abstract Viewer/Itinerary Planner*. Washington, DC: Society for Neuroscience. Online.
- A64.** Carroll JC, Rosario ER, Chang L, Stanczyk FZ, Oddo S, LaFerla FM, and **Pike CJ** (2006) Estrogen regulates neuropathology in a triple transgenic mouse model of Alzheimer disease *2006 Abstract Viewer/Itinerary Planner*. Washington, DC: Society for Neuroscience. Online.
- A65.** Yao M, Nguyen, TV and **Pike CJ** (2006) Dihydrotestosterone reduces extracellular levels of amyloid- β peptide via regulation of neprilysin. *2006 Abstract Viewer/Itinerary Planner*. Washington, DC: Society for Neuroscience. Online.
- A66.** Carroll JC, Rosario ER, Chang L, Stanczyk FZ, Oddo S, LaFerla FM and **Pike CJ** (2007) Progesterone and estrogen regulate Alzheimer-like neuropathology in female 3xTg-AD mice. Program No. 56.18 *Neuroscience Meeting Planner* San Diego, CA: Society for Neuroscience, 2007. Online.
- A67.** Jayaraman A and **Pike CJ** (2007) Progesterone regulates the expression of estrogen receptors. Program No. 56.28 *Neuroscience Meeting Planner* San Diego, CA: Society for Neuroscience, 2007. Online.
- A68.** Rosario ER, Carroll JC, Murphy MP, Chang L, Stanczyk FZ and **Pike CJ** (2007) Age-related testosterone decline and increased Ab in brown Norway rat brain. Program No. 264.8 *Neuroscience Meeting Planner* San Diego, CA: Society for Neuroscience, 2007. Online.

- A69.** Yao M, Rosario ER, and **Pike CJ** (2008) Androgens reduce the phosphorylation of tau through androgen receptor-mediated phosphatidylinositol 3-kinase/ protein kinase B/ glycogen synthase kinase-3 β signaling. Program No. 510.12 *Neuroscience Meeting Planner* Washington, DC: Society for Neuroscience, 2008. Online.
- A70.** Carroll JC, Rosario ER, Villamagna A, and **Pike CJ** (2008) Effects of continuous versus cyclic progesterone on estrogen regulation of neuropathology in 3xTg-AD mice. Program No. 554.13 *Neuroscience Meeting Planner* Washington, DC: Society for Neuroscience, 2008. Online.
- A71.** Rosario ER, Carroll JC, Villamagna A, Kreimer S, and **Pike CJ** (2008) Sex differences on A β and tau neuropathology in 3xTg-AD mice. Program No. 638.10 *Neuroscience Meeting Planner* Washington, DC: Society for Neuroscience, 2008. Online.
- A72.** **Pike CJ**, Carroll JC, [†]Rosario E (2009) Interactions between estrogen and progesterone in the regulation of Alzheimer-related neuropathology in experimental models. Program No. 499.9 *Neuroscience Meeting Planner* Washington, DC: Society for Neuroscience, 2009. Online.
- A73.** Jayaraman A, Carroll JC, Morgan TE, Lin S, Zhao L, Mack W, and **Pike CJ** (2009) Effects of progesterone treatment on expression and function of estrogen receptors in rodent models. Program No. 543.1 *Neuroscience Meeting Planner* Washington, DC: Society for Neuroscience, 2009. Online.
- A74.** Aguirre CC, Jayaraman A, **Pike CJ**, and Baudry M (2009) Progesterone inhibits estrogen-mediated neuroprotection against excitotoxicity by down-regulating estrogen receptor-beta. Program No. 543.10 *Neuroscience Meeting Planner* Washington, DC: Society for Neuroscience, 2009. Online.
- A75.** Carroll JC, Rosario ER, Villamagna A, Gentschein E, Stanczyk FZ, and **Pike CJ** (2009) Effects of continuous versus cyclic progesterone on estrogen regulation of neuropathology in 3xTg-AD mice. Program No. 543.21 *Neuroscience Meeting Planner* Washington, DC: Society for Neuroscience, 2009. Online.
- A76.** Jayaraman A, Carroll JC, Morgan TE, Lin S, Zhao L, Arimoto JM, Murphy MP, Beckett TL, Finch CE, Brinton RD, and **Pike CJ** (2010) Impact of cyclic versus continuous progesterone regimens on estradiol regulation of neuron viability following entorhinal cortex lesion in female rats. *Neuroscience Meeting Planner* Washington, DC: Society for Neuroscience, 2010. Online.
- A77.** Jayaraman A, Barron AM, Brown MA, Morgan TE, Finch CE, and **Pike CJ** (2010) Progesterone: impact of cyclic vs. continuous progesterone regimens on the expression levels β -amyloid degrading enzymes. *Neuroscience Meeting Planner* Washington, DC: Society for Neuroscience, 2010. Online.
- A78.** Rosario ER, Barron AM, Brown MA, Villamagna A, and **Pike CJ** (2010) Dietary induction of type 2 diabetes and experimental depletion of androgens increases AD-like pathology in male 3xTg-AD mice. *Neuroscience Meeting Planner* Washington, DC: Society for Neuroscience, 2010. Online.
- A79.** Zhao L, Morgan TE, Mao Z, Lin S, Chen Y, Cadenas E, Finch CE, **Pike CJ**, Mack W, Brinton RD (2010) Cyclic versus continuous progesterone exposure in hippocampus:

- comparative gene expression profiling and functional network mapping *Neuroscience Meeting Planner* Washington, DC: Society for Neuroscience, 2010. Online.
- A80.** Barron AM, Rosario ER, Brown MA, Elteriefi R, and **Pike CJ** (2010) Diet-induced obesity worsens Alzheimer's pathology in a mouse model of Alzheimer's disease: Investigation of interactions between gender and metabolic syndrome. *Endocrine Reviews* **31** (3) Suppl 1.
- A81.** Jayaraman A, Morgan TE, Lin S, Zhao L, Finch CE, Brinton RD, and **Pike CJ** (2010) Effect of hormonal treatments on expression of A β degrading enzymes in primary neuron cultures and in vivo. *Endocrine Reviews* **31** (3) Suppl 1.
- A82.** Zhao L, Mao Z, Morgan TE, Lin S, Finch CE, **Pike CJ** and Brinton RD (2010) Cyclic versus continuous progesterone exposure differentially regulate gene expression in the hippocampus of adult female rats: A Taqman low-density array study. *Endocrine Reviews* **31** (3) Suppl 1.
- A83.** Zhao L, Morgan TE, Mao Z, Lin S, Cadenas E, Finch CE, **Pike CJ**, Mack WJ, and Brinton RD (2011) Differential impact of menopause and age on gene expression in normal and Alzheimer's disease hippocampus. Program No. 596.05 *Neuroscience Meeting Planner* Washington, DC: Society for Neuroscience, 2011. Online.
- A84.** **Pike CJ**, Carroll JC, Morgan TE, Lin SW, Finch CE, and Brinton RD (2011) Estrogen regulates β -amyloid accumulation in middle-aged but not aged female 3xTg-AD mice. Program No. 596.09 *Neuroscience Meeting Planner* Washington, DC: Society for Neuroscience, 2011. Online.
- A85.** Jayaraman A and **Pike CJ** (2012) Effects of clinical progestagens on estrogen receptor expression and estradiol-mediated neuroprotection. Program No. 188.16. *Neuroscience Meeting Planner* Washington, DC: Society for Neuroscience, 2012. Online.
- A86.** **Pike CJ**, Barron AM, Rosario ER, Brown MA, and Eltereifi R (2012) Differential effects of diet-induced obesity on metabolic outcomes in male and female 3xTg-AD mice. Program No. 188.09. *Neuroscience Meeting Planner* Washington, DC: Society for Neuroscience, 2012. Online.
- A87.** Garcia-Segura L, Barron A, Caruso D, Melcangi R and **Pike CJ** (2012) Ligand for translocator protein reverses pathology in a mouse model of Alzheimer's disease. *Alzheimer's & Dementia: The Journal of the Alzheimer's Association* July 2012 (Vol. 8, Issue 4, Supplement, Pages P260-P261
- A88.** Barron AM, Hojo Y, Higuchi M, **Pike CJ**, and Kawato S (2013) Ligand for translocator protein improves short-term learning & memory and reduces A β in male rat hippocampus. AAIC.
- A89.** Jayaraman A, Lent D and **Pike CJ** (2013) The effects of testosterone and high-fat diet on neuroinflammation. ENDO.
 - one of 40 abstracts from ~5000 selected for ENDO press booklet
 - Presidential Poster Competition Award Winner

PROFESSIONAL ACTIVITIES: MEMBERSHIPS

- Member, American Association for the Advancement of Science, 1989-1996
- Member, Society for Neuroscience, 1991-present
- Member, International Society for Neurochemistry, 1998-2009

PROFESSIONAL ACTIVITIES: ADVISORY

- Guest member, National Research Council, Committee on Future Directions for Cognitive Research on Aging, 1999
- Member, Medical and Scientific Advisory Panel, McCusker Alzheimer's Research Foundation, 2012-current

PROFESSIONAL ACTIVITIES: REFEREE

GRANT REVIEW

NIH Study Sections:

- NIH Neurological Sciences 1 (NLS-1) Study Section, July 1996
- NIH Neurological Sciences 1 (NLS-1) Study Section, October 1996
- NIH Neurological Sciences 1 (NLS-1) Study Section, December 1996
- NIH Neurological Sciences 1 (NLS-1) Study Section, April 1998
- NIH Neurological Sciences 3 (NLS-3) Special Emphasis Panel, August 1997
- NIH Molecular, Cellular, and Developmental Neuroscience-2 (MCDN-2) Study Section, June 1999
- NIH Visual Sciences A (VisA) Study Section, October 2000
- NIH Molecular, Cellular, and Developmental Neuroscience-1 (MCDN-1) Study Section, April 2000
- NIH Molecular, Cellular, and Developmental Neuroscience-1 (MCDN-1) Study Section, January 2001

Other Government and Foundation Review Panels:

- Department of Veterans Affairs Medical Research Service, 1998
- The Wellcome Trust, 1998
- Alzheimer's Association, 1998 – present
- John Douglas French Alzheimer's Foundation, 2000 – 2003
- National Scientific Advisory Council, American Federation for Aging Research (AFAR), 2010 – present
- Neurological Foundation of New Zealand, 2011

JOURNAL REFEREE

- *Alzheimer's Disease and Associated Disorders*
- *American Journal of Pathology*
- *Biochemistry*
- *Biochimica Biophysica Acta*
- *Biological Psychiatry*
- *BMC Neuroscience*
- *Brain Research*
- *Current Immunology Reviews*
- *Current Gerontology and Geriatrics Research*
- *Diabetes*
- *EMBO Journal*
- *Endocrinology*
- *Experimental Gerontology*
- *Free Radical Biology and Medicine*
- *Frontiers in Aging Neuroscience*
- *Frontiers in Neuroendocrinology*
- *Future Neurology*
- *Hormones and Behavior*
- *International Journal of Neuropsychopharmacology*
- *Journal of Alzheimer's Disease*
- *Journal of the American Medical Association (JAMA)*
- *Journal of Biological Chemistry*
- *Journal of Gerontology*
- *Journal of Molecular Biology*
- *Journal of Neurobiology*
- *Journal of Neurochemistry*
- *Journal of Neuroendocrinology*
- *Journal of Neuroscience*
- *Journal of Neuroscience Methods*
- *Journal of Neuroscience Research*
- *Journal of Pharmacy and Pharmacology*
- *Journal of Physiology*
- *Journal of Steroid Biochemistry and Molecular Biology*
- *Journal of Translational Medicine*
- *Neurobiology of Aging*

- *Neurobiology of Disease*
- *Neuroendocrinology*
- *Neuropharmacology*
- *Neuroreport*
- *Neuroscience*
- *Neuroscience Letters*
- *Pharmacology Biochemistry and Behavior*
- *Proceedings of the National Academy of Sciences*
- *Science*

PROFESSIONAL ACTIVITIES: EDITORIAL

- Editorial Board, Handling Editor, *Journal of Neurochemistry*, 1998-2009
- Editorial Board, Review Editor, *Frontiers in Aging Neuroscience*, 2009-present
- Editorial Board, Review Editor, *Frontiers in Cellular Neuroscience* 2012-present

PROFESSIONAL ACTIVITIES: INSTITUTIONAL

- Member, USC Davis School of Gerontology Personnel Committee, 2001
- Member, USC Davis School of Gerontology Faculty Search Committee, 2001
- Participant, USC Department of Pathology Academic Program Review, 2002
- Participant, USC Provost's Vivarium Planning Committee, 2002
- Member, USC Neuroscience Graduate Program Foreign Admissions Committee, 2002
- Member, USC Neuroscience Graduate Program Admissions Committee, 2003 – current
- Member, USC Academic Senate, 2005 – 2006
- Member, USC Davis School of Gerontology Tenure Review Committee, 2005 – 2006
- Member, USC Davis School of Gerontology Faculty Recognition Committee, 2007 – 2010
- Chairperson, USC Davis School of Gerontology Faculty Recognition Committee, 2007 – 2009
- Member, USC Davis School of Gerontology Strategic Planning Committee, 2008
- Chairperson, USC Davis School of Gerontology Faculty Search Committee, 2009 – 2010

- Member, USC Davis School of Gerontology PhD Qualification Exam Committee, 2009 – current
- Representative, USC Good Neighbors Campaign, 2010
- Member, USC Davis School of Gerontology Faculty Council, 2010 – present
- Co-Chairperson, USC Neuroscience Graduate Program Admissions Committee, 2010 – present
- Member, USC Neuroscience Program Executive Council, 2012 – present
- Member, USC Davis School of Gerontology Master's Education Committee, 2012 – present
- Chairperson, USC Davis School of Gerontology Faculty Search Committee, 2013 – present

PROFESSIONAL ACTIVITIES: INVITED LECTURES

- Fourth Meeting of the European Neurological Society (Barcelona, Spain), 1994; *"Effects of antioxidants and Ca⁺⁺ channel antagonists on A β neurotoxicity"*
- University of Kentucky, Sanders Brown Center on Aging (Lexington, Kentucky), 1994; *"Aggregation-dependent neurotoxicity of β -amyloid peptides"*
- University of California San Diego, Alzheimer's Disease Conference (San Diego, California), 1997; *"Apoptosis in Alzheimer's disease"*
- John Douglas French Alzheimer's Foundation (Los Angeles, California), 1998; *"Neuroprotective effects of sex steroid hormones"*
- Harbor-UCLA, Basic Science Seminar Series (Los Angeles, California), 1998; *"Estrogen neuroprotection and its relevance to Alzheimer's disease"*
- Sixth International Conference on Alzheimer's Disease and Related Disorders (Minneapolis, Minnesota), 1998; *" β -amyloid-induced reactive astrogliosis in culture and in Alzheimer's disease brain"*
- University of California Los Angeles (Los Angeles, California), 1998; *"Role of bcl-x in estrogen neuroprotection"*
- John Douglas French Alzheimer's Foundation UCARE Workshop (Los Angeles, California), 1999; *"Neuroprotective actions of estrogen and testosterone"*
- University of Southern California (Los Angeles, California), 2000; *"Estrogen and testosterone neuroprotection in models of Alzheimer's disease"*
- UCLA King/Drew Medical Center (Los Angeles, California), 2000; *"Sex steroid hormone neuroprotection: Relevance to Alzheimer's disease"*

- California State University, Los Angeles (Los Angeles, California), 2001; *"The role of sex steroid hormones in Alzheimer's disease"*
- Southern California Academy of Sciences Annual Meeting (Los Angeles, California), 2001; *"Neuroprotective actions of estrogen and testosterone and their relevance to Alzheimer's disease"*
- Buck Center for Research in Aging (Novato, California), 2001; *"Neuroprotective actions of sex steroid hormones"*
- Alzheimer's Association, Annual Board of Directors Meeting (Los Angeles, California), 2003; *"Androgens and Alzheimer's disease"*
- Plasticity and Repair in Neurodegenerative Disorders (Lake Arrowhead, California), 2004; *"Androgens and Alzheimer's disease"*
- University of Southern California (Los Angeles, California), 2004; Multidisciplinary Research Colloquium Series in Aging; *"Hormones and Alzheimer's disease"*
- Society for Neuroscience (San Diego, California), 2004; Gonadal Hormone Modulation of Brain Vulnerability; *"Neuroprotective actions of androgens"* (Symposium speaker)
- The Andropause Society Conference (London, England), 2005; *Androgens and Active Aging "Age-related testosterone depletion and development of Alzheimer's disease"* (Plenary presentation)
- Third International Meeting: Steroids & Nervous System (Turin, Italy), 2005; *"Androgen neuroprotection is mediated by MAPK signaling"*
- Society for the Study of Androgen Deficiency (London, England), 2007; Androgens in Health and Disease, *"Androgen regulation of neuropathology in a mouse model of Alzheimer's disease"*
- Hormones, Cognitive Function, and Dementia (Loughborough, England), 2007; *"Sex steroid hormones and development of neuropathology in a mouse model of AD"*
- Fourth International Meeting: Steroids & Nervous System (Turin, Italy), 2007; *"Androgens regulate development of Alzheimer neuropathology"*
- University of California Irvine (Irvine, California), Institute for Brain Aging and Dementia Lecture Series, 2007; *"Androgens and Alzheimer's disease"*
- USC-UCLA Alzheimer's Disease Research Update workshop (Los Angeles, California), 2008; *"Sex steroids and Alzheimer's disease"* (Plenary presentation)
- University of California Los Angeles, Alzheimer's Disease Research Forum (Los Angeles, California), 2008; *"The roles of testosterone and estrogen in Alzheimer's disease"*

- University of California Riverside, Biochemistry and Molecular Biology Seminar Series (Riverside, CA), 2009; *“Sex steroid hormones and Alzheimer’s disease”*
- What’s Hot in Aging Research at USC: Interdisciplinary Perspectives (Los Angeles, California), 2010; *“Testosterone, metabolic syndrome, and Alzheimer’s disease in the aging male”*
- Brain Aging PhD Course, Faculty of Health Sciences (Copenhagen, Denmark), 2010; *“Age changes in sex steroid hormones and their role in Alzheimer’s disease”*
- Neurology Grand Rounds, USC Keck School of Medicine (Los Angeles, California), 2010; *“Sex steroids and Alzheimer’s disease”*
- University of Southern California (Los Angeles, California), 2010; Multidisciplinary Research Colloquium Series in Aging; *“Estrogen and testosterone: Hormone regulators of Alzheimer’s disease”*
- Sixth International Meeting: Steroids & Nervous System (Turin, Italy), 2011; *“Sex steroid hormone levels in aging brain and their relationship with Alzheimer’s disease”*
- Children’s Hospital Los Angeles (Los Angeles, California), 2012; *“Interactions between sex steroid hormones, Alzheimer’s disease, and type 2 diabetes”*
- Lifestyle Approaches for the Prevention of Alzheimer’s Disease (Perth, Australia), 2012; *“Testosterone and the prevention of Alzheimer’s disease”*
- Alzheimer’s Association (Newport Beach, CA), 2012; *“Does testosterone play a role in the prevention of Alzheimer’s disease?”*
- Zilkha Mini-Symposium on Alzheimer Research at USC, (Los Angeles, CA) 2013; *“Obesity, Testosterone, and Alzheimer’s: Relationships and Therapeutic Strategies”*

MENTORING:**GRADUATE STUDENTS**

Graduate student	Training period	Publications	Awards, notable achievements	Next position
Radha Aras	2000-2006	2		Postdoctoral fellow; Dr. Kim Tieu, University of Rochester
Thuy-Vi Nguyen	2001-2005	10	• NIA Training Grant Predoctoral Fellow (T32 AG00032)	Postdoctoral fellow; Dr. Dale Bredesen, Buck Institute
Myriam Cordey	2001-2005	4	• 2005 Heinz Osterburg Award (outstanding dissertation in aging)	Postdoctoral fellow; Dr. Karl Deisseroth, Stanford University

			<ul style="list-style-type: none"> • 2005 Outstanding Research Award USC Neuroscience Graduate Program 	
Emily R. Rosario	2002-2007	10	<ul style="list-style-type: none"> • NIA Training Grant Predoctoral Fellow (T32 AG00032) • NIH NRSA Individual Predoctoral Fellow (F31 NS52143, PI: Rosario) • 2006 Outstanding Research Award, USC Neuroscience Graduate Program • 2007 Heinz Osterburg Award (outstanding dissertation in aging) 	Postdoctoral fellow; Dr. Greg Cole, UCLA
Jenna Carroll	2004-2009	10 (+ 2 pending)	<ul style="list-style-type: none"> • NIA Training Grant Predoctoral Fellow (T32 AG00093) • NIH NRSA Individual Predoctoral Fellow (F31 AG032233 PI: Carroll) • 2008, William Hansen Sandberg Memorial Foundation Scholarship • 2009 Heinz Osterburg Award (outstanding dissertation in aging) 	Postdoctoral fellow; Drs. Virginia Lee and John Trojanowski, University of Pennsylvania
Anusha Jayaraman	2006-2010	2	<ul style="list-style-type: none"> • 2009 Women in Science and Engineering (WiSE) Fellowship 	Postdoctoral fellow; Dr. Christian Pike, USC
V. Alexandra Moser	2013-current	0		

POSTGRADUATE FELLOWS

Postdoctoral fellow	Training period	Publications	Next position
Martin Ramsden	2001-2004	6	Research Associate with Dr. Karen Hsiao Ashe, University of Minnesota
Mingzhong Yao	2002-2009	7 (+ 1 pending)	Visiting Faculty, Shanghai University TCM, China
Emily Rosario	2008-2010	7 (+ 1 pending)	Director of Research Institute, Casa Colina Centers for Rehabilitation

			(Pomona, CA)
Anna Barron	2009-2010	5 (+ 2 pending)	Postdoctoral Fellow with Dr. Suguru Kawato, University of Tokyo
Rebekah Vest	2011-2012	1 (+ 1 pending)	Postdoctoral Fellow with Dr. Paco S. Herson, University of Colorado Denver
Joo-Won Lee	2011-current	1 (+ 1 pending)	N/A
Anusha Jayaraman	2012-current	3 (+2 pending)	N/A
Amy Christensen	2012-current	(2 pending)	N/A