

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel in the order listed for Form Page 2.
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NAME		POSITION TITLE		
Pike, Christian J.		Assistant Professor		
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)				
INSTITUTION AND LOCATION		DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
University of Southern California, Los Angeles, CA		B.S.	1985	Biological Sciences
University of California, Irvine, CA		Ph.D.	1994	Biological Sciences
University of California, Irvine, CA		Post-Doc	1994	Neuroscience

Positions

1994-1995 Postdoctoral Associate, Irvine Research Unit in Brain Aging, University of California, Irvine
 1995-1999 Asst. Research Professor, Institute of Brain Aging & Dementia, University of California, Irvine
 1999-present Assistant Professor, Andrus Gerontology Center, University of Southern California

Honors

1991-1993 NIMH Predoctoral Training Grant
 1996 University of California, Faculty Career Development Award
 1996-1998 Ad hoc Reviewer, NIH Neurological Sciences 1 (NLS-1) Study Section
 1997 Ad hoc Reviewer, NIH Neurological Sciences 3 (NLS-3) Special Emphasis Panel
 1998-present Editorial Board, *Journal of Neurochemistry*,
 1999 Ad hoc Reviewer, NIH Molecular, Cellular, & Developmental Neuroscience 2
 2000 Ad hoc Reviewer, NIH Molecular, Cellular, & Developmental Neuroscience 1
 2000 Ad hoc Reviewer, NIH Visual Sciences A (VISA) Study Section
 2000 Turken Award. Alzheimer's Association
 2000-present Hanson Family Professor of Gerontology

Selected Publications

- **Pike CJ**, Walencewicz AJ, Glabe CG and Cotman CW (1991) Aggregation-related toxicity of synthetic **b**-amyloid protein in hippocampal cultures *Eur J Pharmacol* **207**: 367-368.
- **Pike CJ**, Walencewicz AJ, Glabe CG and Cotman CW (1991) In vitro aging of **b**-amyloid protein causes peptide aggregation and neurotoxicity *Brain Res* **563**: 311-314.
- **Pike CJ**, Cummings BJ and Cotman CW (1992) **b**-Amyloid induces neuritic dystrophy *in vitro*: similarities with Alzheimer pathology *Neuroreport* **3**: 769-772.
- Cotman CW, **Pike CJ** and Copani A (1992) **b**-Amyloid neurotoxicity: a discussion of in vitro findings *Neurobiol Aging* **13**: 587-590.
- **Pike CJ**, Burdick D, Walencewicz AJ, Glabe CG and Cotman CW (1993) Neurodegeneration induced by **b**-amyloid peptides *in vitro*: the role of peptide assembly state *J Neurosci* **13**: 1676-1687.
- Loo DT, Copani A, **Pike CJ**, Whitemore ER, Walencewicz AJ and Cotman CW (1993) Apoptosis is induced by **b**-amyloid in cultured CNS neurons *Proc Natl Acad Sci USA* **90**: 7951-7955.
- **Pike CJ** and Cotman CW (1993) Cultured GABA-immunoreactive neurons are resistant to toxicity induced by **b**-amyloid *Neurosci* **56**: 269-274.
- Korotzer A, **Pike CJ**, and Cotman CW (1993) **b**-Amyloid peptides induce degeneration of cultured rat microglia *Brain Res* **624**: 121-125.
- Weiss JH, **Pike CJ** and Cotman CW (1994) Ca²⁺ channel blockers attenuate **b** amyloid peptide toxicity to cortical neurons in culture *J Neurochem* **62**: 372-375.

- **Pike CJ**, Cummings BJ, Monzavi R and Cotman CW (1994) **b**-Amyloid-induced changes in cultured astrocytes parallel reactive astrocytosis associated with senile plaques in Alzheimer's disease *Neurosci* **63**: 517-531.
- Cotman CW and **Pike CJ** (1994) **b**-Amyloid and its contributions to neurodegeneration in Alzheimer's disease. In: *Alzheimer's disease* (eds., Terry RD, Katzman R, and Bick K) pp 305-315 Raven Press, Ltd., New York.
- Watt JA, **Pike CJ**, Walencewicz AJ and Cotman CW (1994) Ultrastructural analysis of **b**-amyloid-induced cell death in cultured hippocampal neurons *Brain Res* **661**: 147-156.
- **Pike CJ**, Walencewicz-Wasserman AJ, Kosmoski J, Cribbs DH, Glabe CG and Cotman CW (1995) Structure-activity analyses of **b**-amyloid peptides: contributions of the **b25-35** region to aggregation and neurotoxicity *J Neurochem* **64**: 253-265.
- **Pike CJ** and Cotman CW (1995) Calretinin-immunoreactive neurons are resistant to **b**-amyloid toxicity *in vitro*. *Brain Res* **671**: 293-298.
- **Pike CJ**, Cummings BJ and Cotman CW (1995) Contributions of **b**-amyloid to reactive astrocytosis in Alzheimer's disease. In: *Research Advances in Alzheimer's Disease and Related Disorders* (eds., Iqbal K, Mortimer J, Winblad B and Wisniewski H) pp 619-627. John Wiley and Sons, Ltd, Sussex, England.
- **Pike CJ**, Cummings BJ and Cotman CW (1995) Early association of reactive astrocytes with senile plaques in Alzheimer's disease *Exp Neurol* **132**: 172-179.
- Vaughan PJ, **Pike CJ**, Cotman CW and Cunningham DD (1995) Thrombin receptor activation protects neurons and astrocytes from cell death produced by environmental insults *J Neurosci.* **15**: 5389-5401.
- Anderson AJ, **Pike CJ** and Cotman CW (1995) Differential induction of immediate early gene proteins in cultured neurons by **b**-amyloid (**Ab**): Association of c-Jun with **Ab**-induced apoptosis *J Neurochem.* **65**: 1487-1498.
- **Pike CJ**, Overman MJ and Cotman CW (1995) Amino-terminal deletions enhance aggregation of **b**-amyloid peptides *in vitro* *J Biol Chem.* **270**: 23895-23898.
- **Pike CJ**, Vaughan PJ, Cunningham DD and Cotman CW (1996) Thrombin attenuates neuronal cell death and modulates astrocyte reactivity induced by **b**-amyloid *in vitro* *J Neurochem* **66**: 1374-1382.
- **Pike CJ**, Ramezan-Arab N, Miller S and Cotman CW (1996) **b**-Amyloid increases enzyme activity and protein levels of glutamine synthetase in cultured astrocytes *Exp Neurol* **139**: 167-171.
- Cummings BJ, **Pike CJ**, Shankle R and Cotman CW (1996) **b**-Amyloid deposition and other measures of neuropathology predict cognitive status in Alzheimer's disease *Neurobiol Aging* **17**: 921-933.
- **Pike CJ**, Balázs R and Cotman CW (1996) Attenuation of **b**-amyloid neurotoxicity *in vitro* by potassium-induced depolarization *J Neurochem* **67**: 1774-1777.
- Deng G, **Pike CJ** and Cotman CW (1996) Alzheimer-associated presenilin-2 confers increased sensitivity to apoptosis in PC12 cells *FEBS Lett* **397**: 5054.
- Cribbs DH, **Pike CJ**, Weinstein SL, Velasquez P and Cotman CW (1997) All-D-enantiomers of **b**-amyloid exhibit similar biological properties to all-L-enantiomers *J Biol Chem* **272**: 7431-7436.
- 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 rhoA activities *J Neurosci* **17**: 5316-5326.
- **Pike CJ**, Ramezan-Arab N and Cotman CW (1997) **b**-Amyloid neurotoxicity *in vitro*: Evidence of oxidative stress but not protection by antioxidants *J Neurochem* **69**: 1601-1611.
- **Pike CJ** (1999) Estrogen modulates neuronal Bcl-x_L expression and **b**-amyloid-induced apoptosis: relevance to Alzheimer's disease *J Neurochem* **72**: 1552-1563.
- Stoltzner SE, Berchtold NC, Cotman CW and **Pike CJ** (2001) Estrogen regulates *bcl-x* expression in rat hippocampus. *Neuroreport* **12**: 2797-2800..
- **Pike CJ** (2001) Testosterone attenuates **b**-amyloid toxicity in cultured hippocampal neurons *Brain Res.* **919**: 160-165.
- Berchtold NC, Kessler J.P., **Pike CJ** and Cotman CW (2001) Estrogen and exercise interact to regulate brain-derived neurotrophic factor (BDNF) gene expression in the hippocampus *Eur J Neurosci* **14**: 1992-2002.
- Soreghan B, **Pike CJ**, Kaye R, Tian W, Milton S, Cotman C and Glabe CG (in press) The influence of the hydrophobic carboxyl terminus of the Alzheimer A β peptide on its conformation, oligomerization and fibril assembly properties *NeuroMol. Med*

Research Support**ONGOING**

1) IIRG-99-1637 CJ Pike (PI)

Total Project Period 09/01/99-08/31/02

Alzheimer's Association

Neuroprotective actions of steroid sex hormones and their therapeutic relevance to Alzheimer's disease

This project investigates the concept of testosterone neuroprotection using cell culture paradigms and analyses of postmortem human brain tissue.

2) P01 AG14751 CE Finch (PI), CJ Pike (Proj. Dir.) Total Project Period 07/01/01-06/30/02

NIH/NIA

Testosterone Neuroprotection in vivo

This project investigates androgen-mediated neuroprotection against excitotoxic lesion with in vivo rodent paradigms.

3) R01 AG15961 CJ Pike (PI)

Total Project Period 02/01/00-01/31/04

NIH/NIA

Mechanism of estrogen neuroprotection in Alzheimer's disease

This project investigates the mechanism of estrogen neuroprotection using cell culture and in vivo rodent paradigms as well as analysis of postmortem human brain tissue. The studies focus on the hypothesis that estrogen regulates the expression of apoptosis-related factors, including Bcl-xL.

COMPLETED

1) Fellowship CJ Pike (PI)

Total Project Period 07/01/98-08/31/00

John Douglas French Alzheimer's Foundation

• Hormonal regulation of neuronal apoptosis in Alzheimer's disease

This project investigated mechanisms of estrogen neuroprotection in a cell culture model of AD.

2) R55 AG15961 CJ Pike (PI)

Total Project Period 09/01/98-01/31/00

NIH/NIA

• Mechanism of estrogen neuroprotection in Alzheimer's disease

This project investigated the hypothesis that estrogen neuroprotection involves regulation of apoptosis related factors. It was awarded to a non-funded R01 application that showed exceptional merit. The R01 has since been awarded.

3) AG05142 CE Finch (PI), CJ Pike (Proj. Dir.)

Total Project Period 04/01/99-03/31/00

NIH/NIA

• Evaluation of testosterone neuroprotection and its relationship with Alzheimer's disease neuropathology

This ADRC pilot grant evaluated strategies to study neuroprotective properties of the sex steroid hormone testosterone, including the establishment of new experimental paradigms to study hormone levels in human brain.

4) 98-15721 CJ Pike (PI)

Total Project Period 01/01/99-12/31/01

State of California Department of Health Services, Alzheimer's Disease and Related Disorder Research Fund

• Estrogen neuroprotection: cellular, pathological and behavioral correlates in Alzheimer's disease and the canine model of age-related dementia.

This project evaluated the relationship between estrogen status and measures of neural pathology and behavioral impairment in aged canines.