

Research Assistant in Neuromodulation and Neuroimaging

The Holsen Lab in the Departments of Medicine and Psychiatry at Brigham and Women's Hospital/Harvard Medical School is seeking a full-time post-bac research assistant (Research Assistant I or II) with a strong interest in neuroscience, psychology, and quantitative subjects including data analysis or computer science. The individual will assist with a clinical trial using both neuroimaging (transcranial magnetic stimulation) and neuroimaging (fMRI) to validate a novel cerebellar satiety network in healthy adults. Under the supervision of Dr. Laura Holsen and a postdoctoral fellow, the post-bac clinical research assistant will carry out a broad range of neuroimaging, biostatistics, and computer science-based research activities and procedures as indicated below. This is a great position for those wanting research experience before applying for graduate school or medical school. Our team has a strong track record of mentoring research assistants who have gone on to pursue medical school or doctoral programs in clinical psychology, cognitive neuroscience, neuroscience, public health, and bioinformatics.

Fostering diversity in the scientific research workforce is a key goal of Dr. Holsen and her team. Thus, additional funding, support, and mentorship are available for individuals from diverse backgrounds, including those from groups demonstrated to be underrepresented in the biomedical, behavioral, clinical, and social sciences.

PRINCIPAL DUTIES AND RESPONSIBILITIES:

Please note, the functions below are representative of major duties that are typically associated with these positions. Specific responsibilities may vary based upon departmental needs. Similarly, not all duties that have been outlined will be assigned to each position.

- Develop and implement strategies to recruit volunteers to participate in clinical trials
- Interview (prescreen) prospective volunteers and determine their eligibility to participate in the study with guidance from study clinicians and PIs
- Schedule and conduct study visits with volunteers, including assessments such as conducting interviews, administering computerized questionnaires and tasks, collecting biological samples (e.g., pregnancy tests)
- Conduct structured clinical interviews for psychiatric disorders, including eating disorders, mood disorders, and suicidal ideation (training and supervision with clinical psychologist provided)
- Review test results and data with the postdoctoral fellow and principal investigators to ensure that protocol requirements are met and that abnormalities are addressed by clinicians
- Enter and maintain all data collected from medical charts and study databases
- Develop meeting agendas, present/guide discussion related to agenda topics, and document meeting notes
- Complete applications, periodic reports, and related forms and ensure timely submission to regulatory bodies overseeing the clinical study
- Contribute to the collection, coding, management, and analysis of behavioral data
- DICOM unpacking, conversion of data to NIfTI (BIDS) format
- Creation of bash scripts for data organization
- Visual inspection of structural and functional data quality
- Editing and running MATLAB-based SPM12 preprocessing scripts

- Quality assessment of motion for functional data
- Editing and running first- and second-level models in SPM12 and fMRIPrep

ADDITIONAL DUTIES AND RESPONSIBILITIES:

- Act as study resource for subjects and the study staff
- General clerical tasks (e.g., filing, copying)
- Create and maintain a variety of study related logs, including billing logs
- Use software programs to generate statistical graphs and reports
- Assist with formal audits of data and study documents
- Assist with creating consent forms, study protocols and amendments, and other study-related documents
- Recommend protocol changes and assist with preparing abstracts and posters
- Uploading data to the NIH data archive
- Preparing detailed agendas and data updates for meetings
- Training new staff members in neuroimaging analyses
- Contribute to the process of structured clinical interviewing for psychiatric disorders, including eating disorders, mood disorders, and suicidal ideation. Training and supervision with a clinical psychologist provided.

SKILLS/ABILITIES/COMPETENCIES REQUIRED:

- Have a strong background and interest in neuroscience, cognitive neuroscience, psychology, biology, mathematics, statistics, or computer science
- Be in good academic standing with a strong GPA
- Strong computer and statistical skills
- Programming skills (previous R experience is required, with a combination of MATLAB, bash, python)
- Comfort with Linux environment
- Experience using R, MATLAB, SPM12, and fMRIPrep
- Familiarity with BIDS format
- Careful attention to details
- Good organizational skills
- Ability to follow directions
- Good communication skills
- Working knowledge of clinical research protocols
- Ability to demonstrate respect and professionalism for subjects' rights and individual needs
- Ability to work independently and as a team player
- Analytical skills and ability to resolve technical problems
- Ability to interpret acceptability of data results
- Working knowledge of data management program

QUALIFICATIONS:

EDUCATION:

- Bachelor's degree in neuroscience, computer science, psychology, cognitive science, or related field required

EXPERIENCE:

- New graduates with some relevant course/project work will be considered for the Research Assistant I position.
- Those with a minimum of 1-2 years of experience working in a research lab with neuroimaging will be considered for the Research Assistant II position.

SUPERVISORY RESPONSIBILITY:

- A Research Assistant I or II may assist with hiring, supervising, and mentoring clinical research interns.
- A Research Assistant II may assist with the training and orientation of new staff members.

EEO Statement

BWH is an Affirmative Action Employer. By embracing diverse skills, perspectives and ideas, we choose to lead. All qualified applicants will receive consideration for employment without regard to race, color, religious creed, national origin, sex, age, gender identity, disability, sexual orientation, military service, genetic information, and/or other status protected under law. We will ensure that all individuals with a disability are provided a reasonable accommodation to participate in the job application or interview process, to perform essential job functions, and to receive other benefits and privileges of employment.

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