

CURRICULUM VITAE

Michael E. Calhoun, Ph.D.



Personal Data

Place of Birth: Maryland, USA
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Education

1987 - 1992 Bachelor of Arts, Computer Science
Boston University, College of Liberal Arts
1996 – 1999 Doctor of Philosophy, Neurobiology
University of Basel, Basel, Switzerland

Positions

1990 - 1992 General Electric Aircraft Engines, Lynn, Massachusetts, USA
Project Engineer, Computer Integrated Manufacturing
1992 - 1993 Paragon Imaging, Chelmsford, Massachusetts, USA
Software Engineer, Medical Imaging
1994 – 1996 Johns Hopkins University, Baltimore, Maryland, USA
Image Management Analyst, Neuropathology Laboratory
1996 - 1999 University of Basel, Basel, Switzerland
Doctoral Student, Neuropathology, Institute of Pathology
1999 – 2004 Mount Sinai School of Medicine, New York, New York, USA
Postdoctoral Fellow, Neurobiology of Aging Laboratories
2004 – 2009 University of Tübingen, Tübingen, Germany
Hertie Institute for Clinical Brain Research
Research Group Leader, Molecular Imaging.
2006-present Sinq Systems, Columbia, Maryland, USA
Founder & Managing Director

Selected Awards and Funding

1999 Doctorate award, Summa Cum Laude, University of Basel, Switzerland
1999 Postdoctoral fellowship, Roche Research Foundation, Basel, Switzerland
Mechanisms and significance of cerebral amyloid angiopathy.
2000-02 Individual NRSA fellowship, NIA, National Institutes of Health, AG05868
Synaptic structure and learning and memory in normal aging.
2002-04 Program project component, NIA, National Institutes of Health, AG09973
Neuroanatomical studies of the aged hippocampal formation.
2005-07 Principal Investigator, Deutsche Forschungsgemeinschaft, CA 477-1/2
Learning-related gene expression in cortical systems:
the impact of vascular and parenchymal amyloid.
2005-08 Principal Investigator, Alzheimer's Association, IIRG-05-13464
Relational memory and learning-related gene induction in AD mouse models.

Teaching

1996-2002 Instructor, Applications of Unbiased Stereology to Neural Systems
Five day course in conjunction with Society for Neuroscience meetings
Johns Hopkins University, Department of Pathology
Maryland / New Orleans / San Diego / Florida

Teaching, cont.

- 1997 Coordinator/Instructor, Neurobiological Applications of Unbiased Stereology
Institute of Pathology, Basel, Switzerland
- 1998-9 Instructor, Neurobiology Block Course
University of Basel, Neurobiology Department
- 2001-3 Lecturer, Neural Basis of Behavioral Plasticity
Ph.D. program, Mt. Sinai School of Medicine, New York
- 2004-9 Lecturer and mentor, Graduate School of Neural and Behavioural Sciences
Universität Tübingen

Selected Publications (from >30 peer-reviewed articles)

- Calhoun M.E.**, Jucker M., Martin L.J., Thinakaran G., Price D.L., Mouton P.R. (1996) Comparative evaluation of synaptophysin-based methods for synapse quantification. *Journal of Neurocytology*, 25:821-828.
- Calhoun M.E.**, Wiederhold K.H., Abramowski D., Phinney A.L., Probst A, Sturchler-Pierrat C., Staufenbiel M., Sommer B., Jucker M. (1998) Neuron loss in APP transgenic mice. *Nature*, 395:755-56.
- Calhoun M.E.**, Kurth D., Phinney A.L., Long J.M., Hengemihle J., Mouton P.R., Ingram D.K., Jucker M. (1998) Hippocampal neuron and synaptophysin-positive bouton number in aging C57BL/6 mice. *Neurobiology of Aging*, 19(6): 599-606.
- Calhoun M.E.**, Burgermeister P., Phinney A.L., Stalder, M., Tolnay M., Wiederhold K.H., Abramowski D., Sturchler-Pierrat C., Sommer B., Staufenbiel M., Jucker M. (1999) Neuronal overexpression of mutant amyloid precursor protein results in prominent deposition of cerebrovascular amyloid. *Proc Natl Acad Sci U S A*, 96:14088-93.
- Calhoun M.E.**, Mouton P.R. (2000) Length measurement: new developments in neurostereology and 3D imagery. *Journal of Chemical Neuroanatomy*, 21(3):257-65.
- Phinney A.L., **Calhoun M.E.**, Woods A.G., Deller T., Jucker M. (2004). Stereological analysis of the reorganization of the dentate gyrus following entorhinal cortex lesion in mice. *European Journal of Neuroscience* 19(7):1731-40.
- Moga D.E., **Calhoun M.E.**, Chowdhury A., Worley P.F., Morrison J.H., Shapiro M.L. (2004) Activity-related cytoskeletal-associated protein is localized to recently activated excitatory synapses. *Neuroscience*, 125(1):7-11.
- Calhoun M.E.**, Mao Y., Roberts J.A., Rapp P.R. (2004) Reduction in hippocampal cholinergic innervation is unrelated to cognitive decline. *Journal of Comparative Neurology*, 475(2):238-46.
- Boncrisiano S.* , **Calhoun M.E.*** , Howard V., Bondolfi L., Kaeser S.A., Wiederhold K-H., Staufenbiel M., Jucker M. (2005) Neocortical synaptic bouton number is maintained despite robust amyloid deposition in APP23 transgenic mice. *Neurobiology of Aging*, 26(5):607-13.
- Fletcher B.R., **Calhoun M.E.**, Rapp P.R., Shapiro M.L. (2006) Fornix lesions decouple the induction of hippocampal arc transcription from behavior but not plasticity. *Journal of Neuroscience*, 26(5):1507-15.
- Shamy J., Buckmaster C.A., Amaral D.G., **Calhoun M.E.**, Rapp P.R. (2007) Reactive plasticity in the hippocampus following entorhinal cortex lesions. *Journal of Comparative Neurology*, 502(2):192-201.
- Calhoun M.E.**, Fletcher B.R., Yi S., Zentko D.C., Gallagher M., Rapp P.R. (2007) Age-related spatial learning impairment is unrelated to spinophilin immunoreactive spine number and protein levels in rat hippocampus. *Neurobiology of Aging*, 29(8):1256-64.
- Bolmont T., Haiss F., Eicke D., Radde R., Mathis C.A., Klunk W.E., Kohsaka S., Jucker M., **Calhoun, M.E.** (2008) Dynamics of the microglia/plaque interaction indicate a role in plaque maintenance. *Journal of Neuroscience*, 28(16):4283-92.
- Wegenast-Braun B.M., Fulgencio A., Radde R., Herzog M.C., Jucker M., **Calhoun M.E.** (2009) Vascular and parenchymal amyloid independently affect synaptic plasticity-related gene induction. *American Journal of Pathology*, 175(1):271-82.
- Rupp N.J., Wegenast-Braun B.M., **Calhoun M.E.**, Jucker M. (2010) Early onset amyloid lesions lead to severe neuritic abnormalities and local but not global neuron loss in the APPPS1 transgenic mouse model. *Submitted*.