

## Christine Nicole Smith, Ph. D.

### Personal

Mailing Address: Veterans Affairs San Diego Healthcare System (151A)  
Veterans Medical Research Facility, Building 13  
3350 La Jolla Village Drive  
San Diego, CA 92161

Current Positions Research Health Scientist  
Research Service, Veterans Affairs San Diego Healthcare System  
  
Assistant Professor  
Department of Psychiatry, University of California San Diego

### Professional Positions

1996-2000 Teaching Assistant, University of Wisconsin Milwaukee (part-time)  
1998-1999 Research Assistant, University of Wisconsin Milwaukee (summer session)  
2001-2003 Research Assistant, University of Wisconsin Milwaukee  
2003-2007 Postdoctoral Fellow, University of California San Diego  
2007-2013 Assistant Project Scientist, University of California San Diego  
2011-present Research Health Scientist, Research Service, Veterans Affairs San Diego Healthcare System  
2013-2017 Assistant Research Scientist, University of California San Diego  
2017-present Assistant Professor, University of California San Diego  
2020-present Faculty Member, University of California San Diego Neurosciences Graduate Program  
2022-present Head of Scientific Operations, Kaizen Brain Center, La Jolla, California

### Education

1992-1996 B.A., University of Puget Sound, Major: Psychology  
1996-1999 M.S., University of Wisconsin Milwaukee, Department of Psychology. Masters, December, 1999:  
Functional Neuroimaging of Human Differential Fear Conditioning  
1999-2003 Ph.D., University of Wisconsin Milwaukee, Department of Psychology. Dissertation May 2003:  
Network Analysis of Human Fear Conditioning: Differential Acquisition, Extinction, and Reversal

### Memberships in Professional Associations

Society for Neuroscience  
Cognitive Neuroscience Society  
International Society for Behavioral Neuroscience (elected member)  
San Diego Neurosciences Society (previously the San Diego Neurology Society)  
Hippocampal Subfield Group  
Western Neurosurgical Society (elected member)  
Center for the Neurobiology of Learning and Memory (elected member)

### Honors and Awards

2000-2002 Associated Graduate Students in Psychology Travel Award  
2000 University of Wisconsin-Milwaukee Graduate Student Travel Award  
2002 University of Wisconsin-Milwaukee Graduate Student Travel Award  
2002 Graduate School Summer Research Assistantship for Dissertation Research  
2002 American Psychological Association Dissertation Fellowship  
2003-2005 Cognitive Neuroscience Postdoctoral Fellowship (NIH)  
2005-2006 Neuroplasticity of Aging Postdoctoral Fellowship (NIH)  
2006 Dartmouth Summer Institute in Cognitive Neuroscience  
2007-2008 Alzheimer's Disease Research Center Pilot Project Grant (NIH)  
2010 Temporal Dynamics of Learning Center (NSF) Small Research Grant  
2011 Temporal Dynamics of Learning Center (NSF) Project Research Grant  
2013 Leon Thal Memorial Travel Grant  
2013 Temporal Dynamics of Learning Center (NSF) Project Research Grant  
2013 Temporal Dynamics of Learning Center (NSF) Junior Researcher Award

2015 Temporal Dynamics of Learning Center (NSF) Small Research Grant  
2015 Temporal Dynamics of Learning Center (NSF) Junior Researcher Award

## Presentations

1998 Biophysics Brown Bag Presentation, Medical College of Wisconsin  
1999 Graduate Student Symposium, University of Wisconsin-Milwaukee  
2000 Society for Neuroscience Annual Meeting Oral Presentation  
2001 Graduate Student Symposium, University of Wisconsin-Milwaukee  
2001 Biophysics Brown Bag Presentation, Medical College of Wisconsin  
2002 Cognitive Neuroscience Brown Bag Presentation, University of Wisconsin-Milwaukee  
2002 Society for Neuroscience Annual Meeting Oral Presentation  
2003 Cognitive Neuroscience Fellows Annual Meeting, University of California San Diego  
2004 Invited Talk, Ponce School of Medicine, Puerto Rico  
2006 Psychiatry Junior Faculty Symposium, University of California San Diego  
2006 Neurobiology Department Neuro-Dinner, University of California San Diego  
2007 Medial Temporal Lobe Imaging Group, University of California San Diego  
2008 Joint Sensorimotor Network/Interacting Memory Systems Network Retreat, Monterey, California  
2009 Invited Talk, Neurodegeneration Seminar Series, Alzheimer's Disease Research Center, University of California San Diego  
2009 Temporal Dynamics of Learning Center Annual Meeting, University of California San Diego  
2010 Invited Talk, Cognitive Neuroscience Brown Bag, University of California San Diego  
2011 Keynote Speaker, Psychiatry Research Symposium, University of California San Diego  
2012 Invited Talk, Symposium for the Center for Translational Research and the Center for fMRI, University of California San Diego ([youtube.com/watch?v=WnKgLiHRwQ&feature=youtu.be](https://www.youtube.com/watch?v=WnKgLiHRwQ&feature=youtu.be))  
2013 International Society for Behavioral Neuroscience Annual Meeting  
2014 Invited Talk, Clinical Neuroscience Seminar Series, Johns Hopkins University  
2014 International Society for Behavioral Neuroscience Annual Meeting  
2014 Society for Neuroscience Annual Meeting Oral Presentation  
2014 Invited Talk, Temporal Dynamics of Learning Center Trainee Fellows Seminar, University of California San Diego  
2015 Invited Talk, Temporal Dynamics of Learning Center Trainee Fellows Retreat, University of California San Diego  
2015 Lew Judd Junior Faculty Psychiatry Research Symposium, University of California San Diego  
2015 Invited Talk, Center for Functional Magnetic Resonance Imaging Seminar Series, University of California San Diego  
2015 International Society for Behavioral Neuroscience Annual Meeting  
2015 Western Neurosurgical Society Annual Meeting  
2015 Invited Talk, Distinguished Educator Advisory Panel, University of California San Diego Temporal Dynamics of Learning Center  
2017 International Society for Behavioral Neuroscience Annual Meeting  
2017 Center for the Neurobiology of Learning and Memory Annual Meeting  
2017 Basic Science Seminar Series, Department of Psychiatry, University of California San Diego  
2017 Invited talk, Hillcrest Biomedical Sciences Seminar Series, University of California San Diego  
2017 Invited talk, California Neurology Society/San Francisco Neurology Society Annual Conference  
2017 Alzheimer's Disease Cognitive Interest Group, University of California San Diego  
2018 Center of Excellence for Stress and Mental Health, Veterans Affairs San Diego Healthcare System  
2018 International Conference on Learning and Memory, Huntington Beach, CA  
2018 Speaker, Celebration of the Career of Larry Squire, University of California San Diego  
2019 Cognitive Brown Bag, Department of Psychology, University of California San Diego  
2019 Alzheimer's Disease Cognitive Interest Group, University of California San Diego  
2019 International Society for Behavioral Neuroscience Annual Meeting  
2020 Invited Talk, Psychology Colloquium Series, California State University San Bernardino  
2021 Invited Talk, Lunch and Learn, Alzheimer's Disease Research Center, University of California San Diego  
2021 Center for the Neurobiology of Learning and Memory Annual Meeting  
2021 International Society for Behavioral Neuroscience Annual Meeting  
2022 Center for the Neurobiology of Learning and Memory Annual Meeting  
2022 International Society for Behavioral Neuroscience Annual Meeting  
2022 Alzheimer's Disease Cognitive Interest Group, University of California San Diego  
2023 Invited Talk, Ruhr-Universität Bochum, Bochum, Germany

**Ad-hoc Reviewer for Scientific Journals**

Behavioral Neuroscience  
 Cerebral Cortex  
 Cognitive Neuropsychology  
 Cognitive, Affective, and Behavioral Neuroscience  
 Cognitive Research  
 Consciousness and Cognition  
 Cortex  
 Emotion  
 European Journal of Inflammation  
 Frontiers in Behavioral Neuroscience  
 Hippocampus  
 Journal of Alzheimer's Disease  
 Journal of Experimental Psychology  
 Journal of International Neuropsychological Society  
 Journal of Visual Experiments  
 Learning and Memory  
 Memory & Cognition  
 Neurobiology of Learning and Memory  
 Neurobiology of Stress  
 Neuroimage  
 Neuron  
 Neuropsychologia  
 Neuropsychology  
 Psychological Research

**Intramural and Extramural Service and Community Outreach**

2009	Volunteer, San Diego Science Festival, Balboa Park
2009	Volunteer docent, Body Worlds and the Brain-Our Three-Pound Gem, Museum of Natural History, Balboa Park, San Diego
2010	Volunteer, San Diego Chapter of the Society for Neuroscience
2012	Invited Speaker, Beach City Book Club, <i>Before I Go To Sleep</i> by S.J. Watson—a fictional account of a patient with memory impairment with symptoms similar to my Publication #13.
2015	Speaker, Distinguished Educator Advisory Panel hosted by the UCSD Temporal Dynamics of Learning Center
2016-2018	Secretary/Treasurer, San Diego Neurology Society (now the San Diego Neurosciences Society)
2016-2019	Member, Budget Committee, Research Service, Veterans Affairs San Diego Healthcare System
2016-present	Member, DEI Action Committee, Department of Psychiatry, UCSD
2017-2019	Volunteer, San Diego March for Science
2017-present	Member, Research Council of the Department of Psychiatry, UCSD
2018-present	Participant, National Alliance for Mental Illness walk, Team: Department of Psychiatry
2018-2021	President, San Diego Neurosciences Society
2019	Completed Junior Faculty Mentor Training Program, UCSD
2019-present	Participant, Alzheimer's Association walk, Team: Alzheimer's Disease Research Center
2020-present	Member of the Institutional Review Board, Veterans Affairs San Diego Medical Center
2020	Six outreach lectures at the San Diego Glenner Alzheimer's Center Memory Café gatherings for community dwelling elderly individuals with normal cognition or cognitive decline: Memory and the Brain: Making new memories and remembering the old ones
2020-present	Peer Support Program, Department of Psychiatry, UCSD
2020-present	Faculty mentor, Mentorship for Advancing Diversity in Undergraduate Research on Aging MADURA Program, UCSD
2022-present	Faculty mentor, PATHways to STEM through Enhanced Access and Mentorship (PATHS) Program, UCSD
2023-present	Faculty mentor, Summer Training Academy for Research Success (STARS), UCSD

**Intramural and Extramural Scientific Activities**

2007-2008	Director of the Medial Temporal Lobe Imaging Group Seminar Series, UCSD
2009-2010	Judge, Student Research Symposium, San Diego State University
2009	Judge and Moderator, Summer Research Conference, UCSD
2009	Abstract Reviewer, Temporal Dynamics of Learning Center Annual Meeting
2010	Radio Interview, All in the Mind, <i>Twenty Four Hour Memory Loss</i> , BBC Radio
2010	Grant reviewer, Alzheimer's Society Studentship Grants
2011	Interview, <i>Hippocampus Plays Bigger Memory Role than Previously Thought</i> , UCSD News by Scott LaFee
2012	Organizer and Moderator, 7th Annual Junior Faculty and Postdoctoral Fellows Research Symposium, Department of Psychiatry, UCSD
2013, 2014	Judge, Data Blitz, Annual meeting for the Center for the Neurobiology of Learning and Memory, University of California Irvine
2015	Grant reviewer, Alzheimer's Society Research Programme (United Kingdom)
2017	Interviews, podcasts for students from San Diego High-Tech Middle School
2018	Grant reviewer, Medical Research Council (MRC) (United Kingdom)
2018	Chair, Open paper session, International Conference on Learning and Memory, University of California Irvine
2018	Organizer, 1-day research symposium titled: Celebration of the Career of Larry Squire
2019	Panel Member, Psychiatry Department 50th Anniversary Symposium, UCSD
2020	Grant reviewer, Medical Research Council (MRC) (United Kingdom)
2020	Grant reviewer, National Science Foundation
2020-2022	Program Committee, Western Neurosurgical Society
2022	Grant reviewer, Canada Foundation for Innovation John R. Evans Leaders Fund (Canada)
2022-present	Member at Large, International Society for Behavioral Neuroscience
2022-present	Randall Smith Lecture Committee, Western Neurosurgical Society
2023	Grant reviewer, National Science Foundation
2023	Grant reviewer, UCSD Altman Clinical Translational Research Institute

## Mentoring

2004	Advised two high school students who completed high school science projects
2008	Lisa Graves (UCSD Psychology undergraduate research assistant): Ms. Graves obtained her Ph.D. in Clinical Psychology from the UCSD/SDSU Joint Doctoral program and now has a tenure-track position at California State University San Marcos.
2009	Flora Suh (UCSD Psychology undergraduate research assistant). Ms. Suh obtained her Ph.D. in Clinical Psychology and Clinical Neuropsychology from the University of Queensland, Australia and now has a private practice in New South Wales, Australia.
2009-2012	Ashley Knutson (UCSD Biology undergraduate research assistant): Ms. Knutson obtained a Masters in Biology from UCSD, followed by a Masters in Nursing from the Columbia School of Nursing. She is now a Nurse Practitioner in New York State.
2009-2012	Zhuang Song, Ph.D. (post-doctoral fellow): Dr. Song is now a Clinical Neuroimaging Data Scientist at Genentech/Roche.
2010	Susan McDuff, Ph.D. (volunteer research assistant and medical student): Dr. McDuff is now a physician in the Boston area.
2010	Devon Christopher (UCSD Psychology undergraduate research assistant): Ms. Christopher obtained her Ph.D. from the University of Pennsylvania.
2010	Michael Benjamin (high school student, honors project)
2010-2014	Soyun Kim, Ph.D. (post-doctoral fellow): Dr. Kim is now a Project Scientist at University of California Irvine.
2011-2016	Adam Dede (graduate student with Dr. Larry Squire): Mr. Dede completed his post-doctoral fellowship and has accepted a position at the University of Phayao, Thailand.
2013-2017	Zhisen Urgolites, Ph.D. (post-doctoral fellow). After serving as a mentor for Dr. Urgolites for two training grants (Cognitive Neuroscience Postdoctoral Fellowship (NIH); Neuroplasticity of Aging Postdoctoral Fellowship (NIA)] she obtained a position as a Project Scientist at UCSD and now works as a Data Scientist for FICO.
2014-2016	Shuying Yu (UCSD Psychology and UCSD Cognitive Science undergraduate). After serving as a mentor for Ms. Yu in the honors program in Psychology and for her NSF-funded Research Experience for Undergraduates fellowship she graduated from UCSD. She is currently a doctoral student at the University of California Santa Barbara.
2015-2018	Andrew Cawley-Bennett, B.S. (volunteer research assistant): After obtaining his B.S. from UCSD, Mr. Cawley-Bennett served as post-baccalaureate scholar and then as my paid research

assistant. He is currently in the doctoral program in Psychology at Emory University and has earned his Master of Science.

- 2015-2016 Ryan Ward (UCSD Biology undergraduate research assistant): Mr. Ward is currently in medical school at University of Colorado School of Medicine, Denver, Colorado.
- 2016 (spring) Scott Vincent (UCSD Cognitive Sciences undergraduate research assistant): Mr. Vincent is currently in the doctoral program at the University of California Los Angeles Neuroscience Interdepartmental Program.
- 2016 (summer) Julia Gulliver (visiting undergraduate research assistant from the University of California Davis): Ms. Gulliver obtained her B.S. from UC Davis and is currently working as a scribe in a medical office and applying to get a Master's in Nursing
- 2016-2021 Isabel Asp (UCSD Psychology undergraduate): After obtaining her B.S. from UCSD, Ms. Asp began working as my paid Research Assistant in July 2018. She continues to volunteer in the laboratory.
- 2018 (summer) Aaron Creswell (UCSD Biology undergraduate research assistant). Mr. Creswell is currently in a Master's program at UCSD and has been accepted to medical school at California Northstate University.
- 2018-2020 Matthew Koester (UCSD Psychology undergraduate research assistant): After obtaining his B.S. in 2019 from UCSD, Mr. Koester worked as my paid research assistant until December 2020. He now works in a psychiatric clinic in Texas.
- 2018-2019 Eunice Lee (UCSD Psychology undergraduate research assistant): Ms. Lee obtained her B.S. in Psychology from UCSD.
- 2019-2020 Irene Chu (UCSD Biology undergraduate research assistant): Ms. Chu is currently obtaining her B.S. in Biology from UCSD.
- 2019 (summer) Julia Chang (visiting undergraduate research assistant from New York University): Ms. Chang is currently obtaining her B.S. from Barnard College in New York.
- 2019-2021 Zimu Li (UCSD Cognitive Science and UCSD Psychology undergraduate research assistant): Mr. Li obtained a B.S. in Cognitive Science and Psychology (double major) from UCSD in 2021 and obtaining his Master's in Integrative Neuroscience at Georgetown University. He is currently in a doctoral program in Psychology at University of Illinois, Urbana-Champaign.
- 2019-present Catherine Tallman, B.S. (UCSD Psychology doctoral student): Ms. Tallman is currently enrolled in the UCSD Psychology doctoral program.
- 2020-2021 Richard (Du) Xiang (UCSD Data Science undergraduate research assistant): Mr. Xiang is currently enrolled in a master's program at UC Berkeley in Computer Science.
- 2020-2021 Brigitte Guzman (UCSD Psychology undergraduate research assistant): Ms. Guzman obtained her B.S. in Psychology at UCSD. She was a MADURA scholar (Mentorship for Advancing Diversity in Undergraduate Research on Aging). She is enrolled in the Department of Psychology doctoral program at the University of Arizona.
- 2020-present Jasmine Baños (UCSD Psychology undergraduate research assistant): Ms. Baños obtained her B.S. in Psychology at UCSD in 2021. She was a MADURA scholar. She is now a post-baccalaureate scholar serving as a volunteer research assistant.
- 2020-2021 Angeela Poudel (UCSD Biology undergraduate research assistant): Ms. Poudel obtained her B.S. in Biology from UCSD in 2021. She is currently enrolled in a master's program in Health Informatics at UC Davis.
- 2020-2021 Jamie (Xin) Wang, M.S. (Visiting Scholar): Ms. Wang is currently a research assistant in the laboratory of Dr. Sarah Banks at UCSD.
- 2021 Zeljana Babic, B.S. (UCSD Neurosciences graduate student): Ms. Babic completed a rotation in my laboratory during the Winter quarter.
- 2021 Emma Spillman, B.S. (UCSD Neurosciences graduate student): Ms. Spillman completed a rotation in my laboratory during the Spring quarter.
- 2021-2022 Xinran (Ran) Zhang, B.S. (post-baccalaureate scholar): After obtaining her B.S. from UCSD, Ms. Zhang is serving as a volunteer research assistant. She is currently enrolled in a doctoral program in Psychology at Washington University.
- 2021-2022 Songyuan (Garrett) Tan (UCSD Psychology undergraduate research assistant): Mr. Tan obtained his B.S. in Psychology from UCSD in 2022. He is working as a research assistant at UC San Francisco.
- 2021-present Zhishang (Jack) Luo (UCSD Data Science undergraduate research assistant): Mr. Luo is currently obtaining his B.S. in Data Science from UCSD and was accepted into the Data Science Doctoral program at UCSD.
- 2021-2022 Nikta Asadollahi (UCSD Psychology undergraduate research assistant): Ms. Asadollahi is currently obtaining her B.S. in Psychology from UCSD.
- 2022-present Jialong (Alex) Guo (UCSD Cognitive Science and UCSD Psychology undergraduate research assistant): Mr. Guo is currently obtaining her B.S. in Cognitive Science from UCSD.

2022-present	Jasmin Rosato (UCSD Psychology undergraduate research assistant). Ms. Rosato is obtaining research experience through UCSD's Regents Scholars Research Initiative program.
2022-present	Jacquelyn Tsui (UCSD Psychology undergraduate research assistant) is part of the UC PATHS initiative to fund URM in STEM fields.
2022-present	Michelle Gomez (UCSD Psychology undergraduate research assistant) is part of the UC PATHS initiative to fund URM in STEM fields.
2023-present	Margaret McKelvey-Whisler (UCSD Psychology undergraduate) is a MADURA scholar.
2023-summer	Olivia Zou (Fusion Academy High School) completed a 2-week intensive internship in the laboratory.

## Teaching

1996-2000	Teaching Assistant, Courses: Introduction to Psychology, Physiological Psychology, Research Methods, and Psychophysiology, Department of Psychology, University of Wisconsin, Milwaukee
2009	Guest Lecturer, Human Memory, Department of Psychology, University of San Diego
2010	Guest Lecturer, SCANS Presents, Department of Cognitive Science, UCSD: Memory and the Brain: Remembering Recent and Remote Events
2014	Guest Lecturer, Introduction to Cognitive Neuroscience, Department of Psychology, UCSD: Long-Term Memory and Consolidation
2014	Guest Lecturer, Clinical Neuropsychology and Assessment, Department of Psychology, UCSD: An Unprecedented Case of Memory Impairment
2015	Guest Lecturer, Temporal Dynamics of Learning Center Bootcamp, UCSD: Memory Systems of the Brain
2015	Hands-on demonstration and explanation of cognitive neuroscience methods and neuroimaging for high school and pre-college students for Academic-Connections, UCSD Extension
2016-2017	Guest Lecturer, Geriatric Psychiatry Didactics, UCSD: The Status of Anterograde and Retrograde Amnesia after Brain Injury or Disease
2016-2020	Guest Lecturer, Clinical Neuroscience; University of San Diego. A two-lecture series each year: 1) The Status of Anterograde and Retrograde Amnesia after Brain Injury or Disease; 2) An Unprecedented Case of Memory Impairment
2017, 2018	Guest Lecturer, Geriatric Psychiatry Didactics, UCSD: Encoding and Retrieving Memories: Lessons from Functional Neuroimaging in Young and Older Adults
2017	Guest Lecturer, Learning: Brain and Behavior, Department of Cognitive Science, UCSD: Memory Encoding and Retrieval in Amnesic Patients
2017	Guest Lecturer, Clinical Neuropsychology Seminar, Department of Psychology, UCSD
2019	Guest Lecturer, St. Michaels Episcopal Day School (lecture about the brain and brain safety for a class of second graders)
2022	Guest Lecturer, T32 Biological Psychiatry Didactic Seminar, Department of Psychiatry, UCSD: Memories acquired across the lifetime: behavioral, genetic, and brain correlates in Mild Cognitive Impairment.
2022	Minor Proposition Study Section for class NEUG 280, Department of Neurosciences, UCSD
2023	Guest Lecturer, Faculty Seminar Series (COGS 200), Department of Cognitive Science, UCSD: Memories acquired across the lifetime: behavioral, genetic, and brain correlates of retrograde memory.

## Master's and Dissertation Committees

2019-2020	Member of Master's Committee, Catherine Tallman, Department of Psychology, UCSD
2019-2021	Member of Dissertation Committee, Charlies Dickey, Department of Neurosciences, UCSD
2020-present	Member of Dissertation Committee, Jarrett Thomas Lovelett, Department of Psychology, UCSD
2021-present	Member of Dissertation Committee, Catherine Tallman, Department of Psychology, UCSD
2023-present	Member of Dissertation Committee, Mia Borzello, Department of Cognitive Science, UCSD

## Research Grants

Pilot Project Award (Smith) 05/01/2023-04/30/2024  
UCSD ACTRI

*Memory Across the Lifespan and its Relationship to Memory Structures in the Brain*

The proposed research investigates retrograde memory for news events in older adults with or without cognitive impairment and relates memory to the structure of medial temporal lobe and hippocampal subregions.

Role: Principal Investigator

I01CX002626 Merit Review (Smith/Delano-Wood) 04/01/2023-03/31/2027

Veterans Affairs

*Use of Novel Neuroimaging, Neuropsychological Methods, and Retrograde Memory Test to Detect Cognitive and Cerebral Disruption in Veterans with Mild Traumatic Brain Injury*

The proposed research investigates the utility of novel ways of examining cognition and white matter, as well as a novel test of news events, in the study of adults with and without histories of mild traumatic brain injury.

Role: Contact Principal Investigator

R01 NS124585 (McDonald) 12/15/2021-11/30/2026

NIH/NINDS

*Multimodal imaging of memory reorganization in epilepsy from whole brain networks to local neuronal responses: Implications for surgical-decision-making*

The grant investigates the utility of non-invasive multimodal imaging in the preoperative evaluation of patients with temporal lobe epilepsy and examines which method or combination of imaging methods (fMRI, DTI, structural morphometry) and clinical variables best predict postoperative memory outcome.

Role: Co-Investigator

2 R56 NS065838 (McDonald) 05/01/2020-11/30/2021

NIH/NINDS

*Multimodal imaging of memory reorganization in epilepsy from whole brain networks to local neuronal responses: Implications for surgical-decision-making*

The proposed research investigates the utility of non-invasive multimodal imaging in the preoperative evaluation of patients with temporal lobe epilepsy and examines which method or combination of imaging methods (fMRI, DTI, structural morphometry) and clinical variables best predict postoperative memory outcome.

Role: Co-Investigator

I01CX001375 Merit Review (Smith) 10/01/2016-09/30/2020 (NCE 09/30/2022)

Veterans Affairs

*The Functional and Structural Neuroanatomy of Past Remembrance*

This grant proposes to study past remembrance by examining memory, brain structure, and brain function in healthy and memory-impaired patients.

Role: Principal Investigator

5 R01 MH024600-43 (Squire) 01/01/1979-06/30/2021 (NCE 10/31/2021)

NIH/NIMH

*Memory Systems of the Mammalian Brain*

This grant supports studies with amnesic patients to investigate the organization of declarative memory and the nature of nondeclarative memory. The grant also supports studies of declarative and nondeclarative memory using functional magnetic resonance imaging.

Role: Co-Investigator

I01CX000359 Merit Review (Squire) 04/01/2015-03/31/2019 (NCE 12/31/2019)

Veterans Affairs

*The Neuropsychology of Memory*

This project proposes to study eye movements in relation to the strength of declarative memory and in relation to the aware-unaware status of individual scenes.

Role: Co-Investigator

SBE0542013 (Cottrell) 10/01/2013-09/30/2016

National Science Foundation

The Temporal Dynamics of Learning Center, an NSF Science Learning Center

Subproject: *The Role of Medial Temporal Lobe and Neocortex in Anterograde and Retrograde Memory Impairment*

This project proposes to investigate the relationship between measures of anterograde memory and retrograde memory in patients who have damage to the hippocampus or larger lesions of the medial temporal lobe.

Role: Co-Principal Investigator of Subproject

SBE0542013 (Cottrell) 09/01/2011-08/31/2013

National Science Foundation

The Temporal Dynamics of Learning Center, an NSF Science Learning Center

Subproject: *Brain activity in humans as a function of study-test interval using fMRI*

This project proposes to study brain activity in humans using functional MRI when there are different intervals between the study period and the test period.

Role: Co-Principal Investigator of Subproject

P50 AG005131 (Thal) 04/01/1997-03/31/2009

NIH/NIA

UCSD Alzheimer's Disease Research Center Pilot Project Grant 04/01/2007-03/31/2008

Pilot Project: *Assessment of Recent and Remote Semantic Memory in Memory-Impaired Patients and Healthy Controls: A neuropsychological and fMRI study*

This project proposes to investigate the status of anterograde and retrograde memory in patients who have mild cognitive impairment relative to normal controls.

Role: Principal Investigator of Pilot Grant

### **Training Grants**

5-T32-AG000216-14 Neuroplasticity of Aging Training Grant (Koo) 07/01/2005 – 06/30/2006

NIH/NIA

*Assessment of Declarative Memories in Amnesics and Healthy Controls using Autobiographical Narratives and fMRI*

Primary Research Advisor, Larry Squire, Ph.D.

Secondary Research Advisor, Robert Clark, Ph.D.

5-T32-MH20002-5 Cognitive Neurosciences Training Grant (Sejnowski) 07/01/2003 – 06/30/2005

NIH/NIMH

*Assessment of Declarative Memory in Amnesic Patients and Healthy Controls*

Primary Research Advisor, Larry Squire, Ph.D.

Secondary Research Advisor, Robert Clark, Ph.D.

### **Publications: Journals and Chapters**

1. Knight, DC, **Smith, CN**, Stein, EA, & Helmstetter, FJ (1999). Functional MRI of human pavlovian fear conditioning: Patterns of activation as a function of learning. *Neuroreport*, 10, 3665-3670. PMCID: PMC10619663
2. Cheng, DT, Knight, DC, **Smith, CN**, Stein, EA, & Helmstetter, FJ (2003). Functional MRI of human amygdala activity during pavlovian fear conditioning, stimulus processing versus response expression. *Behavioral Neuroscience*, 11(1), 1-12. PMCID: PMC12619902
3. Knight, DC, Cheng, DT, **Smith, CN**, Stein, EA, & Helmstetter, FJ (2004). Neural substrates mediating human delay and trace fear conditioning. *Journal of Neuroscience*, 24(1), 218-28. PMCID: PMC14715954
4. Knight, DC, Cheng, DT, **Smith, CN**, Stein, EA, & Helmstetter, FJ (2004). Amygdala and hippocampal activity during acquisition and extinction of fear conditioning. *Cognitive, Affective, and Behavioral Neuroscience*, 4(3), 317-25. PMCID: PMC15535167
5. **Smith, CN**, Clark, RE, Manns, JR., & Squire, LR (2005). Acquisition of differential delay eyeblink classical conditioning is independent of awareness. *Behavioral Neuroscience*, 119(1), 78-86. PMCID: PMC15727514
6. **Smith, CN** and Squire, LR (2005). Declarative memory, awareness, and transitive inference. *Journal of Neuroscience*, 25(44), 10138-46. PMCID: PMC1457087
7. Gold, JJ, **Smith, CN**, Bayley, PJ, Shrager, Y, Brewer, JB, Stark, CEL, Hopkins, RO, & Squire, LR (2006). Item memory, source memory, and the medial temporal lobe: Concordant findings from fMRI and memory-impaired patients. *Proceedings of the National Academy of Sciences, USA*, 103, 9351-9356. PMCID: PMC1482613
8. Cheng, DT, Knight, DC, **Smith, CN**, & Helmstetter, FJ (2006). Human amygdala activity during the expression of fear responses. *Behavioral Neuroscience*, 120(6), 1187-95. PMCID: PMC17201461
9. **Smith, CN**, Hopkins, RO, & Squire, LR (2006) Experience-dependent eye movements, awareness, and hippocampus-dependent memory. *Journal of Neuroscience*, 26(44), 11304-11312. PMCID: PMC2424210
10. Squire, LR, Bayley, PJ, & **Smith, CN** (2008). Amnesia: Declarative and Nondeclarative Memory. In: Larry R Squire (Ed.). *The Encyclopedia of Neuroscience*. San Diego: Elsevier.
11. **Smith, CN**, and Squire, LR (2008). Experience-dependent eye movements reflect hippocampus-dependent (aware) memory. *Journal of Neuroscience*, 28(49), 12825-12833. PMCID: PMC19036976



12. **Smith, CN**, and Squire, LR (2009). Medial temporal lobe activity during retrieval of semantic memory is related to the age of the memory. *Journal of Neuroscience*, 29(4), 930-938. PMID: PMC19176802
13. **Smith, CN**, Frascino, JC, Kripke, DL, McHugh, PR, Treisman, GT, & Squire, LR (2010). Losing memories overnight: a unique form of human amnesia. *Neuropsychologia*, 48, 2833-2840. PMID: PMC2914200
14. Song, Z, Wixted, JT, **Smith, CN**, & Squire, LR (2011). Different nonlinear functions in hippocampus and perirhinal cortex relating functional MRI activity to memory strength. *Proceedings of the National Academy of Sciences, USA*, 108, 5783-8. PMID: PMC3078356
15. **Smith, CN**, Wixted, JT, & Squire, LR (2011). The hippocampus supports both recollection and familiarity when memories are strong. *Journal of Neuroscience*, 31, 15693-15702. PMID: PMC3220416
16. **Smith, CN**, Frascino, JC, Hopkins, RO, & Squire, LR (2013). The nature of anterograde and retrograde memory impairment after damage to the medial temporal lobe. *Neuropsychologia*, 51(13), 2709-2714. PMID: PMC3837701
17. **Smith, CN** (2013). Autobiographical Memory Network (Vol. 1, pp. 146-147); Functional Magnetic Resonance Imaging (Vol. 1, pp. 502-504); Implicit Memory (Vol. 1, pp. 566-569); Magnetic Resonance Imaging (Vol. 1, pp. 653-655); Parahippocampal Gyrus (Vol. 1, pp. 822-823); Psychogenic Amnesia (Vol. 1, pp. 905-907). In *Encyclopedia of Human Memory*. Santa Barbara, CA: Greenwood Publishers.
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