

CURRICULUM VITAE Date Prepared: 08/26/2022

Christopher M. Norris, PhD
Sylvia Mansbach Chair in Alzheimer's Disease
Assoc. Director of Research and Faculty Advancement
Sanders-Brown Center on Aging
Professor, Regular Faculty
Pharmacology and Nutritional Sciences
University of Kentucky College of Medicine



I. GENERAL INFORMATION

Office Address **797 S. Limestone St, 553 Lee Todd Jr Building**
Lexington, KY, 40536

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II. EDUCATION

Undergraduate

Washington & Jefferson College
Washington, PA
09/1988-05/1992 BA, Psychology, Cum Laude
Undergraduate research: "Spatial categorization in infants".
Advisor: Dr. Paul C. Quinn

Professional/Graduate

Wake Forest University
Winston-Salem, NC
09/1992-05/1994 M.A., Experimental Psychology
Master's Thesis: "Relationship between inhibition of the acoustic startle response and the protection of prepulse processing"
Advisor: Dr. Terry D. Blumenthal

University of Virginia
Charlottesville, VA
09/1994-05/1998 Ph.D., Neuroscience
Doctoral Thesis: "Changes in hippocampal synaptic function during aging"
Advisor: Dr. Thomas C. Foster

II. EDUCATION (continued)

Post-Graduate

- Molecular and Biomedical Pharmacology, University of Kentucky College of Medicine**
Lexington, KY
- 07/1998-09/2003 Postdoctoral Fellowship/Scholarship
Research Project: L-type Ca²⁺ channel regulation in primary hippocampal neurons by the protein phosphatase, calcineurin
Advisor: Dr. Philip Landfield
- Molecular and Biomedical Pharmacology, University of Kentucky College of Medicine**
Lexington, KY
- 09/2003-07/2004 Research Associate
Research Project: Calcineurin and biobehavioral markers of aging
Advisors: Drs. Philip Landfield and Susan Kraner

III. ACADEMIC APPOINTMENTS

Faculty

- University of Kentucky College of Medicine**
Lexington, KY
- 07/2004-06/2010 Assistant Professor, Molecular and Biomedical Pharmacology and the Sanders-Brown Center on Aging,
Regular Faculty, Tenure-track, Academic, Full time
- 07/2010-06/2016 Associate Professor, Department of Pharmacology and Nutritional Sciences and the Sanders-Brown Center on Aging,
Regular Faculty, with tenure, Academic, Full time
- 07/2016- Professor, Department of Pharmacology and Nutritional Sciences and the Sanders-Brown Center on Aging,
Regular Faculty, with tenure, Academic, Full time
- 10/2016- Associate Director of Research and Faculty Advancement,
Sanders-Brown Center on Aging
- 08/2019- Professor, Department of Neuroscience
Joint Appointment

IV. CONSULTING ACTIVITIES

National/International

- McGraw-Hill Education**
- 2007 Academic Reviewer
Description: Provided critical review of Basic and Clinical Pharmacology (12th Edition), Chapter 55: Immunopharmacology

IV. CONSULTING ACTIVITIES

National/International (cont'd)

02/2008 **University of Wisconsin, Milwaukee**
Milwaukee, WI
Consultant/Electrophysiology
Description: Consulted Dr. James Moyers' lab on extracellular recording techniques in hippocampal slices.

V. TEACHING ACTIVITIES

1993-1994 **Wake Forest University**
Winston-Salem, NC
Behavioral Research Statistics Laboratory/Undergraduate students
Topic: Research statistics in behavioral research (2 h)

1997-1998 **University of Virginia**
Charlottesville, VA
Medical Neuroscience laboratory/Medical Students
Topic: Neuroanatomy (2 h)

2003 **University of Kentucky College of Medicine**
Lexington, KY
Advanced Molecular Pharmacology/Pharmacology Graduate program/Graduate and professional students
Topics: NMDA receptors/Voltage gated Ca²⁺ channels (1.5 h), Ca²⁺ signaling via calcineurin. (1.5 h)

2005 Aging of the Nervous System/ANA710/Integrated Biomedical Sciences Program/Graduate Students
Topics: Aging-related changes in synaptic plasticity (1.5 h), Role of Neuroglia in Brain Aging (1.5 h)

2005-present Molecular Drug Targets and Therapeutics/PHA622/Pharmacology Graduate Program/Graduate and Professional Students
Topics: Drugs of abuse (2-3 h); Antipsychotics (1 h); Immunosuppressants (1 h)

2006-2014 Dental Pharmacology/OBI836/Dental Students
Topics: Drugs of abuse (1-2 h)

2007-2013 Medical Pharmacology (PHA824) Medical School students
Topics: Drugs of abuse (3 h); Antipsychotics (1 h); Immunosuppressants (2-3 h)

2012 Aging of the Nervous System/ANA710/Integrated Biomedical Sciences Program/Graduate Students
Topics: Ca²⁺ dysregulation and neurologic dysfunction with aging (1.5 h)

V. TEACHING ACTIVITIES (cont'd)

University of Kentucky College of Medicine

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|--------------|--|
| 2013-present | Foundations of Infections, Disease, and Therapeutics (MD810) Medical School Students Topic: Immunosuppressants (2h) |
| 2013-present | Behavioral Basis of Medicine (MD813) Medical School Students Topic: Antipsychotics (1h) |
| 2013-2014 | Behavioral Basis of Medicine/MD813/Medical School students Topics: Drugs of abuse (2 h); Antipsychotics (1 h) |
| 2013-present | Foundations of Infection, Disease and Therapeutics/MD810/Medical School students Topics: Immunosuppressants (2 h) |
| 2016-present | Biochemistry of Neurodegeneration(IFS608)/IFS students Topic: Ca ²⁺ signaling and astrocytes (1 hr) |
| 2019-present | Neuropharmacology: Drugs and the Brain (PHA425G) Advanced Undergraduate Students Topics: Treating psychosis and schizophrenia (1h); Treating Traumatic brain injury (1h); Treating Neuroinflammation (1h); Treating neurodegenerative disorders (1h) |

VI. ADVISING ACTIVITIES

University of Kentucky College of Medicine

Lexington, KY

PhD Advisees

| | |
|-----------------|--|
| 10/2004-12/2007 | <i>Michelle Sama</i> , Molecular and Biomedical Pharmacology Role: Primary Mentor Dissertation title: Characterization of the calcineurin/NFAT pathway in astrocyte-based immune/inflammatory processes and Alzheimer's disease pathology Present position: Associate Professor and Chair, Science Department, Vermont Technical College, Randolph Center, VT |
| 09/2005-05/2008 | <i>Dusan Jeftinija</i> , Molecular and Biomedical Pharmacology Role: Co-Mentor Dissertation title: The Role of the L-type Voltage-gated Calcium Channel Ca (V) 1.2 in Skeletal Muscle Development and Fiber Type Specification Present position: Pharmacist, Louisville KY |
| 09/2006-05/2011 | <i>Diana (Mathis) Sama</i> , Gerontology Dissertation title: Interactions between Ca ²⁺ dysregulation and Neuroinflammation Present position: Proposal Development Officer, Univ Kentucky |

VI. ADVISING ACTIVITIES (continued)

PhD Advisees cont'd

- 09/2007-05/2012 *Jennifer Furman*, Molecular and Biomedical Pharmacology
Role: Primary Mentor
Dissertation title: Emerging potential of astrocytes and calcineurin/NFAT signaling in the treatment of Alzheimer's disease
Present position: Biomedical Writer, Cadent Medical Communications, Irving, TX
- 09/2012-2016 *Melanie Pleiss*, Pharmacology and Nutritional Sciences
Role: Primary Mentor
Dissertation title: Astrocytic calcineurin and connexin43 gap junctions in Alzheimer's disease
Present Position: Physician's Assistant Certified at Southern Emergency Medical Specialists, Louisville, Ky
- 09/2021- *Blaine Weiss*, Pharmacology and Nutritional Sciences
Role: Primary Mentor

Postdoctoral advisees/Senior Scientists

- 2005–2011 *Hafiz Mohammad Abdul*, Sanders-Brown Center on Aging
Role: Primary Supervisor
Present position: Sr Scientist Applied BioMath, Concord, MA
- 2012-2019 *Pradoldej Sompol*: Post doc - Scientist III, Sanders-Brown Center on Aging
Role: Primary Supervisor
- 2013-present *Susan Kraner*: Scientist III, Sanders-Brown Center on Aging
Role: Primary Supervisor
- 2017-present *Jenna Gollihue*, Postdoc fellow, Sanders-Brown Center on Aging
Role: Primary Supervisor
- 2021-present *J. Christopher Gant*, Scientist III, Sanders-Brown Center on Aging
Role: Primary Supervisor

Junior Faculty

- 2019-present *Pradoldej Sompol*: Pharmacology and SBCoA

Rotation students

- 2004 Leslie Gilmer, Gayle Joseph
- 2006 Diana (Mathis) Sama, Sourik Ganguly, Jennifer Furman
- 2008 Robin Webb
- 2010 Paulina Davis
- 2012 Isabel Derera, Cassi Binkley
- 2013 Kendra Staggs, Maria Dixon
- 2015 Jacob Dunkerson
- 2019 Alex Early

High School/Undergraduate/Professional Students

- 2012 Korey Brammel (undergraduate)

VI. ADVISING ACTIVITIES (continued)

2013 Phillip Norton (Medical Student)
2014-2015 Esther Putman (Lafayette High School Student)

High School/Undergraduate/Professional Students (cont'd)

2018 Nathan Farr MD/PhD student
2022 Napasorn Thongsopha, Suthida Hongthong, Walailak University, Thailand. Student interns.

Thesis & Dissertation Committees

2007 Justin Nickels, Anatomy and Neurobiology (outside reviewer): 2008
Justin Rogers, Pharmacology
2009 Michelle Stephens, Anatomy and Neurobiology (outside reviewer):
2010 Robert Hunt, III, Physiology (outside reviewer)
2011 Martin Zane, Center for Neurodegenerative Diseases University of
Texas Medical Branch, Galveston TX (outside reviewer)
Pamela Phares, College of Nursing (outside reviewer)
2012 Robin Webb, Biochemistry
2013 Kathleen Schoch, Physiology (outside reviewer)
2014 Thomas Platt, Biochemistry (outside reviewer)
Paulina Davis, Pharmacology
2017 Erica Weekman, Physiology
2017 Catherine Kaminski Withers, Biochemistry (outside reviewer)
2018 Olga Zolochovska, Center for Neurodegenerative Diseases Univ of
Texas Medical Branch, Galveston TX (outside reviewer)
2018 Claudia Marino, Center for Neurodegenerative Diseases University of
Texas Medical Branch, Galveston TX (outside reviewer)
2019 Han Ly, Pharmacology
2019 Hilaree Frazier, Pharmacology
2019 Jennifer Gooch, Physiology
2021 Jacob Dunkerson, Neuroscience
2022 Benjamin Shaw, Physiology (outside reviewer)
2018 Alex Helman, Biochemistry (outside reviewer)
2019 Brittani Price, Physiology (outside reviewer)
2020 Adam Ghoweri, Pharmacology
2022 Colleen Bodnar, Neuroscience
2023 (expected) Mengfan Xia, Pharmacology
2023 (expected) Alex Early, Physiology
2024 (expected) Sami Case, Pharmacology
2025 (expected) Sabrina Krauss, Neuroscience
2025 (expected) Edric Winford, Pharmacology

Mentored Awards

Donovan Scholarship: Diana Sama 2008-2010
PhRMA Foundation Pre Doctoral Fellowship: Jennifer Furman 2011-2013
NIH T32: Pradoldej Sompol, 2012-2014
PhRMA Foundation Pre Doctoral Fellowship: Melanie Pleiss 2014-2015

VI. ADVISING ACTIVITIES (continued)

Mentored Awards (cont'd)

| | |
|--|------------------------------|
| NIH F31: | Melanie Pleiss 2015-2017 |
| Irene & Eric Simon Brain Research Foundation Summer Fellowship | Esther Putman 2015 |
| NIH T32 | Jenna Gollihue 2018 – |
| Professional Student Mentored Research Fellowship | Nathan “Drew” Farr 2018-2019 |
| UK CCTS Pilot Award | Pradoldej Sompol 2020-2021 |
| NIH T31: | Nathan “Drew” Farr 2020-2021 |
| NIH F30: | Nathan “Drew” Farr 2021-2022 |

Junior Faculty Mentoring Committees

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|-------|--|
| 2020- | Daniel Lee, Associate Professor, Neuroscience Maj-Linda Selenica, Assistant Professor, Biochemistry Josh Morganti, Assistant Professor, Neuroscience |
| 2021- | David Braun, Assistant Professor, Neuroscience Erica Weekman, Assistant Professor, Physiology Justin Miller, Assistant Professor, Bioinformatics and Computational Biology Mark Ebbert, Assistant Professor, Bioinformatics and Computational Biology |

VII. ADMINISTRATIVE ACTIVITIES & UNIVERSITY SERVICE

University

University of Kentucky, Lexington, KY

Administration

| | |
|--------------|--|
| 07/2012-2021 | Member, Institutional Biosafety Committee |
| 2018 | Office of Research Integrity, Inquiry Committee, Chair |
| 10/2019 | External Review Committees for the Division of Laboratory Animal Resources, Office of the Attending Veterinarian, and the Project Development Office |

College

University of Kentucky College of Medicine, Lexington, KY

Education & Research

| | |
|-----------|--|
| 2010–2012 | Gerontology Student Affairs Committee |
| 2011-2012 | Lymph Node/Marrow/Blood Curriculum Committee |
| 2011-2012 | Behavioral Basis Curriculum Committee |
| 2016-2017 | Shared Governance Sub-committee |

Administration

| | |
|--------------|-------------------------------------|
| 2008-2010 | Faculty search committee |
| 2008–present | Full member of the Graduate Faculty |

VII. ADMINISTRATIVE ACTIVITIES & UNIVERSITY SERVICE (cont'd)

2009–present Affiliate Faculty UK Graduate Center for Gerontology
2018 Experienced Leader Academy Participant
University of Kentucky Dept. Pharmacol Nutr. Sci

Education & Research

2009–2020 Course Director, PHA622-002, Neuropharmacology
2009 Master Educator Fellowship Seminar Series Participant

University of Kentucky, College of Medicine, SBCoA

2010–2013 Faculty search committee
2011 Rodent behavior core exploratory committee
2016—present Associate Director of Research and Faculty Advancement
2019—present Co-Director, Sanders-Brown Multiphoton Microscopy Facility
2020-2021 SBCoA Strategic Planning Committee
2021 Faculty search committee chair
2022 SCoBIRC Director search committee

Solicited referrals for tenure promotion, research awards

09/2014 Faculty promotion to Associate Professor, Univ. KY Coll. Medicine
09/2016 Faculty promotion to Associate Professor, S. Illinois Sch. Medicine
09/2017 Faculty promotion to Full Professor, Univ. KY Coll. Medicine
09/2017 Faculty promotion to Associate Professor, U. SC Sch. Medicine
02/2018 Faculty appointment to Assoc Prof, U. Washington, Dept. Pediatrics
11/2018 Faculty promotion to Assoc Prof U TX, Dallas School Natural Sci & Math
01/2019 Established Investigator Award, American Heart Association
11/2019 Faculty appointment to Assoc Prof, UTMB Dept. Anesthesiology
10/2021 Faculty Promotion to Assoc Prof, UTMB Department of Neurology
01/2022 Faculty Promotion to Assoc Prof, UAB Dept. of Cell, Developmental & Integrative Biology

VIII. SPECIAL ASSIGNMENTS

Summer, 2018 Office of Research Integrity, Inquiry Committee, Chair

IX. HONORS & AWARDS

1991-1992 President of Psi Chi, National Honor Society in Psychology Washington & Jefferson Chapter, Washington & Jefferson College
1992 Top Psychology Scholar Award, Given to two psychology majors based on GPA and research excellence - Washington & Jefferson College
1997 Glenn Foundation/American Federation for Aging Research Graduate Scholarship
1997 Michael J. Peach Outstanding Graduate Student Award Nominee, Based on research and academic achievement, University of Virginia
1998 Eric Lothman Award for Outstanding Research in the Neurosciences, University of Virginia

IX. HONORS & AWARDS (cont'd)

- 1999, 02', 03 Postdoctoral Research Forum Award, University of Kentucky
Neuroscience Research Day
- 1998-2000 Neurobiology of Aging Postdoctoral Fellowship (T32), University of Kentucky
- 2000-2003 Postdoctoral National Research and Service Award (F32) from the National Institute on Aging
- 2005-2022 Charles T. Wethington Award for Research Excellence, University of Kentucky Medical Center, University of Kentucky
- 2018- Sylvia Mansbach Endowed Professorship and Chair in Alzheimer' Disease
- 2018- UK VPR Equipment Award (with Olivier Thibault) for Scientifica 2 photon microscope
- 2022- UK NRPA Equipment Award (\$100K)

X. PROFESSIONAL ACTIVITIES, PUBLIC SERVICE & PROFESSIONAL DEVELOPMENT

Memberships

- 1998-present Society for Neuroscience
- 1998-present Bluegrass Chapter of the Society for Neuroscience
- 1998-present Molecular and Cellular Cognition Society
- 2013-present Researchers Against Alzheimer's
- 2014-present Intl. Soc. to Advance Alzheimer's Research and Treatment
- 2014-2016 American Society for Neurochemistry

Positions Held

- 2005-2006: Activities coordinator, Bluegrass Society for Neuroscience
- 2016 President, Bluegrass Society for Neuroscience
- 2015—2020 ISTAART Innate Immunity PIA executive committee member

National Institutes of Health Study Sections

- 2006—2008 ZRG1 F02A NIH *Ad Hoc* member
- 2008 ZHD1 SRC(99) NIH Program Project review committee member
- 2009 ZAG1 ZIJ-6 (07) NIA Special Emphasis Panel, RC2 grant reviewer
- 2010 ZRG1 BCMB-B NIH, Special Emphasis Panel member
- 2011 NIGMS SCORE grant panel member

National Institutes of Health Study Sections

- 2012 ZAG1 ZIJ-2 (J1)2012 NIH PPG review committee member
- 2013 ZNS1 SRB-N (04), NIH EUREKA *Ad hoc* study section member
ZRG1 MDCN-B (03) M NIH Conflict study section member
- 2014 NIH CNNT, *Ad hoc* reviewer
- 2015 ZRG1 BDCN-W (05) NIH Conflict study section member
- 2016 ZRG1 CMBG, *Ad hoc* reviewer

X. PROFESSIONAL ACTIVITIES, PUBLIC SERVICE & PROFESSIONAL DEVELOPMENT (cont'd)

| | |
|-----------|---|
| 2016 | ZAG1 ZIJ-8 (J1) NIH P01 review committee member |
| 2016 | NIH CDIN <i>Ad hoc</i> reviewer |
| 2017-2021 | NIH CDIN regular member |
| 2018 | ZRG1-MDCN-T, Special Emphasis panel member |
| 2019 | ZAG1 ZIJ-5 (J2) NIH P01 review committee member |
| 2021 | ZRG-BDCN, <i>Ad hoc</i> reviewer |
| 2022- | AN-Q (55) review panel, Chair |

Grant reviews non-NIH

| | |
|----------------|--|
| 2003–present | Alzheimer's Association Research Grants Program |
| 2008 | Biotechnology and Biological Sciences Research Council |
| 2009 | Alzheimer's and Related Diseases Research Award Fund |
| 2010 | New Zealand Health Research Council |
| 2010-2011 | Medical Research Council |
| 2010, '12, '14 | University of Kentucky ADC pilot grants |
| 2011 | Louisiana Board of Regents' Research Competitiveness Subprogram |
| 2013 | Stichting Alzheimer Onderzoek-Fondation Recherche Alzheimer grant review |
| 2015 | Paul G. Allen Family Foundation |
| 2017— | Member, Scientific Review Board, Alzheimer's Drug Discovery Foundation |
| 2019 | Michael J. Fox Foundation: Astrocytes RFA |
| 2022 | Michael J. Fox Foundation: Astrocytes Program Review |

Editorial Boards

| | |
|--------------|--|
| 2015–present | Frontiers in Neuroscience, Review Editor, Neuropharmacology |
| 2015–present | Frontiers in Cellular Neuroscience, Review Editor, Cellular Neuropathology |
| 2011–2022 | PLoS ONE |

Journal Peer-Review since 2003

Have provided peer review for over 40 different Scientific journals including *The Journal of Neuroscience*, *Journal of Biological Chemistry*, *Proceedings of the National Academy of Sciences USA*, *Glia*, *Neurobiology of Aging*, *Progress in Neurobiology*, *Journal of Alzheimer's Disease*, *Journal of Neurochemistry*, and *Journal of Neuroinflammation*

Media Contributions

Work featured on the Alzheimer's Research Forum (www.alzforum.org)

| | |
|------------|--|
| 10/18/2009 | The skinny on NFATs-- Mediators of A β Toxicity? Interviewer/columnist: Tom Fagan; Web-based News story (link) |
| 12/2/2009 | Chicago: NFATs, Calcineurin—Mediators of AD, PD Pathogenesis? Interviewer/columnist: Esther Landhuis Web-based News story (link) |

X. PROFESSIONAL ACTIVITIES, PUBLIC SERVICE & PROFESSIONAL DEVELOPMENT (cont'd)

- 2/19/2010 Calcium Hypothesis—Studies Beef Up NFAT, CaN, Astrocyte Connections. Interviewer/columnist: Esther Landhuis
Web-based News story ([link](#))
- 03/04/2015 Systemic Inflammation: A Driver of Neurodegenerative Disease? Connections. Interviewer/columnist: Jessica Shugart
Web-based News story ([link](#))
- 12/16/2016 From Stem Cell Exosomes to Restoring ZZZs: New Ideas to Protect the Brain. Interviewer/columnist: Madolyn Bowman Rogers
Web-based News story ([link](#))

Invited Commentary

Alzheimer's Research Forum (www.alzforum.org)

- 04/15/2010 Abdul et al., J Neurosci. 2009 Oct 14;29(41):12957-69. ([link](#))
- 10/01/2010 Cruchaga et al PLoS Genet. 2010 Sep;6(9) ([link](#))
- 02/25/2011 Mair et al Nature. 2011 Feb 17;470(7334):404-8. ([link](#))
- 08/27/2014 Caraveo et al., PNAS 2014 Aug 26;111(34):E3544-52 ([link](#))
- 12/22/2014 Lian et al Neuron Dec 18. pii: S0896-6273 ([link](#))
- 04/05/2019 Miller et al Nat Neurosci Apr 1. ([link](#))
- 06/15/2020 Human Blood-Brain Barrier Model Blames Pericytes for CAA. Interviewer/columnist: Madolyn Bowman Rogers. Web-based News story ([link](#))
- 02/01/2021 Does Calcium Overload Mark Dendritic Spines for Destruction? Interviewer/columnist: Jessica Shugart
Web-based News story ([link](#))

Workshops

- 10/26/2016 Inflammation Strategy Workshop, Michael J. Fox Foundation, New York, NY

Symposia/Conference/Webinar Chairs

- 11/15/2016 Alzheimer's Disease: Therapeutics in Animal Models, 46th Annual Society for Neuroscience Conference, San Diego, CA
- 07/2020 AAIC Immunity and Neurodegeneration PIA Day symposium on Alzheimer's Disease and Down Syndrome: Neuroinflammatory Biomarkers and Autoimmune Comorbidities
- 2020-present Neurodysfunction and Neurodegeneration weekly virtual seminar series (co-host)
- 11/2021 AAIC Immunity and Neurodegeneration PIA Webinar: Reactive astrocytes as diagnostic and therapeutic targets in Alzheimer's disease and related disorders

Community Service

- 2003– Judge for science fairs at Glendover (2003-2005) and Stonewall Elem
- 2006,2007 Neuroscience exhibit for the Fayette County Science Fair Finals
- 2007: Neuroscience exhibit for Explorium, the Lexington Children's Museum

X. PROFESSIONAL ACTIVITIES, PUBLIC SERVICE & PROFESSIONAL DEVELOPMENT (cont'd)

2006 – 2009 Neuroscience Exhibit for Brain Awareness Week, Stonewall Elementary

2011 Neuroscience exhibit for Stonewall Elementary Science Night

XI. SPEAKING ENGAGEMENTS

Local

- 2004: *"Effects of Calcineurin on Brain Aging Biomarkers"*
Sanders-Brown Center on Aging
- 2006 *"Role of calcineurin in astrocyte activation associated with Alzheimer's disease"* Center of Biomedical Research Excellence
- 2007 *"Role of calcineurin signaling in brain aging"* **Sanders-Brown Center on Aging**
- 2008 *"Critical Role for the Calcineurin/NFAT Signaling Pathway in Neuroinflammation: Implications for Alzheimer's Disease"*
Sanders-Brown Center on Aging
- 2011 *"Targeting astrocytes in a mouse model of Alzheimer's disease"*
Sanders-Brown Center on Aging
- 2012 *"Astrocytes as therapeutic targets in Alzheimer's disease"*
Sanders-Brown Foundation Lunch Meeting
- 2012 *"Targeting Astrocytes in Animal Models of Alzheimer's Disease and TBI"* **Spinal Cord and Brain Injury Research Center**
- 2014 *"Adventures with astrocytes"*
Sanders-Brown Center on Aging
- 2016 *"Astrocytes, synapses, and neurodegenerative disease"*
Sanders-Brown Center on Aging
- 2019 *"Astrocytic calcineurin/NFAT signaling pathway and synapses in a diet-based mouse model of vascular dementia"*
Spinal Cord and Brain Injury Research Center
"Astrocytes and Neurodegenerative disease"
Department of Neuroscience

State/Regional

- 1992: *"Formation of a categorical representation for the spatial relation 'between' by 6- to 7-month-old infants"*
Western Pennsylvania Undergraduate Psychology Conference, Meadville, PA

XI. SPEAKING ENGAGEMENTS (cont'd)

National/International

- 01/1998 “MK-801 improves retention in aged rats: implications for altered neural plasticity in age-related memory deficits” **Winter Conference on the Neurobiology of Learning and Memory. Park City, UT**
- 10/2003 “*Effects of Calcineurin on Brain Aging Biomarkers*” **Department of Biochemistry and Molecular Biology, University of Louisville College of Medicine. Louisville, KY**
- 11/2007 “*Role for the calcineurin/NFAT pathway in astrocyte-based immune/inflammatory processes: Implications for Alzheimer’s disease*” **Society for Neuroscience Meeting. San Diego, CA**
- 02/2009 “*Role of calcineurin signaling in neuroinflammation and Alzheimer’s Disease*” **Department of Biology, Drexel University. Philadelphia, PA**
- 02/2009 “*Calcineurin: A dual threat in aging and Alzheimer’s disease*” **Department of Neuroscience, Cell Biology, and Physiology, Wright State University. Dayton, OH**
- 07/2010: “*Calcineurin: A dual threat in aging and Alzheimer’s disease*” **International Conference on Alzheimer’s Disease, Honolulu, HI**
- 06/2013 “*Targeting astrocytes in injury and disease*” (June 6th) **Department of Physiology, Emory University. Atlanta, GA**
- 07/2013 “*Calpain interactions with the protein phosphatase calcineurin in Alzheimer’s disease*” **FASEB Biology of Calpains in Health Disease meeting, Saxtons River, VT**
- 10/2013 “*Targeting astrocytes as a therapeutic strategy for Alzheimer’s disease*” **NIH Symposium on Alzheimer Disease, International Conference on Psychology, Autism and Alzheimer’s Disease, San Antonio, TX**
- 11/2014 “*The Forgotten Cells in AD: Astrocytes*” **Fourth Annual Markesbery Symposium on Aging and Dementia Lexington, KY**
- 03/2015 “*Targeting astrocyte signaling pathways protects hippocampal synaptic function following traumatic brain injury*” **American Society for Neurochemistry Meeting, Atlanta, GA**
- 04/2015 “*Astrocytes, cytokines, and synaptic dysfunction in neuro-degenerative conditions*” **Frontiers in Neuroscience Seminar Series, Emory University, Atlanta, GA**

XI. SPEAKING ENGAGEMENTS (cont'd)

National/International (cont'd)

- 10/2015 ***“Role of astrocytes in TBI and Alzheimer’s disease” Irene & Eric Simon Brain Research Foundation, New York, NY***
- 11/2016 ***“Inhibition of astrocytic calcineurin/NFAT signaling in a mouse model of vascular cognitive impairment and dementia” Society for Neuroscience Meeting, San Diego, CA***
- 12/2016 ***“Astrocytes, calcineurin, and neurodegenerative disorders” Mitchell Center for Neurodegenerative Diseases, University of Texas Medical Branch. Galveston, TX***
- 04/2017 ***“Astrocytes, calcineurin, and neurodegenerative disorders” Avidin, Ltd. Szeged, Hungary***
- 5/2018 ***“Astrocytes and Calcineurin in Neurodegeneration” Department of Neuroscience and Regenerative Medicine, Augusta University. Augusta, GA***
- 10/2018 ***“Targeting astrocyte signaling in VCID” 10th International Symposium on Neuroprotection and Neurorepair, Dresden, Germany***
- 03/2019 ***“Blocking astrocytic calcineurin/NFAT signaling pathway protects synaptic function in a diet-based mouse model of vascular dementia” 14th International Conference on Alzheimer’s & Parkinson’s Diseases. Lisbon, Portugal***
- 06/2019 ***“Role of Astrocyte Activation in Neurodegenerative Diseases” International conference on Biomedical Sciences and Medical Technology. Nakhon Si Thammarat, Thailand***
- 07/2019 ***“Astrocyte Activation and Hippocampal Synaptic Impairments in Mouse Models of Amyloid Pathology and Cerebrovascular Dysfunction” Alzheimer’s Association International Conference. Los Angeles, CA USA***
- 09/2019 ***“Pre-clinical Assessment of the Therapeutic Utility of Small Molecule Inhibitors of the Calcineurin/NFAT System in Alzheimer’s Disease” Alzheimer’s Drug Discovery Foundation International Conference on Drug Discovery. Jersey City, NJ***
- 03/2020 ***“Astrocyte signaling as a therapeutic target for Alzheimer’s disease and related disorders” (Postponed due to COVID19 pandemic) Society for Brain Mapping & Therapeutics, 17th Annual Conference. Los Angeles, CA***

XI. SPEAKING ENGAGEMENTS (cont'd)

National/International (cont'd)

- 07/2020 “Novel small chemical compound with NFAT modulatory properties alleviates synaptic dysfunction and improves cognition in mouse models of amyloid pathology” (converted to virtual conference due to COVID19 pandemic) **Alzheimer’s Association International Conference. Amsterdam, Netherlands**
- 05/2021 “Targeting reactive astrocytes in animal models of Alzheimer’s disease and related disorders” **Neurodysfunction and Neurodegeneration Seminar Series, Virtual.**
- 10/2021 “Targeting reactive astrocytes in Alzheimer’s disease and related Disorders” **Department of Pharmacology & Physiology, Drexel University, Philadelphia, PA (Virtual)**
- 11/2021 “Targeting and assessing the functional impact of reactive astrocytes” **AAIC Immunity PIA Webinar: Reactive Astrocytes as diagnostic and Therapeutic targets in Alzheimer’s disease and related disorders**
- 3/2022 “Perturbed astrocyte Ca²⁺ signaling in a diet-based mouse model of small cerebral vessel disease **International Conference on Alzheimer’s & Parkinson’s Diseases. Barcelona, Spain (Virtual)**

XII. RESEARCH & INTELLECTUAL CONTRIBUTIONS

A. PATENTS

Submitted, U.S. Patent Pending: “Monoclonal antibodies that specifically label a proteolyzed pathologic form of the protein phosphatase calcineurin” 2020

XII. RESEARCH & INTELLECTUAL CONTRIBUTIONS (cont'd)

B. PUBLICATIONS

Peer-Reviewed Original Research in Professional, Scientific or Educ Journals

1. Blumenthal TD, Schicatano EJ, Chapman JC, **Norris CM**, Ergenzinger ER (1996). Prepulse effects on magnitude estimation of startle eliciting stimuli and responses. *Attention, Perception and Psychophysics* **58**:73-80.
2. **Norris CM**, Blumenthal TD (1996) A relationship between inhibition of the acoustic startle response and the protection of prepulse processing. *Psychobiology* **24**:160-168.
3. **Norris CM**, Korol DL, Foster TC (1996) Increased susceptibility to induction of long-term depression and long-term potentiation reversal during aging. *The Journal of Neuroscience* **16**:5382-5392.
F1000 article recommendation ([link](#))
4. Foster TC, **Norris CM** (1997) Age-associated changes in Ca²⁺-dependent processes: relation to hippocampal synaptic plasticity. *Hippocampus* **7**:602-612.

XII. RESEARCH & INTELLECTUAL CONTRIBUTIONS (cont'd)

B. PUBLICATIONS (cont'd)

5. **Norris CM**, Halpain S, Foster TC (1998) Reversal of age-related alterations in synaptic plasticity by blockade of L-type Ca²⁺ channels. *The Journal of Neuroscience* **18**:3171-3179.
6. **Norris CM**, Halpain S, Foster TC (1998) Alterations in the balance of protein kinase/phosphatase activities parallel reduced synaptic strength during aging. *Journal of Neurophysiology* **80**:1567-1570.
7. **Norris CM**, Foster TC (1999) MK-801 improves retention in aged rats: implications for altered neural plasticity in age-related memory deficits. *Neurobiology of Learning and Memory* **71**:194-206.
8. Foster TC, **Norris CM** (1998) Calcium and neuronal ageing: Comment letter. *Trends in Neurosciences* **21**:286-287.
9. Quinn PC, **Norris CM**, Pasko RN, Schmader TM, Mash C (1999) Formation of a categorical representation for the spatial relation 'between' by 6- to 7-month-old infants. *Visual Cognition* **6**:569-585.
10. Foster TC, Sharrow KM, Masse JR, **Norris CM**, Kumar A (2001) Calcineurin links Ca²⁺ dysregulation with brain aging. *The Journal of Neuroscience* **21**:4066-4073.
11. **Norris CM**, Blalock EM, Porter, NM, Chen, K-C, Landfield PW (2002) Calcineurin enhances L-type Ca²⁺ channel activity in hippocampal neurons: Increased effect with age in culture. *Neuroscience* **110**:213-225.

~~-----JOINED UK AS ASSISTANT PROFESSOR IN JULY 2004-----~~

12. **Norris CM**, Kadish I, Blalock EM, Chen KC, Thibault V, Porter NM, Landfield PW, Kraner SD (2005). Calcineurin triggers reactive/inflammatory processes in astrocytes and is upregulated in aging and Alzheimer's models. *The Journal of Neuroscience* **25**:4649-4658. **Notes**: Corresponding Author
13. Blalock EM, Chen K-C, Stromberg AJ, **Norris CM**, Kadish I, Kraner SD, Porter NM, Landfield PW (2005) Harnessing the power of gene microarrays for the study of brain aging and Alzheimer's disease: Statistical reliability and functional correlation. *Ageing Research Reviews* **4**:481-512.
14. **Norris CM**, Blalock EM, Thibault O, Brewer LD, Clodfelter GV, Porter, NM, Landfield PW (2006) Electrophysiological mechanisms of delayed excitotoxicity: Positive feedback loop between NMDA receptor current and depolarization-mediated glutamate release. *Journal of Neurophysiology* **96**:2488-2500.
15. Jeftinija DM, Hebert SL, **Norris CM**, Wang QB, Rich MM, Kraner SD (2007) The CaV 1.2 Ca²⁺ channel is expressed in the sarcolemma of type I and IIa skeletal muscle fibers. *Muscle & Nerve* **36**: 482-490.
16. Sama MA, Mathis DM, Furman JL, Artiushin IA, Mohammad Abdul H, Kraner SD, **Norris CM** (2008) Interleukin-1 β -dependent signaling between glia and neurons depends critically on astrocytic calcineurin/NFAT activity. *Journal of Biological Chemistry* **283**:21953-21964.

XII. RESEARCH & INTELLECTUAL CONTRIBUTIONS (cont'd)

B. PUBLICATIONS (cont'd)

17. Abdul MH, Sama MA, Furman JL, Mathis DM, Beckett TL, Weidner AM, Patel ES, Baig I, Levine, H III, Murphy MP, Kraner SD, **Norris CM** (2009) Cognitive decline in Alzheimer's disease is associated with selective changes in calcineurin/NFAT signaling. *The Journal of Neuroscience* **29**:12957–12969.
**Featured article on the [Alzheimer's Research Forum](#)*
18. **Norris CM**, Scheff SW (2009) Recovery of afferent function and synaptic strength in hippocampal CA1 following traumatic brain injury. *Journal of Neurotrauma* **26**:2269–2278.
19. Furman JL, Artiushin IA, **Norris CM** (2010) Disparate effects of serum on basal and evoked NFAT activity in primary astrocyte cultures. *Neuroscience Letters* **469**:365–369.
20. Abdul MH, Furman JL, Sama MA, Mathis DM, **Norris CM** (2010) NFATs and Alzheimer's disease. *Molecular and Cellular Pharmacology*, **2**:7-14.
21. **Norris CM**, Blalock EM, Chen K-C, Porter, NM, Thibault O, Kraner SD, Landfield PW (2010) Hippocampal 'zipper' slice studies reveal a necessary role for calcineurin in the increased activity of L-type Ca²⁺ channels with aging. *Neurobiology of Aging* **31**:328–338.
- Promoted to ASSOCIATE PROFESSOR IN JULY 2010-----
22. Mohammad Abdul H, Baig I, Levine, H III, Guttmann RP, **Norris CM** (2011) Proteolysis of calcineurin is increased in human hippocampus during mild cognitive impairment and is stimulated in primary neuronal cultures by oligomeric Aβeta. *Aging Cell*, **10**:103-113.
23. Gant JC, Chen K-C, **Norris CM**, Thibault O, Blalock EM, Porter NM, Landfield PW (2011) Disrupting function of FK506-binding protein 1b/12.6 induces the Ca²⁺-dysregulation aging phenotype in hippocampal neurons. *The Journal of Neuroscience*. **31**:1693-1703.
24. Mathis DM, Furman JL, **Norris CM** (2011) Preparation of acute hippocampal slices from rats and transgenic mice for the study of synaptic alterations during aging and amyloid pathology. *Journal of Visualized Experiments*, **49**: pii: 2330. <http://www.jove.com/details.stp?id=2330>. – 8 page article.
25. Thibault O, Pancani T, Landfield PW, **Norris CM** (2012) Reduction in neuronal L-type Ca²⁺ channel current density in hippocampal "zipper" slices from mid-age memory-deficient APPxPS1 mice. *Biochimica et Biophysica Acta*, **1822**:546-549.
26. Sama DM, Mohammad-Abdul, H, Furman JL, Szymkowski, DE, Scheff, SW, **Norris, CM** (2012) Inhibition of soluble tumor necrosis factor ameliorates synaptic alterations and Ca²⁺ dysregulation in aged rats. *PLOS ONE*, **7**(5):e38170. doi:10.1371/journal.pone.0038170. --10 page article

XII. RESEARCH & INTELLECTUAL CONTRIBUTIONS (cont'd)

B. PUBLICATIONS (cont'd)

27. Bachstetter AD, **Norris, CM**, Sompol P, Wilcock DM, Goulding D, Neltner JH, St Clair D, Watterson DM, Van Eldik LJ (2012) A small molecule suppressor of proinflammatory cytokine production attenuates glial activation and prevents synaptic dysfunction in an Alzheimer's disease transgenic mouse model. *The Journal of Neuroscience*, **32**:10201–10210.
28. Furman JL, Sama DM, Gant JC, Beckett TL, Murphy MP, Bachstetter AD, Van Eldik LJ, **Norris CM** (2012) Targeting astrocytes ameliorates neurologic changes in a mouse model of Alzheimer's disease. *The Journal of Neuroscience*, **32**: 16129 – 16140. ["This Week in the Journal" featured article](#)
29. Sama DM, **Norris CM** (2013) Calcium dysregulation and neuroinflammation: Discrete and integrated mechanisms for age-related synaptic dysfunction. *Ageing Research Reviews*, **12**:982-995.
30. **Norris CM** (2014) Calpain interactions with the protein phosphatase calcineurin in neurodegeneration. *Advances in Biochemistry in Health and Disease*. **8**:17-45
31. Wang W-X, Danaher J, Miller CS, Berger JR, Vega NG, Wilfred BS, Neltner JH, **Norris CM**, Nelson PT (2014) Expression of MiR-15/107 family microRNAs in human tissues and rat brain cells. *Genomics, Proteomics & Bioinformatics* **12**:19-30.
32. Niedowicz DM, Reeves VL, Platt TL, Kohler K, Beckett TL, Powell DK, Lee TL, Sexton TR, Song ES, Brewer LD, Latimer CS, Kraner SD, Larson KL, Ozcan S, **Norris CM**, Hersh LB, Porter NM, Wilcock DM, Murphy MP (2014) Obesity and diabetes cause cognitive dysfunction in the absence of accelerated β -amyloid deposition in a novel murine model of mixed or vascular dementia. *Acta Neuropathologica Communications* **2**:64. doi: 10.1186/2051-5960-2-64. -- 17 page article
33. Gant JC, Blalock EM, Chen KC, Kadish I, Porter NM, **Norris CM**, Thibault O, Landfield PW (2014) FK506-binding protein 1b/12.6: A key to aging-related hippocampal Ca^{2+} dysregulation? *European Journal of Pharmacology* **739**:74-82.
34. Furman JL **Norris CM** (2014) Calcineurin and glial signaling: Neuroinflammation and beyond. *Journal of Neuroinflammation* **11**:158. -- 12 page article
- Promoted to FULL PROFESSOR IN JULY 2016**-----
35. **Norris CM**, Sompol P, Roberts KN, Ansari M, Scheff SW (2016) Pycnogenol protects CA3-CA1 synaptic function in a rat model of traumatic brain injury. *Experimental Neurology* **276**:5-12.
36. Furman JL, Sompol P, Kraner SD, Pleiss MM, Putman EJ, Dunkerson J, Mohammad Abdul H, Scheff SW, **Norris CM** (2016) Blockade of astrocytic calcineurin/NFAT signaling helps to normalize hippocampal synaptic function and plasticity in a rat model of traumatic brain injury. *The Journal of Neuroscience* **36**:1502-1515. ["This Week in the Journal" featured article](#)

XII. RESEARCH & INTELLECTUAL CONTRIBUTIONS (cont'd)

B. PUBLICATIONS (cont'd)

37. Pettigrew LC, Kryscio RJ, **Norris CM** (2016) The TNF α -Transgenic Rat: Hippocampal synaptic Integrity, cognition, function, and post- ischemic cell loss . *PLOS ONE*, **11**(5): e0154721. -- 20 page article
38. Lovell MA, Lynn BC, Fister S, Bradley-Whitman M, Murphy MP, Beckett TL, **Norris CM**, (2016) A novel small molecule modulator of amyloid pathology. *Journal of Alzheimer's Disease*, **53**:273-87.
39. Pleiss MM, Sompol P, Kraner SD, Mohmmad Abdul H, Furman JL, Guttman RP, Wilcock DM, Nelson PT, **Norris CM** (2016) Calcineurin proteolysis in astrocytes: Implications for impaired synaptic function. *Biochimica et Biophysica Acta*, **1862**: 1521–1532.
40. Sudduth TL, WeekmanEM, Gooch JL, Woolums A, **Norris CM**, Wilcock DM (2017) Neurovascular astrocyte degeneration in the hyperhomocysteinemia model of vascular cognitive impairment and dementia (VCID) *Neuroscience*, **341**:42-51.
41. MacPherson KP, Sompol P, Kannarkat G, Chang J, Sniffen L, Wildner ME, **Norris CM**, Tansey MG (2017) Peripheral administration of the soluble TNF inhibitor XPro1595 modifies brain immune cell profiles, decreases beta-amyloid plaque load, and rescues impaired long-term potentiation in 5xFAD mice. *Neurobiology of Disease*, **102**:81-95.
42. Manocha GD, Ghatak A, Puig KL, Kraner SD, **Norris CM**, Combs KL (2017) NFATc2 Modulates Microglial Activation in the A β PP/PS1 Mouse Model of Alzheimer's Disease. *Journal of Alzheimer's Disease*, **58**:775-787.
43. Sompol P, Furman JL, Pleiss MM, Kraner SD, Artiushin IA, Batten SR, Quintero JE, Simmerman LA, Beckett TL, Lovell MA, Murphy MP, Gerhardt GA **Norris CM** (2017) Calcineurin/NFAT signaling in activated astrocytes drives network hyperexcitability in A β -bearing mice. *The Journal of Neuroscience*, **37**:6132-6148.
44. Price BR, Sompol P, **Norris CM**, Wilcock DM (2018) An emerging role of astrocytes in vascular contributions to cognitive impairment and dementia (VCID). *Journal of Neurochemistry*, **144**:644-650.
45. Castonguay D, Dufort-Gervais J, Ménard C, Chatterjee M, Quirion R, Bontempi B, Schneider JS, Arnsten AFT, Nairn AC, **Norris CM**, Ferland G, Bézard E, Gaudreau P, Lombroso PL, Brouillette J (2018) The tyrosine phosphatase STEP is involved in age-related memory decline. *Current Biology*, **28**:1079-1089. **F1000** article recommendation ([link](#))
46. Sompol P, **Norris CM** (2018). Ca²⁺, astrocyte activation and calcineurin/NFAT signaling in age-related neurodegenerative diseases. *Frontiers in Aging Neuroscience*, **10**:199. doi: 10.3389/fnagi.2018.00199.

XII. RESEARCH & INTELLECTUAL CONTRIBUTIONS (cont'd)

B. PUBLICATIONS (cont'd)

47. **Norris CM** (2018) Calcineurin: Directing the damage in Alzheimer's disease? *Journal of Neurochemistry*, **147**:8-11.
48. Kraner SD, **Norris CM** (2018) Astrocyte activation and the calcineurin/NFAT pathway in cerebrovascular disease. *Frontiers in Aging Neuroscience*, **10**:287. doi: 10.3389/fnagi.2018.00287.
49. Frazier HN, Anderson KL, Maimaiti S, Ghoweri AO, Kraner SD, Popa GJ, Hampton KK, Mendenhall MD, **Norris CM**, Craven RJ, Thibault O (2019) Expression of a constitutively active human insulin receptor in hippocampal neurons elevates signaling but does not alter VGCC currents. *Neurochemical Research*, **44**:269-280.
50. Braun D, Abner EL, Bakshi V, Goulding D, Grau EM, Lin AL, **Norris CM**, Sudduth TL, Webster SJ, Wilcock DM, Van Eldik LJ (2019) Blood flow deficits and cerebrovascular changes in a hyperhomocysteinemia model of vascular cognitive impairment and dementia. *ASN Neuro*, **11**:1759091419865788 doi: 10.1177/1759091419865788.
51. Thalman SW, Powell DK, Ubele M, **Norris CM**, Head E, Lin AL (2019) Brain-blood partition coefficient and cerebral blood flow in canines using Calibrated Short TR Recovery (CaSTRR) correction method. *Frontiers in Neuroscience*, **13**:1189. doi: 10.3389/fnins.2019.01189.
52. Quadri Z, Johnson N, Zamudioa F, Miller A, Peters M, Smeltzer S, Hunt JB, Housley SB, Brown B, Kraner SD, **Norris CM**, Nash K, Weeber E, Lee DC, Selenica M-L (2020) Overexpression of human wtTDP-43 causes impairment in hippocampal plasticity and behavioral deficits in CAMKII-tTa transgenic mouse model. *Molecular and Cellular Neuroscience*, **102**:103418. doi: 10.1016/j.mcn.2019.103418.
53. Gollihue JL, **Norris CM** (2020) Astrocyte mitochondria: Central players and potential therapeutic targets for neurodegenerative diseases and injury. *Ageing Research Reviews*, **59**:101039. doi: 10.1016/j.arr.2020.101039.
54. Dufort-Gervais J, Provost C, Charbonneau L, **Norris CM**, Calon F, Mongrain V, Brouillette J (2020) Neuroligin-1 is altered by amyloid-beta oligomers and modulates their toxicity. *Scientific Reports*, **10**(1):6956. doi: 10.1038/s41598-020-63255-6
55. Fu X, Sompol P, Brandon JA, **Norris CM**, Wilkop T, Johnson LA, Richards CI (2020) *In vivo* single-molecule detection of nanoparticles for multiphoton fluorescence correlation spectroscopy to quantify cerebral blood flow. *Nano Letters*, **20**:6135-6141.
56. Frazier HL, Anderson KL, Ghoweri AO, Lin RL, Hawkinson TR, Popa GJ, Sompol P, Mendenhall MD, **Norris CM**, Thibault O (2020) Molecular elevation of insulin receptor signaling improves memory recall in aged Fischer 344 rats. *Ageing Cell*, **e13220**. doi: 10.1111/accel.13220.

XII. RESEARCH & INTELLECTUAL CONTRIBUTIONS

B. PUBLICATIONS (cont'd)

57. Escartin C, Galea E, Lakatos A, O'Callaghan J, Petzold GC, Serrano-Pozo A, Steinhauser C, Volterra A, Carmignoto G, Agarwal A, Allen NJ, Araque A, Barbeito L, Barzilai A, Bergles D, Bonvento G, Butt AM, Chen W-T, Cohen-Salmon M, Cunningham C, Deneen B, de Strooper B, Díaz-Castro B, Farina C, Freeman M, Gallo V, Goldman JE, Goldman SA, Götz M, Gutiérrez A, Haydon PG, Heiland DH, Hol EM, Holt M, Iino M, Kastanenka KV, Kettenmann H, Khakh B, Koizumi S, Lee CJ, Liddelow SA, MacVicar B, Magistretti P, Messing A, Mishra A, Molofsky AV, Murai K, **Norris CM**, Okada S, Oliev SHR, Oliveira JF, Panatier A, Parpura V, Pekna M, Pekny M, Pellerin L, Perea G, Pérez-Nievas BG, Pfrieger FW, Poskanzer KE, Quintana FJ, Ransohoff RR, Riquelme-Perez M, Robel S, Rose CR, Rothstein J, Rouach N, Rowitch D, Semyanov A, Sirko S, Sontheimer H, Swanson RA, Vitorica J, Wanner I, Wood LB, Wu JQ, Zheng B, Zimmer ER, Zorec R, Sofroniew MV, Verkhratsky A (2021) Reactive astrocyte nomenclature, definitions and future directions. *Nature Neuroscience*, **24**:312-325
58. Price BR, Johnson LA, Wilcock DM, **Norris CM** (2021) Reactive Astrocytes: The nexus of pathological and clinical hallmarks of Alzheimer's disease. *Ageing Research Reviews*, **68**:101335. doi: 10.1016
59. Radhakrishnan H, Ubele M, Krumholtz S, Smiley J, Powell, D, **Norris CM**, Stark, C, Head E (2021) Tacrolimus protects against age-associated microstructural changes in the beagle brain. *The Journal of Neuroscience*, **41**:5124-5133.
60. Sompol P, Gollihue JL, Kraner SD, Artiushin A, Cloyd RA, Chishti EA, Koren SA, Nation GK, Abisambra JF, Huzian O, Hackler L, Puskas LG, **Norris CM** (2021) Q134R: Small chemical compound with NFAT inhibitory properties improves behavioral performance and synapse function in mouse models of amyloid pathology. *Ageing Cell*, **Jun 12:e13416**. doi: 10.1111/accel.13416.

Submitted/under review

61. MacPherson KP, Eidson LN, Weiss BE, Gollihue JL, Herrick MK, Houser MC, De Sousa Rodrigues ME, Sniffen L, Weekman EM, Hamilton AM, Kelly SD, Oliver D, Yang Y, Chang J, Sampson T, **Norris CM**, Tansey MG (2022) Soluble TNF mediates amyloid independent, diet-induced alterations to immune and neuronal functions in an Alzheimer's disease mouse model. **Submitted**
62. Gant JC, **Norris CM**, Thibault O, Chen KC, Blalock EM, Porter NM, Landfield PW (2022) K506 and FK520, Calcineurin-inhibiting Ligands of FK506 Binding Protein 12.6/1b, Reverse Aging-related Calcium Dysregulation in Hippocampal CA1 Neurons of Female and Male Rats. **Submitted**
63. Sompol P, Gollihue JL, Lin RL, Kraner SD, Weekman EM, Niedowicz DM, Weiss BE, Case SL, Gant JC, Rogers CB, Sudduth TL, Pleiss MM, Nelson PT, Thibault O, Wilcock DM, Norris CM (2022) Targeting astrocyte signaling alleviates cerebrovascular and synaptic function deficits in a diet-based mouse model of small cerebrovessel disease. **Submitted**.

XII. RESEARCH & INTELLECTUAL CONTRIBUTIONS

B. PUBLICATIONS (cont'd)

Submitted/under review

64. Weiss BE, Pleiss MM, Furman JL, Mohmmad Abdul H, Artiushin IA, **Norris CM** (2022). Regulation of connexin 43 phosphorylation by calcineurin in astrocytes: implications for neuroinflammation and Alzheimer's disease. *In preparation*
65. Kraner SD, Hongthong S, Thongsopha N, Kongpol K Gollihue JL, Sompol P, Norris CM (2022) Development of a Monoclonal Antibody Specific for a Calpain-Generated Δ 48 kDa Calcineurin Fragment, a Marker of Distressed Astrocytes. *In preparation*
66. Gant JC, Kraner SD, Ubele MF, Head E, Norris CM (2022) Nuclear factor of activated T-cells 4 is up-regulated in astrocytes in aging canine brain model. *In Preparation*
67. Sordo L, Ubele MF, Boaz KA, Mefford JL, Denhart Jones E, Smiley JR, Bresch FE, Phelan MJ, Puskás LG, Norris CM, Head E (2022) The calcineurin inhibitor tacrolimus improves maintenance of cognition in an aging beagle model of Alzheimer's disease. *In Preparation*

C. ABSTRACT PRESENTATIONS since 2005

- Sama, MA, Artiushin IA, Kraner SD, **Norris CM** (2005) Inflammatory mediators activate the calcineurin/NFAT pathway in primary astrocytes in an L-type Ca²⁺ channel-dependent manner. *Society for Neuroscience Abstracts* **35**:214.5.
- Jeftinija DM, **Norris CM**, Rich MM, Kraner SD (2005) The Ca_v 1.2 Ca²⁺ channel is expressed in adult skeletal muscle and C2C12 muscle cells. *Society for neuroscience Abstracts* **35**:845.4
- Jeftinija DM, Kraner SD, **Norris CM** (2006) Detection of nuclear factor of activated T-cells in nuclear extracts of human Alzheimer's Disease brain samples. *Society of Neuroscience Abstracts* **36**:385.
- Sama, MA, Artiushin IA, Kraner SD, **Norris CM** (2006) Neuroinflammatory cycles in neuroglia: involvement of the calcineurin/NFAT signaling pathway. *Society of Neuroscience Abstracts* **36**:385.3
- Sama MA, Patel ES, Tudor DL, Landfield PW, **Norris CM** (2006) Cellular distribution and expression levels of multiple calcineurin and NFAT isoforms in human Alzheimer's Disease tissue. *Society for Neuroscience Abstracts* **36**:385.5
- Mathis DM, **Norris CM** (2007) Network activity in hippocampal cultures depends on the CN/NFAT pathway. *Society for Neuroscience Abstracts* **37**:360.7.
- Norris CM**, Kraner SD, Landfield PW, Sama MA, Mohmmad Abdul H (2007) Role for the calcineurin/NFAT pathway in astrocyte-based immune/inflammatory processes: Implications for Alzheimer's disease. *Society for Neuroscience Abstracts* **37**:551.11.
- Norris CM**, Mohmmad Abdul H, Kraner SD, Sama MA, (2008). Alterations in the Subcellular Localization of Calcineurin/Nfat Isoforms in Alzheimer's Disease: Implications for Neuroinflammation. *Alzheimer's and Dementia*. **4**: T629.

XII. RESEARCH & INTELLECTUAL CONTRIBUTIONS

C. ABSTRACT PRESENTATIONS since 2005 (cont'd)

- Mathis DM, Furman JL, Mohmmad Abdul H, Artiushin IA, Kraner SD, **Norris CM** (2008) The CN/NFAT pathway in astrocytes contributes to excitotoxic interactions between astrocytes and neurons. *Society for Neuroscience Abstracts* **38**:52.5.
- Furman JL, Sama MA, Mathis DM, Kraner SD, Artiushin IA, **Norris CM** (2008) Modulation of A β neuronal toxicity by astrocytic calcineurin/NFAT signaling. *Society for Neuroscience Abstracts* **38**:52.6.
- Mohmmad Abdul H, Sama MA, Jeftinija DM, Patel ES, Kraner SD, **Norris CM** (2008) Differential subcellular localization of calcineurin/NFAT isoforms in Alzheimer's disease: Implications for neuroinflammation. *Soc Neurosci Abstracts* **38**:52.7.
- Furman JL, Mohmmad Abdul H, Xiong S, Cohen DA, Lovell MA, Markesbery WR, **Norris CM** (2009) Hippocampal cytokine expression and calcineurin/NFAT signaling associated with pre-clinical Alzheimer's disease and mild cognitive impairment. *Society for Neuroscience Abstracts* **39**:727.4.
- Mathis, DM, Mohammad-Abdul, H, Furman, JL, Artiushin, IA, Szymkowski, DE, Scheff, SW, **Norris, CM** (2009) Chronic brain infusion of dominant-negative TNF α prevents induction of long-term depression in aged rats. *Society for Neuroscience Abstracts* **39**:824.9.
- Mohmmad Abdul H, Guttmann RP, and **Norris CM** (2009) Calpain-mediated proteolysis of calcineurin in AD: Implications for neuroinflammation. *Society for Neuroscience Abstracts* **39**:57.1.
- Thibault O, Mohmmad Abdul H, Pancani T, Phelps JT, Gant C, Murphy MP, Beckett TL Landfield PW, **Norris CM** (2009) Reduction in L-type calcium current density in hippocampal "zipper" slices from mid-age memory-deficient APPxPS1 mice. *Society for Neuroscience Abstracts* **39**:427.3
- Xiong S, Markesbery WR, Furman JL, Bradley MA, **Norris CM**, Lovell MA (2009) Inflammatory cytokines in the progression of Alzheimer's disease. *Society for Neuroscience Abstracts* **39**:57.8.
- Norris CM**, Mohmmad Abdul H, Furman JL, Sama MA, Mathis DM (2010) Calcineurin: A dual threat in aging and Alzheimer's disease. *Alzheimer's and Dementia*. **6**: S156.
- Pettigrew LC, **Norris CM**, Kryscio RJ (2011) Focal cerebral ischemia in the TNF α -transgenic rat: effect on long-term potentiation and cognitive performance. *International Symposium on Cerebral Blood Flow, Metabolism, and Function*. **25**:765.
- Furman JL, Mathis DL, Beckett TL, Murphy MP, **Norris CM** (2011) Chronic suppression of NFAT-mediated astrocyte activation preserves neurologic function in a mouse model of Alzheimer's Disease. *Society for Neuroscience Abstracts*. **41**:

XII. RESEARCH & INTELLECTUAL CONTRIBUTIONS

C. ABSTRACT PRESENTATIONS since 2005 (cont'd)

- Furman JL, Mohmmad Abdul H, **Norris CM** (2012) Alterations in connexin 43 phosphorylation during the progression of Alzheimer's disease: Possible role of astrocytic calcineurin. *Alzheimer's Association International Conference*. P2-109.
- Furman JL, Beckett TL, Murphy MP, **Norris CM** (2012) Suppression of astrocytic calcineurin/NFAT activity reverses pathological hallmarks of Alzheimer's disease in aged, Tg6799 APP/PS1 mice. *Society for Neuroscience Abstracts*. **42**:49.08.
- Pleiss M, Furman JL, Mohmmad Abdul H, **Norris CM** (2012) Dephosphorylation of the astrocytic gap junction protein, connexin 43, is increased in human hippocampus during Mild Cognitive Impairment. *Society for Neuroscience Abstracts*. **42**:49.26.
- Van Eldik LJ, **Norris CM**, Sompol P, Wilcock DM, Goulding D, Neltner JH, St Clair D, Watterson DM, Bachstetter AD (2012) Early stage drug treatment that normalizes glia proinflammatory cytokine production attenuates synaptic dysfunction in an Alzheimer's disease-related mouse model. *Society for Neuroscience Abstracts*. **42**:49.12.
- Wang W-X, Artiushin IA, Wilfred B, Huang W, **Norris CM**, Nelson PT (2012) Transcription factor peroxisome proliferator-activating receptor gamma regulates microRNA-107 expression in primary brain cells *Society for Neuroscience Abstracts*.**42**:49.28.
- Norris CM**, Furman JL, Gant JC, Beckett TL, Murphy MP (2013) Targeting astrocytes reverses select pathological hallmarks of Alzheimer's disease in 5xFAD mice. *International conference on Alzheimer's and Parkinson's Diseases*: 11:195.
- Norris CM** (2013) Targeting astrocytes as a therapeutic strategy for Alzheimer's disease. *Journal of Alzheimer's Disease and Parkinsonism*, 3:4. March 2013, 11th Annual AD/PD meeting, Florence, Italy
- Pleiss MM, Furman JL, Abdul HM, **Norris CM** (2013) The astrocytic gap junction protein connexin 43 exhibits calcineurin-related changes in phosphorylation status during the progression of Alzheimer's disease. *Society for Neuroscience Abstracts*.**43**:116.13.
- Sompol P, Furman JL, Pleiss MM, Artiushin IA, Murphy MP, Gerhardt GA, **Norris CM** (2013) Role of the calcineurin/NFAT pathway in astrocytic glutamate uptake: Implications for Alzheimer's disease. . *Society for Neuroscience Abstracts* **43**:428.13.
- Norris CM**, Furman JL, Pleiss MM, Sudduth TL, Wilcock DM, Scheff SW (2013) Inhibition of astrocytic calcineurin/NFAT activity protects hippocampal synaptic function in an intact rat model of traumatic brain injury. *Society for Neuroscience Abstracts* **43**: 521.20.

Norris CM, Pleiss MM, Mohmmad Abdul H, Furman JL, Guttmann RP, Patel E, Wilcock DM, Nelson PT (2014) Novel antibody detects calcineurin proteolytic fragments in astrocytes associated with small-vessel pathology. *Alzheimer's & Dementia* **10**: P875-P876. AAIC July 2014 Copenhagen, Denmark

XII. RESEARCH & INTELLECTUAL CONTRIBUTIONS

C. ABSTRACT PRESENTATIONS since 2005 (cont'd)

Pleiss MM, Furman JL, Mohmmad Abdul H, **Norris CM** (2014) A novel reagent modulates CN/Cx43 interactions during the progression of Alzheimer's disease *Alzheimer's & Dementia* **10**: P652. AAIC July 2014 Copenhagen, Denmark

Pleiss MM, Mohmmad Abdul H, Furman JL, Guttmann RP, Patel E, Wilcock DM, Nelson PT, **Norris CM** (2014) Calcineurin proteolysis is associated with astrocyte and small vessel pathology. *Soc for Neuroscience Abstracts* **44**:43.08

Brouillette J, Ménard C, Quirion R, Bontempi B, Schneider JS, **Norris CM**, Ferland G, Bézard E, Gaudreau P, Lombroso PL (2014) The tyrosine phosphatase STEP is implicated in age-related memory decline across different species. *Society for Neuroscience Abstracts* **44**:234.12.

Pleiss MM, Abdul Hafiz Mohmmad, Furman JL, Guttmann RP, Patel E, Wilcock DM, Nelson PT, **Norris CM** (2015) A custom antibody detects calcineurin proteolysis in astrocytes and small vessels in human AD brain specimens. *46th Annual American Society for Neurochemistry Meeting*. PTW01-10.

Sompol P, Pleiss MM, Furman JL, Kraner SD, Batten SR, Murphy MP, Gerhardt GA, **Norris CM** (2015) Inhibition of the astrocytic calcineurin/NFAT pathway quells glutamatergic hyperactivity in a mouse model of Alzheimer's disease. *46th Annual American Society for Neurochemistry Meeting* PTW01-11

Norris CM, Sompol P, MacPherson KP, Tansey MG (2015) Peripheral administration of the novel TNF inhibitor XPro1595® improves synaptic function in the 5xFAD Model of Alzheimer's Disease. *Alzheimer's & Dementia in press*. AAIC July 2015 Washington DC.

Macpherson KP, Sompol P, Kannarkati GT, Chang J, **Norris CM**, Tansey MG (2015) Modulation of soluble TNF signaling alters CNS immune cell populations and rescues impaired synaptic plasticity in 5xFAD mice. *Society for Neuroscience Abstracts* **45**:198.07

Maheed ZR, Frazier HN, Hampton K, Maimaiti S, Anderson KL, Popovic J, Brewer LB, Kraner SD, **Norris CM**, Porter NM, Craven RJ, Thibault O (2015) Characterization of a truncated human insulin receptor signaling. *Society for Neuroscience Abstracts* **45**:305.19.

Frazier H, Hampton K, Maimaiti S, Anderson K, Brewer L, Kraner S, **Norris C**, Porter N, Craven R, Thibault O (2016) Signaling and expression of a truncated, constitutively active human insulin receptor. *American Society for Neurochemistry Meeting: Denver, CO*.

Pleiss M, Sompol P, Artiushin I, Kraner S, Powell D, Bakshi V, Lin A-L, Nelson P, Wilcock D, **Norris C** (2016) Inhibition of astrocytic calcineurin/NFAT signaling in a mouse model of vascular cognitive impairment and dementia. *American Society for Neurochemistry Meeting*: Denver, CO.

Sompol P, Furman JL, Pleiss MM, Kraner S, Artiushin I, Batten SR, Murphy MP, Gerhardt GA, **Norris CM** (2016) Inhibition of the astrocytic calcineurin/NFAT pathway quells glutamatergic hyperactivity in a mouse model of Alzheimer's disease. *American Society for Neurochemistry Meeting*: Denver, CO.

XII. RESEARCH & INTELLECTUAL CONTRIBUTIONS

C. ABSTRACT PRESENTATIONS since 2005 (cont'd)

Frazier HN, Maimaiti S, Anderson KL, Hampton K, Brewer LD, Kraner SD, **Norris CM**, Craven RJ, Porter NM, Thibault O (2016) Signaling and expression of a truncated, constitutively active human insulin receptor in neurons and astrocytes. *Society for Neuroscience Abstracts* **46**:306.02.

Pleiss MM, Sompol P, Artiushin IA, Kraner SD, Powell DK, Bakshi A-L, Lin AL, Nelson PT, Wilcock DM, **Norris CM** (2016) Inhibition of astrocytic calcineurin/NFAT signaling in a mouse model of vascular cognitive impairment and dementia. *Society for Neuroscience Abstracts* **46**:482.09.

Sudduth TL, Gooch JL, Weekman EM, Woolums A, Pleiss MM, **Norris CM**, Wilcock DM (2016) Neurovascular astrocyte dysfunction as a key mediator of vascular cognitive impairment. *Society for Neuroscience Abstracts* **46**:128.10.

Frazier HN, Anderson KL, Maimaiti S, Ghoweri AO, Kraner SD, Popa J, Mendenhall MD, **Norris CM**, Thibault O (2017) Signaling and expression of a truncated, constitutively active human insulin receptor in neurons. *Society for Neuroscience Abstracts* **47**:390.10.

Norris CM, Kraner SD, Pleiss MM, Sompol P, Artiushin A, Huzian O, Puskas LG (2017) Q134R, A novel neuroprotective compound suppresses calcineurin/NFAT signaling in neural cells. *13th International Conference on Alzheimer's & Parkinson's Diseases*. Vienna, Austria

Sompol P, Furman JL, Pleiss MM, Kraner S, Artiushin I, Simmerman LA, Batten SR, Quintero G, Beckett TL, Lovell MA, Murphy MP, Gerhardt GA, **Norris CM** (2017) Astrocytic calcineurin/NFAT activity drives neuronal hyperexcitability in the 5xFAD mouse model of Alzheimer's disease. *13th International Conference on Alzheimer's & Parkinson's Diseases*. Vienna, Austria

Gant JC, Sompol P, Landfield PW, **Norris CM**, Thibault O (2017) In vivo neuronal and astrocytic high-resolution calcium imaging in aging and in a model of AD. *Society for Neuroscience Abstracts* **47**:390.09.

Brouillette J, Castonguay D, Dufort-Gervais J, Menard C, Chatterjee M, Quirion R, Bontempi B, Schneider JS, Arnsten AF, Nairn AC, **Norris CM**, Ferland G, Bezard E, Gaudreau P, Lombroso PJ (2017) The tyrosine phosphatase STEP is involved in age-related memory decline. *Society for Neuroscience Abstracts*

47:543.01.

Frazier HN, Anderson KL, Ghoweri AO, Kraner SD, Popa J, Mendenhall MD, **Norris CM**, Thibault O (2018) Inducing elevated insulin receptor signaling via a constitutively active human insulin receptor leads to alterations in glucose metabolism in cultured hippocampal neurons. *Society for Neuroscience Abstracts* **48**:044.02

Kraner SD, Triani F, McCarty K, **Norris CM**, Head E (2018) Nuclear factor of activated T-cells 4 is up-regulated in astrocytes in aging canine brain model. *Society for Neuroscience Abstracts* **48**:049.02.

XII. RESEARCH & INTELLECTUAL CONTRIBUTIONS

C. ABSTRACT PRESENTATIONS since 2005 (cont'd)

Sompol P, Gollihue JL, Kraner SD, Artiushin A, Cloyd R, Koren S, Nation GK, Abisambra JF, Huzian O, Puskas LG, **Norris CM** (2018) Novel NFAT inhibitor Q134R ameliorates synaptic deficits in a mouse model of Alzheimer's disease. *Society for Neuroscience Abstracts* **48**:268.06.

Sompol P, Gollihue JL, Kraner SD, Artiushin A, Cloyd R, Koren S, Nation GK, Abisambra JF, Huzian O, Puskas LG, **Norris CM** (2019) Q134R, A novel NFAT inhibitor ameliorates synaptic deficits in a mouse model of Alzheimer's disease. 14th International Conference on Alzheimer's & Parkinson's Diseases. Lisbon, Portugal

Kraner, SD, Gollihue JL, Weiss, BE, Artiushin IA, Sompol P, **Norris CM** (2020) Development of Monoclonal Antibodies Specific for the Calpain-Generated Δ 48 kDa Calcineurin Fragment, a Marker of Distressed Astrocytes. *Alzheimer's Association International Conference*. P1-08, 44813. Amsterdam, Netherlands (converted to virtual conference due to COVID19 pandemic).

Herrick MK, MacPherson KP, Eidson LN, de Sousa Rodrigues ME, Sniffen L, Wallings RL, Kelly SD, Hamilton AM, Oliver D, Yang Y, Chang J, Keating CE, Coomes A, Sampson TR, Jobin C, **Norris CM**, Barnum CJ, Tansey MG (2020) Soluble TNF mediates high-fat high-carbohydrate diet-induced inflammation, alterations in peripheral blood and brain immunophenotype, and gut microbiome in a mouse model of amyloid pathology. *Alzheimer's Association International Conference*. P2-06, 40436. Amsterdam, Netherlands (converted to virtual conference due to COVID19 pandemic).

Weiss BE, Gollihue JL, Farr ND, Artiushin IA, Sompol P, Kraner SD, Tansey MG, **Norris CM** (2020) Synaptoprotective Effects of the Novel TNF Inhibitor XPro1595 in 5xFAD Mice: Interactions between Western Diet and Sex. *Alzheimer's Association International Conference*. P2-06, 43621. Amsterdam, Netherlands (converted to virtual conference due to COVID19 pandemic).

Sompol P, Edelmann SE, Lin R-L, Gant JC, Kraner SD, Weiss BE, Gollihue JL, Thibault O, Wilcock DM, **Norris CM** (2020) Astrocyte activation and

neurovascular function in a diet-based model of vascular contributions to cognitive impairment and dementia (VCID). *Alzheimer's Association International Conference*. P4-06, 43618. Amsterdam, Netherlands (converted to virtual conference due to COVID19 pandemic).

Farr ND, Kraner SD, Nelson PT, **Norris CM**, Sompol P (2020) Fibronectin accumulation and oxidative modification in Alzheimer's disease. *Alzheimer's Association International Conference*. P4-05, 44053. Amsterdam, Netherlands (converted to virtual conference due to COVID19 pandemic).

XII. RESEARCH & INTELLECTUAL CONTRIBUTIONS

D. SPONSORED RESEARCH PROJECTS, GRANT & CONTRACT ACTIVITIES

ACTIVE

Project Title: Strategies for targeting astrocyte reactivity in Alzheimer's disease and related dementias (STAR-AD/ADRD)
Core A (Norris); **Core B** (Sompol); **Core C** (Nelson, Jiang); **Core D** (Katsumata); **Project 1** (Wilcock); **Project 2** (Thibault); **Project 3** (Norris); **Project 4** (Nelson)

Project Number: P01AG078116

Principal Investigator(s): Norris

Role in Project: Overall PI; Core A Leader; Project 3 Leader

Effort: Core A 20%, Project 3 20%

Institution/University: University of Kentucky

Source of Funding: NIH/NIA

Duration of Project: 09/01/2022 to 08/30/2027

Total Award: \$21,090,042

Grant Number:

Project Title: Oxidative stress-induced vascular pathology and dysfunction in AD

Project Number: 1 R21 AG074146-01A1

Principal Investigator(s): Sompol

Role in Project: Co-I

Effort: 5%

Institution/University: University of Kentucky

Source of Funding: NIH/NIA

Duration of Project: 08/01/2022 to 07/31/2024

Total Award: \$ 420,750

Project Title: Neuronal IL-1R1 signaling in mild closed head injury
Project Number: 1R01NS120882-01
Principal Investigator(s): Bachstetter/Norris (Multi-PI)
Role in Project: --
Effort: 20%
Institution/University: University of Kentucky
Source of Funding: NIH/NINDS
Duration of Project: 07/01/2022 to 3/31/2027
Total Award: \$ 2,659,252
Project Title: Preclinical evaluation of tacrolimus in a canine model of Alzheimer's disease

XII. RESEARCH & INTELLECTUAL CONTRIBUTIONS (cont'd)
D. SPONSORED RESEARCH PROJECTS, GRANT & CONTRACT ACTIVITIES
ACTIVE (cont'd)

Project Number: 1RF1AG056998-01
Principal Investigator(s): Head/Norris (Multi-PI)
Role in Project: --
Effort: 20%
Institution/University: University of Kentucky
Source of Funding: NIH/NIA
Duration of Project: 9/15/2017 to 3/31/2027
Total Award: \$5,999,010
Grant Number: 3200004936

Project Title: Calcineurin and inflammatory signaling processes in aging and Alzheimer's Disease
Project Number: RF1 AG027297
Principal Investigator(s): Norris
Role in Project: NA
Effort: 20 %
Institution/University: University of Kentucky
Source of Funding: NIH-NIA
Duration of Project: 09/01/2006 to 04/30/2023
Total Award: \$ 2,721,832
Grant Number: 3048109207

Project Title: Calcineurin and inflammatory signaling processes in aging and Alzheimer's Disease
Project Number: RF1 AG027297S1
Principal Investigator(s): Norris
Role in Project: NA
Effort: 0 %
Institution/University: University of Kentucky
Source of Funding: NIH-NIA
Duration of Project: 03/01/2022 to 02/28/2023
Total Award: \$250,000
Grant Number:

XII. RESEARCH & INTELLECTUAL CONTRIBUTIONS

D. SPONSORED RESEARCH PROJECTS, GRANT & CONTRACT ACTIVITIES

ACTIVE (cont'd)

Project Title: Pre-clinical efficacy of a selective p38MAPK inhibitor in a model of comorbid Alzheimer/vascular pathology
Project Number: RF1AG064859-01
Principal Investigator(s): Van Eldik
Role in Project: Co-I
Effort: 5%
Institution/University: University of Kentucky
Source of Funding: NIH/NIA
Duration of Project: 8/15/2019 to 9/30/2024
Total Award: \$1,877,660
Grant Number 3200002792

Project Title: Inflammatory contributions of astrocytic RelA in comorbid VCID/AD
Project Number: RF1 AG062480
Principal Investigator(s): Morganti
Role in Project: Co-I
Effort: .6 calendar months
Institution/University: University of Kentucky
Source of Funding: NIH/NINDS
Duration of Project: 9/15/2020-3/31/2025

Total Award: \$101,097
Grant Number: 3200000882

Project Title: Use of novel NFAT inhibitors for the treatment of Alzheimer's-related pathology
Project Number: NA
Principal Investigator(s): Norris
Role in Project: NA
Effort: NA
Institution/University: University of Kentucky
Source of Funding: Hazel Embry Research Fund
Duration of Project: NA
Total Award: ~\$6,000/year
Grant Number: 1215396580

XII. RESEARCH & INTELLECTUAL CONTRIBUTIONS

D. SPONSORED RESEARCH PROJECTS, GRANT & CONTRACT ACTIVITIES

ACTIVE (cont'd)

Project Title: Elucidating the Role of Placental Growth Factor in Diffuse White Matter Disease
Project Number: 1R01NS116990
Principal Investigator(s): Wilcock
Role in Project: Co-I
Effort: 10%
Institution/University: University of Kentucky
Source of Funding: NIH/NINDS
Duration of Project: 04/01/2020 – 03/31/2025
Total Award: \$2,379,469

Project Title: Cell-specific actions of IL-1 / IL-1R1 signaling following traumatic brain injury
Project Number: 5R01NS103785
Principal Investigator(s): Bachstetter
Role in Project: Co-I
Effort: 5%
Institution/University: University of Kentucky
Source of Funding: NIH/NINDS

Duration of Project: 12/15/2018 – 11/30/2023
Total Award: \$961,819
Grant Number: 3200002304

Project Title: Contributions of astrocyte RelA signaling in aging-related neurodegenerative sequelae following TBI
Project Number: 1R01AG070830-01
Principal Investigator(s): Morganti
Role in Project: Co-I
Effort: 5%
Institution/University: University of Kentucky
Source of Funding: NIH/NIA
Duration of Project: 01/15/2021 – 12/31/2025
Total Award: \$665,337
Grant Number: 3200003827

XII. RESEARCH & INTELLECTUAL CONTRIBUTIONS

D. SPONSORED RESEARCH PROJECTS, GRANT & CONTRACT ACTIVITIES

ACTIVE (cont'd)

Project Title: Inflammatory Contributions of Astrocytic RelA in Comorbid VCI/AD
Project Number: 1RF1NS118558-01
Principal Investigator(s): Morganti
Role in Project: Co-I
Effort: 5%
Institution/University: University of Kentucky
Source of Funding: NIH/NINDS
Duration of Project: 09/15/2020 – 3/31/2025
Total Award: \$2,006,540
Grant Number: 3200003596

Project Title: Emerging Role of Tau Citrullination During Alzheimer's Disease and Tauopathies
Project Number: 1RF1AG072728
Principal Investigator(s): Lee
Role in Project: Co-I

Effort: 5%
Institution/University: University of Kentucky
Source of Funding: NIH/NIA
Duration of Project: 05/01/2021 – 04/30/2024
Total Award: \$1,672,789
Grant Number: --

Project Title: Characterizing the role of glutamate transporter 1 on astrocyte physiology in Alzheimer's disease
Project Number: 1F30AG072770-01
Principal Investigator(s): Farr
Role in Project: Mentor
Effort: --
Institution/University: University of Kentucky
Source of Funding: NIH/NIA
Duration of Project: 09/15/2020 – 3/31/2025
Total Award: \$203,000
Grant Number: --

XII. RESEARCH & INTELLECTUAL CONTRIBUTIONS

D. SPONSORED RESEARCH PROJECTS, GRANT & CONTRACT ACTIVITIES

ACTIVE (cont'd)

Project Title: Method for Detection and Quantification of CLN3 Protein
Project Number: 1R03NS120081
Principal Investigator(s): Wang
Role in Project: Co-I
Effort: 5%
Institution/University: University of Kentucky
Source of Funding: NIH/NINDS
Duration of Project: 07/01/2021 – 12/31/2022
Total Award: \$153,000
Grant Number: 3200004184

Project Title: Neurovascular astrocyte dysfunction in VCID
Project Number: 1R01NS097722-01
Principal Investigator(s): Wilcock
Role in Project: Co-I
Effort: 10%

Institution/University: University of Kentucky
Source of Funding: NIH/NINDS
Duration of Project: 9/01/2017 to 9/30/2022
Total Award: \$1,250,000
Grant Number 3200001393

INACTIVE

Project Title: Preclinical evaluation of tacrolimus in a canine model of Alzheimer's disease

Project Number: 1R01AG056998 S1

Principal Investigator(s): Head/Norris (Multi-PI)

Role in Project: --

Effort: 5%

Institution/University: University of Kentucky

Source of Funding: NIH/NIA

Duration of Project: 5/01/2021 to 4/30/2022

Total Award: \$250,000

Grant Number: 3200001540

XII. RESEARCH & INTELLECTUAL CONTRIBUTIONS

D. SPONSORED RESEARCH PROJECTS, GRANT & CONTRACT ACTIVITIES

INACTIVE (cont'd)

Project Title: Q134R in a canine model of aging and Alzheimer disease

Project Number: --

Principal Investigator(s): Norris

Role in Project: --

Effort: 5%

Institution/University: University of Kentucky

Source of Funding: Aperus Pharma Incorporated

Duration of Project: 5/01/2018 to 4/30/2022

Total Award: \$563,392

Grant Number 3048113888

Project Title: RIT1-mediated Protection following Traumatic Brain Injury

Project Number: 1R01NS102196

Principal Investigator(s): Andres

Role in Project: Co-I
Effort: 5 %
Institution/University: University of Kentucky
Source of Funding: NIH/NINDS
Duration of Project: 10/01/2017 – 09/30/2022
Total Award: \$343,719 direct costs/year
Grant Number: --

Project Title: A healthy brain aging strategy to restore insulin signaling and Ca²⁺ homeostasis
Project Number: 2R01AG033649
Principal Investigator(s): Thibault
Role in Project: Co-I, construction of AAV reagents
Effort: 4.8%
Institution/University: University of Kentucky
Source of Funding: NIH-NIA
Duration of Project: 3/01/2015-9/21/2020
Total Award: \$1,250,000
Grant Number: Account #3048112498

XII. RESEARCH & INTELLECTUAL CONTRIBUTIONS

D. SPONSORED RESEARCH PROJECTS, GRANT & CONTRACT ACTIVITIES

INACTIVE (cont'd)

Project Title: Inflammation and Renin-Angiotensin System Dysfunction as risk factors for AD
Project Number: 1RF1AG051514-01
Principal Investigator(s): Tansey
Role in Project: Sub-contract PI
Effort: 4.25%
Institution/University: University of Kentucky
Source of Funding: NIH/NIA
Duration of Project: 10/01/15 to 09/30/20
Total Award: \$101,097
Grant Number: 3200000882

Project Title: Dystrophic functions of aged astrocytes following traumatic brain injury
Project Number: R21AG058006-01
Principal Investigator(s): Morganti
Role in Project: Co-I
Effort: 5 %
Institution/University: University of Kentucky
Source of Funding: NIH/NIA
Duration of Project: 10/01/2018 – 9/30/2020
Total Award: \$275,000
Grant Number: --

Project Number: 16-1
Principal Investigator(s): Andres
Role in Project: --
Effort: 1.5%
Institution/University: University of Kentucky
Source of Funding: KSCHIRT
Duration of Project: 1/15/2017 to 1/14/2020
Total Award: \$300,000

XII. RESEARCH & INTELLECTUAL CONTRIBUTIONS

D. SPONSORED RESEARCH PROJECTS, GRANT & CONTRACT ACTIVITIES

INACTIVE (cont'd)

Project Title: Astrocytic connexin 43 modulation in AD
Project Number: 1R21AG051945-01
Principal Investigator(s): Norris
Role in Project: --
Effort: 15%
Institution/University: University of Kentucky
Source of Funding: NIH/NIA
Duration of Project: 12/15/2016 - 11/30/2018
Total Award: \$275,000
Grant Number: 3200001065

Project Title: Preclinical Assessment of the Therapeutic Utility of Small Molecule Inhibitors of the Calcineurin/NFAT System in Alzheimer's Disease
Project Number: --
Principal Investigator(s): Norris
Role in Project: --
Effort: 15%
Institution/University: University of Kentucky
Source of Funding: Alzheimer's Drug Discovery Foundation
Duration of Project: 03/01/2017 to 5/31/2018
Total Award: \$257,552
Grant Number: 3048113328

Project Number: 1R01NS091329-01
Principal Investigator(s): Abisambra
Role in Project: Co-I
Effort: 2.25%
Institution/University: University of Kentucky
Source of Funding: NIH/NINDS
Duration of Project: 11/01/2015 to 10/30/2020
Total Award: \$1,250,000
Grant Number: Account #3200000286

XII. RESEARCH & INTELLECTUAL CONTRIBUTIONS

D. SPONSORED RESEARCH PROJECTS, GRANT & CONTRACT ACTIVITIES **INACTIVE (cont'd)**

Project Title: The impact of PERK on post-traumatic tauopathy in Alzheimers disease
Project Number: --
Principal Investigator(s): Abisambra
Role in Project: Co-I
Effort: 3%
Institution/University: University of Kentucky
Source of Funding: Army Medical Research and Materiel Command
Duration of Project: 9/15/2015 – 9/14/2018

Total Award: \$737,774
Grant Number: Account #3200000192

Project Title: Astrocytic Calcineurin and Connexin43 Gap Junctions in Alzheimer's Disease
Project Number: 1F31AG047762-01
Principal Investigator(s): Pleiss (Graduate Student)
Role in Project: Primary Mentor
Effort: -
Institution/University: University of Kentucky
Source of Funding: NIH-NIA
Duration of Project: 2/01/2015-1/31/2018
Total Award: \$89,508
Grant Number: Account #3048111996

Project Title: Role of Calcineurin/NFAT Signaling in Traumatic Brain Injury
Project Number: 12-10A
Principal Investigator(s): Norris
Role in Project: NA
Effort: 20 %
Institution/University: University of Kentucky
Source of Funding: Kentucky Spinal Cord and Head Injury Research Trust
Duration of Project: 02/01/2013 – 1/31/2016
Total Award: \$ 300,000
Grant Number: Account #3048110188

XII. RESEARCH & INTELLECTUAL CONTRIBUTIONS

D. SPONSORED RESEARCH PROJECTS, GRANT & CONTRACT ACTIVITIES

INACTIVE (cont'd)

Project Title: Pycnogenol and traumatic brain injury
Project Number: 12-16A
Principal Investigator(s): Scheff
Role in Project: Co-I, perform electrophysiological studies
Effort: 10 %
Institution/University: University of Kentucky

Source of Funding: Kentucky Spinal Cord and Head Injury Research Trust
Duration of Project: 02/01/2013 – 1/31/2016
Total Award: \$ 300,000
Grant Number: Account #3048110185

Project Title: Sexually dimorphic miR-497 regulates alpha-synuclein and alpha-synucleinopathy
Project Number: 1R21 NS085830
Principal Investigator(s): Nelson
Role in Project: Co-I
Effort: 2%
Institution/University: University of Kentucky
Source of Funding: NIH-NINDS
Duration of Project: 9/22/2013-9/21/2015
Total Award: \$275,000
Grant Number: 3048110900

Project Title: Astrocytic Calcineurin and Connexin43 Gap Junctions in Alzheimer's Disease
Project Number: -
Principal Investigator(s): Pleiss (graduate student)
Role in Project: Primary mentor
Effort: -
Institution/University: University of Kentucky
Source of Funding: PhRMA Foundation
Duration of Project: 01/01/14 to 01/31/15
Total Award: \$20,000
Grant Number: Account # 3048111258

XII. RESEARCH & INTELLECTUAL CONTRIBUTIONS

D. SPONSORED RESEARCH PROJECTS, GRANT & CONTRACT ACTIVITIES

INACTIVE (cont'd)

Project Title: Aging of Frontal Structure and Function in Down Syndrome and Dementia
Project Number: 1R01HD064993
Principal Investigator(s): Head/Schmitt

Role in Project: Co-I; collaborator on calcineurin/NFAT measurements
Effort: 1%
Institution/University: University of Kentucky
Source of Funding: NIH- NICHD
Duration of Project: 09/01/09-08/31/14
Total Award: \$1,664,294
Grant Number: Account # 3048106593

Project Title: Modulation of peripheral inflammation and immune cell traffic in AD by XPro1595
Project Number: -
Principal Investigator(s): Tansey (Emory University)
Role in Project: Subcontract PI
Effort: 10%
Institution/University: University of Kentucky
Source of Funding: Alzheimer's Drug Discovery Foundation
Duration of Project: 10/01/2013-9/30/2014
Total Award: \$100,000
Grant Number: Account #3048111295

Project Title: MiR-15/107 microRNAs are important genetic regulators in Alzheimer disease
Project Number: 2R56NS061933
Principal Investigator(s): Nelson
Role in Project: Co-I
Effort: 10 %
Institution/University: University of Kentucky
Source of Funding: NIH-NINDS
Duration of Project: 09/28/12 to 06/30/14
Total Award: \$250,000
Grant Number: Account # 3048109946

XII. RESEARCH & INTELLECTUAL CONTRIBUTIONS

D. SPONSORED RESEARCH PROJECTS, GRANT & CONTRACT ACTIVITIES **INACTIVE (cont'd)**

Project Title: Astrocytic NFAT activity: A promising target for Alzheimer's therapeutics
Project Number: -
Principal Investigator(s): Furman (graduate student)
Role in Project: Primary mentor
Effort: -
Institution/University: University of Kentucky
Source of Funding: PhRMA Foundation
Duration of Project: 02/01/2011 to 01/31/2013
Total Award: \$40,000
Grant Number: Account #3048107937

Project Title: "Hyperglycemia and traumatic brain injury"
Project Number:
Principal Investigator(s): Scheff
Role in Project: Co-I
Effort: 10 %
Institution/University: University of Kentucky
Source of Funding: Kentucky Spinal Cord and Head Injury Research Trust
Duration of Project: 01/31/09 to 01/30/12
Total Award: \$298,398
Grant Number:

Project Title: Investigation into the interrelationship of the roles of oxidative stress and neuroinflammation in Alzheimer's disease
Project Number: -
Principal Investigator(s): Markesbery/Lovell/Norris
Role in Project: --
Effort: 5%
Institution/University: University of Kentucky
Source of Funding: Kleberg Foundation
Duration of Project: 08/01/08 to 07/31/11
Total Award: \$300,000
Grant Number: -

XII. RESEARCH & INTELLECTUAL CONTRIBUTIONS

D. SPONSORED RESEARCH PROJECTS, GRANT & CONTRACT ACTIVITIES

INACTIVE (cont'd)

Project Title: Targeted inhibition of astrocytic NFAT activity in a mouse model of Alzheimer's disease (Pilot grant)
Project Number: -
Principal Investigator(s): Norris
Role in Project: NA
Effort: 10%
Institution/University: University of Kentucky
Source of Funding: Alzheimer's Disease Pilot Project Grant, SBCoA-UKADC
Duration of Project: 07/01/2008-06/30/2009
Total Award: \$25,000
Grant Number: NA

Project Title: Calcineurin and biobehavioral markers of brain aging
Project Number: 1K01-AG024190
Principal Investigator(s): Norris
Role in Project: NA
Effort: 80%
Institution/University: University of Kentucky
Source of Funding: NIH-NIA
Duration of Project: 10/01/04 to 9/30/09
Total Award: \$430,040
Grant Number: 30468259

Project Title: Role of calcineurin in astrocyte activation associated with Alzheimer's Disease (Pilot grant)
Project Number: P20 RR20171
Principal Investigator(s): Norris
Role in Project: NA
Effort: 10%
Institution/University: University of Kentucky
Source of Funding: Center of Biomedical Research Excellence
Duration of Project: 09/01/05 to 08/30/06
Total Award: \$50,000
Grant Number: -

XII. RESEARCH & INTELLECTUAL CONTRIBUTIONS

D. SPONSORED RESEARCH PROJECTS, GRANT & CONTRACT ACTIVITIES

INACTIVE (cont'd)

Project Title: Calcineurin in calcium channel regulation during aging
Project Number: F32AG005903
Principal Investigator(s): Norris
Role in Project: NA
Effort: 100%
Institution/University: University of Kentucky
Source of Funding: NIH-NIA
Duration of Project: 08/01/2000-09/30/2003
Total Award: \$127,660
Grant Number: -

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