

Julie Anna Dumas, Ph.D.
CURRICULUM VITAE

Position: Professor
Department of Psychiatry

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EDUCATION

Year	Institution	Degree	Area of Degree, Accolades
2004-2006	University of Vermont	Post Doctoral Fellow	Clinical Neuroscience
1999-2002	University of North Carolina at Chapel Hill	Ph.D.	Cognitive Psychology
1996-1999	University of North Carolina at Chapel Hill	M.A.	Cognitive Psychology
1992-1996	University of Virginia	B.A.	Biology and Psychology with High Distinction

LICENSES, CERTIFICATION

N/A

FACULTY POSITIONS HELD

Years	Institution	Academic Title	Department
2022-Present	UVM	Professor in the Tenure Pathway	Psychiatry
2020-present	UVM	Associate Professor in the Tenure Pathway- Tenure Awarded 2021	Psychiatry
2012-2020	UVM	Associate Professor in the Research Scholar Pathway	Psychiatry

2006-2012	UVM	Assistant Professor in the Research Track	Psychiatry
2003-2004	Middlebury College	Research Scholar	Psychology
2002-2003	Middlebury College	Visiting Assistant Professor	Psychology

OTHER POSITIONS AND MAJOR ADMINISTRATIVE POSITIONS HELD

Years	Location/Program Name	Role
2008-present	Graduate College	Faculty Member
2008-present	Neuroscience Graduate Program	Faculty Member
2012-present	Clinical Neuroscience Research Unit Department of Psychiatry University of Vermont	Co-Director

HONORS AND AWARDS

Year	Name of Award
2025	Outstanding Achievement in Medicine and Science Award, Celebration of Gender Equity in Science and Medicine, Larner College of Medicine, University of Vermont
2020	Distinguished Fellow, American Association for Geriatric Psychiatry
2011	Top Poster Nominee from the Society for Biological Psychiatry, 2011 for "Estradiol reversal of anticholinergic brain activation in postmenopausal women". One of 47 selected out of 600 to be considered for the Top Poster Award for Clinical/Translational Research
2011, 2012	Scholar in the Advanced Research Institute for Geriatric Psychiatry
2009	Distinguished Member of the National Society of Collegiate Scholars
2008	American College of Neuropsychopharmacology Young Investigator Memorial Travel Award
2008	Barry Lebowitz Early Career Scientist Award, American Association for Geriatric Psychiatry
2006	Summer Research Institute for Geriatric Psychiatry, Scholar
1998	Institute on Aging at the University of North Carolina at Chapel Hill Small Research Grant

1996

Frank W. Finger Undergraduate Award, University of Virginia,
Department of Psychology.

KEYWORDS/AREAS OF INTEREST

Cognitive Aging, Menopause, Cholinergic System, Dopaminergic System, Estrogen, Working Memory, Psychopharmacology, Alzheimer's Disease, Functional Neuroimaging, Mood, Geriatric Depression

SUMMARY OF PROFESSIONAL ACTIVITIES- OVERALL

Dr. Dumas joined the faculty in the Department of Psychiatry as a Research Assistant Professor in 2006 and is now a tenured Professor since 2022. Dr. Dumas has developed a research program that examines the neurobiology underlying age-related cognitive dysfunction as well as the role of hormones on brain functioning across the life span. Since 2015, she has received three R01s, a subcontract R01, and an R56 from the National Institutes on Aging (NIA)/NIH to support this research program. She has also received two investigator-initiated grants to study the effects of choline on brain functioning in postmenopausal women and has a patent pending for this work. She continues to publish this work in specialty journals in her field and is a co-investigator on NIH grants on neuroscience and scientific and professional mentoring topics.

Dr. Dumas' teaching focuses on mentoring opportunities that serve to train the next generation of scientists. Here at UVM, she is a highly sought-after mentor for undergraduate students who are interested in gaining research experience in a human neuroscience laboratory. Nationally, she is a Principal Investigator for an R25 with a colleague at Weill Cornell Medical College and a mentor to another R25 awarded to the University of Pittsburgh where she mentors early career faculty investigators in geriatric mental health. She has a national reputation for mentoring as she has chaired an NIH study section evaluating graduate student and postdoc fellowship grants applications in cognitive, sensory, and motor neurosciences.

Dr. Dumas contributes service to the Department of Psychiatry as the Director of Psychiatry Grand Rounds and as the Vice Chair for Faculty. At the LCOM she has been a member of the Faculty Standards Committee for 10 years and served as Chair in 2019-2020. Dr. Dumas is the Research Director at the UVM MRI Center for Biomedical Imaging. Her national service includes being elected by her peers in Geriatric Psychiatry to two three-year terms on the Board of Directors of the American Association for Geriatric Psychiatry (AAGP) as well as being selected for a 6-year term as the Vice Chair and then Chair for the Research Committee at the AAGP. Dr. Dumas is a Distinguished Fellow of the AAGP in recognition of this service.

SUMMARY OF ACCOMPLISHMENTS

- Internationally recognized expert on the cognitive neuroscience of menopause
- Continuously funded by the NIH/NIA since 2008 with 5 R series awards
- Strong peer reviewed publication record with 65+ papers
- Vice Chair for Faculty, Department of Psychiatry
- Director of Grand Rounds, Department of Psychiatry
- Mentor to undergraduate students in the Honors College, undergraduate Biology, Neuroscience, and Psychology Departments
- Co-Principal Investigator for NIMH sponsored Research Career Institute in Geriatric Mental Health

PROFESSIONAL SERVICE

DEPARTMENTAL SERVICE

Years	Department of	Committee	Role
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2016-Present	Psychiatry	Psychiatry Grand Rounds	Director
2018-Present	Research Center for Children, Youth, and Families, Inc.	Board of Directors	Corporate Secretary
2019-Present	Department of Psychiatry	Vice Chair for Faculty	Vice Chair
2020-Present	Department of Psychiatry	Departmental Faculty Standards Committee	Chair

COLLEGE SERVICE

Years	Service Committee	Role
2007-Present	MRI Center for Biomedical Imaging Advisory Group • bimonthly advisory group	Member
2019-Present	MRI Center for Biomedical Imaging • Mentor new users, aid in developing center budgets, work with co-directors to enhance services to users	Research Director
2011-2023	LCOM Space Committee • <i>Ad hoc</i> meetings	Psychiatry Representative
2014-2020 2022 – present	Faculty Standards Committee • Review 40 promotion dossiers per year and > 100 for reappointment • Chair 2019-2020	Member, Chair 2019-2020
2016-Present	Advancement Committee, Neuroscience Graduate Program • Review all second year NGP student specific aims for the qualifying exam, suggest edits, and approve advancement through the program	Member
2021-2022 2023-2024	Vermont Center for Cardiovascular and Brain Health Symposium Committee • Meet monthly to plan the 2022 and 2024 VCCBH Symposium in June 2022 and 2024	Member
2023-present	Senior Associate Dean for Research Advisory Council	Member

- Meet monthly to discuss strategic planning about research at the LCOM

MEDICAL CENTER SERVICE

N/A

UNIVERSITY SERVICE

Years	Service Committee	Role
2010-2012, 2016	UVM Undergraduate Research Advisory Committee	Grant Reviewer
2018 – Present	The Center on Aging, University of Vermont	Executive Advisory Council Member
2022-2023	Department of Psychology, Human Neuroscience Tenure Track Faculty Position Search Committee	Member

GOVERNMENT

Years	Service Committee	Role
2016	Aging Systems and Geriatrics (ASG) Study Section, Center for Scientific Review (CSR), NIH	<i>Ad Hoc</i> Reviewer
2016	Cognitive Neuroscience and Neurodegeneration (CNN) Study Section, CSR, NIH	<i>Ad Hoc</i> Reviewer
2016	Emotion Regulation in Aging, NIMH, CSR, NIH	<i>Ad Hoc</i> Reviewer
2016	Biomarkers/Discovery Study Section, CSR, NIH	<i>Ad Hoc</i> Reviewer
2017	Neurocognitive Complications of Type 1 Diabetes ZDK1 GRB-9(M1), CSR, NIH	<i>Ad Hoc</i> Reviewer
2017	PAR Panel: Epidemiology and Cohort Studies for Alzheimer's Disease, Related Dementias, and Cognitive Resilience ZRG1 PSEP 55 2017/07 and 2017/10 CSR, NIH	<i>Ad Hoc</i> Reviewer
2018	Aging Systems and Geriatrics, CSR, NIH, 2018/06 and 2018/10, CSR, NIH	<i>Ad Hoc</i> Reviewer
2019 June and December		<i>Ad Hoc</i> Reviewer

2020 February and July	Fellowships: Sensory and Motor Neuroscience, Cognition and Perception ZRG1 F02B-E, CSR, NIH	<i>Ad Hoc</i> Reviewer
2020 July	Fellowships: Sensory and Motor Neuroscience, Cognition and Perception ZRG1 F02B-E, CSR, NIH	<i>Ad Hoc</i> Reviewer
2020 October 2021 May	Cognitive Neuroscience and Neurodegeneration (CNN), CSR, NIH	<i>Ad Hoc</i> Reviewer
2020 November	2021/01 ZAG1 ZIJ-8 (J1) Cardiometabolic Health in Estrogen Cognition Treatment CSR, NIH	Co-Chair
2021 March, June, October	Fellowships: Sensory and Motor Neuroscience, Cognition, and Perception ZRG1 F02B-E, CSR, NIH	Chair
2022 March, June, October	Fellowships: Sensory and Motor Neuroscience, Cognition, and Perception ZRG1 F02B-E, CSR, NIH	Chair
2025 April	Fellowships: Sensory and Motor Neuroscience, Cognition, and Perception ZRG1 F02B-Y (20), CSR, NIH	<i>Ad hoc</i> reviewer
2025 June	Human Cognitive and Mental Function (HCMF), CSR, NIH	<i>Ad hoc</i> reviewer
	Small Business – Biobehavioral Processes (BP-10), CSR, NIA	

SOCIETY MEMBERSHIPS

Years	Society
2002-Present	Psychonomic Society
2004-Present	Society for Neuroscience
2007-2012	Cognitive Neuroscience Society
2007-Present	American Association for Geriatric Psychiatry
2011-2012, 2016-2019	Organization for Human Brain Mapping
2004-2006, 2013-2014	American Psychological Association

SERVICE TO PROFESSIONAL ORGANIZATIONS

Years	Service Committee	Role
2007-Present	Research Committee, American Association for Geriatric Psychiatry	Committee Member

2021-2023	Research Committee, American Association for Geriatric Psychiatry • Selected by peers to serve a 3-year term.	Vice Chair
2023-present	Research Committee, American Association for Geriatric Psychiatry • Selected by peers to serve a 3-year term.	Chair
2008-Present	Alzheimer's Association • Review 5-10 grants per year	Grant Reviewer
2008-Present	Abstract Reviewer for Annual Meeting, American Association for Geriatric Psychiatry • Review 15-20 abstracts each year for the annual conference	Abstract Reviewer
2009-2012, 2021	Young Investigator Award Selection Committee, American Association for Geriatric Psychiatry	Reviewer
2011-2012	Developing Your Research Career Breakfast Seminar, American Association for Geriatric Psychiatry	Co-Leader
2015-2018	Board of Directors, American Association for Geriatric Psychiatry	Non-Psychiatrist Board Member
2023-present	Board of Directors, American Association for Geriatric Psychiatry	Research Committee Chair
2026-present	Board of Directors, American Association for Geriatric Psychiatry	Non-Psychiatrist Board Member

SERVICE TO PROFESSIONAL PUBLICATIONS

Years	Role
2003 – Present	<i>Ad Hoc</i> Reviewer for the Following Journals: <i>Aging Health, Alzheimer's and Dementia, Alzheimer's & Dementia: Diagnosis, Assessment, and Disease Monitoring, American Journal of Geriatric Psychiatry, American Journal of Clinical Nutrition, American Journal of Psychiatry, Biological Psychiatry, Biological Psychiatry: Cognitive Neuroscience and Neuroimaging, Brain Imaging and Behavior, Brain Research, Cerebral Cortex, Contemporary Clinical Trials, Hormones and Behavior, Human Brain Mapping, International Journal of Geriatric Psychiatry, International Psychogeriatrics, Psychoneuroendocrinology, Industrial Health, Journal of Cancer Survivorship, Journal of Experimental Psychology: Learning, Memory, and Cognition, Menopause, Neurobiology of</i>

Aging, Neurochemical Research, Neuroimage, Neuropsychologia, Neuropsychopharmacology, Neuroscience Letters, Psychiatry Research: Neuroimaging, Psychological Science, Psycho-Oncology, Psychopharmacology, Scientific Reports, Sex Roles

- Review approximately 15 manuscripts per year across a variety of journals

10/2021 – Present Editorial Board, *American Journal of Geriatric Psychiatry*

PUBLIC SERVICE

Years	Service Role
2014-2024	Chair, Board of Directors, Burlington Children's Space

SUMMARY OF SERVICE ACTIVITIES

I am involved in professionally related service activities to the Department of Psychiatry, the LCOM, the University, and local and national geriatric psychiatry organizations. I am currently the Vice Chair for Faculty in the Department of Psychiatry where my role is to mentor and assist my faculty colleagues as they progress through the promotion, tenure, and reappointment process. I am also the Director of the Department of Psychiatry Grand Rounds where I am responsible for leading our Grand Rounds committee as we suggest and approve speakers on topics of interest to our Psychiatry audience using state of the art, evidence-based research. At the College level, I am the Research Director of the MRI Center for Biomedical Imaging where I have been a leader in the development of the functional brain imaging program at the LCOM. I have been elected to serve a third term on the LCOM Faculty Standards Committee and in 2019-2020 I served as the Chair. I have served on the LCOM Space Committee since 2011. I am a member of the Senior Associate Dean for Research's Research Advisory Council since 2023. At the University level I am a member of the Executive Committee for the Center on Aging.

Nationally, I have been an *ad hoc* member of several NIH grant review study section for six years and then I chaired Fellowship study section for two years. I am on the editorial board for the *American Journal of Geriatric Psychiatry* since 2021. I have served as an *ad hoc* reviewer for over 30 journals in both psychiatry and psychology fields. I am a member of the Research Committee of the American Association for Geriatric Psychiatry (AAGP). Most notably, I was elected to the Board of Directors of the AAGP. My three-year term ended in 2018. I was recently asked to serve as the Vice Chair of the Research Committee for the AAGP for the term 2021-2023. I am the current Chair of the Research Committee and that term is from 2023-2026. I am a Distinguished Fellow of the AAGP in recognition of this service.

TEACHING

FORMAL SCHEDULED CLASSES

Year	Course Title	Course R E		Hours	Number of Learners	Learner Level
1997	Intro to Psychology, Teaching Assistant (UNC-CH)	x		45	300	UG
1998	Intro to Psychology, Teaching Assistant (UNC-CH)	x		45	300	UG
1998	Cognitive Psychology, Teaching Assistant (UNC-CH)	x		45	60	UG
1999	Cognitive Psychology, Teaching Assistant (UNC-CH)	x		45	60	UG

1999	Cognitive Psychology, Instructor (UNC-CH)	x		45	30	UG
2000	Cognitive Psychology, Instructor (UNC-CH)	x		45	30	UG
2000	Medical Neurobiology, Teaching Assistant (UNC-CH)	x		30	110	UG(Med)
2001	Medical Neurobiology, Teaching Assistant (UNC-CH)	x		30	110	UG(Med)
2002	Adulthood and Aging (Middlebury College)		x	45	25	UG
2003	Animal Cognition (Middlebury College)		x	30	30	UG
2003, 2004, 2005	Advanced Neuroscience, PGY 3, Psychiatry, lecture on amino acid and peptide neurotransmitters	x		1.5	4	G
2006 - 2010	Advanced Neuroscience, PGY 3 Neuropsychology and Neurobiology of Memory (UVM)	x		1.5	4	G
2012, 2014, 2016, 2018	Advanced Neuroscience, PGY 2 and 3, Neuropsychology and Neurobiology of Memory (UVM)	x		1.5	8	G
2014	2 nd Year Nursing Students Research Introduction: Working Memory and the Brain (UVM)	x		1	20	UG
2015	2 nd Year Nursing Students Research Introduction: Cancer, Chemotherapy, and Cognition (UVM)	x		1	20	UG
2015	2 nd Year Honors College Neuroscience of Memory	x		1.5	20	UG
2016, 2017	2 nd Year Nursing Students Research Introduction: Cognition in Women at Midlife (UVM)	x		1	20	UG
2018	2 nd Year Nursing Students Research Introduction: Functional Imaging in Psychiatry (UVM)	x		1	20	UG
2019	Reproductive Endocrinology Fellows, OB/GYN residents lecture: CNS Changes in Menopause (UVM)	x		1	15	G
2019	2 nd Year Nursing Students Research Introduction: Estrogen as a Cognitive Enhancer (UVM)	x		1	25	UG

R-required; E-elective; Hours-approx. per semester; G-graduate studies; UG -undergraduate

POSTGRADUATE AND OTHER COURSES

N/A

PREDOCTORAL STUDENTS SUPERVISED OR MENTORED

Dates	Name	Program School	Role	Current Position
2004	Cecily Stokes-Prindle	RUBY Grant Recipient “Gonadal hormones and cognition”	Mentor	Principal Advisor, The Behavioral Insights Team

2005-2006	Emily Coderre, Ph.D.	Helix summer grant, URECA! Grant Recipient, UVM Honors College: Brain fMRI study of language processing in native Japanese speakers	Mentor and Thesis Supervisor	Assistant Professor, Communication Sciences, UVM
2006-2007	Heather Wilkins, M.S.	Senior Thesis UVM, Effects of menstrual cycle phase on memory for emotional information	Mentor and Thesis Supervisor	MS in Neuroscience, Washington University
2008-2009	Megan Newhouse, MS	URECA! Award recipient UVM: The effects of negative emotion on perceived exertion during exercise	Mentor and Thesis Supervisor	MS in Exercise Psychology
2008-2009	Talaya McCright-Gill, MA	URECA! Award recipient UVM: Brain Processing of Emotional Information in Transgender Individuals	Mentor and Thesis Supervisor	MA in Psychology, NYU
2008-2010	Amanda Kutz, Ph.D.	HELIX summer internship, URECA! Award recipient, UVM: Age differences on the effects of arousal in emotional memory: An fMRI study	Mentor and Thesis Supervisor	Ph.D. in Clinical Psychology, University of Maine, Clinical Psychologist Salt Lake City VA
2009	Kelly Carstens, Ph.D.	APPLE Award, CW Link mini grant UVM: The effects of nicotine on emotional memory	Mentor and Thesis Supervisor	Ph.D. in Neuroscience UNC-Chapel Hill, NIH Principal Investigator, USA EPA
2011-2012	Ariel Bailly	URECA! Award recipient: Subject cognitive impairment in episodic memory: An fMRI Study	Mentor and Thesis Supervisor	Product Manager, Warner Brothers Digital Labs
2014	Jennifer Trimble	Honors College, UVM: Lifetime estrogen exposure, dopaminergic functioning, and cognition in postmenopausal women.	Mentor and Thesis Supervisor	Physician's Assistant Student, Albay Medical College
2016	Sienna Searles, M.D.	Honors College, UVM: The relationship between circulating estrogen, insulin resistance, and cognition in women	Mentor and Thesis Supervisor	PGY 4, Family Medicine at LCOM, UVM, Chief Resident
2018	Anna Senft Miller	Psychology Honors Thesis, UVM: Lifetime estrogen exposure, cumulative stress, and cognition in later life	Mentor and Thesis Supervisor	Physician's Assistant Student, Duke University
2018	Yara Alshaabi	Summer Undergraduate Research Fellowship, Honors College, UVM: Interaction of age and cancer treatment on brain structure and function in breast cancer survivors.	Mentor and Thesis Supervisor	Medical Assistant II Neurology, UVMCMC
2018	Baillie Frizzell, MD	Summer Neuroscience Undergraduate Research Fellowship, UVM	Mentor	PGY-1 Family Medicine at University of Colorado at Denver

2019	Kara Bates	Honors College, UVM: The effect of diabetes on cognition in pre-, peri-, and postmenopausal women	Mentor and Thesis Supervisor	Physician's Assistant Student, Quinnipiac College
2020-2021	Skyler Pearce	Honors College, UVM: The effect of maternal antidepressant use on a child's mental health	Mentor and Thesis Supervisor	University of Michigan MPH student
2020-2021	Maja Burch	Honors College, UVM: Impaired glucose tolerance in aging as a risk factor for cognitive dysfunction.	Mentor and Thesis Supervisor	Clinical Research Assistant at Berenson-Allen Center for Noninvasive Brain Stimulation, Harvard Medical School
2020-2021	Theresa Kirsimagi	College Honors, CAS, UVM: The effects of body mass index on hippocampal volume in women with Down Syndrome	Mentor and Thesis Supervisor	UVM LCOM M2 student
2021-2022	Maddison McGuiness	Honors College, UVM: Reproductive History in Cognitively Healthy Middle-Aged Women and its Relationship to Risk for Alzheimer's Disease	Mentor and Thesis Supervisor	Medical Assistant, Matri
2021-2022	Zane Russom	College Honors Thesis, UVM: Subclinical Metabolic and Cardiovascular Factors and Brain White Matter Microstructural Integrity in Young Women	Mentor and Thesis Supervisor	Research Assistant, Chiu Lab, Harvard Medical School
2021-2025	Abigail Testo, PhD	Neuroscience Graduate Program	Mentor	Postdoctoral Associate
2021-2022	Abigail Myers, BS	Neuroscience Graduate Program	Research Rotation Mentor	UVM Graduate Student
2023-2024	Sabrina Joseph	College Honors Thesis – UVM: Sleep and Menopause	Mentor and Thesis Advisor	UVM Undergraduate Student
2023-2024	J. Katerina Allanson	College Honors Thesis – UVM Visual processing and the cholinergic system in older adults	Mentor and Thesis Advisor	Clinical Research Coordinator at Alzheimer's Disease Research Unit, Yale University School of Medicine
2024-2025	Gwenyth Roundy	Honors College Thesis - UVM	Mentor and Thesis Advisor	Research Project Assistant, UVM
2024-2025	Adeline Haacker	Honors College Thesis - UVM	Mentor and Thesis Advisor	Medical Assistant, Denver, CO

DISSERTATION/THESIS COMMITTEE MEMBERSHIP

2014 - Sydney Trask, Chair, Masters Thesis Committee, Department of Psychology, UVM

2014 – Olga Lipatova, M.A., Chair, Dissertation Committee, Department of Psychology, UVM

2017 - Sydney Trask, M.A., Chair, Dissertation Committee, Department of Psychology, UVM

2017 – Hannah Schoenberg, Chair, Masters Thesis Committee, Department of Psychology, UVM

2019 – Kelsey Hudson, M.A. Dissertation Committee, Department of Psychology, UVM

2019 - Joanna Streck, M.A., Chair, Dissertation Committee, Department of Psychology, UVM

2021 – Hannah Schoenberg, M.A., Chair, Dissertation Committee, Department of Psychology, UVM

2021 – McKenna Perry, B.S., Qualifying Exam Committee, Neuroscience Graduate Program, UVM

2023 – Sarah Von Doepp, B.S., Chair, Masters Thesis Committee, Department of Psychology, UVM

2023 – Noelle Michaud, M.A., Chair, Dissertation Committee, Department of Psychology, UVM

2025 – Samantha Moriarity, M.A, Chair, Dissertation Committee, Department of Psychology, UVM

2025 – Zaidan Mohommed, M.A., Chair, Dissertation Committee, Department of Psychology, UVM

2025 – Grace Firehock, Chair, Honors Thesis Committee, Department of Psychology, UVM

2025 – Paola Pena Garcia, Ph.D. Chair, Dissertation Committee, Cellular and Molecular Biology, UVM

2025 – Samantha Moriarty, Ph.D. Chair, Dissertation Committee, Department of Psychology, UVM

2025 – Abigail Testo, Ph.D., Mentor, Dissertation Committee, Neuroscience Graduate Program, UVM

2025 – Caitlin Allen, Member, Comprehensive Exam Committee, Neuroscience Graduate Program

POSTDOCTORAL FELLOWS AND RESIDENTS DIRECTLY SUPERVISED OR MENTORED INFORMAL TEACHING

2010 - Christina Broadwell, M.D. – Fellow in Obstetrics and Gynecology, President’s Presenter Award from the Society for Gynecologic Investigation for “The Effects of Menstrual Cycle Phase on Attention and Memory for Emotional Information”.

2020-2022– Callum Potts, M.D. – Fellow in Reproductive Endocrinology and Infertility, Department of Obstetrics, Gynecology, and Reproductive Sciences. Thesis mentor “Choline, Estrogen, and Cognition in Postmenopausal Women”

FACULTY MENTORED

2017 - Faculty Mentor, Research Career Institute in Mental Health of Aging, Summer Research Institute, New York, NY. This is a NIMH supported mentorship program for junior faculty in Geriatric Mental Health.

Research Career Institute in the Mental Health of Aging (CIMA)
R25 MH112484 Gunning (PI)

2018 - Faculty Mentor, Research Career Institute in Mental Health of Aging, Summer Research Institute, Nashville, TN. This is a NIMH supported mentorship program for junior faculty in Geriatric Mental Health.

Research Career Institute in the Mental Health of Aging (CIMA)

R25 MH112484 Gunning (PI)

2019 - Faculty Mentor, Research Career Institute in Mental Health of Aging, Summer Research Institute, Boston, MA. This is a NIMH supported mentorship program for junior faculty in Geriatric Mental Health.

Research Career Institute in the Mental Health of Aging (CIMA)

R25 MH112484 Gunning (PI)

2020 - Faculty Mentor, Research Career Institute in Mental Health of Aging, Summer Research Institute, Zoom Video Conference. This is a NIMH supported mentorship program for junior faculty in Geriatric Mental Health

Research Career Institute in the Mental Health of Aging (CIMA)

R25 MH112484 Gunning (PI)

2021 - Faculty Mentor, Research Career Institute in Mental Health of Aging, Summer Research Institute, Zoom Video Conference. This is a NIMH supported mentorship program for junior faculty in Geriatric Mental Health

Research Career Institute in the Mental Health of Aging (CIMA)

R25 MH112484 Gunning (PI)

- I am a co-mentor for Carole McBride, Ph.D., Faculty Scientist, Obstetrics, Gynecology, and Reproductive Sciences. Dr. McBride is developing her research career at the intersection of reproductive sciences and neurosciences, and I am her neuroscience mentor. She is a scholar in the national CIMA 2021 program.

2022 - Faculty Mentor, Research Career Institute in Mental Health of Aging, Summer Research Institute, Pittsburgh, PA. This is a NIMH supported mentorship program for junior faculty in Geriatric Mental Health

Research Career Institute in the Mental Health of Aging (CIMA)

R25 MH112484 Gunning (PI)

2022 – Faculty Mentor, Advanced Research Institute in Geriatric Mental Health. Graylyn International Conference Center, Winston-Salem, NC. This is an NIHM supported mentoring program for junior faculty in Geriatric Mental Health working to obtain their first R01 or similar independent investigator award.

R25 MH068502, Martha L. Bruce, Ph.D., PI

2023 – Faculty Mentor, Advanced Research Institute in Geriatric Mental Health. Tanque Verde Ranch, Tucson, AZ. This is an NIHM supported mentoring program for junior faculty in Geriatric Mental Health working to obtain their first R01 or similar independent investigator award.

R25 MH068502, Martha L. Bruce, Ph.D., PI

2022-2023 – Faculty Mentor, Scientific Training in Addiction Research Techniques (START), Burlington, VT and Tampa, FL. This is a program for scientific mentoring and professional

development for early career scientists from historically underrepresented and underserved backgrounds.

Supplement to U01 DA041148, Garavan & Potter, MPIs

Vermont Center for Cardiovascular and Brain Health (Cushman and Nelson MPI)

2020-2024

P20 GM135007

Project 2: Vascular mechanisms of cognitive impairment in chronic kidney disease. (Cheung PI)

Role: Peer Mentor

Adam Sprouse-Blum, M.D. Assistant Professor in Neurological Sciences. Co-Sponsor for NIH K08 award “Use of MRI to differentiate left- from right-sided migraine”. Submitted 6/2021, scientific review 9/2021, results Not Discussed, Resubmitted March 2023, not discussed.

- I will mentor Dr. Sprouse-Blum on brain imaging design and analysis methods for assessing the effects of migraine on cognitive functioning. We currently work together on two of his projects on cognition in migraine and I aided in data acquisition and analysis.

2024-2025 – Faculty Mentor, Scientific Training in Addiction Research Techniques (START), Burlington, VT and Tampa, FL. This is a program for scientific mentoring and professional development for early career scientists from historically underrepresented and underserved backgrounds.

5R25DA059073-02 Johnson, Garavan, & Potter, MPIs

2024 – Faculty Mentor, Advanced Research Institute in Geriatric Mental Health. Princeton, NJ. This is an NIHM supported mentoring program for junior faculty in Geriatric Mental Health working to obtain their first R01 or similar independent investigator award.

R25 MH068502, Martha L. Bruce, Ph.D., PI

2023-2024 – Research Career Institute in Mental Health of Aging (CIMA), Co-Lead Faculty Mentor with Faith Gunning, PhD. This is a NIMH supported mentorship program for junior faculty in Geriatric Mental Health. Virtual.

OTHER VISITING FACULTY SUPERVISED

N/A

TEACHING AIDS

N/A

TEACHING AWARDS AND NOMINATIONS

Nominated for 2023 Gender Equity in Medicine and Science Polaris Award for Outstanding Mentorship by Abigail Testo, Neuroscience Graduate Program, 3rd year student.

Nominated for the 2023 Mentor Award, Larner College of Medicine, Research Week Award for Outstanding Mentorship by Robert Althoff, MD, PhD, Chair, Department of Psychiatry

Nominated for 2024 Gender Equity in Medicine and Science Polaris Award for Outstanding Mentorship by Robert Althoff, MD, PhD, Chair, Department of Psychiatry.

Nominated for the 2024, 2025 Mentor Award, Larner College of Medicine, Research Week Award for Outstanding Mentorship by Robert Althoff, MD, PhD, Chair, Department of Psychiatry

SUMMARY OF TEACHING ACTIVITIES

I have pursued several teaching opportunities including teaching and mentoring students from undergraduates to post-doctoral fellows and faculty colleagues. I am currently a mentor for two undergraduate Honors College students who are developing research projects for their senior theses in my laboratory in the academic year 2024-2025. I mentor one graduate student from the Neuroscience Graduate Program. My national reputation as a scientist and mentor of the next generation of scientists has been recognized by my serving as a multiple principal investigator for a national program sponsored by the National Institute of Mental Health (NIMH) for helping junior faculty to develop their research careers in geriatric mental health awarded. After a week of “research boot camp” in the summer, I lead a monthly videoconference mentoring session for approximately eight trainees from institutions all over the US. I coordinate the participation of 20 faculty mentors from medical schools, universities, and program officers from the NIMH. The goal is to create a long-term mentoring relationship with the mentees that develop at the summer program and continue as they begin their careers in geriatric mental health. I am currently mentoring a junior faculty colleague in OBGYN here at UVM who participated in this program in 2021 as she develops her research at the intersection of reproductive health and neuroscience.

RESEARCH AND SCHOLARLY ACTIVITIES

RESEARCH AWARDS AND GRANTS

Ongoing Research Support

2R25MH112484-06 Dumas, Gunning (MPI) 2025-2030

The Research Career Institute in Mental Health of Aging (CIMA)

The Research Career Institute in Mental Health of Aging (CIMA) is a national mentoring network that promotes the development of early career investigators focused on aging and mental health. The CIMA is our response to the IOM mandates and the 2015 Strategic Plan. We propose to mentor postdoctoral fellows and new faculty whose focus range from brain networks to novel treatment and prevention approaches, and mental health services for aging individuals.

Role: Principal Investigator (Multiple)

R01 AG085286 Dumas, Kien (MPI) 2023-2028

Fatty Acid Modulation of Brain Function in Older Adults

This study will examine the role of saturated fat compared to monounsaturated fat in cognition, brain functioning, mood, and physical activity in healthy older adults.

Role: Principal Investigator (Multiple)

Balchem Corporation Dumas (PI) 2024-2025

Choline Dose Ranging and Brain Functioning in Postmenopausal Women

This investigator-initiated project will examine the ability of two doses of the nutrient choline to influence brain functioning in healthy postmenopausal women. Choline has been shown to be critical for brain development in the fetus and its metabolism is controlled by estradiol. We showed in a recent study that choline increased efficiency of brain functioning in healthy

postmenopausal women. This study will examine the dose of choline necessary to observe this effect.

Role: Principal Investigator

ADC: \$320,000

R01 AG066159 Dumas & Newhouse (MPI) 2019-2024, NCE

Health of the Cholinergic System and Risk for Alzheimer's Disease in Postmenopausal Women

This study here will examine an established AD-related neurotransmitter-based mechanism that may also underlie cognitive changes after menopause and will identify individual difference factors that are associated with cognitive performance changes after menopause and their relationship to structural, functional, and biomarker evidence of risk for later life cognitive dysfunction.

Role: Principal Investigator (Multiple)

Annual Direct Costs (ADC): \$900,000

U01DA051039-01 MPI: Garavan, Potter 2020-2027

19/21 ABCD-USA CONSORTIUM: RESEARCH PROJECT SITE AT UVM

The major goal of this U01 application is to serve as a research project site for the Adolescent Brain Cognitive Development (ABCD)-USA Consortium. In addition to supporting the overall consortium goals, this application specifically focuses on risk and protective factors in the etiology of substance use using multi - stage analytic methods.

Role: Co-Investigator

ADC: \$1,070,305

U01DA055354 MPI: Potter, Garavan 2021-2026

20/24 The Healthy Brain and Child Development National Consortium

This project aims to describe brain, cognitive and psychological development in a uniquely large sample for a ten-year period starting at birth. It will assess numerous pre- and post-natal influences on a diverse multi-site sample of participants.

Role: Co-Investigator

Total Award Amount: \$ 5,559,097

Completed Research Support

R01 AG047992 MPI: Newhouse and Aizen 2015-2021 NCE

Long-Term Nicotine Treatment of Mild Cognitive Impairment

This study will examine the effect of two years of nicotine treatment on memory and clinical outcomes in older adults with Mild Cognitive Impairment

Role: Sub-Contract Principal Investigator

Subcontract ADC: 29,000.

R25 GM154373 Dougherty & Deming (MPI) 2024-2025

New American Youth on the Rise

New American Youth on the Rise (NAYR) is a mentorship and enrichment program for middle and high school girls from "New American" immigrant groups in Chittenden County (VT). NAYR aims to foster health equity for local immigrant communities by 1) developing a pathway to college careers in health sciences thereby enhancing representation in the healthcare workforce, and 2) increasing trust between the academic health center and local community by demonstrating investment in the community.

Role: Co-Investigator

ADC: 250,000

- Balchem Corporation Dumas (PI) 2021-2022
Choline and Brain Functioning in Postmenopausal Women
 This investigator-initiated project will examine the ability of a single dose of the nutrient choline to influence brain functioning in healthy postmenopausal women. Choline has been shown to be critical for brain development in the fetus and its metabolism is controlled by estradiol. This study will examine how choline affects the brain in postmenopausal women who no longer have high levels of circulating estradiol.
 Role: Principal Investigator
 ADC: \$180,000
- R56AG062105 Dumas (PI) 2019-2021
Fatty Acid Effects on Brain Functioning in Normal Aging
 This pilot study will assess the role of saturated fat compared to monounsaturated fat on cognition, mood, and inflammation in healthy older adults.
 Role: Principal Investigator
 ADC: \$420,000
- R01 AG050716 Dumas (PI) 2016-2021
The Nicotinic Cholinergic System and Cognitive Aging
 The goal of this project is to examine the role of the nicotinic cholinergic system in the cognitive changes associated with normal aging
 Role: Principal Investigator
 ADC: \$301,794
- 1P20GM135007 MPI: Cushman, Nelson 2020-2025
Vermont Center for Cardiovascular and Brain Health: Centers of Biomedical Research Excellence
 The major goal of this Center of Biomedical Research Excellence (COBRE), the “Vermont Center on Cardiovascular and Brain Health” (VCCBH), will be to nucleate the University of Vermont’s considerable research expertise in cardiovascular and neurovascular research and provide support for the next generation of investigators via a Strategic Mentoring Initiative that interlinks diverse mentors.
 Role: Peer Mentor
- U01 DA041148 Garavan, Potter (PIs) 2015-2020
 6/13 ABCD - USA Consortium: Research Project
 This study follows 11000 9- and 10-year-old children for 10 years measuring cognitive, behavioral, and psychosocial variables.
 Role: Co-Investigator
 ADC: 800,000
- R01 AG050716--03S Dumas (PI) 2018-2019
The Nicotinic Cholinergic System and Cognitive Aging
 The goal of this supplement is to add an aim testing a hypothesis related to Alzheimer’s Disease and Alzheimer’s disease Related Dementias (AD/ADRD). The AD/ADRD aim will examine the role of the nicotinic modulation in brain functioning of cognitively normal older adults who report subjective cognitive decline (SCD). SCD is a known biomarker that increases risk for AD.
 ADC: \$180,000

R21 AG047944 Dumas (PI) 2014-2016

Cognition after Menopause and COMT Genotype

The study examined the interaction of COMT and estradiol on cognition in health postmenopausal women

Role: Principal Investigator

TDC: \$275,000

Armin Grams, Ph.D. Memorial Research Award

University of Vermont Center on Aging Dumas and Kien (MPI) 2014-2016

Dietary Saturated and Monounsaturated Fatty Acids and Cognition

This study compared the effects of saturated and monounsaturated fatty acids in the diet on brain function in healthy older women

Role: Co-Principal Investigator

TDC: \$50,000

Weil Cornell Medical College and NIMH Bruce(PI) 2011-2012

Advanced Research Institute in Geriatric Psychiatry

This is a mentoring program for training the next generation of scientists in geriatric mental health

Role: Trainee

K01 AG030380 Dumas (PI) 2008-2013

Hormone and Neurotransmitter Interactions in Cognitive Aging

This study examined the interaction of estradiol and the cholinergic and the dopaminergic system on brain functioning in postmenopausal women

Dates: September 2008 - August 2013

Role: Principal Investigator

ADC: \$85,000 per year

K01 AG030380 – 02S1 Dumas (PI) 2009-2010

Hormone and Neurotransmitter Interactions in Cognitive Aging

This supplement funded the purchase of projection equipment for functional brain imaging studies in this project.

Role: Principal Investigator

TDC: \$50,000

NARSAD Young Investigator Award Dumas (PI) 2008-2010

Cognitive and Emotional Alterations in Geriatric Depression: A Brain fMRI Study

This study examined functional brain differences in older adults with and without depression.

Role: Principal Investigator

TDC: \$60,000

American Federation for Aging Research 08183 Dumas (PI) 2008-2009

Estrogen Attenuation of Cholinergic-Induced Alterations in Fronto-Parietal Brain Activation during Working Memory in Older Women

This study examined the interaction of estradiol treatment and cholinergic system function in postmenopausal women

Role: Principal Investigator

TDC: \$60,000

R01 DA008076

Higgins (PI)

2009-2012

Modeling Initial Smoking Abstinence and Relapse Risk

This study examined the neural activity underlying smoking abstinence and relapse.

Role: Co-Investigator

TDC: \$525,566

ISTART/R03 DA023460

Potter (PI)

2008-2009

The Functional Neuroanatomy of Acute Nicotinic Modulation of Impulsivity in Women

This study examined the neuroanatomy underlying nicotinic challenge in women who were highly impulsive

Role : Co-Investigator

TDC : \$150,000

NIA R01 AG021476

Newhouse (PI)

2009-2014

Estrogen Effects on Cholinergic Function in Older Women

This study examined the interaction of modulations of the cholinergic system with tamoxifen, progesterone, and acute estradiol treatment to understand hormone and neurotransmitter interactions in brain function in postmenopausal women

Role: Co-Investigator

TDC: \$490,000 per year

F32 AG023430

Dumas (PI)

2004-2006

*Estrogen and Cognition in Post-Menopausal Women*This was a postdoctoral training grant to learn psychopharmacology and functional imaging
Individual Postdoctoral Fellowship

Role: Principal Investigator

TDC: \$40,000 per year

National Institutes of Health

Dumas (PI)

2005-2007

Clinical Research Loan Repayment Program

Role: Clinical Researcher Loan Repayment Recipient

University of California at San Diego and NIMH Jeste (PI)

2006

Summer Research Institute in Geriatric Psychiatry

Mentorship program for young investigators in geriatric mental health.

Role: Trainee

R01 AG021476

Newhouse (PI)

2003-2008

Estrogen Effects on Cholinergic Function in Older Women.

This grant examined the role of cholinergic functioning in postmenopausal women

Role: Co-Investigator

TDC: \$250,000 per year

Fletcher Allen Health Care Trustees Research Fund Newhouse (PI)

2003-2005

A Brain fMRI Study of Cholinergic Blockade in Normal Post-Menopausal Women.

This study examined brain imaging during cholinergic modulation after estradiol treatment in postmenopausal women

Role: Co-Investigator

TDC: \$100,000

Lilly

Newhouse (PI)

2004-2005

Double-Blind, Randomized, Placebo-Controlled, Safety and Scopolamine-Reversal Study of LY593093 in Healthy Volunteers

This study examined the ability of a novel M1 agonist to reverse the cognitive impairment from scopolamine

Role: Co-Investigator

TDC: \$120,000

Selected Unfunded Grant Submissions

N/A

SCHOLARSHIP

Peer Reviewed Publications

Original Research

(* indicates UVM student author, H index = 30)

1. Willingham, D. B., & Dumas, J. A. (1997). Long-term retention of a motor skill: Implicit sequence knowledge is not retained after a one year delay. *Psychological Research*, 60, 113-119.
2. Hartman, M., Dumas, J., & Nielsen, C. (2001). Age differences in updating working memory: Evidence from the delayed-matching-to-sample test. *Aging, Neuropsychology, and Cognition*, 8, 14-35
3. Dumas, J. & Hartman, M. (2003). Adult age differences in temporal and item memory. *Psychology and Aging*, 18, 573-586.
4. Dumas, J., Edgren, C., & Newhouse, P. (2006). Estrogen therapy after menopause: Role in normal cognition and Alzheimer's disease. *Aging Health*, 2, 955-966
5. Dumas, J., Hancur-Bucci, C., Naylor, M., Sites, C., & Newhouse, P. (2006). Estrogen treatment effects on anticholinergically-induced cognitive dysfunction in post-menopausal women. *Neuropsychopharmacology*, 31, 2056-2078.
6. Newhouse, P, Dumas, J., Hancur-Bucci, C., Naylor, M., Sites, C., Benkelfat, C., & Young, S. (2008). Estrogen administration negatively alters mood following monoaminergic depletion and psycho-social stress in post-menopausal women. *Neuropsychopharmacology*. 33, 1514-1527.
7. Dumas, J. A. & Hartman, M. (2008). Adult age differences in the access and deletion functions of inhibition. *Aging, Neuropsychology, and Cognition*, 15: 330-357.
8. Dumas, J., Hancur-Bucci, C., Naylor, M., Sites, C., & Newhouse, P. (2008). Estrogen interacts with the cholinergic system to affect verbal memory in post-menopausal women: Evidence for the critical period hypothesis. *Hormones and Behavior*, 53, 159-169.
9. Coderre, E.*, Filippi, C., Newhouse, P., & Dumas, J. (2008). The Stroop effect in kana and kanji scripts in native Japanese speakers: An fMRI study. *Brain and Language*, 107, 124-132.

10. Dumas, J, Saykin, A., McAllister, T., McDonald, B., Hynes, M., & Newhouse, P. (2008). Nicotinic versus muscarinic blockade alters verbal working memory performance and brain activation patterns in older women. *American Journal of Geriatric Psychiatry*, 16, 272-282.
11. Maki, P.M. & Dumas, J.A. (2009). Mechanisms of action of estrogen in the brain: Insights from human neuroimaging and psychopharmacological studies. *Seminars in Reproductive Medicine*, 27, 250-259.
12. Coderre, E.*, Filippi, C., Newhouse, P., & Dumas, J.A. (2009). Ichi, Ni, 3, 4: Neural representation of kana, kanji, and Arabic numbers in native Japanese speakers. *Brain and Cognition*, 70, 289-296.
13. Newhouse, P.A., Dumas, J.A., Wilkins, H.*, Coderre, E.*, Sites, C., Naylor, M.R., Benkelfat, C., & Young, S.N. (2010). Estrogen treatment impairs cognitive performance following psychosocial stress and monoamine depletion in postmenopausal women. *Menopause*, 17(4), 860-873.
14. Dumas, J.A., McDonald, B.C., Saykin, A.J., McAllister, T.W., West, J.D., Hynes, M.L., & Newhouse, P.A. (2010). Cholinergic modulation of hippocampal activity during episodic memory encoding in postmenopausal women: A pilot study. *Menopause*, 17(4), 852-859.
15. Dumas, J.A., Kutz, A.M.*, Naylor, M.R., Johnson, J.V., & Newhouse, P.A. (2010). Increased memory load-related frontal activation after estradiol treatment in postmenopausal women. *Hormones and Behavior*, 58, 929-935.
16. Dumas, J.A. & Newhouse, P.A. (2011). The cholinergic hypothesis of cognitive aging revisited again: Cholinergic functional compensation. *Pharmacology, Biochemistry and Behavior*. 99, 254-261.
17. Newhouse, P.A., Potter, A.S., Dumas, J.A., & Thiel, C.M. (2011). Functional brain imaging of nicotinic effects on higher cognitive processes. *Biochemical Pharmacology*, 82, 943-951.
18. Dumas, J.A., Albert, K.M.*, Naylor, M.R., Sites, C.K, Benkelfat, C., & Newhouse, P.A. (2012). The effects of age and estrogen on stress responsivity in older women. *American Journal of Geriatric Psychiatry*. 20(9):734-743
19. Dumas, J.A., Kutz, A.M.*, Naylor, M.R., Johnson, J.V., & Newhouse, P.A. (2012). Estradiol altered anticholinergic brain activity during working memory in postmenopausal women. *Neuroimage*, 60, 1394-1403.
20. Cannizzaro, M.S., Dumas, J., Prelock, P., & Newhouse, P.A. (2012). Organizational Structure Reduces Processing Load in the Prefrontal Cortex During Discourse Processing of Written Text: Implications for High-Level Reading Issues After TBI. *Perspectives on Neurophysiology and Neurogenic Speech and Language Disorders*, 22(2), 67-78.
21. Dumas, J.A., Kutz, A.M. *, McDonald, B.C., Naylor, M.R., Pfaff, A.C., Saykin, A.J., &

- Newhouse, P.A. (2013). Increased Working Memory-Related Brain Activity in Middle-Aged Women with Cognitive Complaints. *Neurobiology of Aging*, 34, 1145-1147.
22. Kien, C.L., Bunn, J.Y., Tompkins, C.L., Dumas, J.A., Crain, K.I., Ebenstein, D.B., Koves, T.R., & Muoio, D.M. (2013). Substituting dietary monounsaturated fat for saturated fat is associated with increased daily physical activity and resting energy expenditure and with changes in mood. *The American Journal of Clinical Nutrition*, 97, 689-697.
 23. Newhouse, P.A., Albert, K.M.*, Astur, R., Johnson, J., Naylor, M.R., & Dumas, J.A. (2013). Tamoxifen Improves Cholinergically-Modulated Cognitive Performance in Postmenopausal Women. *Neuropsychopharmacology*, 38(13):2632-2643.
 24. Dumas, J.A., Makarewicz, J., Schaubhut, G.L.*, Devins, R., Albert, K.*, Dittus, K. & Newhouse, P.A. (2013). Chemotherapy Altered Brain Functional Connectivity in Women with Breast Cancer: A Pilot Study. *Brain Imaging and Behavior*, 7(4): 524-532
 25. Seminowicz, D.A., Shpaner, M., Keaser, M.L., Krauthamer, G.M.*, Mantegna, J., **Dumas, J.A.**, Newhouse, P.A., Filippi, C., & Naylor, M.R. (2013). Cognitive behavioral therapy increases prefrontal cortex gray matter in patients with chronic pain. *Journal of Pain*, 14(12):1573-1584.
 26. Lomond, K.V., Henry, S.M., Jacobs, J.V., Hitt, J.R., Horak, F.B., Cohen, R.G., Schwartz, D., **Dumas, J.A.**, Naylor, M.R., Watts, R. and DeSarno, M.J. (2013). Protocol to assess the neurophysiology associated with multi-segmental postural coordination. *Physiological Measurement*, 34, N97-N105
 27. Peng, S.-L., **Dumas, J.A.**, Park, D.C., Liu, P., Filbey, F.M., McAdams, C.J., Pinkham, A.E., Adinoff, B., Zhang, R., Lu, H. (2014). Age-related increase of resting metabolic rate in the human brain. *Neuroimage*, 96:176-183.
 28. Dumas, J.A. & Newhouse, P. A. (2014). Impaired working memory in geriatric depression: An fMRI study. *American Journal of Geriatric Psychiatry*. S1064-7481(14)00281-4.
 29. Newhouse, P.A. & Dumas, J.A. (2015). Estrogen-cholinergic interactions in older women: Implications for cognitive aging. *Hormones and Behavior*. 74, 173-185.
 30. Dumas, J.A. (2015). What is Normal Cognitive Aging? Evidence from Task-Based Functional Neuroimaging. *Current Behavioral Neuroscience Reports*. 2(4): 256-261.
 31. Liu, P., Dimitrov, I., Andrews, T., Crane, D.E., Dariotis, J.K., Desmond, J., **Dumas, J.**, Gilbert, G., Kumar, A., MacIntosh, B.J., Tucholka, A., Yang, S., Xiao, G., & Lu, H. (2016). Multi-site evaluations of a T2-Relaxation-Under-Spin-Tagging (TRUST) MRI technique to measure brain oxygenation. *Magnetic Resonance in Medicine*. 75(2): 680-687.
 32. Dumas, J.A., Bunn, J.Y., Nickerson, J.P., Crain, K.I., Ebenstein, D.B., Tarleton, E.K., Makarewicz, J.A., Poynter, M.E., Kien, C.L. (2016) Dietary saturated fat and monounsaturated fat have reversible effects on brain function and pro-inflammatory

cytokine secretion in young women. *Metabolism*, 65, 1582-1588.

33. Vega, J.N., Zurkovsky, L., Albert, K., Melo, A., Boyd, B., **Dumas, J.**, Woodward, N., McDonald, B.C., Saykin, A.J., Park, J.H., Naylor, M., Newhouse, P.A. (2016). Altered brain connectivity in early postmenopausal women with subjective cognitive impairment. *Frontiers in Neuroscience, Section on Neuropsychopharmacology*, 10: 1-11. doi: 10.3389/fnins.2016.00433
34. Dumas, J.A., Filippi, C.G., Newhouse, P.A., Naylor, M.R. (2017). Dopaminergic contributions to working memory-related brain activation in postmenopausal women. *Menopause*, 24(2):163-170 PMID: PMC5266665
35. Albert, K., Hiscox, J., Boyd, B., **Dumas, J.**, Taylor, W., & Newhouse, P. (2017). Estrogen enhances hippocampal gray-matter volume in young and older postmenopausal women: a prospective dose-response study. *Neurobiology of Aging*, 56:1-6.
36. Vega, J.A., **Dumas, J.**, & Newhouse P.A. (2017). Cognitive effects of chemotherapy and cancer-related treatments in older adults. *American Journal of Geriatric Psychiatry*, S1064-7481(17) 30278-6.
37. **Dumas, J.A.** (2017). Strategies for Preventing Cognitive Decline in Healthy Older Adults. *Canadian Journal of Psychiatry*, 1:706743717720691. doi: 10.1177/0706743717720691.
38. Achenbach, T.M., Ivanova, M.Y., Rescorla, L.A., & **Dumas, J.A.** (in press). Transdiagnostic dimensional assessment of psychopathology in later life. *Current Behavioral Neuroscience Reports*.
39. Ivanova, M.Y., Achenbach, T., Leite, M., Almeida, V., Caldas, C., Turner, L., & **Dumas, J. A.** (2018). Empirically Derived Dimensional Syndromes of Self-Reported Psychopathology: Cross-Cultural Comparisons of Portuguese and US Elders. *International Journal of Geriatric Psychiatry*, 33(5):695-702
40. Searles, S.*, Makarewicz, J.A., & Dumas, J.A. (2018). The role of estradiol in schizophrenia diagnosis and symptoms in postmenopausal women. *Schizophrenia Research*, 196, 35-38. doi: 10.1016/j.schres.2017.05.024.
41. Vega, J.A., **Dumas, J.A.**, & Newhouse, P.A. (2018). Self-Reported Chemotherapy-Related Cognitive Impairment Compared with Cognitive Complaints following Menopause. *Psycho-Oncology*, 27, 2198-2205.
42. **Dumas, J.A.**, Makarewicz, J.A., Bunn, J.Y., Nickerson, J.P., & McGee, E. (2018). Dopamine-Dependent Cognitive Processes after Menopause: The Relationship between COMT Genotype, Estradiol, and Working Memory. *Neurobiology of Aging*, 72, 53-61.
43. Frizell, B. & **Dumas, J.A.** (2018). Examining the relationship between neurosteroids, cognition, and menopause with neuroimaging methods. *Current Psychiatry Reports*, 20:96 <https://doi.org/10.1007/s11920-018-0963-2>.
44. Hagler DJ Jr, Hatton S, Cornejo MD, Makowski C, Fair DA, Dick AS, Sutherland MT,

- Casey BJ, Barch DM, Harms MP, Watts R, Bjork JM, Garavan HP, Hilmer L, Pung CJ, Sicut CS, Kuperman J, Bartsch H, Xue F, Heitzeg MM, Laird AR, Trinh TT, Gonzalez R, Tapert SF, Riedel MC, Squeglia LM, Hyde LW, Rosenberg MD, Earl EA, Howlett KD, Baker FC, Soules M, Diaz J, de Leon OR, Thompson WK, Neale MC, Herting M, Sowell ER, Alvarez RP, Hawes SW, Sanchez M, Bodurka J, Breslin FJ, Morris AS, Paulus MP, Simmons WK, Polimeni JR, van der Kouwe A, Nencka AS, Gray KM, Pierpaoli C, Matochik JA, Noronha A, Aklin WM, Conway K, Glantz M, Hoffman E, Little R, Lopez M, Pariyadath V, Weiss SR, Wolff-Hughes DL, DelCarmen-Wiggins R, Feldstein Ewing SW, Miranda-Dominguez O, Nagel BJ, Perrone AJ, Sturgeon DT, Goldstone A, Pfefferbaum A, Pohl KM, Prouty D, Uban K, Bookheimer SY, Dapretto M, Galvan A, Bagot K, Giedd J, Infante MA, Jacobus J, Patrick K, Shilling PD, Desikan R, Li Y, Sugrue L, Banich MT, Friedman N, Hewitt JK, Hopfer C, Sakai J, Tanabe J, Cottler LB, Nixon SJ, Chang L, Cloak C, Ernst T, Reeves G, Kennedy DN, Heeringa S, Peltier S, Schulenberg J, Sripada C, Zucker RA, Iacono WG, Luciana M, Calabro FJ, Clark DB, Lewis DA, Luna B, Schirda C, Brima T, Foxe JJ, Freedman EG, Mruzek DW, Mason MJ, Huber R, McGlade E, Prescott A, Renshaw PF, Yurgelun-Todd DA, Allgaier NA, **Dumas JA**, Ivanova M, Potter A, Florsheim P, Larson C, Lisdahl K, Charness ME, Fuemmeler B, Hettema JM, Maes HH, Steinberg J, Anokhin AP, Glaser P, Heath AC, Madden PA, Baskin-Sommers A, Constable RT, Grant SJ, Dowling GJ, Brown SA, Jernigan TL, Dale AM. (2019) Image processing analysis and methods for the Adolescent Brain and Cognitive Development Study, *Neuroimage*, 15;202:116091. doi: 10.1016/j.neuroimage.2019.116091.
- Role: I am a co-investigator at the UVM site and my role was to aid in the data collection and management of the UVM data. I also participated in consortium-wide discussions about the creation of the imaging protocols and analyses.
45. Ivanova MY, Achenbach TM, Rescorla LA, Turner LV, **Dumas JA**, Almeida V, Anafarta-Sendag M, Bite I, Boomsma DI, Caldas JC, Capps JW, Chen YC, Colombo P, da Silva Oliveira M, Dobrea A, Erol N, Frigerio A, Funabiki Y, Gedutien R, Guðmundsson HS, Heo MQ, Kim YA, Lee TS, Leite M, Liu J, Markovic J, Misiec M, Müller M, Oh KJ, Portillo-Reyes V, Retz W, Sebre SB, Shi S, Sigurðardóttir SH, Simulioien R, Sokoli E, Tomasevic T, Vink JM, Zasępa E. (2020). The Generalizability of Older Adult Self-Report (OASR) Syndromes of Psychopathology Across 20 Societies. *Int J Geriatr Psychiatry*. Jan 29. doi: 10.1002/gps.5268. [Epub ahead of print] PubMed PMID: 31994777.
- Role: I am the expert on aging on this paper and aided in paper conceptualization and writing
46. Conley AC, Albert KA, Boyd B, Kim SG, Shokouhi S, McDonald BC, Saykin AJ, **Dumas J**, Newhouse PA. (2020). Cognitive complaints are associated with reduced medial temporal gray matter volume in younger postmenopausal women. *Menopause*, 27(11): 1120-1127.
47. Potter, A., Dube, S., Allgaier, N., Loso, H., Ivanova, M., Barrios, L.C., Bookheimer, S., Chaarani, B., **Dumas, J.**, Feldstein-Ewing, S., Freedman, E.G., Garavan, H., Hoffman, E., McGlade, E., Robin, L., Johns, M.M. (2021). Early Adolescent Gender Diversity and Mental Health in the Adolescent Brain Cognitive Development Study. *Journal of Child Psychology and Psychiatry*, 62(2): 171-179. doi: 10.1111/jcpp.13248
- Role: I contributed to the conceptualization of the paper, the data interpretation, and reviewing and editing the writing.

48. Ivanova MY, Achenbach TM, Rescorla LA, Turner LV, **Dumas JA**, Almeida V, Anafarta-Sendag M, Carlos Caldas J, Chen YC, da Silva Oliveira M, Erol N, Funabiki Y, Guðmundsson HS, Kim YA, Leite M, Liu J, Markovic J, Misiec M, Oh KJ, Shi S, Sigurðardóttir SH, Sokoli E, Tomasevic T, Zasepa E. (2021). The generalizability of empirically derived syndromes of collateral-reported elder psychopathology across 11 societies. *Res Nurs Health. Aug;44(4):681-691*. doi: 10.1002/nur.22161. Epub 2021 Jun 14. PMID: 34125443
- Role: I am the expert on aging on this paper and aided in paper conceptualization and writing
49. Nop, O., Senft Miller, A.*, Culver, H.*, Makarewicz, J., & **Dumas, J.A.** (2021). Nicotine and cognition in cognitively normal older adults. *Frontiers in Aging Neuroscience, 13*:640674. doi: 10.3389/fnagi.2021.640674.
- Role: I am the senior author on this paper
50. Senft Miller, A.*, Nop, O., Slavich, G.M. & **Dumas, J.A.** (2022). Lifetime stress exposure, cognition, and psychiatric well-being in women. *Aging and Mental Health. 26(9):1765-1770*, <https://doi.org/10.1080/13607863.2021.1958144>
- Role: I am the senior author on this paper and the first author completed this project as a part of her UVM CAS college honors thesis
51. Herting MM, Uban KA, Gonzalez MR, Baker FC, Kan EC, Thompson WK, Granger DA, Albaugh MD, Anokhin AP, Bagot KS, Banich MT, Barch DM, Baskin-Sommers A, Breslin FJ, Casey BJ, Chaarani B, Chang L, Clark DB, Cloak CC, Constable RT, Cottler LB, Dagher RK, Dapretto M, Dick AS, Dosenbach N, Dowling GJ, **Dumas JA**, Edwards S, Ernst T, Fair DA, Feldstein-Ewing SW, Freedman EG, Fuemmeler BF, Garavan H, Gee DG, Giedd JN, Glaser PEA, Goldstone A, Gray KM, Hawes SW, Heath AC, Heitzeg MM, Hewitt JK, Heyser CJ, Hoffman EA, Huber RS, Huestis MA, Hyde LW, Infante MA, Ivanova MY, Jacobus J, Jernigan TL, Karcher NR, Laird AR, LeBlanc KH, Lisdahl K, Luciana M, Luna B, Maes HH, Marshall AT, Mason MJ, McGlade EC, Morris AS, Nagel BJ, Neigh GN, Palmer CE, Paulus MP, Potter AS, Puttler LI, Rajapakse N, Rapuano K, Reeves G, Renshaw PF, Schirda C, Sher KJ, Sheth C, Shilling PD, Squeglia LM, Sutherland MT, Tapert SF, Tomko RL, Yurgelun-Todd D, Wade NE, Weiss SRB, Zucker RA, Sowell ER. (2021). Correspondence Between Perceived Pubertal Development and Hormone Levels in 9–10-Year-Olds from the Adolescent Brain Cognitive Development Study. *Front Endocrinol (Lausanne). Feb 18; 11:549928*. doi: 10.3389/fendo.2020.549928. eCollection 2020.PMID: 33679599
- Role: I contributed to the conceptualization of the paper, the data interpretation, and reviewing and editing the writing
52. Chaarani B, Hahn S*, Allgaier N, Adise S, Owens MM, Juliano AC, Yuan DK*, Loso H*, Ivanciu A, Albaugh MD, **Dumas J**, Mackey S, Laurent J, Ivanova M, Hagler DJ, Cornejo MD, Hatton S, Agrawal A, Aguinaldo L, Ahonen L, Aklin W, Anokhin AP, Arroyo J, Avenevoli S, Babcock D, Bagot K, Baker FC, Banich MT, Barch DM, Bartsch H, Baskin-Sommers A, Bjork JM, Blachman-Demner D, Bloch M, Bogdan R, Bookheimer SY, Breslin F, Brown S, Calabro FJ, Calhoun V, Casey BJ, Chang L, Clark DB, Cloak C, Constable RT, Constable K, Corley R, Cottler LB, Cox S, Dagher RK, Dale AM, Dapretto M, Delcarmen-Wiggins R, Dick AS, Do EK, Dosenbach NUF,

Dowling GJ, Edwards S, Ernst TM, Fair DA, Fan CC, Feczko E, Feldstein-Ewing SW, Florsheim P, Foxe JJ, Freedman EG, Friedman NP, Friedman-Hill S, Fuemmeler BF, Galvan A, Gee DG, Giedd J, Glantz M, Glaser P, Godino J, Gonzalez M, Gonzalez R, Grant S, Gray KM, Haist F, Harms MP, Hawes S, Heath AC, Heeringa S, Heitzeg MM, Hermosillo R, Herting MM, Hettema JM, Hewitt JK, Heyser C, Hoffman E, Howlett K, Huber RS, Huestis MA, Hyde LW, Iacono WG, Infante MA, Irfanoglu O, Isaiah A, Iyengar S, Jacobus J, James R, Jean-Francois B, Jernigan T, Karcher NR, Kaufman A, Kelley B, Kit B, Ksinan A, Kuperman J, Laird AR, Larson C, LeBlanc K, Lessov-Schlagger C, Lever N, Lewis DA, Lisdahl K, Little AR, Lopez M, Luciana M, Luna B, Madden PA, Maes HH, Makowski C, Marshall AT, Mason MJ, Matochik J, McCandliss BD, McGlade E, Montoya I, Morgan G, Morris A, Mulford C, Murray P, Nagel BJ, Neale MC, Neigh G, Nencka A, Noronha A, Nixon SJ, Palmer CE, Pariyadath V, Paulus MP, Pelham WE, Pfefferbaum D, Pierpaoli C, Prescott A, Prouty D, Puttler LI, Rajapaske N, Rapuano KM, Reeves G, Renshaw PF, Riedel MC, Rojas P, de la Rosa M, Rosenberg MD, Ross MJ, Sanchez M, Schirda C, Schloesser D, Schulenberg J, Sher KJ, Sheth C, Shilling PD, Simmons WK, Sowell ER, Speer N, Spittel M, Squeglia LM, Sripada C, Steinberg J, Striley C, Sutherland MT, Tanabe J, Tapert SF, Thompson W, Tomko RL, Uban KA, Vrieze S, Wade NE, Watts R, Weiss S, Wiens BA, Williams OD, Wilbur A, Wing D, Wolff-Hughes D, Yang R, Yurgelun-Todd DA, Zucker RA, Potter A, Garavan HP; ABCD Consortium. (2021). Baseline brain function in the preadolescents of the ABCD Study, *Nature Neurosci. Jun 7*. doi: 10.1038/s41593-021-00867-9. Online ahead of print. PMID: 34099922

- Role: I contributed to the conceptualization of the paper, the data interpretation, and reviewing and editing the writing

53. Conley, A.C., Albert, K.M., McDonald, B.C., Saykin, A.J., **Dumas, J.A.**, & Newhouse, P.A. (2022). Estradiol treatment in young postmenopausal women with self-reported cognitive complaints: Effects in Cholinergic-mediated cognitive performance. *Human Psychopharmacology*, 37(5): e2838 doi: 10.1002/hup.2838. Epub 2022 Feb 24. PMID: 35212023

54. Testo, A.A.*, McBride, C.A., Bernstein, I.M., & **Dumas, J.A.** (2022). Preeclampsia and its relationship to pathological brain aging. *Frontiers in Physiology*, 17 October 2022; 13:979547 <https://doi.org/10.3389/fphys.2022.979547> PMID: 36324311

- I am the senior author on this paper.

55. McBride, C.A., Russom, Z.*, Achenbach, E., Bernstein, I.M., & **Dumas, J.A.** (2023). Cardiovascular profiles associated with white matter hyperintensities in healthy young women. *Frontiers in Physiology*, Jan 13;13:979899. doi: 10.3389/fphys.2022.979899. PMID: P36714317.

- I am the senior author on this paper.

56. **Dumas, J.A.**, Bunn, J.Y., LaMantia, M.A., McIssac, C., Miller, A.M.*, Nop, O.*, Testo, A.*, Soares, B.P., Mank, M., Poynter, M., & Kien, C.L. (2023). Alteration of brain function and systemic inflammatory tone in older adults by decreasing the dietary palmitic acid intake. *Aging Brain*, 3, 100072. doi: <https://doi.org/10.1016/j.nbas.2023.100072>

- I am the co-senior author on this paper and project.

57. de Ruiter, M. B., Deardorff, R. L., Blommaert, J., Chen, B. T., **Dumas, J. A.**, Schagen, S. B., Sunaert, S., Wang, L., Cimprich, B., Peltier, S., Dittus, K., Newhouse, P. A., Silverman, D. H., Schroyen, G., Deprez, S., Saykin, A. J., & McDonald, B. C. (2023). Brain gray matter reduction and premature brain aging after breast cancer chemotherapy: a longitudinal multicenter data pooling analysis. *Brain imaging and behavior*, 10.1007/s11682-023-00781-7. Advance online publication. <https://doi.org/10.1007/s11682-023-00781-7>
- I conducted the data analysis on the UVM data for this multisite data pooling project.
58. Gebru, N. M., Gonçalves, P. D., Cruz, R., Thompson, W. K., Allgaier, N., Potter, A., Garavan, H., **Dumas, J.**, Leeman, R. F., Johnson, M. (*In press*). Effects of Parental Mental Health and Family Environment on Impulsivity in Preadolescents: A Longitudinal ABCD Study®. *Frontiers in Behavioral Neuroscience*.
- I mentored Dr. Gebru on this project, helped develop the ideas, and edited the manuscript.
59. Myers, A.J.*, Potts, C., Makarewicz, J.A., McGee, E., & **Dumas, J.A.** (2023). Choline kinase alpha genotype is related to hippocampal brain volume and cognition in postmenopausal women. *Heliyon*, Dec 22;10(1): e23963. doi: 10.1016/j.heliyon.2023.e23963. eCollection 2024 Jan 15
- I mentored Ms. Myers on this project and am the senior author on this project and paper.
60. Testo, A.A.*, Makarewicz, J., McGee, E., & **Dumas, J.A.** (2024). Estradiol associations with functional brain connectivity in postmenopausal women. *Menopause*, 31(3), 218-224.
- I mentored Ms. Testo on this project and am the senior author on this project and paper.
61. McBride, CA, Russom. Z.*, Bernstein, I.M., & **Dumas, J.A.** (2024). Subclinical metabolic and cardiovascular factors and brain white matter microstructural integrity in young women. *Reproductive Sciences*. April 2, online ahead of print, DOI: [10.1007/s43032-024-01516-9](https://doi.org/10.1007/s43032-024-01516-9)
- I mentored Mr. Russom on this project for his UVM Honors Thesis in 2021 and I am the senior author on this paper.
- Podcast discussion of this paper with the Social Media Editor for *Reproductive Sciences*, Panicos Shangaris, MD
https://open.spotify.com/episode/4xr0DCyJL5sgodKUKlvyR2?si=7X4_H03fS-GJW2MA2G_nJQ&nd=1&dlsi=13f2e25f4a184cbc
62. Conley, A.C., Vega, J.N., Johnson, J.V., **Dumas, J.A.**, & Newhouse, P.A. (2024). Effect of estradiol with or without micronized progesterone on cholinergic-related cognitive performance in postmenopausal women. *Frontiers in Neuroscience, Section of Psychopharmacology*, DOI: 10.3389/fnins.2024.1428675
- I contributed to the conceptualization of this project, data collection, and data interpretation.
63. Russell, JK, Conley, AC, Boyd, BD, Begnoche, JP, Schlossberg, R, Stranick, Rosenberg, AJ, Acosta, LMY, Martin, D, Neal, Y, Kanel, P, Albin, RL, Rafi, MS, **Dumas, J.**, & Newhouse, P.A. (2025). Differences in cholinergic terminal density in adults with Down syndrome compared to neurotypical controls measured by [18F]-

fluoroethoxybenzovesamicol positron emission tomography imaging. *Neurobiology of Aging*, (148) 50-60.

- I contributed to the conceptualization of this project, data collection, and data interpretation as PI of the study where controls were utilized.
64. Russell, JK, Conley, AC, Boyd, BD, Begnoche, JP, Schlossberg, R, Stranick, Rosenberg, AJ, Acosta, LMY, Martin, D, Neal, Y, Kanel, P, Albin, RL, Rafi, MS, **Dumas, J.** & Newhouse, PA. (2025). Brain cholinergic terminal density utilizing [F¹⁸]-fluoroethoxybenzovesamicol PET in adults with Down's syndrome: Relationship to amyloid PET and cognitive performance. *Alzheimer's Dement.* 21(4): e70134. doi: 10.1002/alz.70134
- I contributed to the conceptualization of this project, data collection, and data interpretation as PI of the study where controls were utilized.
65. Testo, A.A.*, Roundy, G.*, & **Dumas, J.A.** (2025). Cognitive Decline in Alzheimer's Disease. *Current Topics in Behavioral Neuroscience*, 69: 181-195. doi: 10.1007/7854_2024_527.
- I am the senior author on this paper, and I contributed to the conceptual development.
66. Kien, C.L & **Dumas, J.A.** (2025). How the dietary saturated/monounsaturated fatty acid ratio modulates brain function in older adults. *Nutrients*, 17(11): 1987 doi: 10.3390/nu17111897.
- I am a co-senior author on this review paper about our current funded R01 project.
67. Albert, K., Boyd, B., McDonald, B., **Dumas, J.**, Saykin, A., Taylor, W., & Newhouse, P. (2025). Associations between subjective cognitive concern, brain network connectivity, and cognitive performance in cognitively normal older adults. *Aging Brain*, 9, 100155.
- I am the PI on one of the grants that funded the data collection for some of the data in this study.
68. Dumas, J.A., Testo, A.*, Senft Miller, A.*, Ozahl, A., Potts, C., Zhang, J., Aboukhatwa, M., Boyd, J.T. (2026). Oral Choline Reduced Working Memory-Related Brain Activation in Postmenopausal Women: A Pilot Study. *Nutrients*, Jan 30;18(3):459. doi: 10.3390/nu18030459.
- I am the PI on the investigator-initiated award grants that funded the data collection for this study.

In Review

N/A

In Preparation

N/A

Non-Peer Reviewed Publications and Other Creative Activities

Review Articles

1. Dumas, J., Salerno, J., & Newhouse, P. (2006). The role of estrogen in the development of

- age-related cognitive impairment and dementia. *Psychiatric Times*.
2. Dumas, J.A. (2008). Clearing up the confusion on estrogen in the brain? A first step. *Sex Roles*, 60(5), 444-446.

Books and Chapters

Other Scholarly Publications – Invited Commentaries and Editorials

1. Dumas, J.A. (2013). Lifetime hormone exposure and cognition in postmenopausal women with breast cancer. *Menopause*, 20(9): 883-885.
2. Dumas, J.A. (2017). Physical Activity and the Hippocampus in Older Adults: A commentary on Rosano et al. Hippocampal response to 24-month physical activity intervention in sedentary older adults. *American Journal of Geriatric Psychiatry*, 25(3): 218-219.
3. Dumas, J.A. (2019). Increases and decreases in functional brain activation in healthy older adults: The relationships between executive control circuit activity, amyloid burden, and education in healthy older adults, *The American Journal of Geriatric Psychiatry*, 27(12): 1372-1374.
4. Dumas, J.A. (2020). Functional connectivity and cognitive control in late life depression. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, 5(2): 138-139.
5. Dumas, J.A. (2020). Gender roles are an important consideration for the study of mental health and aging. *International Psychogeriatrics*, 32(11), 1263-1265. DOI: 10.1017/S1041610220001362
6. Dumas, J.A. (2021). Subjective Cognitive Complaints in Aging: A Commentary on Topiwala et al. 2020. *American Journal of Geriatric Psychiatry*, 29(3), 227-229. DOI: 10.1016/j.jagp.2020.07.015
7. Dumas, J.A. (2022). The Influence of White Matter Hyperintensities and Functional Connectivity on Cognition in Older Adults: A Commentary on Jaywant et al. *American Journal of Geriatric Psychiatry*. 30(3):281-283. doi: 10.1016/j.jagp.2021.08.007. Epub 2021 Aug 21. PMID: 34535363
8. Teixeira, A.L. & Dumas, J.A. (2022) Further Evidence of Peripheral Inflammatory Markers Involvement in Late-Onset Depression and Cognitive Decline. *American Journal of Geriatric Psychiatry*, 30(6): 701-702. doi: 10.1016/j.jagp.2021.12.003. Epub 2021 Dec 9. PMID: 34991952
9. Dumas, J.A. (2024) Lifetime Estrogen Exposure and Dementia Risk: A Commentary on Park et al. (2024). *American Journal of Geriatric Psychiatry*, 32(7): 806-807, doi: 10.1016/j.jagp.2024.02.009. Epub 2024 Feb 26

Abstracts

(* indicates UVM student author)

This list includes conference poster presentations and peer-reviewed and accepted oral presentations.

1. Willingham, D. B., & Dumas, J. A. (November 1996). Retention of implicit learning across a one-year delay. Paper presented at the 37th Annual Meeting of the Psychonomic Society, Chicago, IL.
2. Dumas, J. A. & Hartman, M. (April, 1998). Age differences in frontal lobe function: Evidence from the delayed-matching-to-sample task. Poster presented at the Cognitive Aging Conference, Atlanta, GA.
3. Dumas, J., Nielsen, C., & Hartman, M. (November, 1998). Age differences on a delayed response task: Testing the frontal lobe hypothesis. Poster presented at the 39th Annual Meeting of the Psychonomic Society, Dallas, TX.
4. Dumas, J. & Hartman, M. (November, 1999). Age differences in the speed of working memory. Poster presented at the 40th Annual Meeting of the Psychonomic Society, Los Angeles, CA.
5. Dumas, J. & Hartman, M. (April, 2000). The relationship between age differences in temporal and item memory. Poster presented at the Cognitive Aging Conference, Atlanta, GA.
6. Dumas, J. & Hartman, M. (November, 2001). Age differences in temporal and item memory. Poster presented at the 42nd Annual Meeting of the Psychonomic Society, Orlando, FL.
7. Dumas, J. & Hartman, M. (November, 2002). The effects of irrelevant information on age differences in working memory. Poster presented at the 43rd meeting of the Psychonomic Society, Kansas City, MO.
8. Arndt, J. & Dumas, J. (November, 2003). The contribution of perceptual mechanisms to the spacing effect. Poster presented at the 44th meeting of the Psychonomic Society, Vancouver, BC, Canada.
9. Hartman, M., McCabe, J., Dumas, J., & Stratton, B. (April, 2004). Age differences in working memory updating for repeated versus unique stimuli. Poster presented at the Cognitive Aging Conference, Atlanta, GA.
10. Dumas, J.A., Hancur-Bucci, C.A., Naylor, M.R., & Newhouse, P.A. (October, 2004). The differential role of nicotinic and muscarinic systems in cognition in older women. Poster presented at the 34th Annual Meeting of the Society for Neuroscience, San Diego, CA.
11. Dumas, J.A., Hancur-Bucci, C.A., Naylor, M.R., & Newhouse, P.A. (May, 2005). Muscarinic versus nicotinic antagonist effects on cognitive performance in older women. Poster presented at the 60th Annual Meeting of the Society of Biological Psychiatry, Atlanta, GA.
12. Dumas, J.A. & Hartman, M. (November, 2005). A time-accuracy study of age differences in perception and working memory. Poster presented at the 46th Annual Meeting of the Psychonomic Society, Toronto, ON.
13. Dumas, J., Saykin, A., McAllister, T., McDonald, B., Hynes, M., Flashman, L., &

- Newhouse, P. (November, 2005). Muscarinic and Nicotinic Blockade Alters Spatial Working Memory Performance and Brain Activation Patterns in Older Women. Poster presented at the 5th Annual Meeting of the International College of Geriatric Psychoneuropharmacology, Pittsburgh, PA.
14. Newhouse, P., Dumas, J., Naylor, M., Salerno, J., Hancur-Bucci, C., & Johnson, J. (November, 2005). Estrogen Agonist and Antagonist Effects on Anti-Cholinergic Induced Cognitive Dysfunction in Post-Menopausal Women. Poster presented at the 35th Annual Meeting of the Society for Neuroscience, Washington, DC.
 15. Dumas, J, Saykin, A., McAllister, T., McDonald, B., Hynes, M., Flashman, L., & Newhouse, P. (November, 2005). Muscarinic and Nicotinic Blockade Alters Working Memory Performance and Brain Activation Patterns in Older Women. Poster presented at the 35th Annual Meeting of the Society for Neuroscience, Washington, DC.
 16. Dumas, J, Saykin, A., McAllister, T., McDonald, B., Hynes, M., Flashman, L., & Newhouse, P. (May, 2006). Muscarinic and Nicotinic Blockade Alters Verbal and Spatial Working Memory Performance and Brain Activation Patterns in Older Women. Poster presented at the 61st Annual Meeting of the Society of Biological Psychiatry, Toronto, ON.
 17. Newhouse, P., Dumas, J. Edgren, C. & Naylor, M. (October, 2006). Differential Estradiol Dose Effects on Cognitive Performance After Anticholinergic Challenge in Older Women. Poster presented at the 36th Annual Meeting of the Society for Neuroscience, Atlanta, GA.
 18. Dumas, J. Saykin, A., McAllister, T., McDonald, B., Hynes, M., West, J., & Newhouse, P. (October, 2006). Muscarinic and Nicotinic Cholinergic Modulation of Verbal Episodic Memory Encoding-Induced Activity in Older Women. Poster presented at the 36th Annual Meeting of the Society for Neuroscience, Atlanta, GA.
 19. Coderre, E.L.*, Filippi, C., Newhouse, P., Dumas, J. (May 2007). A Brain fMRI Study of Language Processing in Native Japanese Speakers. Poster presented at the Annual Meeting of the Cognitive Neuroscience Society, New York, NY.
 20. Newhouse, P. Dumas, J., Naylor, M., Edgren, C., & Johnson, J. (May 2007). Estradiol Dose May Be Important in Determining Cognitive Performance in Older Women. Poster presented at the 62nd Annual Meeting of the Society for Biological Psychiatry, San Diego, CA.
 21. Newhouse, P. Dumas, J., Naylor, M., Edgren, C., & Johnson, J. (May 2007). Estradiol Dose May Be Important in Determining Cognitive Performance in Older Women. Poster presented at the 62nd Annual Meeting of the Society for Biological Psychiatry, San Diego, CA.
 22. Newhouse, P., Dumas, J., Naylor, M., & Johnson, J. (May, 2007) Hormonal Modulation of Cholinergic System-Related Cognitive Function after Menopause. Paper presented at the 62nd Annual Meeting of the Society for Biological Psychiatry, San Diego, CA
 23. Dumas, J. Saykin, A., McAllister, T., McDonald, B., Hynes, M., West, J., & Newhouse, P. (May, 2007). Muscarinic and Nicotinic Cholinergic Modulation of Verbal Episodic Memory Encoding-Induced Activity in Older Women. Poster presented at the 62nd Annual

Meeting of the Society for Biological Psychiatry, San Diego, CA

24. Newhouse, P. Dumas, J.A., Edgren, C., Coderre, E.L.*, Naylor, M. & Johnson, J. (November 2007). Estradiol With or Without Progesterone Effects on Cholinergic-Related Cognitive Performance in Older Women. Poster presented at the 30th Annual Meeting of the Society for Neuroscience, San Diego, CA
25. Dumas, J., Edgren, C., Coderre, E.L.*, Naylor, M., Johnson, J., & Newhouse, P. (November 2007). Estradiol Interacts with the Cholinergic System to Affect Verbal Memory in Postmenopausal Women: Evidence for the Critical Period Hypothesis. Poster presented at the 30th Annual Meeting of the Society for Neuroscience, San Diego, CA
26. Wilkins, H.L.*, Dumas, J.A., Coderre, E.*, Sites, C., Naylor, M.R., Benkelfat, C., Young, S., & Newhouse, P.A. (November 2008). Estrogen Impairs Cognition After Psychosocial Stress in Postmenopausal Women. Poster presented at the 31st Annual Meeting of the Society for Neuroscience, Washington, DC.
27. Newhouse, P.A., Dumas, J.A., Coderre, E.L.*, Edgren, C.L., Naylor, M.R., Johnson, J., & Astur, R. (November 2008). Tamoxifen Treatment Improves Visual-Spatial Learning using the Virtual Morris Water Maze following Cholinergic Blockade in Postmenopausal Women. Poster presented at the 31st Annual Meeting of the Society for Neuroscience, Washington, DC.
28. Dumas, J.A., Coderre, E.L.*, Edgren, C.L., Naylor, M.R., Johnson, J., & Newhouse, P.A. (November 2008). Tamoxifen Reverses Impairments from Cholinergic Blockade in Postmenopausal Women: A Comparison of Explicit and Implicit Memory. Poster presented at the 31st Annual Meeting of the Society for Neuroscience, Washington, DC.
29. Dumas, J. Saykin, A., McAllister, T., McDonald, B., Hynes, M., West, J., & Newhouse, P. (December, 2008). Cholinergic Modulation of Hippocampal Activity During Episodic Memory Encoding in Older Women. Poster presented at the 47th Annual Meeting of the American College of Neuropsychopharmacology, Scottsdale, AZ.
30. Dumas, J.A. (2009). Aging, Sex Steroids, and Circuits: Hormonal Effects on Brain Activity Associated with Cognitive and Emotional Processes. Paper presented at the annual meeting of the American Association for Geriatric Psychiatry, Honolulu, HI
31. Kutz, A.M.*, Newhouse, P.A., & Dumas, J.A. (2009). Emotion Aids Attentional Processes in Binding Source and Item Information in Older Adults. Poster Presented at the 2009 Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA.
32. Singh, P, Quick, A., Dumas, J.A., Filippi, C.G., Lenox, S., Tandan, R. (2009). Longitudinal Changes in Brain Activation on fMRI in ALS in Response to Finger Tapping and Word Generation Tasks. Poster presented at the 61st Annual Meeting of the American Academy of Neurology.
33. Dumas, J.A., Kutz, A.M.*, Edgren, C.E., & Newhouse, P.A. (2009). Estrogen Modulation of Frontal Lobe Circuitry During Verbal Working Memory in Older Women. Poster Presented at the 2009 American Federation for Aging Research Grantee Conference, Santa Barbara, CA.

34. Naylor, M.R., Krauthamer, G.M., Dumas, J.A., Filippi, C.G., & Newhouse, P.A. (2009). fMRI Investigates Treatment Response to CBT in Patients with Chronic Pain. Poster Presented at the 40th Annual Meeting of the Society for Neuroscience, Chicago, IL.
35. Kutz, A.M.*, Newhouse, P.A., & Dumas, J.A. (2009). Age Difference in Memory for Emotional Information: The Effect of Encoding Instructions and Emotional Valence. Poster Presented at the 40th Annual Meeting of the Society for Neuroscience, Chicago, IL.
36. Dumas, J.A. & Newhouse, P.A. (2009). Working Memory and Emotional Processing in Geriatric Depression: An fMRI Study. Poster Presented at the 40th Annual Meeting of the Society for Neuroscience, Chicago, IL.
37. Broadwell, C.E., Wilkins, H.L.*, Kutz, A.M.*, Newhouse, P. A., Dumas, J.A. (2010). The Effects of Hormone Variation During the Menstrual Cycle on Emotional Memory. Poster presented and President's Presenters Award Winner at the Annual Meeting of the Society for Gynecologic Investigation. Orlando, FL.
38. Kutz, A.M.*, Broadwell, C., Wilkins, H.L.*, Pfaff, A.C.*, Newhouse, P.A., & Dumas, J.A. (2010). Estradiol Modulates Emotional Memory Encoding in Young Women. Poster Presented at the 2010 Annual Meeting of the Cognitive Neuroscience Society, Montreal, QC, Canada.
39. Dumas, J.A., Kutz, A.M.*, Pfaff, A.C.*, & Newhouse, P.A. (2010). Estrogen Modulation of Frontal Lobe Circuitry During Verbal Working Memory in Older Women. Poster Presented at the 2010 Annual Meeting of the Cognitive Neuroscience Society, Montreal, QC, Canada.
40. Albert, K.*, Dumas, J.A., Kelly, B.K., Dittus, K.L., Newhouse, P.A. (2010). Breast cancer chemotherapy alters brain activity during working memory. Poster presented at the 41st Society for Neuroscience Annual Meeting, San Diego, CA.
41. Kutz, A.M.*, Dumas, J.A., Newhouse, P.A. (2010). Estradiol administration increases activation in areas associated with emotional processing in post-menopausal women. Poster presented at the 41st Society for Neuroscience Annual Meeting, San Diego, CA.
42. Newhouse, P.A., Kutz, A.M.*, Pfaff, A.C.*, Naylor, M.R., Johnson, J.V., Dumas, J.A. (2010) Estradiol treatment alters brain activation following nicotinic blockade in postmenopausal women. Poster presented at the 41st Society for Neuroscience Annual Meeting, San Diego, CA.
43. Dumas, J.A., Kutz, A.M.*, Pfaff, A.C.*, Naylor, M.R., Johnson, J.V., Newhouse, P.A. (2010). Estradiol decreases scopolamine-induced activation in the frontal lobes during a working memory task in postmenopausal women. Poster presented at the 41st Society for Neuroscience Annual Meeting, San Diego, CA.
44. Albert, K.M.*, Dumas, J.A., Kelly, B., Dittus, K., & Newhouse, P.A. (2011). Working memory-related brain activity increases following breast cancer chemotherapy. Poster presented at the 66th Annual meeting of the Society of Biological Psychiatry, San

Francisco, CA.

45. Newhouse, P.A., Kutz, A.M.*, Naylor, M.R., & Dumas, J.A. (2011). Responsivity of postmenopausal women to estradiol induced brain changes in emotional circuitry. Poster presented at the 66th Annual meeting of the Society of Biological Psychiatry, San Francisco, CA.
46. Dumas, J.A. & Newhouse, P.A. (2011). Working memory in geriatric depression: Aberrant activation of emotion-related brain areas. . Poster presented at the 66th Annual meeting of the Society of Biological Psychiatry, San Francisco, CA.
47. Dumas, J.A., Kutz, A.M.*, Naylor, M.R., Johnson, J.V., & Newhouse, P.A. (2011) Estradiol reversal of anticholinergic-related brain activation in postmenopausal women. Poster presented at the 66th Annual meeting of the Society of Biological Psychiatry, San Francisco, CA. Poster nominated for **Top Poster Award**: one of 47 out of 600 nominated for the clinical/translational award.
48. Naylor, M.R., Krauthamer, G.M.*, Seminowicz, D., Dumas, J.A. Mantegna, J. Perelman, H.* McCallion, E.*, Filippi, C. Newhouse, P.A. (2011). Structural and Functional Treatment Effects of Cognitive Behavioral Therapy in Chronic Pain. Poster presented at the 17th annual meeting for the Organization for Human Brain Mapping, Quebec, QC, Canada.
49. Albert, K.M.*, Dumas, J.A., Kelly, B., Dittus, K., & Newhouse, P.A. (2011). Working memory-related brain activity increases following breast cancer chemotherapy. Poster presented at the 17th annual meeting for the Organization for Human Brain Mapping, Quebec, QC, Canada.
50. Dumas, J.A., Kutz, A.M.*, Naylor, M.R., Johnson, J.V., & Newhouse, P.A. (2011) Estradiol reversal of anticholinergic-related brain activation in postmenopausal women. Poster presented at the 17th annual meeting for the Organization for Human Brain Mapping, Quebec, QC, Canada.
51. Naylor, M.R., Krauthamer, G.M., Dumas, J., Lieberman, G.*, McCallion, E.*, Perelman, H.*, Filippi, C., & Newhouse, P. (2011) Functional and structural neuroanatomical effects of cognitive behavioral therapy. Paper presented at the 15th World Congress of Psychiatry, Buenos Aires, Argentina.
52. Kutz, A.M.*, Newhouse, P.A., & Dumas, J.A. (2011). Brain activation during emotional processing in geriatric depression. Poster presented at the 25th annual meeting of the Society for Research in Psychopathology, Boston, MA.
53. Newhouse, P.A., Kutz, A.*, Pfaff, A.*, McDonald, A., Saykin, A., West, J., Devins, R., Casson, P., Naylor, M., & Dumas, J.A. (2011). Estradiol treatment increases cortical gray matter in healthy postmenopausal women. Poster presented at the 42nd Society for Neuroscience Annual Meeting, Washington, DC.
54. Carstens, K.*, Potter, A.S., Newhouse, P.A., & Dumas, J.A. (2011). Nicotine Increases Activation in the Anterior Insular Cortex during Emotional Encoding Task in Non-Smoking Adults. Poster presented at the 42nd Society for Neuroscience Annual Meeting, Washington,

DC.

55. Dumas, J.A., Kutz, A.M.*, Pfaff, A.*, Naylor, M.R., Casson, P., & Newhouse P.A. (2011). Increased frontal activation during working memory performance in postmenopausal women with cognitive complaints. Paper presented at the 42nd Society for Neuroscience Annual Meeting, Washington, DC.
56. Dumas, J.A., Carstens, K.*, & Potter, A. (2012). Nicotine Decreased Activation in the Brain Regions Involved in Emotional Processing in Non-Smoking Adults. Poster Presented at the 2012 Annual Meeting of the Cognitive Neuroscience Society, Chicago, IL.
57. Newhouse, P.A., Kutz, A.*, Pfaff, A.*, McDonald, A., Saykin, A., West, J., Devins, R., Casson, P., Naylor, M.R., & Dumas, J.A. (2012). Estradiol treatment increases cortical gray matter in healthy postmenopausal women. Poster presented at the 67th Annual Convention, Society for Biological Psychiatry, Philadelphia, PA.
58. Shpaner, M., Seminowicz, D., Keaser, M., Mantangna, J., Dumas, J.A., Filippi, C., Lieberman, G., & Naylor, M.R. (2012). Anatomical and functional changes following cognitive behavioral therapy in patients with chronic musculoskeletal pain. Poster presented at the 43rd Annual meeting of the Society for Neuroscience, New Orleans, LA.
59. Kamkwalala, A.R., Kellar, K., Aisen, P., White, H., Wesnes, K., Pfaff, A., Dumas, J.A., Howard, D., Levin, E., Newhouse, P., (2012). Nicotine Treatment of Mild Cognitive Impairment (MCI): Open Label Follow-Up of Double-Blind Phase. Poster presented at the 43rd Annual meeting of the Society for Neuroscience, New Orleans, LA.
60. Dumas, J.A., Broadwell, C., Soung, J., Casson, P., Naylor, M.R., & Newhouse P.A. (2012). Prior hormone therapy use in postmenopausal women reduced working memory-related brain activation. Paper presented at the 43rd Annual meeting of the Society for Neuroscience, New Orleans, LA.
61. Zurkovsky, L., Dumas, J.A., Woodward, N.D., & Newhouse, P. (2013). Cognitive complaints after menopause correlate with functional connectivity of the medial temporal lobe. Poster presented at the 68th Annual Convention, Society for Biological Psychiatry, San Francisco, CA.
62. Zurkovsky, L., Dumas, J.A., Woodward, N.D., & Newhouse, P. (2013). Cognitive complaints after menopause correlate with functional connectivity of the frontal cortex and medial temporal lobe. Poster presented at the 44th Annual meeting of the Society for Neuroscience, San Diego, CA.
63. Kien, C.L., Bunn, J.Y., Tompkins, C.L., Dumas, J.A., Crain, K.I., Ebenstein, D.B., Koves, T.R., & Muoio, D.M. (2013). Substituting dietary monounsaturated fat for saturated fat is associated with increased daily physical activity and resting energy expenditure and with changes in mood. Poster presented at Experimental Biology, Boston, MA.
64. Newhouse, P.A., Albert, K., Astur, R., Johnson, J.V., Naylor, M.R., & Dumas, J.A. (2013). Tamoxifen produces estrogen-like agonist effects on cholinergically mediated learning in postmenopausal women. Poster presented at the 44th Annual meeting of the Society for

Neuroscience, San Diego, CA.

65. Dumas, J.A., Makarewicz, J., Naylor, M.R., & Newhouse, P.A. (2013). COMT genotype interacted with dopaminergic stimulation to modulate working memory-related brain activation in postmenopausal women. Poster presented at the 44th Annual meeting of the Society for Neuroscience, San Diego, CA.
66. Vega, J.N., Zurkovsky, L., Boyd, B.D., Dumas, J.A., Woodward, N.D., Naylor, M.R., Eisenberg, E., Newhouse, P.A. (2014) Estrogen treatment reduces brain functional connectivity in post-menopausal women. Poster presented at the 45th Annual Meeting of the Society for Neuroscience, Washington, DC.
67. Newhouse, P.A., Valiquette, C., Albert, K., Astur, R., Eisenberg, E., McDonald, B.C., Naylor, M.R., Saykin, A., & Dumas J. (2014). Estrogen improves hippocampally-mediated cognition in women who report postmenopausal cognitive impairment. Poster presented at the 45th Annual Meeting of the Society for Neuroscience, Washington, DC.
68. Dumas, J.A., Bunn, J.Y., Nickerson, J.P., Crain, K.I., Ebenstein, D.B., Tarelton, E.K., Makarewicz, J., Poynter, M.E., & Kien, C.L. (2015). Dietary saturated fat versus monounsaturated fat has reversible effects on brain function and the secretion of pro-inflammatory cytokines in young women. Poster presented at the 46th Annual Meeting of the Society for Neuroscience, Chicago, IL.
69. Dumas, J.A., Makarewicz, J., Nickerson, J.P., McGee, E., Bunn, J.Y., & Naylor, M.R. (2016). COMT Genotype and Working Memory in Postmenopausal Women. Poster presented at the 22nd Annual Meeting of the Organization for Human Brain Mapping, Geneva, Switzerland.
70. Dumas, J.A., Makarewicz, J., Bunn, J.Y., Nickerson, J.P., & McGee, E. (2017). COMT genotype, estradiol, and working memory after menopause. Paper presented at the 48th Annual Meeting of the Society for Neuroscience, Washington, DC.
71. Dumas, J.A., Makarewicz, J., Bunn, J.Y., Nickerson, J.P., & McGee, E. (2018). The Relationship between COMT genotype, estradiol, and episodic memory in Postmenopausal Women. Poster presented at the Annual Meeting of the American College of Neuropsychopharmacology, Hollywood, FL.
72. Dumas, J.A., Makarewicz, J., Bunn, J.Y., Nickerson, J.P., & McGee, E. (2019). Dopamine Dependent Cognitive Processes after Menopause: An fMRI Study. Poster presented at the 25th Annual Meeting of the Organization for Human Brain Mapping, Rome, Italy.
73. Dumas, J.A., Senft Miller, A.E.*, Slavitch, G. (2019). Cumulative Life Stress Exposure, Lifetime Estrogen Exposure, and Cognition and Mental Health in Older Women. Poster Presented at the Annual Meeting of the American College of Neuropsychopharmacology, Orlando, FL.
74. Sprouse Blum, A., Littenberg, B., Zhang, J., Hipko, S., Gonyea, J., Senft-Miller, A., Nop, O., Dumas, J., Shapiro, R., Soares, B., DaSilva, L., Allison, J., Furlonge, J, Watts, R. (2024) Vascular reactivity in migraine using breath-hold functional MRI. American

Headache Society 66th Annual Scientific Meeting, San Diego, CA.

75. Dumas, J.A., Testo, A., Senft Miller, A., Zhang, J., Aboukhatwa, M., and Boyd, J. (2024). The Effects of Choline on Brain Functioning in Postmenopausal Women. Poster presented at the 4th Annual meeting of the Vermont Center for Cardiovascular and Brain Health.

Patents

“Compositions and Methods for Improving Brain Function”

Patent filed 3/14/2025

Jonathan Bortz and Julie Dumas

Balchem Corporation and the University of Vermont

Other Creative Activities

N/A

Quality Improvement and Patient Safety Activities

N/A

SUMMARY OF SCHOLARLY ACTIVITIES

My research program focuses on the neurobiology of cognitive aging and the influence of hormones on brain functioning. For many years we have examined the role of the nicotinic cholinergic system in normal cognitive aging and I received an R01 from the NIA/NIH for this work. Additionally, my collaborators and I are examining whether nicotine can improve cognition in older adults with Mild Cognitive Impairment in a two-year placebo-controlled treatment study. I am a sub-contract PI on this project.

More recently I received an NIA/NIH R01 in collaboration with my colleagues at Vanderbilt University to examine the health of the cholinergic system and its relationship to known Alzheimer's biomarkers in healthy postmenopausal women. Our study examines how the integrity of the cholinergic system after menopause is related to Alzheimer's disease biomarkers in the brain, CSF, and plasma. This project brings together work I have been doing since my initial appointment at UVM on neurotransmitter systems, hormones, menopause, and extends these investigations to work that may provide knowledge about an individual woman's risk for dementia.

I have also received an R56 and more recently an R01 from the NIH/NIA to examine the role of fatty acids in brain functioning. We (Kien et al. 2013; Dumas et al. 2023) have shown that a diet with a relatively higher ratio of saturated fat compared to monounsaturated fat resulted in higher ratings of anger and less physical activity. The data from this project showed that a one-week manipulation of dietary fat influenced working memory related brain functioning as well as cytokine levels and LDL cholesterol. More recently we showed that the one-week diet manipulation modulated brain activation in healthy older adults. Our new R01 will allow us to complete the fully powered larger study using our same dietary protocol and neuroscience tools for evaluating brain effects.

My national reputation as an expert in the cognitive neuroscience of menopause and aging is demonstrated by the invitations to present work from all of these projects at national and international meetings. I publish the results from the studies in subspecialty journals. I engage students in all aspects of these projects which benefits their educational experience and is useful for my lab as well. I am also asked to serve on a number of different NIH and Alzheimer's Association study sections and review manuscripts for publication.

INVITED PRESENTATIONS**Regional**

Years	Host Organization “Title of Talk”	City, State
2006	UVM Dementia Conference “Normal Cognitive Aging and Mild Cognitive Impairment”	Burlington, VT
2007	UVM Dementia Conference “Functional Imaging and Dementia: The State of the Art”	Stowe, VT
2008	UVM Dementia Conference “Cholinergic Systems and Aging”	Burlington, VT
2008	UVM Department of Psychiatry Grand Rounds “The Cholinergic Hypothesis of Cognitive Aging Revisited Again: Insights from Estrogen Studies in Older Women”	Burlington, VT
2011	14 th Annual Breast Cancer Conference, sponsored by the Vermont Cancer Center “Cognitive Issues Surrounding Breast Cancer Therapy”	Burlington, VT
2013	16 th Annual Breast Cancer Conference, sponsored by the Vermont Cancer Center “Cognitive Issues Surrounding Breast Cancer Therapy” Co-panelist with Patricia O’Brien, M.D., Kim Dittus, M.D., & Owen Drudge, Ph.D.	Burlington, VT
2014	17 th Annual Breast Cancer Conference, sponsored by the Vermont Cancer Center “Cognitive Issues Surrounding Breast Cancer Therapy” Panel Moderator and Co-panelist with Patricia O’Brien, M.D., Owen Drudge, Ph.D. & Moira Mulligan, Ph.D.	Burlington, VT
2014	<i>Across The Fence</i> , UVM Extension Program WCAX TV “Chemobrain” Presented with Patti O’Brien, M.D.	Burlington, VT
2014	<i>Across The Fence</i> , UVM Extension Program WCAX TV “Women, Memory, and Menopause”	Burlington, VT
2015	Annual Research Retreat: A Framework for Excellence in Women’s Health Research.	Burlington, VT

	Department of Obstetrics, Gynecology, and Reproductive Sciences, University of Vermont College of Medicine. “Hormone and Neurotransmitter Interactions in the Brain: Effects on Brain Functioning in Postmenopausal Women”	
2015	Department of Psychiatry Grand Rounds, UVM “The Neurobiology Underlying Cognition and Mood in Women at Midlife”	Burlington, VT
2016	Biobehavioral Cluster Lectures, Department of Psychology, UVM “The Neurobiology Underlying Cognition and Mood in Women at Midlife”	Burlington, VT
2019	<i>Across The Fence</i> , UVM Extension Program, WCAX TV “The Brain After Menopause”	Burlington, VT
2020	Research Tapas, LCOM, UVM, “MRI at the University of Vermont MRI Center for Biomedical Imaging: A Tool for Neuroscience and Beyond”	Burlington, VT
2023	Research Tapas, LCOM, UVM, “Managing Career Transitions: Moving from a K to an R, and from being a Mentee to a Mentor.”	Burlington, VT
National Years	Host Organization “Title of Talk”	City, State
2007	Psychiatry Grand Rounds, Maine Medical Center “Estrogen and Cognition in Postmenopausal Women”	Portland, ME
2007	Symposium presentation at the 20 th Annual Meeting of the American Association for Geriatric Psychiatry. “Hormones, the Cholinergic System, and Cognitive Aging: A New Hypothesis.”	New Orleans, LA
2007	Symposium presentation at the 62 nd Annual Meeting of the Society for Biological Psychiatry. “The Cholinergic Hypothesis of Cognitive Aging Revisited Again: A Cholinergic Theory of Cognitive Aging and Disease.”	San Diego, CA

2008	Paper presented at the Award Winner session for the Barry Lebowitz Early Career Scientist Award at the annual meeting of the American Association for Geriatric Psychiatry. "Nicotinic versus Muscarinic Blockade Alters Verbal Working Memory Performance and Brain Activation Patterns in Older Women"	Orlando, FL
2008	Symposium presentation at the Annual Meeting of the American Association for Geriatric Psychiatry. "The Effects of Menopause on Cholinergic Functioning and Cognitive Aging."	Orlando, FL
2011	Symposium presentation at the Annual Meeting of the American Association for Geriatric Psychiatry "Hormone and Neurotransmitter Interactions in the Brain: Effects on Brain Activity and Cognition in Older Women."	San Antonio, TX
2012	Symposium presentation at the Annual Meeting of the American Association for Geriatric Psychiatry "The Cholinergic Hypothesis of Aging Revisited Again: A Cholinergic Theory of Aging, Cognition and Disease."	Washington, DC
2013	Symposium presentation at the Annual Meeting of the American Association for Geriatric Psychiatry. "Cholinergic and dopaminergic contributions to normal cognitive aging."	Los Angeles, CA
2013	Symposium presentation at the 68 th Annual Convention, Society for Biological Psychiatry. "Estrogen modulation of emotional processing in pre- and postmenopausal women."	San Francisco, CA
2015	Department of Psychiatry Grand Rounds, Vanderbilt University. "The Neurobiology Underlying Cognition and Mood in Women at Midlife"	Nashville, TN
2015	Symposium presentation at the Annual Meeting of the American Association for Geriatric Psychiatry. "Cancer, Chemotherapy, and Cognition."	New Orleans, LA
2016	Symposium presentation at the Annual Meeting of the American Association for Geriatric Psychiatry. "Cognition after menopause: The influence of hormones and COMT genotype."	Washington, DC

2018	Symposium presentation at the 49 th Annual Meeting of the American Association for Geriatric Psychiatry “Estrogen as a cognitive enhancer: The same old hormones combined with new genetic information”	Honolulu, HI
2020	Department of Psychiatry Grand Rounds, University of Connecticut “The Neurobiology Underlying Cognition in Women at Midlife”	Farmington, CT
2021	Symposium presentation at the Annual Meeting of the American Association for Geriatric Psychiatry “Age and Sex Differences in Subjective Cognitive Decline in Middle Aged and Older Adults”	Virtual
2023	Symposium presentation at the Annual Meeting of the American Association for Geriatric Psychiatry “The Role of the Nicotinic Cholinergic System in Cognition in Healthy Older and Younger Adults”	New Orleans, LA
2023	Symposium presentation at the Annual Meeting of the American Association for Geriatric Psychiatry “Nicotinic Modulation and Brain Functioning in Older Adults with and without Subjective Cognitive Decline”	New Orleans, LA
2023	Advanced Research Institute for Geriatric Mental Health Grand Rounds, Dartmouth Hitchcock Medical Center. “Promotion: What is it? Is it for me? Am I ready?”	Virtual
2025	Invited Oral Presentation at the Annual Meeting of the American Association for Geriatric Psychiatry: “Difference in Resting State Functional Connectivity between Menopausal Stages”. Presented by Abigail Testo	Phoenix, AZ
2026	Invited to give Psychiatry Grand Rounds at University of North Carolina at Chapel Hill. Title: Reproductive Aging and the Female Brain: How Pregnancy and Menopause Shape Brain Aging	Chapel Hill, NC
2026	Invited to give Psychiatry Grand Rounds at UCONN Health. Title: Reproductive Aging and the Female Brain: How Pregnancy and Menopause Shape Brain Aging	Farmington, CT

International

Years	Host Organization “Title of Talk”	City, State
2007	Symposium presentation at the 7 th Annual Meeting of the International College of Geriatric Psychoneuropharmacology. “Estrogen-Neurotransmitter Interaction Effects in Cognition and Mood in Postmenopausal Women.”	San Diego, CA, USA
2009	Symposium presentation at the 14 th International Psychogeriatric Association. “Hormones, Neurotransmitters, and Cognitive Aging: A New Hypothesis”	Montreal, QC, Canada
2013	Symposium presentation at the 41 st Annual Meeting of the International Neuropsychological Society. “Hormone and Neurotransmitter Interactions in the Brain: Effects on Cognition and Brain Activation in Postmenopausal Women.”	Waikoloa, HI.
2017	Brain, Perception, and Cognition Seminar Series, Department of Psychology, Ryerson University “The Neurobiology of Cognition in Women at Midlife”	Toronto, ON, Canada