

Leigh Johnson, PhD
College of Biomedical and Translational Sciences
Institute for Healthy Aging
Institute for Translational Research
Pharmacology & Neuroscience
Email: Leigh.Johnson@unthsc.edu



Area of Expertise

My area of expertise is in translational aging research. I am the Co-I of Health & Aging Brain among Latino Elders (HABLE) study (R01AG054073) and the Director of the Clinical and Outreach cores for this study. I have spent a great deal of time studying factors related to cognitive loss among Mexican-Americans with a specific emphasis on the link between depression and cognition. I have developed and cross-validated a depressive endophenotype (DepE) of cognitive aging across multiple national and international cohorts. This work has been translated into a proof of concept clinical trial (The DEMO trial). The DEMO trial utilizes a precision medicine approach to identify those individuals more likely to benefit from antidepressant treatment for prevention of memory loss and potentially Alzheimer's disease.

Qualifications

BSW in Psychology, Louisiana State University
MSW, Louisiana State University
PhD in Social Work, University of Texas at Arlington

Recent Publications

The Association of Neighborhood Socioeconomic Status with Executive Function and Processing Speed in Cognitively Normal Mexican American Elders from the Health and Aging Brains Study: Health Disparities Cohort
for the HABS-HD Study Team, 1 Aug 2024, In: *Dementia and Geriatric Cognitive Disorders*. 53, 4, p. 180-189 10 p.

Comorbidities Incorporated to Improve Prediction for Prevalent Mild Cognitive Impairment and Alzheimer's Disease in the HABS-HD Study
Zhang, F., Petersen, M., Johnson, L., Hall, J. & O'Bryant, S. E., 6 Dec 2023, In: *Journal of Alzheimer's Disease*. 96, 4, p. 1529-1546 18 p.

A Machine Learning-Based Multiple Imputation Method for the Health and Aging Brain Study–Health Disparities
Zhang, F., Petersen, M., Johnson, L., Hall, J., Palmer, R. F. & O'Bryant, S. E., Dec 2023, In: *Informatics*. 10, 4, 77.

Centralizing prescreening data collection to inform data-driven approaches to clinical trial recruitment
Kim, D. R., Grill, J. D., Aisen, P., Ernstrom, K., Gale, S., Heidebrink, J., Jicha, G., Jimenez-Maggiora, G., Johnson, L., Peskind, E., McCann, K., Shaffer, E., Sultzer, D., Wang, S., Sperling, R. & Raman, R., Dec 2023, In: *Alzheimer's Research and Therapy*. 15, 1, 88.

Precision Medicine for Preventing Alzheimer's Disease: Analysis of the ADAPT Study
O'Bryant, S. E., Zhang, F., Johnson, L. A., Hall, J., Petersen, M., Oh, E. S., Lyketsos, C. G. & Rissman, R. A., 10 Oct 2023, In: *Journal of Alzheimer's Disease*. 95, 4, p. 1609-1622 14 p.

Association of Area Deprivation Index and hypertension, diabetes, dyslipidemia, and Obesity: A Cross-Sectional Study of the HABS-HD Cohort
for the HABS-HD Study Team, 1 Jan 2023, In: *Gerontology and Geriatric Medicine*. 9

Association of cardiovascular risk factors and blood biomarkers with cognition: The HABS-HD study
The Health and Aging Brain Study (HABS-HD) Study Team, 1 Jan 2023, In: *Alzheimer's and Dementia: Diagnosis, Assessment and Disease Monitoring*. 15, 1, e12394.

Plasma Biomarkers of Alzheimer's Disease Are Associated with Physical Functioning Outcomes Among Cognitively Normal Adults in the Multiethnic HABS-HD Cohort

The HABS-HD Study Team, 1 Jan 2023, In: Journals of Gerontology - Series A Biological Sciences and Medical Sciences. 78, 1, p. 9-15 7 p.

Medical comorbidities and ethnicity impact plasma Alzheimer's disease biomarkers: Important considerations for clinical trials and practice

for the HABS-HD Study Team, Jan 2023, In: Alzheimer's and Dementia. 19, 1, p. 36-43 8 p.

A blood screening test for Dementia with Lewy Bodies for Primary Care

Petersen, M., Ferman, T. J., Zhang, F., Pedraza, O., Wszolek, Z. K., Ross, O. A., Como, T., Julovich, D., Johnson, L., Hall, J., Graff-Radford, N. R. & O'Bryant, S., 2023, In: Journal of Alzheimers Disease & Parkinsonism. 13, 6, 6 p.

Sponsored Projects

A Blood Test for Screening into Alzheimer's Prevention Trials

O'Bryant, S. (PI), Hall, J. (CoI) & Johnson, L. (CoI)

NIA: National Institute on Aging

15/09/17 → 30/06/22

ACTC AHEAD Alzheimer's Association Proposal: Diverse Recruitment Component

Johnson, L. (PI)

University of Southern California

1/11/21 → 31/10/24

AHEAD 3-45 Study: A Placebo-Controlled, Double-Blind, Parallel Treatment Arm, 216 Week Study to Evaluate Efficacy and Safety of Treatment With BAN2401 in Subjects With Preclinical Alzheimer's Disease and Elevated Amyloid (A45 Trial) and in Subjects With

Johnson, L. (PI) & Davis, S. (CoI)

University of Southern California

1/01/20 → 31/12/24

Amyloid Burden among Mexican Americans

O'Bryant, S. (PI), Hall, J. (CoI), Johnson, L. (CoI) & Nandy, R. (CoI)

NIA: National Institute on Aging

30/09/18 → 31/08/19

Amyloid Burden among Mexican Americans

RISSMAN, R. (CoPI), TOGA, A. (CoPI), RISSMAN, R. (CoPI), TOGA, A. (CoPI), Johnson, L. (PI), O'Bryant, S. (CoPI), O'BRYANT, S. (PI), O'Bryant, S. (PI), JOHNSON, L. (PI), O'BRYANT, S. (CoPI), JOHNSON, L. (CoPI), RISSMAN, R. (CoPI) & TOGA, A. (CoPI)

National Institute on Aging

30/09/18 → 30/04/22

An Alzheimer's Blood Test for Primary Care

O'Bryant, S. (PI), Hall, J. (CoI), Johnson, L. (CoI) & Nandy, R. (CoI)

NIA: National Institute on Aging

1/06/18 → 31/05/21

A Pro-Inflammatory Endophenotype to Predict Treatment Response to NSAID Therapy in AD

O'Bryant, S. (PI), Hall, J. (CoI) & Johnson, L. (CoI)

NIA: National Institute on Aging

1/09/16 → 31/03/21

Community-Based Primary Care for the Elderly

Mason, D. (PI), Knebl, J. (CoI), Johnson, L. (CoI), Bugnariu, N. (CoI) & O'Bryant, S. (CoI)

Centers for Medicare & Medicaid Services

28/05/13 → 31/12/17

Development and Validation of the Cumulative Environmental Exposure Index for Arsenic: A Novel Environmental Public Health Indicator

O'Bryant, S. (PI) & Johnson, L. (Col)
Environmental Protection Agency (EPA)
1/03/12 → 28/02/14

Epigenetic Risk Factors for AD

Barber, R. (PI), Johnson, L. (Col), Phillips, N. (Col), Nandy, R. (Col) & Zhou, Z. (Col)
NIA: National Institute on Aging
15/09/21 → 31/05/26

Genetic and Biomarker Study of Alzheimer's Disease - Recruitment of Mexican Americans into the Texas Alzheimer's Research Consortium (TARC)

O'Bryant, S. (PI), Hall, J. (Col), Johnson, L. (Col) & Large, S. (Col)
Alzheimer's Disease Program
1/09/16 → 31/08/17

Genetic and Biomarker Study of Alzheimer's Disease - Recruitment of Mexican Americans into the Texas Alzheimer's Research Consortium (TARC)

O'Bryant, S. (PI) & Johnson, L. (Col)
Alzheimer's Disease Program
1/03/12 → 31/08/15

Genetic and Biomarker Study of Alzheimer's Disease - Recruitment of Mexican Americans into the Texas Alzheimer's Research Consortium (TARC)

O'Bryant, S. (PI) & Johnson, L. (Col)
Alzheimer's Disease Program
1/09/15 → 31/08/17

Genetic Architecture of Alzheimer's disease Proteinopathies

Johnson, L. (PI), CRUCHAGA, C. (CoPI), CRUCHAGA, C. (CoPI) & KAMBOH, I. (CoPI)
15/04/21 → 28/02/23

Global Alzheimer's Platform Trial-Ready Cohort for Preclinical/Prodromal Alzheimer's Disease

Johnson, L. (PI)
University of Southern California
15/05/19 → 30/04/23

Global Alzheimer's Platform Trial-Ready Cohort for Preclinical/Prodromal Alzheimer's Disease

Johnson, L. (PI), Large, S. (Col) & Davis, S. (Col)
University of Southern California
1/05/20 → 30/04/23

Health & Aging Brain Study - Health Disparities (HABS-HD)

O'Bryant, S. (PI), Johnson, L. (Col) & Barber, R. (Col)
NIA: National Institute on Aging
1/09/22 → 31/08/27

Health & Aging Brain Study - Health Disparities (HABS-HD)

O'Bryant, S. (PI), Hall, J. (Col), Johnson, L. (Col), Mason, D. (Col), Large, S. (Col) & Petersen, M. (Col)
NIA: National Institute on Aging
1/09/22 → 31/08/27

Health & Aging Brain Study - Health Disparities (HABS-HD)

O'Bryant, S. (PI) & Johnson, L. (Col)

NIA: National Institute on Aging
1/09/22 → 31/08/27

Health & Aging Brain Study - Health Disparities (HABS-HD)

O'Bryant, S. (PI) & Johnson, L. (Col)
NIA: National Institute on Aging
1/09/22 → 31/08/27

Health and Aging Brain among L

O'Bryant, S. (PI), Kline, G. (Col), Hall, J. (Col), Johnson, L. (Col), Barber, R. (Col), Mason, D. (Col), Nandy, R. (Col) & Large, S. (Col)
NIA: National Institute on Aging
1/08/20 → 30/04/26

Health Disparities in Alzheimer's Disease among Mexican Americans

O'Bryant, S. (PI) & Johnson, L. (Col)
NIA: National Institute on Aging
1/09/16 → 31/08/17

Health Disparities in Alzheimer's Disease and Mild Cognitive Impairment among Mexican Americans

O'Bryant, S. (PI), Hall, J. (Col) & Johnson, L. (Col)
NIA: National Institute on Aging
1/09/17 → 31/05/22

Hemodynamic Mechanisms Linking Aortic Arch Stiffness with Brain Insult in Older Adults

Rickards, C. (PI) & Johnson, L. (Col)
Dignity Health
1/04/21 → 31/08/23

Inflammation as a Pathway for the Depression-cognition Link

Johnson, L. (PI) & O'Bryant, S. (Col)
National Alzheimer's Association
1/10/16 → 30/09/18

Phase II randomized controlled trial of benfotiamine in early Alzheimers Disease

Johnson, L. (PI)
University of California, San Diego
1/07/23 → 30/06/27

Sleep Quality and Mechanistic Links to Alzheimer Disease and Related Disorders among Older Mexican Americans and Non-Hispanic Whites

O'Bryant, S. (PI) & Johnson, L. (Col)
UNIVERSITY OF CALIFORNIA SAN FRANCISCO
15/09/19 → 30/06/24

Structural Neuroimaging Biomarkers of a Depressive Endophenotype of MCI among Mexican Americans

Johnson, L. (PI)
Intramural Research(UNTHSC)
1/10/13 → 31/08/15

The A3 Study: Ante-Amyloid Pre

Johnson, L. (PI), Large, S. (Col) & Davis, S. (Col)
University of Southern California
1/06/19 → 30/04/24

The A45 Study: Combination Anti-Amyloid Therapy for Preclinical Alzheimer's Disease

Johnson, L. (PI) & Davis, S. (Col)

University of Southern California

30/09/19 → 31/05/21

Therapeutic Effects of Exercise in Adults with Amnesic Mild Cognitive Impairment

O'Bryant, S. (PI) & Johnson, L. (Col)

University of California, San Diego

15/03/16 → 28/02/19

The Role of Depression on Cognition in the Elderly (For: Menaka Yadav)

Johnson, L. (PI)

Intramural Research(UNTHSC)

15/10/15 → 28/02/17

Understanding Depression-Related Memory Loss among the Elderly

Johnson, L. (PI) & O'Bryant, S. (Col)

Pfeiffer Research Foundation

1/06/14 → 31/08/16

Understanding Depression-Related Memory Loss among the Elderly "Proof of Concept"

Johnson, L. (PI)

J. E. S. Edwards Foundation

1/09/16 → 31/08/18

Understanding the Influence of Depression on Diabetes in Mexican Americans

Johnson, L. (PI)

The Hogg Foundation for Mental Health

1/06/12 → 31/05/13