

Christian J. Pike, Ph.D.

CURRENT APPOINTMENT

Professor
Assistant Dean of Research
Leonard Davis School of Gerontology
University of Southern California

CONTACT INFORMATION

Leonard 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
Email: cjpike@usc.edu
Lab website: <http://gero.usc.edu/labs/pikelab/>

EDUCATION

- | | |
|-------------|---|
| 1981 – 1985 | B.S., Biological Sciences (<i>magna cum laude</i>)
University of Southern California, Los Angeles, CA |
| 1989 – 1994 | Ph.D., Biological Sciences
University of California Irvine, Irvine, CA
Dissertation advisor: Dr. Carl W. Cotman
Dissertation title: <i>Studies on the role of β-amyloid protein in the neurodegeneration of Alzheimer's disease</i> |
| 1994 – 1995 | Postdoctoral fellow, Irvine Research Unit in Brain Aging
University of California Irvine, Irvine, CA |

APPOINTMENTS

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| 1995 – 1999 | Assistant Research Professor, Institute for Brain Aging and Dementia
and Department of Psychobiology
University of California Irvine, Irvine, CA |
| 1999 – 2005 | Assistant Professor, Leonard Davis School of Gerontology
University of Southern California, Los Angeles, CA |
| 2002 – present | Member, USC Neuroscience Graduate Program |

	University of Southern California, Los Angeles, CA
2005 – 2012	Associate Professor, Leonard Davis School of Gerontology University of Southern California, Los Angeles, CA
2012 – present	Professor, Leonard Davis School of Gerontology University of Southern California, Los Angeles, CA
2022 – present	Assistant Dean of Research, Leonard Davis School of Gerontology University of Southern California, Los Angeles, CA

AWARDS & HONORS

1991 – 1993	Trainee, National Institutes of Mental Health Predoctoral Training Grant (T32 MH-14599)
1996	University of California Irvine, Faculty Career Development Award
1998 – 2000	Fellow, John Douglas French Alzheimer's Foundation
1999	Andrus Center Associates, Grant Award
2000	Turken Award, Alzheimer's Association
2000 – 2005	Hanson Family Trust Assistant Professor of Gerontology
2015	USC Mellon Mentoring Award (Graduate Students)

FUNDING

COMPLETED FUNDING

1995 – 1996	Alzheimer's Association, Pilot Research Grant (PRG-95-066) <i>Possible Regulation of Apoptotic Factors by Estrogen</i> Role: Principal Investigator Total direct costs = \$30,000
1998 – 2000	John Douglas French Alzheimer's Foundation, Fellowship <i>Hormonal Regulation of Neuronal Apoptosis in Alzheimer's Disease</i> Role: Principal Investigator Total direct costs = \$60,000
1998 – 2000	National Institute on Aging, James A. Shannon Director's Award (R99 AG15961) <i>Mechanism of Estrogen Neuroprotection in Alzheimer's Disease</i> Role: Principal Investigator Total direct costs = \$100,000

- 1999 – 2000 National Institutes on Aging, ADRC Pilot Project Grant (P01 AG05142)
Evaluation of Testosterone Neuroprotection and Its Relationship with Alzheimer's Disease Neuropathology
Role: Principal Investigator
Total direct costs = \$30,000
- 1999 – 2001 State of California Department of Health Services, Alzheimer's Disease and Related Disorder Research Fund (98-15721)
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
- 1999 – 2009 National Institutes on Aging (T32 00037),
Training in Neurobiology and Endocrinology of Aging
Role: Preceptor (PI: C Finch)
- 1999 – 2002 Alzheimer's Association, Investigator Initiated Research Grant (IIRG-99-1637)
Neuroprotective Actions of Steroid Sex Hormones and Their Therapeutic Relevance to Alzheimer's Disease
Role: Principal Investigator
Total direct costs = \$180,000
- 2000 – 2005 National Institutes on Aging, (R01 AG15961)
Mechanism of Estrogen Neuroprotection in Alzheimer's Disease
Role: Principal Investigator
Total direct costs = \$588,139
- 2001 – 2004 National Institutes on Aging (P01 AG14751)
Testosterone Neuroprotection in vivo
Role: Project Leader (PI: C Finch)
Total direct costs for project = \$334,000
- 2002 – 2008 National Institutes on Aging (T32 00032)
Multidisciplinary Research Training in Gerontology
Role: Preceptor (PI: V Bengtson, E Crimmins)
- 2004 – 2007 National Institutes of Mental Health, (R01 MH59776)
Physical Activity, Antidepressants, and BDNF Induction
Role: Subcontractor
Total direct costs (subcontract) = \$55,797
- 2004 – 2007 Alzheimer's Association, Investigator Initiated Research Grant (IIRG-04-1274)
The Role of Age-Related Testosterone Depletion in AD
Role: Principal Investigator
Total direct costs = \$240,000
- 2008 – 2009 National Institutes on Aging, ADRC Pilot Project Grant (P50 AG05142)

- SARMs and Alzheimer's Disease.*
 Role: Project Leader (PI: H Chui)
 Total direct costs for project = \$35,000
- 2005 – 2010 National Institutes on Aging (R01 AG23739),
Androgens and Alzheimer's Disease
 Role: Principal Investigator
 Total direct costs = \$779,530
- 2006 – 2011 National Institutes on Aging (P01 AG26572)
Progesterone in Brain Aging and Alzheimer's Disease - Project 5: Progesterone Regulation of Alzheimer Neuropathology,
 Role: Project Leader (PI: R Brinton)
 Total direct costs for project \$490,200
- 2010 – 2013 Alzheimer's Association, Investigator Initiated Research Grant (IIRG-10-174301)
NeuroSARMs in the Prevention of Alzheimer's Disease
 Role: Principal Investigator
 Total direct costs = \$200,000
- 2010 – 2015 National Institutes on Aging (P50 AG05142)
Alzheimer Disease Research Center - Project 2: Novel NeuroERMs and NeuroARMs for Protection Against Alzheimer Pathology
 Role: Project Leader (PI: H Chui)
- 2011 – 2017 Total direct costs for project = \$675,000
 National Institutes on Aging (R01 AG034103)
Interactions between Testosterone and Type 2 Diabetes in Alzheimer's Disease
 Role: Principal Investigator
 Total direct costs = \$1,250,000
- 2016 – 2019 Alzheimer's Association (SAGA-17-419408)
Interactions between Sex, APOE4, and Neuroinflammation in AD Pathogenesis
 Role: Principal Investigator
 Total direct costs = \$225,000
- 2016 – 2019 Alzheimer's Association (SAGA-17-419536)
Brain Sexual Differentiation and Aging Interact in Development of AD
 Role: Co-Investigator (PI: T Town)
 Total direct costs = \$225,000
- 2015 – 2020 National Institutes on Aging (R01 AG051521)
Amyloid and Inflammation: Modulation by ApoE, Gender, Air Pollution, and Drugs
 Role: Co-Investigator (PI: C Finch)
 Total direct costs = \$1,885,230
- 2018 – 2020 Cure Alzheimer's Fund

Interactions among TREM2, APOE, and sex

Role: Principal Investigator, contact PI (MPI: C Pike, C Finch)

Total direct costs = \$285,713

2011 – 2021

National Institutes on Aging (P01 AG26572)

Perimenopause in Brain Aging and Alzheimer's Disease - Project 2: Perimenopause, ovarian hormones, and obesity: interactive regulators of Alzheimer pathology.

Role: Project Leader (PI: R Brinton)

Total direct costs for project \$842,420

2017 – 2022

National Institutes on Aging (RF1 AG058068)

Sex differences in the relationship between APOE and AD: Role of sexual differentiation

Role: Principal Investigator, contact PI (MPI: C Pike, M Gatz, MJ LaDu)

Total direct costs = \$2,457,308

2018 – 2023

National Institutes on Aging (P01 AG055367)

Urban air pollution in Alzheimer's disease: risk, heterogeneity, and mechanisms

Role: Co-Investigator (PI: CE Finch)

Total direct costs = \$7,834,147

ACTIVE FUNDING

2021 – 2024

Cure Alzheimer's Fund

Protection against APOE4 with longevity-promoting interventions

Role: Principal Investigator, contact PI (MPI: C Pike, C Finch, B Benayoun)

Total direct costs = \$370,188

2023 – 2028

National Institutes on Aging (R01 AG084485)

Dietary protection against APOE4 phenotypes in aging and Alzheimer's

Role: Principal Investigator

Total costs = \$5,172,358

PENDING FUNDING

2024 – 2029

National Institutes on Aging (R01 AG084214)

MOTS-c, APOE and Alzheimer's disease

Role: Principal Investigator, contact PI (MPI: C Pike, C Lee)

Total costs = \$4,122,701

PUBLICATIONS

CITATION / IMPACT REPORT

• **h-index = 70**

- **i10 index = 100**
- **RCR: mean = 3.81, weighted = 354**
- **total citations = 20,080**
- **average citations per article = 188**

REFEREED JOURNAL ARTICLES (*Chronological order*)

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 β): Association of c-Jun with A β -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, Kesslak 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, Kesslak 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: PMC3399667

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, Eltereifi R, and **Pike CJ** (2013) Sex-specific effects of high-fat diet on indices of metabolic syndrome in 3xTg-AD mice: Implications for Alzheimer's disease. *PLoS ONE* **8** (10): e78554. PMID: PMC3810257

77. Jayaraman A, Christensen A, Moser VA, Vest RS, Miller CP, Hattersley G, **Pike CJ** (2014) Selective androgen receptor modulator RAD140 is neuroprotective in cultured neurons and kainate-lesioned male rats. *Endocrinology* **155** (4): 1398-1406. PMID: PMC3959610
78. Jayaraman A and **Pike CJ** (2014) Alzheimer's disease and type 2 diabetes: Multiple mechanisms contribute to interactions. *Current Diabetes Reports* **14** (4): 476. PMID: PMC3985543
79. Jayaraman A and **Pike CJ** (2014) Differential effects of synthetic progestagens on neuron survival and estrogen neuroprotection in cultured neurons. *Molecular and Cellular Endocrinology* **384** (1-2): 52-60. PMID: PMC3954450
80. Jayaraman A, Lent D and **Pike CJ** (2014) Diet-induced obesity and low testosterone increase neuroinflammation and reduce neuron survival. *Journal of Neuroinflammation* **11** (1): 162. PMID: PMC4190446
81. Barron AM, Brown MA, Morgan TE and **Pike CJ** (2015) Impact of continuous versus discontinuous progesterone on estradiol regulation of neuronal viability and sprouting following entorhinal cortex lesion in female rats. *Endocrinology* **156** (3): 1091-1099. PMID: PMC4330320
82. Yin F, Yao J, Sancheti H, Feng T, Melcangi RC, Morgan TE, Finch CE, **Pike CJ**, Mack WJ, Cadenas E, and Brinton RD (2015) Perimenopause is a bioenergetic transition of female brain characterized by deficits in glucose metabolism and synaptic function. *Neurobiology of Aging* **36** (7): 2282-2295. doi: 10.1016/j.neurobiolaging.2015.03.013. PMID: PMC4416218
83. Christensen A and **Pike CJ** (2015) Menopause, obesity and inflammation: Interactive risk factors for Alzheimer's disease. *Frontiers in Aging Neuroscience*. **7**: 130. Doi 10.3389/fnagi.2015.00130 PMID: PMC4493396
84. Moser VA and **Pike CJ** (2016) Obesity and sex interact in the regulation of Alzheimer's disease. *Neuroscience & Biobehavioral Reviews*. **67**: 102-118. PMID: PMC4912955
85. Cacciottolo M, Christensen A, Moser VA, Liu J, **Pike CJ**, Morgan TE, Dolzhenko E, Charidimou A, Wahlund L-O, Wiberg MK, Chiang GC-Y and Finch CE (2016) Sex and APOE alleles in the microbleeds and Alzheimer's disease of mice and men. *Neurobiology of Aging*. **37**: 47-57. PMID: PMC4687024
86. Uchoa MF, Moser VA, and **Pike CJ** (2016) Interactions between inflammation, sex steroids, and Alzheimer's disease risk factors. *Frontiers in Neuroendocrinology*. **43**: 60-82. PMID: PMC5123957
87. **Pike CJ** (2017) Sex and the development of Alzheimer's disease. *Journal of Neuroscience Research*. **95**: 671-680. PMID: PMC5120614
88. Christensen A and **Pike CJ** (2017) Age-dependent regulation of obesity and Alzheimer-related outcomes by hormone therapy in female 3xTg-AD mice. *PLoS One* **12**(6): e0178490. PMID: PMC5456100
89. Moser VA and **Pike CJ** (2017) Obesity accelerates Alzheimer-related pathology in APOE4 but not APOE3 mice. *eNeuro* **4**(3) pii: ENEURO.0077-17.2017. PMID: PMC5469027

- Highlighted in *eNeuro* and *Neuronline*

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91. Christensen A and **Pike CJ** (2018) TSPO ligand PK11195 improves Alzheimer-related outcomes in aged female 3xTg-AD mice. *Neuroscience Letters* **683**: 7-12. doi: 10.1016/j.neulet.2018.06.029. PMCID: PMC6436542
92. Moser VA, Christensen AK, Liu J, Zhou A, Yagi S, Beam CR, Galea LAM, and **Pike CJ** (2019) Effects of aging and testosterone treatment on neural and metabolic outcomes of high-fat diet in male brown Norway rats. *Neurobiology of Aging* Sep 22 **73**: 145-160. doi: 10.1016/j.neurobiolaging.2018.09.016. PMCID: PMC6252085
93. Yen K, Wan J, Mehta HH, Miller B, Christensen A, Levine ME, Salomon MP, Brandhorst S, Xiao J, Kim S-J, Navarrete G, Campo D, Longo V, **Pike CJ**, Mack WJ, Hodis HN, Crimmins EM, and Cohen P. Humanin prevents age-related cognitive decline in mice and is associated with improved cognitive age in humans (2018) *Scientific Reports* **8**(1):14212. doi: 10.1038/s41598-018-32616-7. PMCID: PMC6154958
94. Moser VA, Uchoa MF, and **Pike CJ** (2018) TLR4 antagonist TAK-242 blocks the adverse neural effects of diet-induced obesity. *Journal of Neuroinflammation* **15**(1):306. doi: 10.1186/s12974-018-1340-0 PMCID: PMC6217784
95. Christensen A and **Pike CJ** (2019) APOE genotype affects metabolic and Alzheimer-related outcomes induced by Western diet in female EFAD mice. *FASEB J* **33**(3):4054-4066. doi: 10.1096/fj.201801756R. PMCID: PMC6404574
96. Stephen T, Cacciottolo M, Balu D, Morgan TE, LaDu MJ, Finch CE, and **Pike CJ** (2019) APOE genotype and sex affect microglial interactions with plaques in Alzheimer's disease mice. *Acta Neuropathologica Communications* **7**(1):82. PMCID: PMC6528326
97. Luo J, Beam CR, Karlsson IK, **Pike CJ**, Pedersen NL, and Gatz M. (2020) Dementia risk in women higher in same-sex than opposite-sex twins. *Alzheimer's & Dementia (Amst)* **12** (1): e12049. doi: 10.1002/dad2.12049. PMCID: PMC7306516
98. Christensen A, Liu J, and **Pike CJ** (2020) Aging reduces estradiol protection against neural but not metabolic effects of obesity in female 3xTg-AD mice. *Frontiers in Aging Neuroscience*. May 5;12:113. doi: 10.3389/fnagi.2020.00113. PMCID: PMC7214793
99. Jiang J, Young K, and **Pike CJ** (2020) Second to fourth digit ratio (2D:4D) is associated with dementia in women. *Early Human Development* **149**:105152.
100. Moser AM, Workman MJ, Hurwitz SJ, Lipman RM, **Pike CJ**, and Svendsen CN (2021) A novel transcription profile in mouse and human microglia is driven by APOE4 and sex. *iScience* **24** (11): 103238. DOI:<https://doi.org/10.1016/j.isci.2021.103238>

- 101.** Rangan P, Lobo F, Parrella E, Rochette N, Morselli M, Stephen T, Cremonini AL, Tagliafico L, Monacelli F, Odetti P, Nencioni A, **Pike CJ**, LaDu MJ, Pellegrini M, Xia K, Tran K, Ann B, Chowdhury D and Longo VD (2022) A fasting-mimicking diet reduces neuroinflammation/Nox2 to attenuate cognitive decline in mouse models of Alzheimer's disease. *Cell Reports* **40** (13): 111417. doi: 10.1016/j.celrep.2022.111417.
- 102.** Yao M, Rosario ER, Soper JC, and Pike CJ (2022) Androgens regulate tau phosphorylation through phosphatidylinositol 3-kinase-protein kinase B-glycogen synthase kinase 3 β signaling. *Neuroscience*. In press. doi: 10.1016/j.neuroscience.2022.06.034.
- 103.** Stephen T, Breningstall B, Suresh S, McGill CJ, and **Pike CJ** (2022) *APOE* genotype and biological sex regulate astroglial interactions with amyloid plaques in Alzheimer's disease mice. *Journal of Neuroinflammation*. **19**: 286 (2022). doi.org/10.1186/s12974-022-02650-4
- 104.** Valencia-Olvera AC, Maldonado Weng J, Christensen A, LaDu MJ, and **Pike CJ** (2022) Role of estrogen in women's Alzheimer's disease risk as modified by *APOE*. *Journal of Neuroendocrinology*. Oct 20:e13209. doi: 10.1111/jne.13209
- 105.** Christensen A and **Pike CJ** (2023) Effects of *APOE* genotype and Western diet on metabolic phenotypes in female mice. *Metabolites*. **13**: 287. doi.org/10.3390/metabo13020287
- 106.** Shkirkova K, Demetriou A, Sizdahkhani S, Lamorie-Foote K, Zhang H, Morales M, Chen S, Zhao L, Diaz A, Godoy-Lugo J, Zhou B, Zhang N, Li A, Mack W, Sioutas C, Thorwald M, Finch CE, **Pike CJ**, Mack WJ (2024) Microglial TLR4 mediates white matter injury in a combined model of diesel exhaust exposure and cerebral hypoperfusion. *Stroke*. In press.
- 107.** Liu J and **Pike CJ** (2024) Microglia/macrophage-specific deletion of TLR-4 protects against neural effects of diet-induced obesity. bioRxiv 2024.02.13.580189; doi: <https://doi.org/10.1101/2024.02.13.580189>

PENDING MANUSCRIPTS

- 108.** Iida T, Thorwald M, and **Pike CJ** (in revision) Interactions among *APOE* genotype, biological sex, and TREM2 expression in phagocytosis by cultured microglial cells. *Frontiers in Aging Neuroscience*.
- 109.** Miller B, Kim S-J, Cao K, Mehta HH, Thumaty N, Kumagai HK, Iida T, McGill C, **Pike CJ**, Nurmakova K, Levine ZA, Sullivan PM, Yen K, Ertekin-Taner N, Atzmon G, Barzilai N, Cohen P (In review) Humanin variant P3S is associated with longevity in *APOE4* carriers and resists *APOE4*-induced brain pathology. *iScience*.
- 110.** Faglia BM, York J, Christensen A, Dela Rosa C, Balu D, **Pike CJ**, Ta LM, Buhimschi IA (In revision) *APOE* polymorphisms and female fertility in a transgenic mouse model of AD. *Scientific Reports*.
- 111.** Liu J, Sample C, and **Pike CJ** (In review) Effects of *APOE* genotype and estrogen status on innate immune challenge in female mice. *Brain Behavior and Immunity - Health*.

EDITED BOOK CHAPTERS

- 112.** 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.
- 113.** 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.
- 114.** 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.
- 115.** **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.
- 116.** 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.
- 117.** 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* (editors, A. Fisher, I. Hanin, M. Yoshida). Book Series: *Advances in Behavioral Biology*, **49**: 45-51.
- 118.** **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.
- 119.** **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.
- 120.** Christensen A and **Pike CJ** (2020) Staining and quantification of β -amyloid pathology in transgenic mouse models of Alzheimer's disease. In: *Aging. Methods in Molecular Biology* (editor, Curran SP), Vol 2144. Humana, New York, NY. doi.org/10.1007/978-1-0716-0592-9 19

PATENTS

- 2013 Compositions and Methods for the Treatment of Alzheimer's Disease
US Patent Application No. 61/823,872
Inventors: Christian J. Pike, Anna M. Barron

PROFESSIONAL ACTIVITIES: MEMBERSHIPS

1989 – 1996	Member, American Association for the Advancement of Science
1991 – present	Member, Society for Neuroscience
1998 – 2009	Member, International Society for Neurochemistry
2014 – 2017	Member, Endocrine Society
2015 – 2017	Member, Gerontological Society of America

PROFESSIONAL ACTIVITIES: ADVISORY

1999	Guest member, National Research Council, Committee on Future Directions for Cognitive Research on Aging
2012 – 2014	Member, Medical and Scientific Advisory Panel McCusker Alzheimer's Research Foundation

PROFESSIONAL ACTIVITIES: REFEREE

GRANT REVIEW

NIH Study Sections:

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 1 (NLS-1) Study Section
August 1997	NIH Neurological Sciences 3 (NLS-3) Special Emphasis Panel
June 1999	NIH Molecular, Cellular, and Developmental Neuroscience-2 (MCDN-2) Study Section
October 2000	NIH Visual Sciences A (VisA) Study Section
April 2000	NIH Molecular, Cellular, and Developmental Neuroscience-1 (MCDN-1) Study Section
January 2001	NIH Molecular, Cellular, and Developmental Neuroscience-1 (MCDN-1) Study Section
August 2015	NIH/CSR Brain Disorders and Clinical Neuroscience IRG (BDCN) Special Emphasis Panel
October 2015	NIH/CSR Aging Systems and Geriatrics (ASG) Study Section
April 2016	NIH/CSR Brain Disorders and Clinical Neuroscience IRG (BDCN) Special Emphasis Panel
February 2018	NIH/CSR Aging Systems and Geriatrics (ASG) Study Section

- | | |
|----------------|---|
| January 2019 | NIH/CSR Heart, Lung, and Blood Program Project (HLBP) Review Committee |
| June 2019-2023 | Standing member, NIH/CSR Aging Systems and Geriatrics (ASG) Study Section |

Other Government and Foundation Review Panels:

- | | |
|----------------|--|
| 1998 | Department of Veterans Affairs Medical Research Service |
| 1998 | The Wellcome Trust |
| 1998 – present | Alzheimer's Association |
| 2000 – 2003 | John Douglas French Alzheimer's Foundation |
| 2010 – present | National Scientific Advisory Council, American Federation for Aging Research (AFAR) |
| 2011, 2014 | Neurological Foundation of New Zealand |
| 2017 | Alzheimer's Research UK |
| 2017 | European Science Foundation |
| 2018 – present | Cure Alzheimer's Fund |
| 2022 | Oregon Alzheimer's Research Partnership |
| 2022 | Nathan Shock Pilot Grants – San Antonio Nathan Shock Center |
| 2022 | Florida Department of Health's Ed and Ethel Moore Alzheimer's Disease Research Program |

TENURE AND PROMOTION REVIEW (EXTERNAL)

- | | |
|------|-------------------------------------|
| 2014 | University of California, San Diego |
| 2015 | University of California, Irvine |
| 2015 | Tel Aviv University |
| 2016 | Cornell University |
| 2020 | University of Illinois Chicago |
| 2020 | University of Kentucky |
| 2021 | DePaul University |
| 2022 | University of Kansas |

JOURNAL REFEREE

- *ACS Chemical Neuroscience*
- *Acta Neuropathologica*
- *Alzheimer's & Dementia: Translational Research & Clinical Interventions*
- *Alzheimer's Disease and Associated Disorders*
- *Alzheimer's Research & Therapy*
- *American Journal of Pathology*

- *Appetite*
- *Asian Journal of Andrology*
- *Biochemistry*
- *Biochimica Biophysica Acta*
- *Biochimica Biophysica Acta – Molecular Basis of Disease*
- *Biology of Sex Differences*
- *Biological Psychiatry*
- *BMC Neuroscience*
- *Brain Research*
- *Current Immunology Reviews*
- *Current Gerontology and Geriatrics Research*
- *Diabetes*
- *Disease Models & Mechanisms*
- *EMBO Journal*
- *Endocrinology*
- *Experimental Gerontology*
- *Free Radical Biology and Medicine*
- *Frontiers in Aging Neuroscience*
- *Frontiers in Cellular 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*
- *Laboratory Investigations*
- *Neurobiology of Aging*
- *Neurobiology of Disease*
- *Neuroendocrinology*
- *Neuropharmacology*
- *Neuroreport*
- *Neuroscience*
- *Neuroscience & Biobehavioral Reviews*
- *Neuroscience Letters*
- *Pharmacology Biochemistry and Behavior*
- *PLoS One*
- *Proceedings of the National Academy of Sciences USA*
- *Science*

- *Science Reports*

PROFESSIONAL ACTIVITIES: EDITORIAL

1998 – 2009	Editorial Board, Handling Editor, <i>Journal of Neurochemistry</i>
2009 – 2019	Editorial Board, Review Editor, <i>Frontiers in Aging Neuroscience</i>
2012 – present	Editorial Board, Review Editor, <i>Frontiers in Cellular Neuroscience</i>
2019 – 2022	Editorial Board, Associate Editor, <i>Frontiers in Aging Neuroscience</i>

PROFESSIONAL ACTIVITIES: INSTITUTIONAL

2001	Member, USC Davis School of Gerontology Personnel Committee
2001	Member, USC Davis School of Gerontology Faculty Search Committee
2002	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,
2003 – current	Member, USC Neuroscience Graduate Program Admissions Committee,
2005 – 2006	Member, USC Academic Senate
2005 – 2006	Member, USC Davis School of Gerontology Tenure Review Committee
2007 – 2010	Chairperson, USC Davis School of Gerontology Faculty Recognition Committee
2008	Member, USC Davis School of Gerontology Strategic Planning Committee
2009 – 2010	Chairperson, USC Davis School of Gerontology Faculty Search Committee
2009 – 2014	Member, USC Davis School of Gerontology PhD Qualification Exam Committee
2010	Representative, USC Good Neighbors Campaign
2010 – 2016	Member, USC Davis School of Gerontology Faculty Council
2010 – 2019	Co-Chairperson, USC Neuroscience Graduate Program Admissions Committee
2012 – 2020	Member, USC Neuroscience Program Executive Council

2012 – 2014	Member, USC Davis School of Gerontology Master's Education Committee
2012 – 2015	Organizer, USC Davis School of Gerontology Multidisciplinary Research Colloquium Series on Aging
2013 – 2014	Chairperson, USC Davis School of Gerontology Faculty Search Committee
2014 – 2016	Chairperson, USC Davis School of Gerontology Tenure Review Committee
2014 – 2017	Member, USC Davis School of Gerontology Biology of Aging PhD Admissions Committee
2017	Member, USC Davis School of Gerontology Third-Year Tenure Review Committee
2018 – 2020	Member, USC Davis School of Gerontology Faculty Council
2019 – 2020	Chairperson, USC Davis School of Gerontology Faculty Council
2019 – 2020	Member, USC Biology of Aging PhD Program Executive Council
2019	Ad hoc Member, USC Dornsife Committee on Appointments, Promotion, and Tenure
2020	Member, USC Davis School of Gerontology Third-Year Tenure Review Committee
2020	Member, USC Davis School of Gerontology Faculty Search Committee
2020 – 2022	Chairperson, USC Davis School of Gerontology Promotion Review Committee
2020 – 2022	Member, USC Davis School of Gerontology Tenure Review Committee
2022 – 2023	Member, USC Davis School of Gerontology Faculty Council
2022 – 2023	Chairperson, USC Davis School of Gerontology Promotion Review Committee
2023 – current	Member, USC Davis School of Gerontology Dean's Executive Committee
2023 – current	Chairperson, USC Davis School of Gerontology Facilities, Safety, Training Committee
2024-current	Chairperson, USC Davis School of Gerontology Faculty Council

PROFESSIONAL ACTIVITIES: INVITED LECTURES

- 1994 Fourth Meeting of the European Neurological Society (Barcelona, Spain), *Effects of antioxidants and Ca⁺⁺ channel antagonists on A β neurotoxicity*
- 1994 University of Kentucky, Sanders Brown Center on Aging (Lexington, Kentucky), *Aggregation-dependent neurotoxicity of β -amyloid peptides*
- 1997 University of California San Diego, Alzheimer's Disease Conference (San Diego, California), *Apoptosis in Alzheimer's disease*
- 1998 John Douglas French Alzheimer's Foundation (Los Angeles, California), *Neuroprotective effects of sex steroid hormones*
- 1998 Harbor-UCLA, Basic Science Seminar Series (Los Angeles, California), *Estrogen neuroprotection and its relevance to Alzheimer's disease*
- 1998 Sixth International Conference on Alzheimer's Disease and Related Disorders (Minneapolis, Minnesota), *β -amyloid-induced reactive astrogliosis in culture and in Alzheimer's disease brain*
- 1998 University of California Los Angeles (Los Angeles, California), *Role of bcl-x in estrogen neuroprotection*
- 1999 John Douglas French Alzheimer's Foundation UCARE Workshop (Los Angeles, California), *Neuroprotective actions of estrogen and testosterone*
- 2000 University of Southern California (Los Angeles, California), *Estrogen and testosterone neuroprotection in models of Alzheimer's disease*
- 2000 UCLA King/Drew Medical Center (Los Angeles, California), *Sex steroid hormone neuroprotection: Relevance to Alzheimer's disease*
- 2001 California State University, Los Angeles (Los Angeles, California), *The role of sex steroid hormones in Alzheimer's disease*
- 2001 Southern California Academy of Sciences Annual Meeting (Los Angeles, California), *Neuroprotective actions of estrogen and testosterone and their relevance to Alzheimer's disease*
- 2001 Buck Center for Research in Aging (Novato, California), *Neuroprotective actions of sex steroid hormones*
- 2003 Alzheimer's Association, Annual Board of Directors Meeting (Los Angeles, California), *Androgens and Alzheimer's disease*
- 2004 Plasticity and Repair in Neurodegenerative Disorders (Lake Arrowhead, California), *Androgens and Alzheimer's disease*

- 2004 University of Southern California (Los Angeles, California), Multidisciplinary Research Colloquium Series in Aging; *Hormones and Alzheimer's disease*
- 2004 Society for Neuroscience (San Diego, California), Gonadal Hormone Modulation of Brain Vulnerability; *Neuroprotective actions of androgens* (Symposium speaker)
- 2005 The Andropause Society Conference (London, England), *Age-related testosterone depletion and development of Alzheimer's disease* (Plenary presentation)
- 2005 Third International Meeting: Steroids & Nervous System (Turin, Italy), *Androgen neuroprotection is mediated by MAPK signaling*
- 2007 Society for the Study of Androgen Deficiency (London, England), *Androgen regulation of neuropathology in a mouse model of Alzheimer's disease*
- 2007 Hormones, Cognitive Function, and Dementia (Loughborough, England), *Sex steroid hormones and development of neuropathology in a mouse model of AD*
- 2007 Fourth International Meeting: Steroids & Nervous System (Turin, Italy), *Androgens regulate development of Alzheimer neuropathology*
- 2007 University of California Irvine (Irvine, California), *Androgens and Alzheimer's disease*
- 2008 USC-UCLA Alzheimer's Disease Research Workshop (Los Angeles, California), *Sex steroids and Alzheimer's disease* (Plenary presentation)
- 2008 University of California Los Angeles, Alzheimer's Disease Research Forum (Los Angeles, California), *The roles of testosterone and estrogen in Alzheimer's disease*
- 2009 University of California Riverside, (Riverside, CA), *Sex steroid hormones and Alzheimer's disease*
- 2010 What's Hot in Aging Research at USC: Interdisciplinary Perspectives (Los Angeles, California), *Testosterone, metabolic syndrome, and Alzheimer's disease in the aging male*
- 2010 Faculty of Health Sciences (Copenhagen, Denmark), *Age changes in sex steroid hormones and their role in Alzheimer's disease*
- 2010 USC Keck School of Medicine (Los Angeles, California), *Sex steroids and Alzheimer's disease*

- 2010 University of Southern California (Los Angeles, California), Multidisciplinary Research Colloquium Series in Aging, *Estrogen and testosterone: Hormone regulators of Alzheimer's disease*
- 2011 Sixth International Meeting: Steroids & Nervous System (Turin, Italy), *Sex steroid hormone levels in aging brain and their relationship with Alzheimer's disease*
- 2012 Children's Hospital Los Angeles (Los Angeles, California), *Interactions between sex steroid hormones, Alzheimer's disease, and type 2 diabetes*
- 2012 Lifestyle Approaches for the Prevention of Alzheimer's Disease (Perth, Australia), *Testosterone and the prevention of Alzheimer's disease*
- 2012 Alzheimer's Association (Newport Beach, CA), *Does testosterone play a role in the prevention of Alzheimer's disease?*
- 2013 Zilkha Symposium on Alzheimer Research at USC (Los Angeles, CA), *Obesity, Testosterone, and Alzheimer's: Relationships and Therapeutic Strategies*
- 2014 University of North Texas Health Science Center (Fort Worth, TX), *Testosterone and the regulation of Alzheimer' disease in men*
- 2014 California State University Fullerton (Fullerton, CA), *Interactions between obesity and testosterone in Alzheimer's disease pathogenesis*
- 2015 Eighth International Meeting: Steroids & Nervous System (Turin, Italy), *Obesity and Alzheimer's disease: gender differences and sex steroid hormones*
- 2015 Society for Behavioral Neuroendocrinology, Annual Meeting (Pacific Grove, CA), *Neuroprotective actions of testosterone in Alzheimer's disease* (Symposium speaker)
- 2015 American Aging Association, Annual Meeting (Marina Del Rey, CA), *Sex differences and steroid hormones in Alzheimer's disease*
- 2015 Gerontological Society of America, Annual Meeting (Orlando, FL), *Sex hormones regulate effects of obesity on Alzheimer-related pathology* (Symposium speaker)
- 2016 Barshop Institute, University of Texas Health Science Center at San Antonio, *Sex hormones regulate effects of obesity on Alzheimer-related pathology*
- 2016 Nathan Shock Center Summit (Seattle, WA), *Sex differences in Alzheimer's disease from humans to rodents*
- 2016 ParadOx Workshop (Los Angeles, CA), *Neural effects of obesity are regulated by age, sex, and APOE*

2016	Diabetes and Obesity Research Institute, University of Southern California (Los Angeles, CA), <i>Obesity and Alzheimer's disease: Roles of neuroinflammation and sex steroid hormones</i>
2017	2017 Barshop Symposium on Aging. Sex Differences in Aging: Mechanisms and Responses to Intervention (Bandera, TX), <i>Approaches to Investigating Sex Differences in Alzheimer's Disease</i>
2018	University of California Los Angeles (Los Angeles, CA), <i>Sex, obesity, and Alzheimer's Disease</i>
2018	University of Stony Brook (Stony Brook, NY), <i>Sex, obesity, and Alzheimer's Disease</i>
2019	Alzheimer's Disease Conference of the Society for Brain Mapping & Therapeutics International Congress (Los Angeles, CA) <i>Obesity as a regulator of Alzheimer-related pathology: the roles of metabolic and inflammatory pathways</i>
2020	Cure Alzheimer's Fund, Mini Seminar on APOE (Webinar) <i>Interactions among TREM2, APOE and sex</i>
2020	University of Arizona, <i>Interactions among sex, APOE and microglia in Alzheimer's disease</i>
2022	Eleventh International Meeting: Steroids & Nervous System (Turin, Italy), <i>Sex and sex steroid hormones modulate the interactions between APOE genotype and Alzheimer's disease</i>
2023	University of Illinois Chicago, <i>APOE, sex and Alzheimer's disease</i>

MENTORING

GRADUATE STUDENT GUIDANCE COMMITTEES

Graduate student	Degree, year	Program (USC)	Faculty mentor (primary appointment)
Zhijin Wu	PhD, 2000	Molecular Biology	Julie Andersen (Gero)
Kevin Pong	PhD, 2000	Neuroscience	Michel Baudry (Neurobio)
Zhong Xie	PhD, 2001	Neuroscience	Caleb Finch (Gero)
Deepak Laxman Bhole ^a	PhD, 2001	Molecular Biology	John Tower (Mol Bio)
Melissa Ferguson	PhD, 2002	Neuroscience	Tom McNeill (Cell Neuro)
Rapee Boonplueang	PhD, 2004	Molecular Biology	Julie Andersen (Gero)
Thuy-Vi Nguyen*	PhD, 2005	Neuroscience	Christian Pike (Gero)
Myriam Cordey*	PhD, 2005	Neuroscience	Christian Pike (Gero)
Jaqueline Rivera	PhD, 2006	Molecular Biology	Don Arnold (Mol Bio)
Tzu-Wei Wu	PhD, 2006	Neuroscience	Roberta Brinton (Pharm)

Catherine Harris	PhD, 2006	Neuroscience	Tom McNeill (Cell Neuro)
Radha Aras*	PhD, 2006	Neuroscience	Christian Pike (Gero)
Qiong Wu ^a	MS, 2006	Neuroscience	Caleb Finch (Gero)
Zheng-Yi Zhou ^a	MS, 2006	Neuroscience	Valter Longo (Gero)
Ludwig Hamo ^a	PhD, 2007	Neuroscience	Michel Baudry (Neurobio)
Emily Rosario*	PhD, 2007	Neuroscience	Christian Pike (Gero)
Angela Wong	PhD, 2007	Molecular Biology	Caleb Finch (Gero)
Reymundo Dominguez	PhD, 2008	Neuroscience	Michel Baudry (Neurobio)
Jenny Ngo	PhD, 2008	Molecular Biology	Kelvin Davies (Gero)
Ying Li	PhD, 2008	Neuroscience	Valter Longo (Gero)
Jenna Carroll*	PhD, 2009	Neuroscience	Christian Pike (Gero)
Young-eun Yoo	PhD, 2009	Neuroscience	Chein-Ping Ko (Neurobio)
Anusha Jayaraman*	PhD, 2010	Neuroscience	Christian Pike (Gero)
Priya Balasubramanian ^a	PhD, 2010	Molecular Biology	Valter Longo (Gero)
Jason Arimoto	PhD, 2012	Neuroscience	Caleb Finch (Gero)
Jia Hu ^a	PhD, 2012	Molecular Biology	Valter Longo (Gero)
Sangeeta Bardhan Cook ^a	PhD, 2012	Molecular Biology	Valter Longo (Gero)
Andrew Pickering ^a	PhD, 2012	Molecular Biology	Kelvin Davies (Gero)
Keiko Kurita	PhD, 2014	Psychology	Beth Meyerowitz (Psych)
Jamaica Rettburg ^a	PhD, 2014	Neuroscience	Roberta Brinton (Pharm)
William Toy	PhD, 2016	Neuroscience	Michael Jakowec (Neurol)
Inyoung Choi	PhD, 2016	Molecular Biology	Valter Longo (Gero)
Alexandra Ycaza	PhD, 2014	Psychology	Mara Mather (Gero)
Tiffanie Nham ^a	MS, 2012	Neuroscience	Alan Watts (Neurobio)
Jennifer Park	PhD, 2015	Neuroscience	Aaron McGee (Keck)
Ryan Kast ^a	PhD, 2016	Neuroscience	Aaron McGee (Keck)
Dana Lynn	PhD, 2016	Molecular Biology	Sean Curran (Gero)
Eliza Bacon*	PhD, 2017	Neuroscience	Roberta Brinton (Pharm)
Alexandra Moser	PhD, 2017	Neuroscience	Christian Pike (Gero)
Ted Hsu ^a	PhD, 2017	Neuroscience	Scott Kanoski (College)
Celeste-Elise Stephany	PhD, 2016	Neuroscience	Aaron McGee (Keck)
Xun Chen ^a	PhD, 2018	Neuroscience	Dion Dickman (College)
Melanie Sweeney*	PhD, 2019	Neuroscience	Berislav Zlokovic (Keck)
Jorge Suarez	No degree	Molecular Biology	Valter Longo (Gero)
Yvette Wang	PhD, 2018	Pharmacy	Roberta Brinton (Pharm)
Matthew Halliday ^a	PhD, 2019	Neuroscience	Michael Jakowec (Keck)
Hans Dalton	PhD, 2018	Molecular Biology	Sean Curran (Gero)
Priya Rangan	PhD, 2019	Gerontology	Valter Longo (Gero)
Brett Spatola	PhD, 2019	Molecular Biology	Sean Curran (Gero)
Lisa Dokovna ^a	PhD, 2019	Neuroscience	Ruth Wood (Keck)
Aarti Mishra	PhD, 2019	Pharmacy	Roberta Brinton (Pharm)
Chia-An Yen	PhD, 2020	Molecular Biology	Sean Curran (Gero)
Aida Bareghamyan ^a	Pending	Molecular Biology	Don Arnold (College)

Kwok (Chris) Im	PhD, 2020	Neuroscience	Terrence Town (Keck)
Joe Reynolds ^a	PhD, 2020	Biology of Aging	David Lee (Gero)
Brendan Miller*	PhD, 2022	Neuroscience	Pinchas Cohen (Gero)
Alicia Quihius	Pending	Neuroscience	Terrence Town (Keck)
Kristina Shkirkova ^a	PhD, 2023	Neuroscience	William Mack (Keck)
Jiahui Liu*	PhD, 2022	Biology of Aging	Christian Pike (Gero)
Azar Asadi Shahmirzadi	PhD, 2020	Biology of Aging	Gordon Lithgow (Buck/Gero)
Fleur Lobo	PhD, 2022	Biology of Aging	Valter Longo (Gero)
Koral Wheeler ^a	Pending	Neuroscience	Meredith Braskie (Keck)
Samuel Garza ^a	Pending	Molecular Pharmacology	Vassilios Papadopoulos (Pharm)
Elissa Fultz ^a	Pending	Biology of Aging	Ralf Langen (Keck)
Ryan Lu	Pending	Biology of Aging	Bérenicé Benayou (Gero)
Mahshid Shelechi	Pending	Biology of Aging	Valter Longo (Gero)
Doyle Lokitayakul ^a	Pending	Biology of Aging	Tara Tracy (Buck/Gero)
Michelle Rice	Pending	Biology of Aging	David Lee (Gero)
Cassandra McGill*	Pending	Biology of Aging	Christian Pike (Gero)
Garett Cheung ^a	Pending	Molecular Pharmacology	Vassilios Papadopoulos (Pharm)
Victoria Tenant ^a	Pending	Neuroscience	Meredith Braskie (Keck)
Tyne McHugh	Pending	Biology of Aging	Lisa Ellerby (Buck/Gero)
Danielle Luu ^a	Pending	Neuroscience	Meredith Braskie (Keck)
Cynthia Siebrand ^a	Pending	Biology of Aging	Julie Andersen (Buck/Gero)

^aqualifying exam committee member, *committee chairperson

GRADUATE STUDENTS – PRIMARY MENTOR

Graduate student	Training period	Publications	Dissertation title	Awards, notable achievements	Next position
Radha Aras	2000-2006	2	Role of caspases in astrogliosis		Postdoctoral fellow; Dr. Kim Tieu, University of Rochester
Thuy-Vi Nguyen	2001-2005	10	Anti-apoptotic mechanism of androgen neuroprotection	• NIA Training Grant Predoctoral Fellow (T32 AG00032)	Postdoctoral fellow; Dr. Dale Bredesen, Buck Institute
Myriam Cordey	2001-2005	4	Role of protein kinase C in estrogen neuroprotection	• 2005 Heinz Osterburg Award (outstanding dissertation in aging) • 2005 Outstanding Research Award USC	Postdoctoral fellow; Dr. Karl Deisseroth, Stanford University

				Neuroscience Graduate Program	
Emily R. Rosario	2002-2007	10	Age-related androgen depletion and the development of Alzheimer's disease	<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	Estrogen and progesterone-based hormone therapy and the development of Alzheimer's disease	<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	Estrogen and progesterone interactions in neurons: implications for Alzheimer's disease-related pathways	<ul style="list-style-type: none"> • 2009 Women in Science and Engineering (WiSE) Fellowship 	Postdoctoral fellow; Dr. Christian Pike, USC
V. Alexandra Moser	2013-2018	7	The role of inflammation in mediating effects of obesity on Alzheimer's disease	<ul style="list-style-type: none"> • 2015 ENDO Travel Award for Early Career Forum and Conference 	Postdoctoral fellow; Dr. Clive Svendsen, Cedars Sinai Medical Center
Jiahui Lui	2017-2022	4	TLR4-mediated innate immune response and		Postdoctoral fellow;

			neuroinflammation: focus on <i>APOE</i> and obesity		Dr. Sean Curran, University of Southern California
Cassandra McGill (co-mentored with Bérénice Benayoun)	2021- current	5		<ul style="list-style-type: none"> • 2021 AGE Conference Travel Award • 2021-2022 NIA Training Grant Predoctoral Fellow (T32 AG052374) • 2023-2025 NIH NRSA Individual Predoctoral Fellow (F31 AG084279 PI: McGill) 	N/A

POSTGRADUATE SCHOLARS – PRIMARY MENTOR

Postdoctoral scholar	Training period	Publications	Next position
Martin Ramsden	2001-2004	6	Research Associate with Dr. Karen Hsiao Ashe, University of Minnesota
Mingzhong Yao	2002-2009	8	Visiting Faculty, Shanghai University TCM, China
Emily Rosario	2008-2010	8	Director of Research Institute, Casa Colina Centers for Rehabilitation (Pomona, CA)
Anna Barron	2009-2010	7	Postdoctoral Fellow with Dr. Suguru Kawato, University of Tokyo
Rebekah Vest	2011-2012	2	Postdoctoral Fellow with Dr. Paco S. Herson, University of Colorado Denver
Joo-Won Lee	2011-2013	1	N/A
Anusha Jayaraman	2012-2014	4	Tenure track faculty, Center for Neuroscience, Indian Institute of Science, Bangalore (India)
Amy Christensen	2012-2019	9	Assistant Professor of Research, University of Southern California
Aaron Barnett	2014-2015	0	N/A
Camille Sample	2017-2018	1 pending	N/A
Terri Stephen	2018-2021	2; 1 pending	Postdoctoral scholar with Dr. Michael Bienkowski, University of Southern California
Tomomitsu Iida	2018-2022	2 pending	-
Elizabeth Nguyen	2019-2020	1 pending	-