



Postdoctoral Fellowship Training Program
Postdoctoral Fellowship Description
CLINICAL FOCUS

Title:	Postdoctoral Fellowship in Functional Neurosurgery APA-accredited: YES <u>X</u> NO <u> </u>
Site:	Brown University Health, Rhode Island Hospital
Supervisors:	Seth A. Margolis, PhD, ABPP-CN (primary supervisor) Jennifer Davis, PhD, ABPP-CN Wael Asaad, MD, PhD Neishay Ayub, MD Andrew Blum, MD, PhD Clark Chen, MD, PhD Prarthana Prakash, MD

Description of Site

This two-year fellowship at Brown University Health / Rhode Island Hospital (RIH) is part of the APA-Accredited Clinical Neuropsychology Specialty Program (CNSP) within the Postdoctoral Fellowship Training Program (PFTP) of Brown University's Clinical Psychology Training Consortium. The fellowship is primarily housed in the Brown University Health Neuropsychology Program. The fellow will spend 60% of their time on clinical activities, 30% on research, and 10% on structured didactics. Training is consistent with Houston Conference Guidelines and meets requirements for the American Board of Professional Psychology (ABPP) / American Board of Clinical Neuropsychology (ABCN) board certification.

RIH is one of several teaching hospitals within Brown University Health. RIH is a private, 719-bed, not-for-profit, acute care hospital and academic medical center founded in 1863. It is the largest of the state's general acute care hospitals, providing comprehensive health services, and serves as a primary teaching hospital for the Warren Alpert Medical School of Brown University. RIH is the largest trauma center in the region and has extensive neurology, neurosurgery, and psychiatry departments, all of which fall under the umbrella of the Norman Prince Neurosciences Institute (NPNI). NPNI is dedicated to providing clinical care to patients with neurological conditions and conducting cutting edge research in neurosciences. The incoming fellow will split their time between clinical and research activities within the Neuropsychology Program and within comprehensive surgical programs for epilepsy, movement disorders, and brain tumors.

The Neuropsychology Program includes a busy outpatient program where the incoming fellow will spend the majority of their clinical time under the supervision of board-certified clinical neuropsychologists (Drs. Davis and Margolis). Though the incoming fellow will have dedicated time and training in specialty neurosurgical populations and procedures, the program also receives referrals from neurologists, geriatricians/internists, and psychiatrists with questions of neurodegenerative differential diagnosis and treatment planning for a wide range of non-surgical patients with epilepsy and movement

disorders, as well as more general adult and geriatric patients with stroke, TBI, neurodegenerative and neuropsychiatric disorders. A major focus of the evaluation process is the follow-up, feedback appointment, at which time the patient and family/caregivers are provided with both written and oral summaries of the examination, along with detailed recommendations. The incoming fellow can expect to get in depth training in delivering impactful feedback in these sessions.

The Movement Disorders Program offers a multidisciplinary approach to managing Parkinson's disease (PD), essential tremor (ET), dystonia, Huntington's disease, and atypical movement disorder patients. One of the hallmarks of the program is offering comprehensive, coordinated care from a multidisciplinary team of specialists in neurology, neuropsychology, speech-language pathology, occupational therapy, and physical therapy for surgical interventions of movement disorders. Our team of specialists evaluates patients for cutting-edge surgical treatment options for PD, dystonia, and ET such as deep brain stimulation and high intensity focused ultrasound. Patients' candidacy is determined by comprehensive evaluations from specialists that occur over one day in a multidisciplinary fast track model. Patients are discussed that same day by the team in a consensus conference for rapid turnaround of findings to the patient and referring physician. The incoming neuropsychology fellow will participate in the Fastrack clinics and multidisciplinary meetings alongside the movement disorders neurology fellow.

The Comprehensive Epilepsy Program (CEP) is a multidisciplinary center that provides tertiary-level care to seizure disorder patients with complex needs, including those whose epilepsy has proven to be refractory to first-line therapies. Disciplines involved include neurology, neurosurgery, neuropsychology, neuroradiology, clinical neurophysiology, psychiatry, and nursing. The CEP is a Level 4 center, accredited by the National Association of Epilepsy Centers. The CEP follows ~2000 patients annually. Surgical workups include routine and long-term video-EEG monitoring, structural and functional neuroimaging (e.g., fMRI, PET, MEG), stereoelectroencephalography (sEEG), comprehensive neuropsychological and Wada testing (intra-carotid sodium amytal or brevitall procedure). Patients are discussed in a small monthly surgical working group and in a larger monthly interdisciplinary conference. The CEP performs open resections, laser interstitial thermal therapy (LITT), and neuromodulation procedures (e.g., Responsive Neurostimulation, Deep Brain Stimulation, Vagus Nerve Stimulation). The incoming neuropsychology fellow will train alongside the CEP's Epilepsy Neurology Fellow.

The Comprehensive Brain Tumor Center at the Brown University Health provides comprehensive evaluation, diagnosis and treatment for patients with primary and secondary (metastatic) tumors of the brain. The program is staffed by a multidisciplinary team including specialists in oncology, neurology, neurosurgery, radiation oncology, neuropathology, psychiatry, and neuropsychology. Patients are discussed in a weekly neuro-oncology tumor board, which the incoming fellow can attend. Brain tumor program patients are seen by neuropsychology pre- and post-surgically on an outpatient basis, with a subset referred for awake craniotomies with intraoperative cortical mapping when masses sit within eloquent cortex.

Brown Neuropsychology Free Clinic Elective Rotation. The Brown Neuropsychology Free Clinic provides a brief neuropsychology evaluation service to the uninsured/underinsured patients of the larger Rhode Island Free Clinic (RIFC). RIFC is a community-based free healthcare center in Providence RI, with a mission to increase access to medical services among underserved communities and contributes to reducing healthcare disparities. The Neuropsychology Free Clinic at RIFC serves as an elective opportunity for Brown neuropsychology fellows to train with culturally, racially, and linguistically diverse populations. Under the supervision of a Brown neuropsychology faculty member, trainees will work with professional interpreters to conduct neuropsychological evaluations and provide consultation on differential diagnosis and treatment recommendations. Experienced RIFC neuropsychology postdoctoral fellows could potentially engage in tiered supervision of new RIFC neuropsychology residents with their primary supervisor at RIFC.

Fellowship Aims

1. To provide the fellow with specialty post-doctoral training in the assessment and management of neurosurgical populations with an emphasis on functional neurosurgeries (i.e., deep brain stimulation, focused ultrasound, responsive neurostimulation, laser interstitial thermal therapy, intraoperative cortical mapping).
2. To provide the fellow with complementary, broad post-doctoral training in hospital-based adult/geriatric clinical neuropsychology.
3. To provide the fellow with mentored research opportunities in neurosurgical populations.

Fellowship Timeline

The duration of the fellowship is 2 years, contingent upon satisfactory progress. The anticipated start date is July-September. Consistent with the Brown Training Committee policy, the fellow and the primary mentor will notify each other in December about an offer for a second year.

Clinical Activity Plan (60%)

The fellow will have three clinical days per week comprised of direct clinical contact with patients, data analysis, report writing, and related clinical skills. The fellow will be trained and prepared to function independently in clinical neuropsychology through exposure to a wide variety of adult and geriatric clinical populations across the Brown University Health Neuropsychology Program and specialty neurosurgical programs in epilepsy, movement disorders, and brain tumor. Patients within Brown University Health are from diverse sociodemographic, socioeconomic, and linguistic backgrounds, and the incoming fellow can expect to receive training in working with patients from a variety of such backgrounds, including training to work with medical interpreters. Supervision will focus on ensuring competencies in clinical interviewing, test selection, administration, scoring and analysis of test data, integration of assessment results (including neuroimaging and other general medical work-up), pre-surgical candidacy considerations/contraindications, differential diagnosis, report writing, treatment planning, as well as feedback delivery. Our program is highly interdisciplinary; thus, there will be a focus on developing professional skills in interacting with other disciplines and professionals to prepare fellows for a career in hospital-based neuropsychology. A primary emphasis will be placed on training the incoming fellow to assume the role of a neuropsychologist within neurosurgical settings/treatment teams (e.g., assisting with pre-surgical candidacy assessment, neurosurgical treatment planning, post-operative follow ups).

In order to ensure that the fellow receives a high level of clinical training in the area of clinical neuropsychology, the following activities will be required during the fellowship:

- The fellow will regularly conduct neuropsychological evaluations, including medical records review, clinical interview, test administration/scoring, and interpretation/report writing.
- The fellow will participate in neuropsychological feedback sessions, reviewing test results with patients and their care partners.
- The fellow will service the Comprehensive Epilepsy Program by conducting neuropsychological evaluations one day per week, under Dr. Margolis's supervision, and see patients within the Epilepsy Monitoring Unit alongside attending epileptologists (Drs. Blum and Ayub) and neurosurgeons (Dr. Asaad) to learn about seizure diagnosis/classification, treatments, and surgical planning.
- The fellow will also conduct neuropsychological evaluations within the Movement Disorders multidisciplinary fast track program to establish candidacy for surgical treatment of movement disorders twice per month under Dr. Davis's supervision. On alternating weeks, the fellow will be

embedded in the Neurology clinic under the supervision of a movement disorders neurologist (Dr. Prakash).

- The fellow will service the Comprehensive Brain Tumor Program by triaging and expediting focused pre-surgical evaluations of neuro-oncology patients and learning to conduct intraoperative cortical mapping to assist neurosurgeons (Dr. Chen) with awake resections.
- The fellow will be required to attend and regularly present at Consensus Conference meetings for each specialty program attended by neurology, neurosurgery, neuropsychology, and other specialties.
- The fellow will also attend/assist with Wada test procedures in presurgical epilepsy/brain tumor patients, neuromodulation programming sessions with neurology and neurosurgery (epilepsy and movement disorders) and observe neurosurgeries.

Path toward licensure: YES

Research Activity Plan (30%)

The fellow has one and half days of protected research time each week (i.e., 30% time). The fellow will conduct research in neurosurgical populations.

- The fellow will collaborate with ongoing investigator-initiated research projects based on their interests.
- There will be opportunities to use existing datasets, access data from ongoing research studies, or collect new data.
- Broadly speaking, mentors' interests relate to evidence-based considerations for pre-surgical candidacy, neurocognitive and neuropsychiatric outcomes of neurosurgery, and health-related quality of life in neurosurgical populations.
- Manuscript preparation and submission: 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. There are also opportunities to develop grant-writing skills and potential opportunities to submit applications for external funding.

Didactics (10%)

Required Didactics:

First year fellows will participate in the following clinically oriented post-doctoral seminars through the Brown Postdoctoral Fellowship Training Program:

- Core Seminars (1 per month)
- Clinical Ethics – if intending to sit for licensure (1 per month)

Throughout the 2-year fellowship, fellows are required to attend:

- Department of Psychiatry and Human Behavior Academic Grand Rounds (1 per month)
- Clinical Neuropsychology Specialty Program Seminars (1 per week)
- Neuropsychology Grand Rounds (2 per year)
- Department of Pathology Brain Cuttings (at least once in Years 1 or 2)
- Brown Neurology Grand Rounds (1 per week)
- Comprehensive Epilepsy Program Case Conference (1 per month)
- Movement Disorders Fast Track Case Conference (2 per month)

Optional Didactics

Postdoctoral Research Seminar: The fellow will have the option of attending DPHB Biostatistics Seminar (monthly, attend when content is relevant), DPHB grant writing workshops, or Advance-CTR training opportunities to help fellows prepare for an independent research career.

Brain Tumor Board Conference: This case conference meets once per week and involves discussion of patients' clinical course, pathology reports, and treatment(s) to date as well as care plan(s).

Supervision and Evaluation

At a minimum, a full-time fellow will receive four hours of structured learning activities per week. Individual, weekly, clinical supervision will be provided by Drs. Davis and Margolis and on a preceptorship model with neurologists (Drs. Blum, Ayub, Prakash) and neurosurgeons (Drs. Asaad and Chen). Drs. Davis and Margolis will provide weekly research mentorship, in collaboration with neurology/neurosurgery colleagues, to ensure that the fellow is making progress and on track to achieve their short- and long-term goals. Fellows will also attend research meetings relevant to their research project(s) and receive supervision/mentorship from relevant study investigators. Every 6 months for the duration of the fellowship, the fellow and the supervisors will provide formal evaluations, and evaluations of the program relative to the goals and learning objectives of the fellowship.

Please visit the [Brown Faculty](#) page to view supervisor profiles.

Resource Requirements

Fellows will be provided with the following resources:

- Access to space to complete clinical and research responsibilities
- A computer and project specific software
- Internet access
- Telephone
- Personal office space
- Professional funds of \$1000 per year

Reporting and Approval

This fellowship is part of the CNSP. The position has been discussed and approved by the Neuropsychology faculty in their monthly meeting.

Director, Clinical Neuropsychology Specialty Program

Associate Director, Clinical Neuropsychology Specialty Program

Director, Postdoctoral Fellowship Training Program