



BROWN
Alpert Medical School

**Clinical Psychology Training Programs at Brown: A Consortium of the
Providence VA Medical Center, Lifespan, and Care New England
Postdoctoral Fellowship Training Program
Postdoctoral Fellowship Description: RESEARCH FOCUS**

Title: Postdoctoral Fellowship in Sleep, Sleep Loss and the Neuroscience of Attention and Learning in Children

APA-accredited: ___YES __X__NO

Site: Bradley Hospital

E.P. Bradley Hospital Sleep Research Laboratory
Sleep And NeuroDevelopment at Bradley Hospital Program

Supervisor(s): Jared M. Saletin PhD, Primary Supervisor

There is a possibility for secondary mentorship within Bradley Sleep Lab (e.g., by Mary A. Carskadon, PhD)

Description of Site

The **Sleep And NeuroDevelopment Program at Bradley Hospital (SAND@BRADLEY)** is directed by Dr. Jared M. Saletin and is located at the **E.P. Bradley Hospital Sleep Research Laboratory** (www.sleepforscience.org).

Our laboratory is affiliated with Brown University's Department of Psychiatry and Human Behavior and MRI Research Facility, as well as Bradley Hospital's new COBRE Center for Sleep and Circadian Rhythms in Child and Mental Health. The Sleep Lab was founded by our director, Dr. Mary A. Carskadon in 1985 to broaden our understanding of sleep and circadian rhythms in developing humans and to foster the training of the next generation of sleep researchers. The SAND@BRADLEY research program has been funded through NIH grants since 2016, with current focus on studying the effects of chronic sleep restriction on brain and behavioral processes underlying attention and impulsivity in early adolescents.

The Sleep Lab and Bradley Hospital — through the new COBRE center — offers a rich environment for training in sleep and circadian rhythms methods and their application to adolescent mental health research. Our dedicated four-bedroom sleep laboratory offers state-of-the-art polysomnography (EEG/EOG/EMG) recording equipment, circadian light control, and behavioral testing capabilities. Our lab also maintains a suite of at-home sleep monitors (actimetry and wearable EEG) facilitates field research.

Research conducted at the Sleep Lab extends to novel applications of sleep and circadian science to adolescent topics such as mood regulation, suicide-risk, weight control, eating disorders, asthma and methods development.

Our lab is dedicated to training. Dr. Carskadon leads a well-respected summer apprenticeship for undergraduate students. Our lab also provides research placements for Brown undergraduate honors

students, pre-doctoral psychology residents, postdoctoral research fellows, and visiting faculty. Our lab hosts monthly academic colloquia and weekly journal club activities to enrich our intellectual community.

Fellowship Aims

1. To provide the fellow with broad post-doctoral training in the area of sleep and circadian rhythms as it relates to the cognitive neuroscience of learning and attention in children and adolescents.
2. To provide the fellow with a strong working knowledge of sleep, circadian rhythms, and developmental cognitive neuroscience research.
3. To provide the fellow with research training and experience in preparation for a research career in sleep, circadian rhythms, cognitive neuroscience or related fields.

Fellowship Timeline

The duration of the fellowship is 2 years. A second year is contingent upon satisfactory progress during the first year and a mutual desire of mentor/mentee to continue. The anticipated start date is July 1, 2022.

Research Activity Plan (90%)

90% of the fellow's time will be dedicated to research/academic activities and professional development/training activities in service of their training goals and the research group's activities. The fellow will participate in the following activities:

Study activities (50%): The fellow will participate in the main R01 research project funded by Dr. Saletin, including meetings, project management, supervision of data acquisition (e.g., running fMRI scans, neurocognitive testing, and in-take interviews, for example), supervision of RAs, data processing and analysis, and data discovery. Determinations of which particular data the fellow focuses on analyzing and processing will be made based on their individual background and interests.

Specific Training (10%): Through their participation in study activities, it is anticipated that the fellow will gain experience and exposure to the following methodologies:

- Structural and functional magnetic resonance imaging (MRI) before and after sleep loss.
- Cognitive performance testing of learning, attention, and/or impulsivity.
- Actigraphy data collection to measure sleep patterns in the home.
- Dim-light-melatonin-onset procedures for ascertaining circadian phase.

While the study touches on each of these tools, the fellow is expected to pick one area to specialize in for more in-depth mastery based on their individual background, interest, and training goals. Secondary mentorship in this formal area will be identified as appropriate; for example, from sleep lab faculty (e.g., Drs. Carskadon, Barker), COBRE-affiliated cores or through other colleagues in the department or on-campus.

Additionally, through archival data opportunities, fellows may also be trained in key sleep research methods, including the scoring and staging of human sleep polysomnography signals. Further opportunities exist in the E.P. Bradley Sleep Research Laboratory's other endeavors. These extra opportunities will be tailored to a fellow's background and interest.

Independent Research Activities. A total of 30% time will be reserved for independent research activities.

Manuscript preparation and submission (15%): The fellow will be encouraged to collaborate on manuscript preparation and poster submissions at national conferences. Individually tailored goals will be established in this area. For example, archival data from prior work may be available to fellows depending on measures congruent with the fellow's interests and expertise.

Grant writing (15%): In concert with didactic activities in grant writing, fellows are encouraged to write and submit their own mentored grant proposal blending their interest with the overall group's studies, pilot data, and collaborations. Dr. Saletin will aid the fellow in assembling a broader group of mentors in support of these efforts.

To further support independent research activities, new measures or tasks may be added to the existing research protocol as applicable to a fellow's individual background and interest.

Clinical Activity Plan (0%)

There is no requirement of clinical work as part of the postdoctoral fellowship, although opportunities may be created under special circumstances. In this case, research effort will be reduced to allow for participation in clinical activities, a primary clinical supervisor will be identified, and attendance at Clinical Ethics will be required.

Path toward licensure: YES _____ NO X _____

Didactics (10%)

The fellow will participate in the following postdoctoral seminars through the Postdoctoral Fellowship Training Program.

Mandatory Didactics:

RFP Core Seminar (1 per week) **Non applied psychology fellows can opt out of selected topics**

Grantsmanship Seminar (1 per week)

DPHB Academic Grand Rounds (1 per month)

Sleep Lab colloquia series (1 per month)

Sleep Lab Journal Club (2-3 per month)

Optional Didactics:

Clinical Ethics – if intending to sit for licensure (1 per month) **Non applied psychology fellows can opt out of selected topics**

CAAS seminars.

Supervision and Evaluation

Supervision will be provided in the form of weekly individual supervision with Dr. Jared M. Saletin.

Progress will be contextualized through a mentor/mentee agreement decided at the onset of the fellowship. At the midpoint and conclusion of the fellowship, the fellow and the supervisor will provide formal evaluations, and evaluations of the program relative to the goals and learning objectives of the fellowship.

Fellows will also be encouraged to develop a second mentor, either within or outside the Sleep Lab community.

Resource Requirements

Fellow will be provided with the following resources:

- Workspace at the E.P. Bradley Hospital Sleep Research Laboratory
- Access to the Brown University Magnetic Resonance Imaging Facility (MRF) and resources
- Access to the sleep lab's library of devices, resources, and protocols for sleep research
- A computer and project specific software
- Internet access
- Telephone
- Support for travel to 1 conference per year will be provided based on grant availability.

Reporting and approval

This fellowship will be part of the Research Fellowship Program (RFP). The position has been discussed and approved by the RFP faculty and Training Committee.

Associate Director, Research Fellowship Program

Director, Postdoctoral Fellowship Training Program