**Linda J. Larson-Prior, Ph.D.**

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**Education**

M.S. in Biomedical Informatics, UAMS, Little Rock, AR 2021-

PhD in Neurobiology, Kent State University, Kent, OH 1981-1986  
M.A., Case Western Reserve University, Cleveland, OH 1976-1978  
B.A. in Arabic and Anthropology, Ohio State University, Columbus, OH 1969-1972

**Current Position**

Director of the Neurocognitive Dynamics Laboratory 2015-present

University of Arkansas for Medical Sciences

Little Rock, AR

Full Scientist

Director of the Brain Function Laboratory 2019-present

Arkansas Children’s Nutrition Center

Little Rock, AR

Associate Center Director 2020-present

Center for Childhood Obesity Prevention

Arkansas Children’s Research Institute

Little Rock, AR

**Professional Experience**

Intern, Office of Academic Career Development 2003-2004

University of Pittsburgh

Pittsburgh, PA

Senior Scientist 2000-2003  
Abratech, Inc.  
Sausalito, CA

Senior Scientist 1994

Medical College of Pennsylvania

Department of Anatomy

Philadelphia, PA

Visiting Scientist 1987

Physiology Institute

University of Munich

Munich, GERMANY

Instructor 1977-1978

Cuyahoga Community College

Cleveland, OH

**Academic Appointments**

Professor 2020-present

Department of Neurosciences

University of Arkansas for Medical Sciences

Little Rock, AR

Full Scientist 2019-present

Arkansas Children’s Nutrition Center

Children’s Way

Little Rock, AR

Professor 2018-present

Department of Biomedical Informatics

University of Arkansas for Medical Sciences

Little Rock, AR

Professor 2015-present

Department of Psychiatry

Department of Neurology

Department of Neuroscience

University of Arkansas for Medical Sciences

Little Rock, AR

Collaborating Scientist 2018-2019

Arkansas Children’s Nutrition Center

Children’s Way

Little Rock, AR

Adjunct Associate Professor 2015-2016

Department of Radiology

Washington University School of Medicine

St. Louis, MO

Associate Professor 2011-2015

Department of Neurology

Washington University School of Medicine

St. Louis, MO

Associate Professor 2004-2015

Department of Radiology

Washington University School of Medicine

St. Louis, MO

Professor 2002-2003

Department of Basic Sciences

Touro University College of Osteopathic Medicine

Vallejo, CA

Associate Professor 1999-2002

Department of Basic Sciences

Touro University College of Osteopathic Medicine

Vallejo, CA

Assistant Professor 1993-1998

Department of Neuroscience & Anatomy

Penn State University

Milton S. Hershey Medical Center

Hershey, PA

Research Assistant Professor 1992-1993

Department of Organismal Biology & Anatomy

University of Chicago Medical School

Chicago, IL

Postdoctoral Research Associate 1988-1991

Department of Physiology

Northwestern University Medical School

Chicago, IL

Postdoctoral Fellow 1985-1987

Department of Physiology

Northwestern University Medical School

Chicago, IL

Teaching Assistant in Neurobiology 1981-1985

Neurobiology Program

Northeast Ohio Medical University

Rootstown, OH

Teaching Assistant in Human Anatomy 1980-1981

Neurobiology Program

Northeast Ohio Medical University

Rootstown, OH

Adjunct Faculty 1977-1978

Cuyahoga Community College

Cleveland, OH

**Professional Memberships and Activities**

*Professional Affiliations*

International Consortium for Freezing of Gait (ICFOG) 2024-present

Society of Psychophysiological Research 2023-present

McDonnell Center for Systems Neuroscience 2012-2015

IEEE-EMBS 2006-2019

Organization for Human Brain Mapping (OHBM) 2005-present

American Academy of Sleep Medicine 2002-present

Organization for Computational Neuroscience 1995-2008

American Association for the Advancement of Science 1993-present

Society for Neuroscience 1981-present

*Service to Professional Organizations*

Consultant, Institute for Advancement of Food and Nutrition

Sciences Cognitive Measures across the Lifespan Committee 2025

Member, HBCD Responsible Use of Data Committee 2024-present

Member, HBCD EEG Working Group 2022-present

Member, ENIGMA-MEG Working Group 2021-present

Member, OHBM Best Practices Committee 2020-2025

Mentor, Org. for Human Brain Mapping Special Interest Group 2017-present

Executive Committee and Treasurer, Org. Computational Neuroscience 2002-2008

Steering Committee, Computational Neuroscience 2000-2002

Program Committee, Computational Neuroscience 1996-1999

Councilor, Susquehana Valley Chapter, Society for Neuroscience 1994-1997

*Service to Community*

Presenter, Parkinson’s Disease Support Group 2023

Panelist, Science Wednesday, “Sleep”, University of Central AR 2021

Panelist, UAMS Science Café, “The Science of Memory” 2017

Brain Awareness Week: Stroke and the brain 2007

Presenter, Hillside Elementary School, San Mateo CA 2001

Presenter, MIT Elementary School, Vallejo CA 2001

Mentor, High School Teachers, Society for Neurosciences 1998

Community Lecture: “Migraine”, Hershey PA 1997

Judge, Nye Elementary School Science Fair 1997

Presenter, North Side Elementary School Night of Scientific Discovery 1996

*Professional Development*

CIMER Mentoring Certification Training 2022

NIH IDeA Core Business Virtual Workshop 2020

Best Practices for Competitive Grant Applications 2020

NIH Neurobiology of Sleep, Circadian Rhythm and SUD Workshop 2020

TRI UAMS Regulatory Compliance Conference 2020

Administrative Internship, University of Pittsburgh 2004

IACUC 101 Plus Short course, PRIM&R 2003

Clinical Polysomnography and Sleep Medicine, Stanford School of Sleep Medicine 2003

Survival Skills and Ethics Course 2003

Administrative Internship, University of Pittsburgh 2003

American Association of Medical Colleges conference 2002

**Honors and Awards**

Women Faculty Leadership Institute, Washington University 2021

Women Faculty Leadership Institute, Washington University 2015

Invited Participant, DARPA Workshop: New Frontiers in Human Computer Interactions 2013

National Academy of Sciences, Keck Futures Initiative Imaging Science 2010

Invited Faculty, Professional Skills Workshop, Society for Neurosciences 2006

**Committee Assignments and Administrative Services**

*Institutional Service*

University of Arkansas for Medical Sciences

Member, AI Planning Committee 2025

Member, NCOR Equipment Committee 2024-present

Collaborative ADRC Application Working Group 2024-2025

LCME Self Study Task Force 2021-2022

Graduate Program Advisory Committee 2021-2022

Associate Director, Center for Childhood Obesity Prevention (CCOP) 2020-present

CCOP Leadership Team member 2020-present

Member, ACRI Research Informatics Core 2019-2024

Member, Institutional Review Board 2018-present

IPE Facilitator 2018-present

PRI Executive Council 2018

PRI Faculty Retention Committee 2018

Chair, Psychiatry Dept. Promotion & Tenure Committee 2017-2022

Judge, UAMS Medical Ethics Bowl 2017-2019

Member, IPE Anatomy Committee 2017-present

Member, IPE Research Committee 2017-present

Judge, IPE Triple Aim Project 2017-present

UAMS Research Misconduct Investigation Committee 2017

Member, PRI Promotion & Tenure Committee 2016-2017

Member, PILLAR-IPE Steering Committee 2016-present

UAMS Academic House (Ish) Advisor 2016-present

Judge, Student Research Day 2016-present

Member, IPE Development Committee 2016-2017

UAMS Institutional Review Panels

Reviewer, ACRI Intramural Grant Program 2023

Reviewer, ACRI Intramural Grant Program 2022

Reviewer, ACRI Intramural Grant Program 2021

Reviewer, ACRI Intramural Grant Program 2020

Panelist, TRI Grant Pilot Program 2019

Reviewer, CTSA Interinstitutional Pilot Award Program 2018

ACH Research Scholar Pilot Grant Awards Program 2018

Evaluator, Arkansas IDeA Networks of Biomedical Research Excellence 2017

Reviewer, INBRE Faculty Mentored Research Program 2017

Reviewer, Child Health Intramural Program 2017-present

Reviewer, ACHRI ABI Discovery Acceleration Initiative 2016

Washington University in St. Louis Medical School

Secretary, Academic Women’s Network 2013-2015

Treasurer, Academic Women’s Network 2009-2012

Pre-clinical Councilor, Academic Women’s Network 2008-2009

Reviewer, ICTS Intramural grant program 2010-2014

Member, Program for Ethical & Responsible Conduct in Science & Scholarship

Task Force II 2007-2010

Clinical Research Training Center *Grantsmanship* mock study panel 2010

Touro University College of Osteopathic Medicine

Chair, Institutional Animal Care and Use Committee 2001-2003

Member, Medical Student Admissions Committee 2001-2003

Member, Institutional Safety Committee 2000-2002

Member, Institutional Grant Review Panel 2000

Chair, Faculty Senate 1999-2003

Chair, Faculty Rank, Promotions and Retention Committee 1999-2001

Co-chair, Faculty Development Committee 1998

Penn State University College of Medicine

Parlimentarian, Faculty Organization 1997-1998

Medical Student Selection Committee 1996-1998

Medical Student Research Committee 1996-1998

Co-organizer, Computational Neuroscience Journal Club 1995-1998

Medical Student Interviewer 1993-1998

Networking and Telecommunications Committee 1993-1998

Elements of Neuroscience Curriculum Committee 1993-1998

Faculty Recruitment Committee 1993-1995

System Administrator, Departmental DNS Server 1993-1996

*Service to the Field: National/International Review Panels*

Manuscript Reviewer, International Journals 2005-present

Biomedical Sciences Journals

Proceedings of the National Academy of Science

Scientific Reports

Nature Scientific Data

Frontiers in Neuroscience

Frontiers in Neurology

Current Biology

Gates Open Research

Biology

Biomedicine

Biomimetics

Cells

Applied Science

Pharmaceuticals

Journal of Personalized Medicine

Healthcare

International Journal of Environmental Research and Public Health

Neuroimaging Journals

Magnetic Resonance Materials in Physics, Biology and Medicine

Human Brain Mapping

Neuroimage

Brain Imaging and Behavior

Medical Engineering & Physics

Computational Neuroscience Journals

Computers in Biology and Medicine

Journal of Biomedical Graphics and Computing

Entropy

Neuroscience Journals

Brain

Cerebral Cortex

Journal of Psychophysiology

Journal of Comparative Neurology

Neuroscience

Sleep

Clocks and Sleep

Neuroscience Letters

OBM Neurobiology

Submissions Reviewer, National/International Scientific Meetings

AMIA Annual Symposium 2019

IEEE International Conference on Biomedical and Health Informatics 2015

IEEE-EMBC Conference 2011-present

IEEE-LSSA Meeting 2006

Organization for Human Brain Mapping Conference 2006-present

Computational Neuroscience Meeting 2004-2008

Grant Reviewer

*National*

Chair, NIHZRG1 AN-W(SS) Review Panel 2025

Co-chair, NIH/ZRG1 AN-H (02) Review Panel 2024

Reviewer, University of Southern California CTSA proposals 2023

Chair, NIH/F03B Fellowship review panel 2022-2023

External Reviewer, Research Foundation Flanders 2022

University of Southern California CTSA review committee 2022

Co-chair, National Institutes of Health/CSR F03B Fellowship SEP panel 2021

National Institutes of Health EITN Study panel member (*ad hoc*) 2018-2019

Louisiana State University EPSCoR Track II preproposals 2018

Virginia Commonwealth University CTSA Multi-School Grant 2017

Co-chair, National Institutes of Health/CSR BDCN Fellowship SEP panel 2017-2020

Co-chair, National Institutes of Health/ETTN L54 I/START panel 2016-2018

National Institutes of Health/CSR BDCN Fellowship SEP panel 2006-2017

National Institutes of Health/NIA panel (*ad hoc*) 2004

National Institutes of Health/National Science Foundation Computational

Neuroscience Special panel (CRCNS) 2002

National Science Foundation Behavioral & Computational Neuroscience

Review Panelist 1997-2000

National Science Foundation (ad hoc) 1996

National Institutes of Health (NIDCD) Site Visit Team 1994

National Institutes of Health Special Review Panel (NEUROLAB) 1992

*International*

External Review AGAUR Pasqual Maragall Researchers Program 2024

External Review AGUAR ICREA Academy Programme 2024

External Reviewer, Agència de Gestió d’Ajuts Universitaris

i de Recerca (AGAUR), Catalonia 2024

Agency for Management of Univ. & Res. Grants Catalonia 2022

European Science Foundation, Flanders 2022

Research Grants Council, University Grants Committee, Hong Kong 2019

Research Grants Council, Early Career Scheme, Hong Kong 2018-2020

Biotechnology & Biological Sciences Research Council, UK 2018

Research Grants Council, University Grants Committee, Hong Kong 2014

Research Grants Council, Early Career Scheme, Hong Kong 2016

START Program, FWF, Austrian Science Fund 2010

**Educational Activities**

Didactic Teaching

*Medical Student Courses*

Independent study – Step 1 prep 10 hours 2019-present

Brain and Behavior 5 hours 2019-present

Medical Neuroscience (Course Director) 118 hours 1998-2003

Primary Care Skills 9 hours 2000

Problem Based Learning 6 hours 2000-2001

Problem Based Learning (Co-Director) 12 hours 1999

Medical Physiology 2 hours 1999-2003

Clinical Systems 4 hours 1999

Human Anatomy 100 hours 1991-1997

Neuroanatomy Laboratory 33 hours 1981-1985

Human Anatomy Laboratory 72 hours 1980-1981

*Allied Health Professional Courses*

Neurobiology of Sleep (OT) 2 hours 2007-2010

Physiology (Nursing) 8 hours 1988

*Graduate Student Courses*

IPE Functional Anatomy Workshop 3 hours 2019-present

Connectomics 48 hours 2021, 2022

Independent Study In Biomedical Informatics 2 hours 2021-present

Research Design for Biomedical Informatics 4 hours 2019-present

Research Imaging Informatics 3 hours 2021-present

Imaging for Anatomy (Course Director) 57 hours 2017-present

Neuroimaging 2 hours 2017-present

Ethics and Research Science 12 hours 2009

Neuroscience 13 hours 1993-1997

Computational Neuroscience 48 hours 1995

*Undergraduate Courses*

Ethics in Research and Development. 1 hour 2024-present

Physical Anthropology (Course Director) 24 hours 1978

Sociocultural Anthropology (Course Director) 24 hours 1978

Archaeology 24 hours 1977

Mentoring

*Mock Study Panels*

TRI K-Scholar Study Panel UAMS L. Russel, PhD Postdoctoral Fellow 2024

Path-to-K Study Panel UAMS B. Ayers, PhD Assistant Professor 2023

R21 Mock Study Panel UAMS C. Hayes, PharmD/PhD Assistant Professor 2019

R21 Mock Study Panel UAMS C. Ashby, PhD Assistant Professor 2019

RO1 Mock Study Panel UAMS P. Tsai, MSN/PhD Professor 2016

K-23 Mock Study Panel WUSTL B. Palanca MD/PhD Instructor 2010

K-23 Mock Study Panel WUSTL S. Sullivan, MD Assistant Professor 2010

K-23 Mock Study Panel WUSTL T. Schwedt, MD Assistant Professor 2009

*Faculty Mentoring*

Lara Raines, Assistant Professor IPE Mentoring 2025

Tiffany Miles, Instructor Chair, Mentoring Committee 2024-present

Peter DelNero, Assistant Professor IPE Mentoring 2023

Ellen van der Plas, Assistant Professor Mentoring Committee Mentor 2023-present

Tracy Nolan, PhD, Instructor Mentoring Committee Mentor 2022-present

Rania Elkhateb, PhD, Assistant Professor Research mentor 2022-2023

Roy Morello, PhD, Associate Professor Mentoring Committee Mentor 2021-present

Corey Hayes, PhD, Assistant Professor Mentoring Committee Mentor 2021-present

Stefani Kennon-McGill, PhD, Instructor K01 mentor 2021-2023

Sree Chintapalli, PhD. Assistant Professor Mentoring team member 2020-present

Ivan Vargas, PhD. Assistant Professor K23HL141581 Mentor 2019-present

Se-ran Jun, PhD. Assistant Professor Mentoring Committee member 2019-present

James Hungerford, MD. Assistant Professor ACH Mentor 2018-2020

Olcay Kursun, PhD. Assistant Professor INBRE Mentor 2018-2021

Ahmad Patooghy, PhD. Assistant Professor INBRE Mentor 2018-2021

Victoria Poole, PhD. Assistant Scientist OHBM Mentor 2018

Mahmut Karakaya, PhD. Assistant Professor INBRE Mentor 2016-2021

Michael Robeson, PhD. Assistant Professor Mentoring Committee member 2018-present

Tuhin Virmani, MD/PhD. Associate Professor Clinician-Scientist Mentor 2016-present

Mathias Brochhausen, PhD. Associate Professor Mentoring Committee member 2016-2019

Pamela Newland, RN/PhD.Assistant Professor R15 Mentor 2013-2018

Andrei Vedeniapin, MD. Assistant Professor K23 Mentor 2010

Todd J. Schwedt, MD. Assistant Professor KL2/K23 Mentor 2012-2013

Ben J.A. Palanca, MD/PhD. Assistant Professor FAER Award Mentor 2007-2013

Yo-El Ju, MD. Assistant Professor AASM Training Award Mentor 2007-2011

*Postgraduate Mentoring*

Whitney Norris K12 Co-Mentor 2024-present

M. Julieta Mateos OHBM Mentor 2023-present

Fernanda de Morales OHBM Mentor 2023

G. Catalina Cruz, PhD. Postdoctoral Fellow Mentor/Advisor 2019-2023

Aparna Das, MD, Resident Research Mentor 2019-2021

Adi Yaniv, PhD. Postdoctoral Fellow OHBM Mentor 2019-2020

Jyothika Kumar, PhD. Postdoctoral Fellow OHBM Mentor 2019-2022

Birgit Rauchbauer, PhD. Postdoctoral Fellow OHBM Mentor 2019-2020

Makoto Uji, PhD. Postdoctoral Fellow OHBM Mentor 2019-2021

Lora Minkova, PhD. Postdoctoral Fellow

and medical student OHBM Mentor 2019

Veronica Guadagni, PhD. Postdoctoral Fellow OHBM Mentor 2018

Abbas Babajani-Feremi, PhD Mentor/Advisor 2011-2015

*Graduate Mentoring*

Thesis Advisor

Huo Lu Professor, Philadelphia College of Osteopathic Med 1994-1998

Aaron S. Kemp University of Arkansas for Medical Sciences 2020-present

Dylan GilbreathUniversity of Arkansas for Medical Sciences 2020-2024

Sonya Utecht University of Arkansas for Medical Sciences 2023-present

Thesis Committee Member

Valentina Juncos University of Arkansas for Medical Sciences 2025-present

Katrina M. Tracy University of Arkansas for Medical Sciences 2024-present

A. Journey Eubank University of Arkansas for Medical Sciences 2020-present

Namarta Kapil University of Arkansas for Medical Sciences 2019-2023

Alexa C. Escapita University of Arkansas for Medical Sciences 2019-2024

Ravi Chacko Washington University in St. Louis, BME 2015-2018

Mrinal Pahwa Washington University in St. Louis, BME 2014-2015

Nathan Dees University of Missouri, St. Louis, Physics 2005-2009

Nannan Cao Washington University in St. Louis, ESE 2007

Thomas Coates Penn State University College of Medicine 2001-2005

Ashish Dugar Penn State University College of Medicine 1999

Research Mentoring

Mandeep Kaur UAMS, Honors in Research Medical Student 2023-2024

Lin-Chi Ho UAMS, Honors in Research Medical Student 2022-2024

Carli Cox UAMS, Honors in Research Medical Student 2020-2023

Jack Merten UAMS, Honors in Research Medical Student 2020-2023

Anna Furtjes King’s College London, OHBM Mentor 2020-2021

Anita Shanakar Ohio State University, OHBM Mentor 2020-2021

Anna Chen NYU Langone Health, OHBM Mentor 2020-present

Fei Gao University of Macau, OHMB Mentor 2019-present

Caitlin Caperton UAMS MSTP, Research Rotation 2017

Lauren Morehead UAMS MSTP, Research Rotation 2017

Duah Alkam UAMS Graduate student, Research Rotation 2016

Jarrett Wann UAMS Graduate student, Research Rotation 2016

Amal Shoeib UAMS Graduate student, Research Rotation 2016

Richard Gean UAMS Graduate student, Research Rotation 2016

Ravi Chacko WUSM MSTP, TL1 Mentoring Team 2015

*Undergraduate and Other Student Mentoring*

Post-baccalaureate Mentees

Journey (Abigail) Eubanks Research Intern 2019-2020

Undergraduate Mentees

Jennifer Randall Millersville University 1997-1998

Bryan Cummiskey Southern Illinois University 2008

Ryan Verner Washington University, BME 2011-2012

Alicia Boyd University of Missouri, Physics 2013

Christina Ge Washington University, pre-med 2013-2015

Zimin Hang Washington University, Psychology 2013-2017

Jenny Liu Washington University, pre-med 2013-2016

*Honors thesis advisor*

Serena Fang Washington University, pre-med 2013-2016

Laci Giambrone EPSCoR REU summer fellow 2017

Kalissa Bittner EPSCoR REU summer fellow 2017

Christopher Mondragon EPSCoR REU summer fellow 2017

Eric Bussey INBRE summer fellow 2017

Yanna Zhu University of Manchester, UK 2018

OHBM mentor

Jacob Seidlitz University of Cambridge, UK 2018

OHBM mentor

Hannah McCall EPSCoR REU summer fellow 2018

Leann Tengowski EPSCoR REU summer fellow 2018

Alesha Jex EPSCoR REU summer fellow 2018

Journey (Abigail) Eubanks INBRE summer fellow 2018

Amanda Coalson EPSCoR REU summer fellow 2019

Charles (Sashi) White EPSCoR REU summer fellow 2019

Porter McGee EPSCoR REU summer fellow 2019

Paige Ogden INBRE summer fellow 2019-2022

Yixing Wang INBRE summer fellow 2023

Anu Iyer NSF DART Fellow 2024-present

Adam Alexander INBRE summer fellow 2024

High School Mentees

Carissa Ferguson Ferring Undergraduate Scholar 2006-2008

Anu Iyer NSF Fellowship 2021-2023

Akul Shrivastavaj ACRI summer fellow 2024

Rohan Aggata ACRI summer fellow 2024

Organized Symposia, Conferences and Meetings

Mini-symposium on Oscillations and Networks. A. Assadi, M. Banks, **L. Larson-Prior**, and Erwin Montgomery (co-organizers). Computational Neurosciences, 2005.

Frontiers in Imaging Brain Energetics and Electrical Activity. **L.J. Larson-Prior** and J. Culver, (co-organizers). Speakers: L.J. Larson-Prior, Washington University; T. Holy, Washington University; E. Hillman, Cornell University, J. Culver, Washington University. Presented at: IEEE/NLM Life Science Systems & Applications Workshop, Washington DC, 2006.

Frontiers in the Neuroimaging of Human Sleep. **L.J. Larson-Prior** (organizer). Speakers: L.J. Larson-Prior, Washington University; M. Massimini, Univ. of Milan; R. Huber, Univ. of Zurich; M. Chee, Singapore Univ. Presented at SLEEP 2007, Minneapolis, MN, 2007.

Neuroimaging Technologies for Optimizing Performance. S.K. Mun, K. Friedl, S. Cardin, **L.J. Larson-Prior**, K.H. Wong (organizing committee). Presented at VT-TATRIC workshop on Neuroperformance, Alexandria, VA 2010

The Neuroscience of the Interaction of Sleep, Stress and Performance. **L.J. Larson-Prior**, K. Friedl and S.K. Mun (Co-chairs). Arlington Innovation Center: Health Research of Virginia Tech, Arlington, VA 2015

UAMS Digital Health Conference. Anita Walden, Aaron Kemp, Hari Eswaren, Thomas Kim and **Linda Larson-Prior** (organizing committee). University of Arkansas for Medical Sciences, 2019

**Grants and Contracts**

***Current***

NSF OIA 2217824 (MPI, contact PI: Murray) 9/1/2022-8/31/2026 $6,000,000

RII Track-2 EPSCoR: Facilitating ubiquitous technology utilizing resilient eco-friendly sensors (FUTURE sensors)

Role: Investigator

The goal of this proposal is to develop novel sensor technologies that will provide just-in-time information on environmental toxins in soil, air and human beings with a particular emphasis on heavy metal contaminants.

NIH U01-DA055352 (MPI: Acheson, Ou, McKelvey) 09/01/2021-8/31/2026

1/6 HBCD Prenatal Experience and Longitudinal Development (PRELUDE)

Role: Investigator

The HEALthy Brain and Child Development study will recruit approximately 7,5000 pregnant women in the 2nd and 3rd trimester and follow their children to age 10, using neuroimaging, behavioral assessments, EEG, biosample collection, and assessments of parent-child interaction and the home environment. This research will lead to greater understanding of factors affecting early childhood brain development, allowing targeted interventions and improved outcomes for mother-child dyads.

NIH/NIGMS P20-109096-06 (PI: Weber) 08/01/2022-07/31/2027

Center for Childhood Obesity Prevention phase 2

Role: Associate Center Director

The Center for Childhood Obesity Prevention focuses on developing research infrastructure around the theme of childhood obesity prevention and providing junior investigators with formal mentoring, training and research project funding to help them acquire preliminary data to successfully compete for independent research grant support around this theme.

USDA-ARS 6026-10700-001-000D (PI: Andres, Borsheim) 11/01/2024-10/31/2029

Impact of maternal and child diet quality and physical activity from infancy to early adulthood

Role: Investigator

***Pending***

DOD (MPI: Boddu and Virmani [contact PI]) 1/10/2025-12/31/2027

Predicting and treating freezing of gait in Parkinson’s disease through development of machine learning models and a pharmacologic intervention with Modafinil

Role: Investigator

NIH/NIGMS. 1 P20-GM 156567 (MPI: Ou, Acheson) 9/1/2024-8/31/2029

Center for Study of the Developing Brain (CSDB)

Role: Neuroimaging Core Director

***Past***

USDA-ARS 6026-51000-010-06S (PI: Ferruzzi) 11/01/2019-10/31/2024

Dietary influences on psychological and neuropsychological development and function in children

Role: Project PI

UAMS-TRI Biomedical Informatics Research Benefitting Rural Health (PI: Virmani) 7/1/2022-6/30/2023

|  |
| --- |
| Utilization of a neuroinformatics research platform (ARIES) to develop quantitative tools for clinical assessment and treatment of Parkinson’s disease patients in rural Arkansas  Role: Investigator |

UAMS Barton Program (PI: Ramatallah) 1/10/23-12/31/23 $25,000

Phone-Collected corpus for remote assessment of Parkinson’s Disease

Role: Investigator

UAMS Neurodegeneration Hub Pilot Grant (PI: Larson-Prior) 7/15/2022-7/14/2023. $20,000

Neural network dynamics underlying cognitive-motor deficits among people with Parkinson’s Disease

Role: PI

NIH/NHLBI K23 HL141581-02 (PI: Vargas) 4/03/2020-3/31/2024

Circadian and Ultradian Cortisol Rhythms in Chronic Sleep Continuity Disturbance

Role: Mentor

NIH/NIGMS 5P20 GM109096 (PI: Weber) 8/01/2016-07/31/2021

Center for Childhood Obesity Prevention

Role: Associate Center Director

ACRI Intramural (PI: Alberts) 6/1/2020-11/30/2021

Functional connectivity study of posterior fossa syndrome in children

Role: Investigator

OIA-1632891 NSF EPScoR (contact PI: Iasemidis,) 9/01/2016-8/31/2020

RII Track-2 FEC- Probing and understanding the brain: micro and macro dynamics of seizure and memory networks

Role: Co-PI responsible for collection, interpretation and analysis of EEG data.

INBRE Mentored Research Development Grant (PI: Karakaya) 1/1/2018-4/30/2020

Development of retina imaging system using smartphones

Role: Mentor

UAMS-TRI Team Science Voucher Award (PI: Larson-Prior) 6/01/2020-5/31/2021

A trans-disciplinary approach to reducing caregiver burden in Arkansas

Role: PI

NIH/NCI U24 1U24CA215109-02S1 (PI: Prior) 9/2018-8/2019

Informatics platform for cancer-related cognitive impairment and dementia research

Role: Investigator

UAMS-TRI Internal Pilot Award (PI: Larson-Prior) 1/15/2019-2/1/2020

Impact of buprenorphine-assisted treatment on sleep, mood and cognition among opioid use disorder patients

Role: PI

UAMS-DEAP Development Enhancement Award (PI: Larson-Prior) 12/20/2018-11/19/2019

A multimodal interrogation of cognitive-motor network integration in Parkinson’s Disease

Role: PI

USDA-ARS 6026-51000-010-05S (PI: Adams) 11/01/2014-10/31/2019

Dietary Influences on Infant/Child/Adolescent Health and Development

Role: Co-investigator

UAMS Office of Interprofessional Education (PI: Walden, Kim) 4/1/2018-3/31/2019

Interprofessional education to guide the meaningful use and secure adoption of mobile health and wearable technologies for clinical and research applications

Role: Investigator

Knight Alzheimer’s Disease Research Center (PI: Larson-Prior) 5/1/2015-4/30/2016

Changes in brain network dynamics as an index of amyloid status in healthy elders

Role: PI

1-R44-MH106421 (PI: Turovets & Larson-Prior) 9/23/2014-7/31/16 $753,000

Pediatric head models for improved imaging of neurological development - Phase 2

Partner: Electrical Geodesics, Inc

Role: Co-PI

DOD (PI: Mun) 9/20/2011-8/31/2014

Neuroperformance Imaging

Role: Subcontract PI

U54 MH091657 (PI: Van Esssen, D) 09/01/10 - 08-31/15

Mapping the Human Connectome: Structure, Function and Heritability

Role: Investigator and manager of MEG component

NIH R21-MH098223 (PI: Shannon) 7/26/2012-4/3/2014

Biostatistics for Connectomes

Role: Investigator

Michael J. Foxx Foundation (PI: Galvin) 1 cal month 10/1/2011-9/30/2013

Bioanatomical phenotypes of Parkinson’s Disease with and without cognitive impairment

Role: Subcontract PI

NIH R43-NS67726 (PI: Turovets & Larson-Prior) 3/01/10-2/29/12

Pediatric head models for improved imaging of neurological development

SBIR Business Partner:: Electrical Geodesics, Inc

Role: Co-PI

McDonnell Foundation (PI: Larson-Prior) 7/1/09-6/30/11

Motor learning and sleep: an ECoG study

Role: PI

McDonnell Center for Systems Neuroscience (PI: Larson-Prior) 6/2011

A one-time equipment grant to cover needed equipment for high density EEG/fMRI studies

P20-MH077967 (PI: Tononi) 07/01/07 – 06/30/11

NIH: Sleep Function and Synaptic Homeostasis

Subcontract: Brain Plasticity and Local Sleep Homeostasis (PI: Raichle)

Role: Investigator

Cephalon, Inc. (PI: Duntley) 10/1/08- 06/30/09

Contract: Functional Neuroimaging of the Effects of Armodafinil Treatment on Prefrontal.

Role: Imaging Specialist, Investigator

NIH R44-NS041776 ( PI: Jewett) 10/05-9/07

Error Reduction in Dipole Source Localization Models

Role: Subcontract PI

NSF IBN-9514844 (PI: Larson-Prior) 2/96-1/2000

Role of serotonin in cerebellar cortical processing

Role: PI

NIH R29-NS30759 ( PI: Larson-Prior) 9/91-8/97

Slow Synaptic Transmission in the Cerebellum

Role: PI

ACRI Intramural (PI: Escalona-Vargas) 6/1/2020-11/30/2021 (NCE)

Pediatric language and memory mapping in refractory epilepsy using MEG

Role: Investigator

**Publications**

***Editorial Positions***

Associate Editor, Frontiers in Neuroscience 2021-present

Associate Editor, Frontiers in Neurology 2021-present

Associate Editor, Frontiers in Psychiatry 2021-present

Topic Editor: Nutrients 2023-2024

Topic Editor: Frontiers Human Neuroscience - Motor Neuroscience 2022-2023

Topic Editor: Frontiers

Editorial Board, OBM Neurobiology 2016-2023

Associate Editor, Journal of Biomedical Graphics & Computing 2017

Associate Editor, Human Computation 2016

Editorial Board, Human Computation 2014-2016

Guest Editor for Special Research Topic, Frontiers in Sleep and Chronobiology 2011

***Refereed Journal Articles***

1. Larson-Prior, L.J. and Slater, N.T. (1988) GABAergic inhibition and epileptiform discharges in the turtle hippocampus. *Brain Research*, 460:369-375. PMID 3224268

2. Larson-Prior, L.J. and Slater, N.T. (1989) Excitatory amino acid receptor mediated slow synaptic transmission in turtle cerebellum. *Neuroscience Letters*, 104:286-291. PMID 2554224

3. Larson-Prior, L.J., McCrimmon, D.R., and Slater, N.T. (1990) Slow excitatory amino acid-mediated synaptic transmission in turtle cerebellar Purkinje cells. *J. Neurophysiol.*, 63:637-650. PMID 1970354

4. Larson-Prior, L.J., Ulinski, P.S., and Slater, N.T. (1991) Excitatory amino acid receptor-mediated transmission in geniculocortical and intracortical pathways within visual cortex. *J. Neurophysiol.*, 66:293-306. PMID 1681038

5. Larson-Prior, L.J. and Cruce, W.L.R. (1992) The red nucleus and mesencephalic tegmentum in a ranid amphibian: a cytoarchitectonic and HRP connectional study. *Brain, Behav. and Evol.*, 40:273-286. PMID 1472987

6. Larson-Prior, L.J., Morrison, P.D., Bushey, R.M. and Slater, N.T. (1995) Frequency dependent activation of a slow *N*-methyl-D-aspartate dependent EPSP in turtle cerebellum by mossy fibre afferents. *Neuroscience*, 67:867-879. PMID 7675211

7. Larson-Prior, L.J., Siuciak, J.A. and Dubocovich, M.L. (1996) Localization of 2-[125I]iodomelatonin binding sites in visual areas of the turtle brain. *Eur. J. Pharmacol.*, 297:181-185. PMID 8851181

8. Larson-Prior, L.J., Bushey, R.M., Maines, L.W. and Lakoski, J.M. (1996) Identification of central 5-HT and 5-HT1A receptors in the turtle brain (Chrysemys picta). *Neurosci. Letts.*, 212:79-82. PMID 8832643

9. Lu, H. and Larson-Prior, L.J. (1996) Serotonergic modulation of evoked responses in turtle cerebellar Purkinje cells. *J. Neurophysiol.*, 76:3102-3113.

10. Larson-Prior, L.J., and Lu, H. (1999) Serotonergic modulation of the cerebellar granule cell network. *Neurocomputing*, 26-27:419-426.

11. Coates, T.D., Larson-Prior L., Wolpert S., Prior F. (2003) An Interface and Signal Processing Methodology for Classification of Simple Stimuli Based on Detected Nerve Activity. *IEEE Engineering in Medicine and Biology*, 22:64-76.

12. Jewett, D.L., Caplovitz, G., Baird, B., Trumpis, M., Olson, M.P. and Larson-Prior, L.J. (2004) The use of QSD (q-sequence deconvolution) to recover superposed, transient evoked-responses.  *Clin. Neurophysiol*., 115(12):2754-2775. PMID: 15546784

13. Larson-Prior, L.J., Hart, T. and Jewett, D.L. (2004) Neural processing of high-rate auditory stimulation under conditions of increased sensory load. *Neurocomputing*, 58-60:993-998

14. Jewett, D.L., Hart, T., Larson-Prior, L.J., Baird, B., Olson, M., Trumpis, M., Makayad, K., and Bavafa, P. (2006) Human sensory-evoked responses differ coincident with either "fusion-memory" or "flash-memory", as shown by stimulus repetition-rate effects. *BMC Neuroscience*, 7:18-35. PMID: 16504094

15. Vincent, J.L., Larson-Prior, L.J., Zempel, J., and Snyder, A.Z. (2007) Moving GLM ballistocardiogram artifact reduction for EEG acquired simultaneously with fMRI. *Clin. Neurophysiol*., 118:981-998. PMID: 17368972

16. McAvoy, M., Larson-Prior, L.J., Nolan, T.S., Vaishnavi S.N., Raichle, M.E. and d’Avossa, G. (2008) Resting states affect spontaneous BOLD oscillations in sensory and paralimbic cortex. *J. Neurophysiol.*, 100:922-931. PMID: 18509068

17. Prior, F., Brunsden, B., Hildebolt, C., Nolan, T., Pringle, M., Vaishnavi, S.N., and Larson-Prior, L.J. (2009) Facial recognition from volume rendered magnetic resonance imaging data. *IEEE Trans. Information Tech. in Biomedicine*., 13:5-9. PMID:19129018

18. Larson-Prior, L.J., Zempel, J., Nolan, T.S., Prior, F.W., Snyder, A.Z. and Raichle, M.E. (2009) Cortical network functional connectivity is maintained in the descent to sleep. *PNAS*, 106:4489-4494. PMID: PMC2657465

19. Ju, Y-E., Larson-Prior, L.J. and Duntley, S.D. (2011) Changing demographics in REM sleep behavior disorder: possible effect of autoimmunity and antidepressants. *Sleep Med*, 12:278-283. PMID:21317035

20. Larson-Prior, L.J., Power, J.D., Vincent, J.L., Nolan, T.S., Coalson, R.S., Zempel, J., Snyder, A.Z., Schlaggar, B.L., Raichle, M.E., Petersen, S.E. (2011) Modulation of the brain’s functional network architecture in the transition from wake to sleep. *Prog. Br. Res*., 193:277-294. PMID 21854969.

21. Van Essen, D.C., Ugurbil, K., Auerback, D., Barch, D., Behrens, T.E., Bucholz, R., Chang A., Chen, L., Corbetta, M., Curtiss SW, Della Penna S., Feingberg, D., Glasser, MF, Harel N., Heath, A.C., Larson-Prior, L.J., Marcus, D., Michalareas, G., Moerller, S., Oostenveld R., Petersen, S.E., Prior, F., Schlaggar, B., Smith, S., Snyder, AZ, Xu, J.G., and Yacoub, E. for the WU-Minn HCP Consortium (2012) The human connectome project: a data acquisition perspective. *Neuroimage*, 62:2222-2231 PMID 22366334

22. Zempel, J.M., Politte, D., Kelsey, M., Verner, R., Nolan, T.S., Babajani-Feremi, A., Prior, F. Larson-Prior, L.J. (2012) Characterization of scale-free properties of human electrocorticography in awake and slow-wave sleep states. *Front Neurol*, 3:76 PMID 22701446

23. McAvoy, M., Larson-Prior, L.J., Ludwikow, M., Zhang, D., Snyder, A.Z., Gusnard, D., Raichle, M.E., d’Avossa, G. (2012) Dissociated mean and functional connectivity BOLD signals in visual cortex during eyes closed and fixation*. J. Neurophysiol*, 108:2363-2372. PMID 22875902

24. Shannon, B., Dosenbach, R., Su, Y., Vlassenko, A., Larson-Prior, L.J., Nolan, T., Snyder, A., Raichle, M.E. (2012) Morning-evening variation in human brain metabolism and memory circuits. *J. Neurophysiol*., 109:1444-1456. PMID 23197455

25. Schwedt, T.J., Mar,S., Nolan, T., Benzinger, T., Schlaggar, B., Larson-Prior, L.J. (2013) Atypical resting state functional connectivity of affective pain regions in chronic migraine. *Headache,* 53:737-751. PMID 23551164

26. Larson-Prior, L.J., Oostenveld, R., Della Penna, S., Michalareas, G., Prior, F., Babajani-Feremi, A., Schofffelen, J.M., Marzetti, L., de Pasquale, F., Di Pompeo, F., Stout, J., Woolrich, M., Luo, Q., Bucholz, R., Fries, P., Pizzella, V., Romani, G.L., Corbetta, M., Snyder, A.Z. (2013) Adding dynamics to the Human Connectome Project with MEG. *Neuroimage*. 80:190-201 PMID 23702419

27. Song, J., Morgan, K., Turovets, S., Li, K., Davey, C., Godyadinov, P., Luu, P., Smith, K., Prior, F., Larson-Prior, L., Tucker, D.M. (2013) Anatomically accurate head models and their derivatives for dense array EEG source localization. *Functional Neurology, Rehabilitation and Ergonom*ics, 3(2-3): 275-293.

28. Schwedt, T.J., Larson-Prior, L.J., Coalson, R.S., Nolan, T., Mar, S., Ances, B., Benzinger, T., Schlaggar, B.L. (2014) Allodynia and descending pain modulation in migraine: a resting state functional connectivity analysis. *Pain Medicine,* 15:154-165, PMID 24165094

29. Greve, D.N., Duntley, S.P., Larson-Prior, L.J., Krystal, A.D., Diaz, M.T., Drummond, S.P.A., Thein, S.G., Kushida, C.A., Yang, R., Thomas, R.J. (2014) Effect of armodafinil on cortical activity and working memory in patients with residual excessive sleepiness associated with CPAP-treated OSA: a multicenter fMRI study.  *J. Clin Sleep Med,* 10:143-153. PMID 24532997

30. Larson-Prior, L.J., Ju, Y-E.S., Galvin, J.E. (2015) Cortical-subcortical interactions in hypersomnia disorders: mechanisms underlying cognitive and behavioral aspects of the sleep-wake cycle. *Front Neurol*, 5:165. PMID 25309500

31. LaRosa, P., Brooks, T., Deych, E., Shands, B., Prior, F.,Larson-Prior, L., Shannon, W. (2015) Gibb’s distribution for statistical analysis of graphical data with a sample application to fcMRI brain images. *Statistics in Medicine*, doi: 10.1002/sim.6757. PMID 26608238

32. Julian, B.A., Mitra, A., Larson-Prior, L.J**.,** Snyder, A.Z., Avidan, M.S., Raichle, M.E. (2015) Resting-state functional magnetic resonance imaging correlates of sevoflurane-induced unconsciousness. *Anesthesiology*, 123:346-356 PMID 26057259

33**.** Hodge, M., Horton, W., Brown, T., Herrick, R., Olsen, T., Hileman, M.E., McKay, M., Archie, K.A., Cler, E., Harms, M.P., Burgess, G.C., Glasser, M.F., Elam, J.S, Curtiss, S.W., Barch, D.M., Oostenveld, R., Larson-Prior, L.J., Ugerbil, K., Van Essen, D.E., Marcus, D.S (2015) ConnectomeDB – Sharing human brain connectivity data. *Neuroimage*, 124(PtB):1102-1107. PMID 25934470

34**.** Shah, J., Pillai, L., Williams, D.K., Doerhoff, S., Larson-Prior, L., Garcia-Rill, E., Virmani, T. (2018) Increased foot strike variability in Parkinson’s disease patients with freezing of gait. *Parkinsonism & Related Disorders*, 53:58-63. PMID 29773512

35. Virmani, T, Pillai, L., Glover, A., Doerhoff, S., Williams, D.K., Garcia-Rill, E., Larson-Prior, L. (2018) Impaired step-length setting prior to turning in Parkinson’s disease patients with freezing of gait. *Movement Disorders*, 33:1823-1825. PMID: 30306629.

36. Virmani, T, Gupta, H, Shah, J and Larson-Prior, L (2018) Objective measures of gait and balance in healthy non-falling adults as a function of age. *Gait & Posture*, 65:100-105. PMID: 30558914

37. Walden, A., Kemp, A., Larson-Prior, L., Kim, T., Gan, J., McCoy, H., Payakachat, N., Ward, W., Eswaran, H. (2020) Establishing a digital health platform in an academic medical center supporting rural communities. *J* *Clinical Trans Sci*, 4:384-388. PMID: 33244426

38. Levitis, E., Gould van Praag, C.D., Gaut, R., Heurnis, S., DuPre, E., Kiar, G., Bottenhorn, K.L. and the OHBM Open Science Special Interest Group (2021) Centering inclusivity in the design on online conferences. *GigaScience* 10:1-14 doi:10.1093/gigascience/giab051 PMID: 34414422

39**.** Alatorre-Cruz, G.C., Downs, H., Hagood, D., Gu, Y., Larson-Prior, L.J. (2021) Effect of obesity on inhibitory control in preadolescents during a stop-signal task: an event-related potential study. *Int. J. Psychophysiology* 165:56-67 PMID: 3387269

40. DeGeorge, E., Fullen, C., Gess, J., Kleiner, J., Larson-Prior, L.J. (2021) Age of onset and medication effects on cognitive performance and quality of life in patients with epilepsy. *Epilepsy & Beh*, 121:108008 PMID: 34004525

41. Syeda, H.B., Glover, A., Pillai, L., Kemp, A., Spencer, H., Lotia, M., Larson-Prior, L., Virmani, T. (2022) Amplitude modulation and dopamine response of finger tapping and gait are related in Parkinson’s disease. *Scientific Reports,* 12(1):4180. doi: 10.1038/s41598-022-07994-8. PMCID: PMC8907286

42. Elam, J.S., Glasser, M.F., Harms, M.P., Stamatios, N.S., Anderssson, J.L.R., Burgess, G.C., Curtiss, S.W., Oostenveld, R., Larson-Prior, L.J., Schoffelen, J-M., Hodge, M.R., Cler E.A., Marcus D.M., Barch, D.M., Yocoub, E., Smith, S.M., Ugurbil, K., Van Essen, D.C. (2021) Human Connectome Project: A Retrospective. *Neuroimage*, 80:62-79 PMID: 23684880.

43. Na, X. Li, T., Larson-Prior, L.J., Baldwin, C.E., Badger, T.M., Ou, X. (2021) Correlations between sleep disturbance and brain cortical morphometry in healthy children. *Sleep Science & Practice*, 5:16.

44. Merten, J.E.†\*, Villarrubia, S.A. †, Holly, K.S., Kemp, A.S.\*, Kumler, A.C., Larson-Prior, L.J.‡, Murray, T.A.‡ (2022) The use of rodent models to better characterize the relationship among epilepsy, sleep and memory. *Epilepsia*, 63(3):526-536. PMID: 34985784

45. Syeda, H.B., Glover, A., Pillai, L., Kemp, A.S., Spncer, H., Lotia, M., Larson-Prior, L.J., Virmani, T. (2022) Amplitude setting and dopamine response of finger tapping and gait are related in Parkinson’s disease. Sci. Rep. 12(1): 4180. PMID: 35264705

46. Bona, J., Kemp, A.S.\*, Cox, C.\*, Nolan, T.S., Pillai, L., Das, A.\*, Galvin, J.E., Larson-Prior, L., Virmani, T., Prior, F. (2022) Semantic integration of multi-modal data and derived neuroimaging results using the Platform for Imaging in Precision Medicine (PRISM) in the Arkansas Imaging Enterprise System (ARIES). *Frontiers in Artificial Intell*., 4:649970 PMID: 35224477

47. Scott, H, Griffen, C., Coggins, W., Elberson B., Abdeldayem, M., Virmani, T., Larson-Prior, L.J., Petersen E. (2022) Virtual reality in the neurosciences: current practice and future directions. *Frontiers in Surgery: Neurosurgery*, doi:.org/10.3389/fsurg.2021807195 PMID: 35252318

48. Alatorre-Cruz, G.C., Downs, H., Hagood, D., Sorenson, S.T., Williams, K., Larson-Prior, L.J. (2022) Effect of obesity on arithmetic processing in preteens with high and low math skills. An event-related potentials study. *Frontiers in Human Neuroscience: Cognitive Neuroscience* (16). PMID: 35360282 Shared to OpenNEURO. <https://openneuro.org/datasets/ds004019/versions/1.0.0>

49. Virmani, T., Lotia, M., Glover, A., Pillai, L., Kemp, A.\*, Iyer, A., Farmer, P., Syed, S., Larson-Prior, L., Prior, F. (2022) Feasibility of telemedicine research visits in people with Parkinson’s residing in medically underserved areas. *J. Clinical Trans Sci*. 1-36. PMID: 36590358

50. Shoults, C.C., Rutherford, M.W., Kemp, A.S., Addicott, M., Brown, A., Greene, C.J., Hayes, C.J., Gan, J., Larson-Prior, L.J., Bona, J.P. (2023) Determining caregiver burden using social media forums. *Int. J. Environmental Res. and Public Health*. 20(3):1933 PMID: 36767297

51. Alatorre-Cruz, G.C., Andres, A., Gu, Y., Downs, H., Hagood, D., Sorenson, S.T., Williams, K., Larson-Prior, L.J. (2023) Impact of feeding habits on the development of language-specific processing of phonemes in the infant brain. An event-related potentials study. *Front. Nutr.- Nutrition, Psychology and Brain Health*. doi:10.3389/fnut/2-23/1032413. PMID: 36875846

52. Gilbreath, D., Hagood, D., Alatrorre-Cruz, G., Andres, A., Downs, H., Larson-Prior, L.J. (2023) Effects of early nutrition factors on baseline neurodevelopment during the first 6 months of life: an EEG study. *Nutrients*, 15:1535. PMID: 36986265

53. Virmani, T., Bazanova, O.M., Larson-Prior, L.J. (2023) Editorial: Neuroscience of posture and gait control: mechanisms, influencing factors and cognitive-motor retraining. *Frontiers Hum Neurosci* 17:1197022. [doi.org/10.3389/fnhum.2023.1197022](https://doi.org/10.3389/fnhum.2023.1197022). PMID: 37261080

54. Virmani, T., Pillai, L., Landes, R., Glover, A., Larson-Prior, L. Prior, F., Factor, S. (2023) Gait declines differentially in, and improves prediction of, people with Parkinson’s Disease converting to a freezing of gait phenotype. *J Park Dis* 13(6):961-973

55. Iyer, A.+, Kemp, A.S.+\*, Rhamatallah, Y., Pillai, L., Glover, A., Prior, F.W., Larson-Prior, L.J., Virmani, T. A (2023) machine learning method to process voice samples for identification of Parkinson’s Disease. *Sci Rep*, 13:20615 (+co-first authors). PMID: 37996478

56. Virmani, T., Kemp, A.S.\*, Pillai, L., Glover, A., Spencer, H. Larson-Prior, L., (2023) Development and implementation of the frog-in-maze game to study upper limb movement in people with Parkinson’s disease. *Sci. Rep*, 13:22784. PMID: 38123606

57. Uddin, L.Q., Betzel, R.F., Cohen, J.R., Damoiseaux, J.S., De Brigard, F., Eickhoff, S.B., Fornito, A., Gratton, C., Gordon, E.M., Laird, A.R., Larson-Prior, L.J., McIntosh, A. R., Nickerson, L.D., Pessoa, L., Pinho, A.L., Poldrack, R.A., Razi, A., Sadaghiani, S., Shine, J.M., Yendiki, A., Yeo, B.T.T., Spreng, R.N. (2023) Controversies and current progress on large-scale brain network nomenclature from OHBM WHATNET: Workgroup for Harmonized Taxonomy of NETworks. *Network Neurosci*, 7(3):864-905. PMID: 37781138

58. Virmani, T., Pillai, L., Smith, V., Glover, A., Abrams, D., Farmer, P., Syed, S., Spencer, H.J., Kemp, A., Barron, K., Murray, T., Morris, B., Bowers, B., Ward, A., Imus, T., Larson-Prior, L.J., Lotia, M., Prior, F. (2024) Feasibility of regional center telehealth visits utilizing a rural research network in people with Parkinson’s disease. *J. Clinical Trans Sci*. 8(1):e63. PMID: 38655451

59. Gilbreath, D.\*, Hagood, D., Larson-Prior, L. (2024) A systematic review over the effect of early infant diet on neurodevelopment: insights from neuroimaging. *Nutrients*. 16(11):1703. PMID: 38892636

60. Fox, N.A., Perez-Edgar, K., Morales, S., Brito, N.H., Campbell, A.M., Cavanaugh, J.F. et al. (2024) The development and structure of the HEALthy Brain and Child Development (HBCD) Study EEG protocol. *Devel Cogn Neurosci*, 69:101447. PMID: 39305603

61. Rahmatallah, Y., Kemp, A.S., Iyer, A., Pillai, L., Larson-Prior, L.J., Virmani, T., Prior, F. (2025) Pre-trained convolutional neural networks identify Parkinson’s disease from spectrogram images of voice samples. *Res Sq* 2024 PMID: 39764112. *Scientific Reps* 15:7337. PMID: 40026201

62. Uddin, L.Q., Kong, R., Betzel, R.F., Cohen, J.R., Damoiseaux, J.S., De Brigard, F., Eickhoff, S.B., Fornito A., Gratton, C., Gordon, E.M., Holmes, A.J., Laird, A.R., Larson-Prior, L., Nickerson, L.D., Pinho, A.L., Razi, A., Sadaghiani, S., Shine, J.M., Yendiki, A. Yeo, B.T., Spreng, R.N., Xue, A. (2025) A network correspondence toolbox for quantitative evaluation of novel neuroimaging results. Preprint: *BioRxiv* 2024 PMID: 38948881, *Nature Communications*, 16:2930. PMID: 40133295

63. Gilbreath, D., Hagood, D., Andres, A., Larson-Prior, L.J. (2025) The effect of diet on the development of EEG microstates in healthy infants throughout the first year of life. *Neuroimage*, 24:121152. PMID: 40139517

64. Kemp, A.S.\*\*, Eubank, A.J.\*, Younus, Y., Galvin, J.E., Prior, F.W., Larson-Prior, L.J. (2025) Sequential patterning of dynamic brain states distinguish Parkinson’s disease patients with cognitive impairment. *Neuroimage*, Apr 14:103729. PMID: 40252310

65. Fitzgerald, L.R., Weaver, J.W., Mancino, M.J., Addicott, M., Larson-Prior, L.J., Thostenson, J., Oliveto, A.H. (2024) Exploratory study of heart rate variability among participants with opioid use disorder undergoing outpatient buprenorphine-assisted detoxification and transition to injection naltrexone. *Exp Clin Psychopharmacol*, in press

***Preprints in Review***

66. Holly, K.S., Kumler, A.C., Dhungel, P., Rudrashetty, S., Villarrubia, S., Merten, J.\*, Kemp, A.S.\*, Iasemidis, L., Larson-Prior, L.J., Murray, T.A. Automated rodent sleep spindle detector: MATLAB app using two complementary search algorithms. *Sci Rep*, in revision Preprint: *Research Square* 2024 <https://doi.org/10.21203/rs.3.rs-3523866/v1>

***Under Review***

67. Pillai, L., Glover, A., Larson-Prior, L., Prior, F., Landes, R., Factor, S., Virmani, T. (2024) Towards objective individualized medicine for people with Parkinson’s Disease. *Park & Related Dis*, in review

68. Alatorre-Cruz, G.C.\*, Andres, A., Downs, H., Hagood, D., Gu, Y., Larson-Prior, L.J. (2024) Psychophysiological differences in semantic processing in breastfed and formula-fed children. *Psychophysiol*, in revision

69. Kemp, A.S.\*, Escalona-Vargas, D., Galvin, J.E., Larson-Prior, L.J. (2024) EEG microstates in Parkinson’s Disease with mild cognitive impairment. *PLoS*, in revision

70. Na, X, Larson-Prior, L., Ou, X (2024) Sex-dependent differences in brain cortical development and cognitive functions associated with childhood obesity. *Pediatric Obesity*, in review.

71. Huang, Y., Na, X., Larson-Prior, L.J., Ou, X. (2025) Body weight-related alterations in white matter functional connectivity in children. *BMCNeurology*, in review

72. Ramirez, A., Debopam, S., Larson-Prior, L., Escalona-Vargas, D. (2025) Visual working memory in pediatric epilepsy using magnetoencephalography: pilot study. *EMBC25*, in press

73. Utecht, S., Gomez-Acevedo, H., Bona, J., van-der Plas, E., Prior, F., Larson-Prior, L.J. (2025) An activation likelihood estimation meta-analysis of voxel based morphometry studies of chemotherapy related brain volume changes in breast cancer (2025) *Cancers*, in review

***Peer-Reviewed Proceedings Volumes***

74. Larson-Prior, L.J., Zempel, J. and Snyder, A.Z. (2006) Imaging across scale: the promise of multi-modal imaging. Life Science Systems & Applications Workshop, IEEE/NLM, IEEE Xplore pg. 1-2. doi 10.1109/LSSA.2006.250435.

75. Politte D, Prior F, Ponton C, Nolan T, Larson-Prior LJ (2010) Sources of non-physiologic noise in simultaneous EEG-fMRI data: a phantom study. IEEE/EMBC Conf. 2010, IEEE Xplore 5:129-132. PMID: 21095809.

76. Kelsey M, Politte, D, Verner R, Zempel J, Nolan T, Babajani-Feremi A, Prior F, Larson-Prior L (2012) Determination of neural state classification metrics from the power spectrum of human ECoG. IEEE/EMBC Conf, IEEE Xplore 2012:4336-4340 PMID 23366918

77. Smith KE, Politte, DG, Reiker GG, Nolan TS, Hildebolt C, Matteson C, Tucker D, Prior FW, Turovets S, Larson-Prior L.J. (2012) Automated measurement of pediatric cranial bone thickness and density from clinical computed tomography. IEEE/EMBC Conf, IEEE Xplore 2012:4462-4465 PMID 23366918

78. Song, J., Turovets, S. Govyadinov, P., Mattson, C., Luu, P., Smith, K., Prior, F., Larson-Prior, L., Tucker, D. (2013) Anatomically accurate infant head models for EEG source localization. Journal of Physics: conference Series, 2013; 434:012012.

79. Smith KE, Politte, DG, Reiker GG, Nolan TS, Hildebolt C, Matteson C, Tucker D, Prior FW, Turovets S, Larson-Prior L.J. (2013) Automated measurement of skull circumference, cranial index, and braincase volume from pediatric computed tomography. IEEE Eng Med Biol Soc 2013. PMID 24110603

80. Kelsey, M, Prior, F.W., Larson-Prior, L.J. (2015) Spatiotemporal analysis of the appearance of gamma-band microstates in resting state MEG. IEEE Eng Med Biol Soc 2015. PMID 26736833

***In preparation***

Kemp, A.S.\*, Gan, J., Addicott, M., Bona, J., Brown, A., Greene, C., Hayes, C., Rutherford, M., Shoults, C., Larson-Prior, L.J. Assessing the needs of family caregivers in Arkansas using community informed research. *J* *Clinical Trans Sci*., in prep

Gilbreath, D., Andrews, A., Hagood, D., Andres, A., Larson-Prior, L. Effects of early nutrition on aperiodic neuronal activity from 2 to 12 months using EEG analysis. *Psychophysiol*.

***Invited Reviews***

Slater, N.T., Freedman, J.E. and Larson-Prior, L.J. (1988) Russell's viper venom proteins: Molecular probes for neurotransmitter receptors (Minireview). *Comp. Biochem. Physiol.*, 91C:51-60. PMID 2905229

Ozcan, A., Wong, K.H., Larson-Prior, L.J., Cho, A-H., Mun, S-K. (2012) Background and mathematical analysis of diffusion MRI methods*. Int. J. Imaging Systems and Tech*, 22:44-52.

Larson-Prior, L.J., Azhar, G., Davila, D.G., Jun, S-R., Kemp, A.S., Nookaew, I., Wei, J.Y., Wassenaar, T.M. (2017) Neurobiology of sleep and microbiomics in aging. *OBM Neurobiology*, 1(2):003; doi:10.21926/obm.neurobiol.1702003.

***Book Chapters***

Ulinski, P.S., Larson-Prior, L.J., and Slater, N.T. (1991) Cortical circuitry underlying visual motion analysis in turtles. In: *Visual Structures and Integrated Functions.* M.Arbib and J.-P. Ewert (Eds). Springer-Verlag, Berlin Heidelberg. pp 307-324.

Ulinski, P.S., Larson-Prior, L.J., and Slater, N.T. (1991) Cellular and network determinants of visual motion properties in cortical neurons: studies in an *in vitro* preparation of visual cortex. In: *Neural Systems: Analysis and Modeling*. F. Eeckman (Ed.), Kluwer Academic, Boston, p. 211-212.

Lu, H., Prior, F.W. and Larson-Prior, L.J. (1997) Information processing in a cerebellar granule cell. In: *Computational Neuroscience: Trends in Research, 1997.* J. Bower (Ed.), Plenum Press, pp. 115-121.

Lu, H., Prior, F.W. and Larson-Prior, L.J. (1998) The role of feedforward and feedback inhibition on frequency-dependent information processing in a cerebellar granule cell. In: *Computational Neuroscience: Trends in Research, 1998.* J. Bower (Ed.), Plenum Press, pp. 453-458.

Larson-Prior, L.J. (2000) The Cerebellum. In: *Neuroscience Secrets*. M. Wong-Riley (Ed), William Lamsback, Hanley & Belfus Inc., Philadelphia, pp. 206-224.

Larson-Prior, L.J. (2013) Parallels in Neural and Human Communication Networks. In: *The Handbook of Human Computation* Michelucci, P (Ed) Springer, New York

**Professional Workshops and Courses**

Strategies to Ensure Successful Mentoring. J.M. Lakoski and **L.J. Larson-Prior**. Presented at: Southern Regional Women in Medicine and Science Leadership Conference. 2003.

Maximizing Your Effectiveness as a Mentor. **L.J. Larson-Prior** and J.M. Lakoski. Presented at: University of Pittsburgh Schools of the Health Sciences, 2004.

Empowering Academic Career Success: Building and Sustaining Mentoring Relationships. **L.J. Larson-Prior**. Presented at: Washington University Postdoctoral Seminar Series, 2005.

Empowering Academic Career Success. **L.J. Larson-Prio**r. Presented at: Washington University Professional Development Series, 2006.

Managing Your Mentor: Tips for Being a Successful Mentee. Office of Academic Career Development Postdoctoral Professionalism Series. J.M. Lakoski and **L. J. Larson-Prior**. University of Pittsburgh Schools of the Health Sciences. 2007.

Maximizing Mentoring Relationships. Office of Academic Career Development Health Science Faculty Professional Development Series. J.M. Lakoski and **L. J. Larson-Prior**. University of Pittsburgh Schools of the Health Sciences. 2007.

Empowering Academic Career Success. **L.J. Larson-Prio**r. Panel discussion following lecture: L.J. Larson-Prior, PhD (moderator); L. Cottler, PhD, MPH; E. Majerus MD, PhD; J. Kauwe, PhD. Presented at: Washington University Professional Development Series, 2008.

Building Career Success: finding and sustaining dynamic mentoring relationships. **L.J. Larson-Prior**. Panel discussion following lecture: L.J. Larson-Prior, PhD (moderator); K. O’Malley, PhD; K. Kornfeld, MD, PhD; S. Imai, MD, PhD; A. Stowe, PhD. Presented at: Washington University Professional Development Series, 2009.

Mentor-Trainee Relationships. **L.J. Larson-Prior**. Washington University School of Medicine PERCSS-RCR Event. 2013

Mentoring Matters. University of Arkansas for Medical Sciences TRI Virtual Workshop.Planning Committee member and presenters: B. Boatang, R. Hakkak, E. Borsheim, E., **L.J. Larson-Prior**, K. Sexton,, M. Tilford. January 2021

Mentoring 101. **L.J. Larson-Prior**. University of Arkansas for Medical Sciences TRI Research Fundamentals Seminar. September 2021

American Association of Anatomists pre-conference workshop: Inter-Professional Education, Anatomy Competence Event Planning. Presenters: W. Ward, D. Davies, L.J. Larson-Prior, E. Meyer

UAMS Women’s Faculty Development Research Committee Navigating Faculty Career Advancement Panel presentation: Presenters: L.J. Larson-Prior, Nukhet Aykin-Burns, Giulia Baldini. May 2023

Nuts and Bolts of Building and Managing your Independent Research Program. Center for Childhood Obesity Retreat: Presenters: L.J. Larson-Prior and J. Weber. Followed by a panel discussion in which the presenters participated together with seven faculty colleagues

**Abstracts and Presentations**

***Invited Lectures*** *(chronological order)*

1. "*Synaptic Physiology of the Turtle Cerebellum*" Presented by L.J. Larson-Prior to the Reptile Social, Society for Neuroscience, Toronto, Canada. (Coauthor: N.T. Slater) November 1988.

2. "*The Role of Hippocampus in Learning and Memory*" Presented by L.J. Larson-Prior at the University of Illinois. February 1990.

3. "*NMDA-mediated Synaptic Transmission in the Turtle Hippocampus*" Presented by L.J. Larson-Prior to the Midwestern Hippocampal Meeting, Evanston, Illinois. June 1990.

4. "*Slow but Sure: Novel Synaptic Potentials in Turtle Cerebellum*". Presented by L.J. Larson-Prior at The University of Oklahoma Health Sciences Center. October 1990.

5. "*NMDA-mediated Synaptic Transmission in the Turtle Hippocampus*" Presented by

L.J. Larson-Prior at Northeast Ohio Universities College of Medicine. December

1990.

6. “*Slow Excitatory Synaptic Transmission in the Cerebellum*” Presented by L.J. Larson- Prior at the University of California, Riverside. January 1991.

7. *"Frequency dependent modulation of slow EPSPs in turtle cerebellum"* Presented by L.J. Larson-Prior at the University of Chicago. March 1991.

8. *"Short-term plasticity at the parallel fiber/Purkinje cell synapse and the regulation of pacemaker activity"* Presented by L.J. Larson-Prior at the American Association of Anatomists Satellite Conference on Synaptic Plasticity. April 1991.

9.  *“The regulation of pacemaker discharges in cerebellar Purkinje cells”*  Presented by L. J. Larson-Prior at the University of Oklahoma Health Sciences Center. May 1991.

10.  *“The regulation of cerebellar Purkinje cell discharge by defined afferent systems”*  Presented by L. J. Larson-Prior at Northwestern University Medical School. May 1991.

11.  *"Frequency dependent expression of a slow NMDA-dependent EPSP in cerebellar Purkinje cells evoked by defined afferent systems"*  Presented by L.J. Larson-Prior at the University of Arkansas. January 1992.

12. *"Neurophysiology of vestibular neurons in non-mammalian vertebrates"*  Presented by L.J. Larson-Prior at Neural Control of Movement Conference. April 1992.

13. *"The role of excitatory amino acids in synaptic transmission in the cerebellar cortex"* Presented by L.J. Larson-Prior at the Department of Pharmacology, Penn State University College of Medicine. September 1993.

14. *"The physiologic basis for information processing in the cerebellar cortex"* Presented by L.J. Larson-Prior at Johns Hopkins University School of Medicine. September 1994.

15. *"Short-term plasticity in the cerebellar cortex: regulation of pacemaker activity in Purkinje cells"* Presented by L.J. Larson-Prior at Neuroscience Day, Penn State University College of Medicine. September 1995.

16. *"The physiologic basis for information processing in the cerebellar cortex"* Presented by L.J. Larson-Prior at the Department of Biochemistry and Molecular Biology, Penn State University College of Medicine. December 1995.

17. *"The role of serotonin in synaptic transmission in the cerebellar cortex"* Presented by L.J. Larson-Prior at the Department of Cell Biology, Neurobiology and Anatomy, Loyola University College of Medicine. September 1996.

18.  *"Serotonergic modulation of cerebellar signal processing"* Presented by L.J. Larson-Prior at the Department of Anatomy and Structural Biology, University of South Dakota School of Medicine. September 1996.

19. “*Mechanisms of cerebellar processing of sensory information*” Presented by L.J. Larson-Prior at the San Francisco College of Osteopathic Medicine. March 1997.

20. “*Serotonergic modulation of cerebellar cortical processing*” Presented by L.J. Larson-Prior at the Department of Cell and Neurobiology at the University of Southern California. January 1998.

21. “*The role of serotonin in cerebellar processing*” Presented by L.J. Larson-Prior at the National Science Foundation. June 2000.

22. "*Integration across imaging modalities*" Presented by L.J. Larson-Prior at the Neuroimaging Laboratory at Washington University in St. Louis. February, 2005.

23. "*Imaging neural function across scale: the promise of multi-modal integration*" Presented by L.J. Larson-Prior at the Department of Physics and Astronomy at the University of Missouri St. Louis. March 2006.

24. "*Imaging across scale: the promise of multi-modal imaging*" Presented by L.J. Larson-Prior at the IEEE/NLM Life Science Systems & Applications Workshop. July 2006.

25. “*Imaging the resting brain: studies of state changes in the brain at rest*” Presented by L.J. Larson-Prior at the NINDS Center Core for Brain Imaging (NCCBI) Symposium Series, Washington University. December 2006.

26. “*Functional connectivity in the sleeping brain*” Presented by L.J. Larson-Prior at SLEEP2007, Minneapolis, MN. June 2007.

27. “*Neuroimaging of Human Sleep*” Presented by L.J. Larson-Prior at the Sleep Research Society’s 13th Annual Trainee Symposia Series, Baltimore, MD. June 2008.

28. “*Imaging pathologies of sleep and their consequences*” Presented by L.J. Larson-Prior at Neurology Grand Rounds, Washington University Medical School, St. Louis. MO. January 2009.

29. “*Imaging the role of sleep in human cognitive function*” Presented by L.J. Larson-Prior at Virginia Tech, Blacksburg VA. April 2009.

30. “*Brain network connectivity following sleep-related consolidation of motor learning*” Presented by L.J. Larson-Prior at the NINDS Lecture Series, Washington University Medical School. October 2009.

31. “*Can we read your mind with fMRI?*” Presented by L.J. Larson-Prior at SciFest 2009, St. Louis Science Center. October 2009.

32. “*Assessing the function of human sleep with neuroimaging*” Presented by L.J. Larson-Prior, University of North Texas. October 2009.

33. “*Resting state functional connectivity of chronic pain: migraine headache*” Presented by L.J. Larson-Prior, Neuroscience Research Institute, Gachon University of Medicine and Sciences, Seoul, South Korea. March 2010.

34. “*Modulation of functional neural networks in the transition from wake to sleep*” Presented by L.J. Larson-Prior, 29th International Summer School of Brain Research “Slow Brain Oscillations of Sleep, Resting State and Vigilence” in Amsterdam, The Netherlands. July 2010.

35. “*Modulation of functional neural networks in the transition from wake to sleep*” Presented by L.J. Larson-Prior, Samsung Medical Center, Seoul, South Korea. July 2010.

36. “*The promise of neuroimaging in human sleep research*” Presented by L.J. Larson-Prior, Neuroscience Research Institute, Gachon University of Medicine and Sciences, Inchon, South Korea. September 2010.

37. “*Imaging neural state changes of sleep and pathologies of attention*” Presented by L.J. Larson-Prior, Neuroimaging Technologies for Optimizing Performance Workshop, Alexandria, VA. September 2010.

38. “*Accurate head modeling: defining the right parameters*” Presented by L.J. Larson-Prior (Smith, K, Politte, D, Nolan T, Prior F, co-authors). Electrical Geodesics Inc Workshop on Anatomical Constraints for Dense Array EEG Research at Human Brain Mapping, June 2011.

39. “*Functional neural network modulation in wake, sleep and learning*” Presented by L.J. Larson-Prior, Neuroscience Research Institute, Gachon University of Medicine and Sciences, Inchon, South Korea. July 2011

# 40. “*Introduction to Macro-Connectomics: Future Prospects*” Presented by L.J. Larson-Prior at the International Workshop on the Study of Neuro-Stress with MRI Tractography and PET Imaging, Inchon, South Korea. February 2012

41. “*The Role of Sleep in Motor Performance*” Presented by L.J. Larson-Prior, Department of Physical Therapy at Washington University School of Medicine. October 2012

42. “*Imaging the human brain in action: the promise of simultaneous EEG/fMRI*” Presented by L.J. Larson-Prior at the Neuroscience Lecture Series, Southern Illinois University Carbondale, October 2012

43. “*Adding dynamics to human brain connectomics with MEG*” Presented by L.J. Larson-Prior at the Biomedical Engineering Senior Seminar Series, Illinois Institute of Technology. Chicago. May 2013

44. “*Brain networks in health and disease*” Presented by L.J. Larson-Prior, University of Arkansas for Medical Sciences. May 2015.

45. “*The promise of sleep in health and disease*” Presented by L.J. Larson-Prior, State University of New York at Stony Brook. June, 2015

46. “*Effect of sleep quality and emotional set on working memory function*” Presented by L.J. Larson-Prior at the Neuroscience of Interaction of Sleep, Stress and Performance Workshop, Virginia Tech Arlington Innovation Center, Arlington, VA. June, 2015.

47. “*Introduction of HCP-MEG Connectome*” Presented by L.J. Larson-Prior at the Human Brain Mapping HCP Course entitled Exploring the Human Connectome, Honolulu, HW. June, 2015.

48. “*The promise of sleep in an aging population*” Presented by L.J. Larson-Prior at the Reynolds Institute of Aging at the University of Arkansas for Medical Sciences. February, 2016.

49. “*The contribution of sleep to human performance*” Presented by L.J. Larson-Prior at the Department of Neurobiology and Developmental Sciences at the University of Arkansas for Medical Sciences. March 2016.

50. “*Introduction of HCP-MEG Connectome*” Presented by L.J. Larson-Prior at the Human Brain Mapping HCP Course entitled Exploring the Human Connectome, Boston MA. June 2016.

50. “*Connectomics: Mapping the brain in health and disease*” Presented by L.J. Larson-Prior at Arkansas State University. September 2016.

51. “*Introduction of HCP-MEG Connectome*” Presented by L.J. Larson-Prior at the Human Brain Mapping HCP Course entitled Exploring the Human Connectome, Vancouver BC. June 2017.

52. “*Imaging memory function in epilepsy patients*” Presented by L.J. Larson-Prior at the NeuroNEM Workshop, Louisiana Tech University, Ruston LA July 2017.

53. “*Neuroimaging: Understanding the diseased brain*” Presented by L.J. Larson-Prior at Arkansas State University, September 2017.

54. “*Connectomics: the promise and the challenges*” Presented by L.J. Larson-Prior at DBMI Seminar Series, February 2018.

55. “*The impact of sleep on neurological function*” Presented by L.J. Larson-Prior at Neurology Grand Rounds, UAMS, March 2018.

56. “*Introduction of HCP-MEG Connectome*” Presented by L.J. Larson-Prior at the Human Brain Mapping HCP Course entitled Exploring the Human Connectome, Oxford UK, June 2018.

57. “*So what’s so special about sleep anyway?*” Presented by L.J. Larson-Prior at Psychiatry Grand Rounds, UAMS, September 2018.

58. “*Introduction of HCP-MEG Connectome*” Presented by L.J. Larson-Prior at the Human Brain Mapping HCP Course entitled Exploring the Human Connectome, Portland OR, June 2019.

59. “*Is Parksinson’s disease a motor disorder*?” Presented by L.J. Larson-Prior to the Neuropsychiatry Unit, Champalimaud Center for the Unknown, Lisbon Portugal, July 2020.

60. “*The complex relationship between chronic opioid use and sleep*” Presented by L.J. Larson-Prior at the TRI Innovation Seminar Series, September 2020.

61. “*Mentoring 101*” presented by L.J. Larson-Prior as part of the TRI Research Fundamentals Seminar, September 2021.

62. “*The impact of feeding behaviors on cognitive development in children*” Presented by L.J. Larson-Prior to the Institute for the Advancement of Food and Nutrition Sciences webinar series, May 2022.

63. “*The role of sleep in healthy brain function*” Presented by L.J. Larson-Prior at Neurology Grand Rounds. May 2023.

64. “*Research Ethics*” Presented at the Future Sensors EPSCoR All-Hands Meeting in Ruston LA. July 2023.

65. “*Moving with Parkinson’s Disease*” Presented by L.J. Larson-Prior to the Conway Parkinson’s Disease Support Group. October 2023

66. “*The role of sleep in cognitive function across the lifespan*” Presented by L.J. Larson-Prior at the Jean Mayer Human Nutrition Research Center on Aging at Tufts University Seminar Series. November 2023

67. “Brain Power and Balance: How obesity, circadian rhythms and nutrition effect cognitive function in children” Presented by L.J. Larson-Prior at the University of Maryland. January 2025.

**Abstracts** (From past decade only, reverse chronological order)

***Poster presentations***

 Iyer A, Kemp A, Rahmatallah Y, Pillai L, Glover A, Prior F, Larson-Prior L, Virmani T. “A machine learning method to process voice samples for identification of Parkinson’s disease,” Abstract and poster presentation, Bridge2AI-Voice Symposium, Tampa Fl, April 22, 2025.

Dickinson, K.J., Ward, W., Boone, M., Larson-Prior, L.J., Turner, R., Neill, K. F. Training faculty to engage in difficult conversations with health professions students in distress: a simulation-based approach. Simulation Research Day, October 2024.

Virmani, T., Pillai, L., Rone, M., Stone, A., Smith, V., Glover, A., Abrams, D., Avery, D., Farmer, P., Syed, S., Spencer, H., Kemp, A., Barron, K., Murray, T., Bowers, B., Hall, J., Ward, A., Petronio, D., Imus, T., Larson-Prior, L., Landes, R.D., Prior, F., Dhall, R. Bridging the *Access to Care* Gap for People with Parkinson’s Disease residing in rural medically underserved areas. American Neurological Association conference, September 2024

Hoq, M.E., Prior, F.W., Larson-Prior, L.J. Optimizing and harnessing 20 million NLST CT lung screening images for robust foundation model training. August 2024

Eubank, J.\*, Kemp, A.S.\*, Galvin, J.E., Prior, F., Larson-Prior, L. Patterning of dynamic brain states distinguish Parkinson’s patients with mild cognitive impairments. *OHBM*, July 2024

Gilbreath, D.\*, Hagood, D., Down, H., Larson-Prior, L. Effects of diet on the neurodevelopment of 2- and 6-month old infants determined by EEG microstates. *OHBM*, July 2024

Bragg Zizza, K., Larson-Prior, L., Hilpert, J., Weber, J., Williams, H., Falkenthal, E. Building and sustaining COBRE Scientific research cores. *NISBRE* Conference, June 2024

Koturbash, I., Swindle, T., Porter, C., Ayers, B., Rose, S., Allred, M., Larson-Prior, L., Weber, J. Establishment of the peer mentoring and work/life balance committee as an important pillar of the sustainability or success of the Center Members. *NISBRE* Conference, June 2024

Utecht, S.\*, Larson-Prior, L.J. Chemotherapy-related cognitive impairment (CRCI) in breast cancer: an ALE meta-analysis of neuroimaging studies. *International Cancer Imaging Soc*, September 2023

Gilbreath, D.\*, Alatorre -Cruz, C.G.\*, Gu, Y, Downs, H., Hagood, D., Williams, D.K., Larson-Prior, L.J. (2023) Psychophysiological correlates of protein vs. carbohydrate intake and inhibitory control in overweight preteens. *Soc Psychophysiol Res*, September 2023

Alatorre -Cruz, C.G.\*, Andres, A., Downs, H., Hagood, D., Larson-Prior, L.J. (2023) Psychophysiologial differences in semantic processing breastfed and milk formula-fed children. *OHBM*, July 2023

Gilbreath, D.\*, Alatorre -Cruz, G.\*, Hagood, D., Larson-Prior, L. (2023) Effects of maternal gestational weight on neurodevelopment of 5-year-old children using baseline EEG. *OHBM*, July 2023

Kemp, A.S.\*, Escalona-Vargas, D., Eubank, J.\*, Galvin, J.E., Gilbreath, D., Younus, Y., Prior, F., Larson-Prior, L. (2023) Sequential patterning of dynamic brain states distinguish individual’s with Parkinson’s disease. *OHBM*, July 2023

Iyer, A.\*, Prior, F., Virmani, T., Larson-Prior, L., Rahmatallah, Y., Kemp, A.\*, Conrad, L. (2023) VAST (Voice and Spiral Tool): A novel multimodal machine learning method to detect Parkinson’s Disease and assess severity. AR-BIC Conference, March 2023

Alatorre-Cruz, C.G.\*, Gu, Y., Downs, H., Hagood, D., Williams, D.K., Larson-Prior, L.J. (2022) Effect of protein vs. carbohydrate intake on inhibitory control in overweight preteens. *Soc for Neurosci*, November 2022

Bona, J. Diehl, A.D., Cox, A.P., Kemp, A.S., Larson-Prior, L.J. (2022) Semantically enhancing childhood nutrition data measurements using open biomedical ontologies. *Intl. Conf Biomed. Ontology*. September 2022

Alatorre-Cruz, C.G.\*, Andres, A., Gu, Y., Downs, H., Hagood, D., Williams, D., Larson-Prior, L. (2022) Impact of diet on the development of hemispheric asymmetry in processing of phonemes in infant brain. *OHBM*, June 2022

Gilbreath, D.\*, Escalona-Vargas, D., Kemp, A.S.\*, Virmani, T., Larson-Prior, L. (2022) Resting-state EEG analysis in Parkinson’s disease with measurable cognitive impairment. *OHBM*, June 2022

Kong, R., Spreng, N., Nickerson, Fornito, A., Laird, A., L., Razi, A, Yendiki, A., Gordon, E, Larson-Prior, L., Cohen, J., Damoiseaux, J., Betzel, R., Eickhoff, S., Sadaghiani, S., Uddin, L., Yeo, B.T. (2022) Correspondences across 16 group-level functional brain network atlases. OHBM, 6/2022

McKissack, L.G.\*, Borsheim, E., Larson-Prior, L., Edwards, T.J., Diaz, E.C. (2021) Anatomical placement and scoring algorithm of accelerometer monitors impact estimates of sleep duration in children. The Obesity Society, 11/2021

Uddin, L., Betzel, R., Cohen, J. Damoiseaux, J., De Brigard, F., Eickhoff, S., Fornito, A., Gratton, C., Gordon, E., Laird, A., Larson-Prior, L., McIntosh, A., Nickerson, L., Pessoa, L., et al. (2021) Update from WHATNET: Workgroup for HArmonized Taxonomy of NETworks. *OHBM virtual meeting*, June 2021

Alatorre-Cruz, G.C.\*, Downs, H., Hagood, D., Sorenson, S.T., Larson-Prior, L. (2021) Effect of obesity on arithmetic processing in preteens with high and low math skill. *Org* *Human Brain Mapping*, June 2021 virtual meeting

Alatorre-Cruz, G.C.\*, Downs, H., Hagood, D., Sorenson, S.T., Larson-Prior, L. (2021) Effect of obesity on inhibitory control in preadolescents dueing stop-signal task: an event related potentials study. *Cognitive Neuroscience*, 2021 virtual meeting

Kemp, A.S.\*, Spencer, H., Pillai, L., Glover, A., Larson-Prior, L., Virmani, T. (2021) Utilization of a novel frog-in-maze finger tapping task to differentiate Parkinson’s disease freezers from non-freezers. *Am Acad Neurology*, April 2021 virtual meeting

Alatorre-Cruz, G.C.\*, Downs, H., Hagood, D., Sorenson, S.T., Larson-Prior, L. (2021) Effect of obesity on inhibitory control in preadolescents during stop-signal task. An event-related potentials study. *Cognitive Neurosci*, March 2021 virtual meeting

Kemp, A.S.\*, Eubank, A.J.\*, Larson-Prior, L.J., Galvin, J.E. (2020) Dynamic functional connectivity markers of cognitive impairment in Parkinson’s disease. *Org* *Human Brain Mapping*, June 2020 virtual meeting

Isaac, L.\*, Fullen, C.\*, Kleiner, J., Kemp, A.\*, Larson-Prior, L., Gess, J. (2020) Mood, but not cognitive functioning, is predictive of self-reported medication effects in epilepsy. *Intl Neuropsychological Soc (INS) Annual Meeting*, November 2020

Fullen, C.\*, Issac, L.\*, Gess, J., Kleiner, J., Kemp, A.\*, Larson-Prior, L. (2020) The effect of patient-specific seizure characteristics on perceived cognitive function. *Intl Neuropsychological Soc (INS) Annual Meeting*, November 2020

Kemp, A.S.\*, Bona, J.P., Nolan, T.S., Larson-Prior, L.J., Virmani, T., Pillai, L., Brochhausen, M., Tarbox, L., Prior, F. (2019) Semantic representations of multi-modal data: neuroinformatic processing pipelines and derived neuroimaging results in the Arkansas Image Enterprise System (ARIES). *AMIA Annual Symposium*, November 2019

Bona, J.P., Kemp, A.S.\*, Nolan, R., Larson-Prior, L.J., Das, A., Virmani, T., Pillai, L., Brochhausen, M., Prior, F. (2019) Semantic integration of neuroinformatics data in the Arkansas Image Enterprise System with open biomedical ontologies. *International Conference on Biomedical Ontology (ICBO)*, July 2019

Bona, J.P., Kemp, A.S.\*, Nolan, T.S., Larson-Prior, L.J., Das, A., Virmani, T., Pillai, L., Brochhausen, M., Prior, F. (2019) Semantic integration of neuroinformatics data in the Arkansas Image Enterprise System (ARIES). *ITCR Annual Meeting*, May 2019

Larson-Prior, L.J., Gu, Y., Andres, A., Downs, H., Bellando, J., Jarratt, K., Badger, T.M., Pivik, R.T. (2019) Infant diet influences the early postnatal development of resting gamma coherence across cortical hemispheres. *Org* *Human Brain Mapping*, June 2019

Carns, D.R\*., Gess, J.L., Kleiner, J.S., Kemp, A.S\*., Larson-Prior, L.J. (2019) Utilization of DKEFS fluency measures to determine laterality in epilepsy patients. *Intl Neuropsychological Soc (INS)*, February 2019

Carns, D.R\*., Kleiner, J.S., Gess, J.L., Kemp, A.S\*., Larson-Prior, L.J. (2019) Relationship of seizure locality an derror rates on the Wisconsin Card Sorting Test. *Intl Neuropsychological Soc (INS)*, February 2019

Tengowski, L\*., Salinas, S\*., Carns, D.R\*., Gess, J.L., Kleiner, J.S., Kemp, A.S., Larson-Prior, L.J. (2019) A task of visual integration can help localize seizure location in pre-surgical epilepsy patients. *International Neuropsychological Soc (INS)*, February 2019

Turovets, S., Morgan, K\*., Hammond, D., Hou, J., McCutcheon, A., Li, K., Kimd, H.E., Smith, K., Nolan, T., Larson-Prior, L.J. (2018) Age specific pediatric head atlases for forward electrical modeling. *American Epilepsy Society (AES)*, November 2019

Larson-Prior, L.J., Kemp, A.S\*., Baghal, A., Syed, S., Matthews, E.E. (2018) P17 Sleep abnormalities in non-CNS malignant tumors. *Cancer Imaging* 18(Suppl 1):28

Larson-Prior, L.J., Escalona-Vargas, D., Kemp, A.S., Morehead, L.C., Kelsey, M., Galvin, J.E. (2018) Microstate analysis of cortical synchrony in Parkinson Disease with mild cognitive impairment. *Org* *Human Brain Mapping*, June 2018

Prior, F.W., Tarbox, L., Kurc, T., Larson-Prior, L.J., Sharma, A., Saltz, J. (2018) PRISM: Neuroinformatics architecture to support research reproducibility and data publication. *Org* *Human Brain Mapping*, June 2018

Giambrone, L\*., Salinas, S.L\*., Kemp, A.S.\*, Kleiner, J.S., Gess, J.L., Larson-Prior L. (2017) Gender differences on a test of spatial memory among patients with epilepsy. *International Neuropsychological Soc (INS)*, November 2018

Mondragon, C\*., Escalona-Vargas, D., Larson-Prior, L. (2017) Nonlinear Analysis of pre and postictal brain states using phase-amplitude coupling. *BMES (Biomedical Engineering Society)* Abstract 3120

Salomon, R.M., Golden, K., Mhyre, J., Eads, L., James, A.J., Clothier, J., Hayar, A., Delgado, D.L., Larson-Prior, L.J. (2017) Resting state fMRI of raphe nucleus activity following ketamine. *Org Human Brain Mapping* June 2017

Hou, J.\*, Turovets, S., Li, K., Luu, P., Larson-Prior, L., Tucker, D. (2017) Spatially resolved pediatric skull conductivities for inhomogeneous electrical forward modeling. *Org* *Human Brain Mapping* June 2017

Salomon, R.M., Golden, K., Mhyre, J., James, A.J., Clothier, J., Hayar, A., Delgado, D.L., Larson-Prior, L.J. (2017) Resting state fMRI of raphe nucleus activity following ketamine. *Biological Psychiatry* 2017

Kelsey, M\*., Prior, F., Larson-Prior, L.J. (2015) MEG microstate topographic stability. *Org* *Human Brain Mapping* June 2015

Larson-Prior, L.J., Nolan, T.S., Hildebolt, C., Galvin, J.E. (2015) Changes in cortical network connectivity in Parkinson’s Disease with mild cognitive impairment. *Org* *Human Brain Mapping* June 2015

Stroup, M.L\*, Liu, J,\* Nolan, T.S., Mun, S.K., Kaufman, D.A.S, Larson-Prior, LJ. (2015) Modulation of affective interference during working memory. *Cog Neuro*sci *Soc* March 2015

Van Patten, R\*., Larson-Prior, L.J., Balota, D., Kaufman, D.A.S. (2015) Effects of context maintenance on cued-Stroop performance in healthy aging. *Int Neuropsych Soc (INS)* February 2015

Larson-Prior, L., LaRosa, P.\*, Brooks, T., Deych, E., Shands, B., Prior, F., Shannon, W. (2014) Statistical evaluation of connectome data using object oriented data analysis. *Org* *Human Brain Mapping.*#132 (87).

Kelsey, M\*, Boyd, A\*, Politte, D., Zempel, J., Prior, F., Larson-Prior, L. (2014) Characterization of microstates of human electrocorticography in awake and NREM sleep. *Org* *Human Brain Mapping.* #1686 (74).

Song, J., Turovets, S., Govyadinov, P., Luu, P., Tucker, D., Prior, F., Larson-Prior, L. (2013) Accurate pediatric head models for EEG source localization. *Org. Human Brain Mapping* June 2013

***Oral Conference Presentations***

Larson-Prior, L.J., Bona, J.P, Virmani, T., Kemp, A.S\*., Pillai, L., Prior, F.W. (2020) **Leveraging telehealth in underserved populations for open data research.** Presented by L.J. Larson-Prior to the Open Science Special Interest Group at the Organization for Human Brain Mapping Virtual Meeting, June 2020.

Smith, K., Politte, D., Reiker G., Nolan, T.S., Hildebolt C., Mattson C., Tucker, D., Prior, F., Turovets, S., **Larson-Prior, L.J.** (2013) Automated measurement of skull circumference, cranial index, and braincase volume from pediatric computed tomography. *IEEE Engineering in Medicine and Biology (EMBC)*. Presented by L.J. Larson-Prior in Osaka, Japan, July 2013.

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