



JOHNS HOPKINS

M E D I C I N E

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SCHOOL OF MEDICINE

*Department of Psychiatry and Behavioral Sciences*

# ***Postdoctoral Residency in Clinical Neuropsychology***



## MISSION STATEMENT

The residency in clinical neuropsychology at the Johns Hopkins University School of Medicine provides advanced training and supervision in the clinical application of scientific knowledge of normal and abnormal brain function and behavior, across the life span, to postdoctoral psychologists. The program includes didactic and practicum experiences in assessment and intervention that are consistent with the *Policy Statement of the Houston Conference on Specialty Education and Training in Clinical Neuropsychology*. Its aim is to impart to psychologists the clinical competencies that enable them to qualify for certification in clinical neuropsychology by the American Board of Clinical Neuropsychology (ABCN/ABPP). The residency program is one of the original members of the *Association of Postdoctoral Programs in Clinical Neuropsychology (APPCN)*.

## INTRODUCTION

The Johns Hopkins University holds a distinguished position in the history in American psychology, beginning with the founding of the first psychological laboratory in America by G. Stanley Hall in 1883. Among the faculty of the School of Medicine, founded in 1893, have been a large number of eminent behavioral scientists who have shaped American psychology, including John B. Watson, Karl S. Lashley, Curt Richter, John Money, and Joseph Brady. Johns Hopkins has also been the home of many distinguished neuroscientists, including Harvey Cushing, Walter Dandy, Phillip Bard, Vernon Mountcastle and Solomon Snyder. Indeed, the first documented use of the term “neuropsychology” was by Sir William Osler, first Professor of Medicine at Johns Hopkins, at the dedication of the Phipps Psychiatric Clinic in 1913. While clinical neuropsychology residents at Johns Hopkins inevitably assimilate this historical perspective on the development of our discipline, they also are exposed to the most advanced contemporary theories and state-of-the-art methods in the behavioral and neural sciences, as well as best practices in clinical service delivery.

Located at the Johns Hopkins Hospital, the Department of Psychiatry and Behavioral Sciences Division of Medical Psychology has more than 40 Ph.D. psychologists on its full- and part-time faculty. These psychologists are engaged in a wide variety of clinical and academic activities, ranging from direct patient care to basic behavioral and neuroscience research. For many years, the Division sponsored a *predoctoral* internship in medical psychology, where graduate students received supervised experience in the assessment and treatment of patients in the Phipps Psychiatric Service of Johns Hopkins Hospital. While this was a successful program in many respects, the *predoctoral* status of these trainees made it difficult for them to benefit maximally from the unique opportunities that Johns Hopkins has to offer. In contrast, *postdoctoral* residents who are beginning careers in neuropsychology can take full advantage of the many clinical and research opportunities that are available only at a premier academic medical center. Indeed, the Johns Hopkins University has ranked among the top 5 medical schools in the country for many years, and the Johns Hopkins

Hospital has been rated the best hospital in America every year for over 15 years by *U.S. News and World Report*.

## **GOALS OF THE RESIDENCY PROGRAM**

The purpose of the fellowship program is to provide Ph.D. psychologists with two years of supervised experience in:

- 1) clinical psychological and neuropsychological assessment,
- 2) consultation to physicians and other health care professionals on issues of cognitive and emotional functioning and psychological management of patients,
- 3) psychological intervention with patients with neuropsychiatric or medical disorders,
- 4) medico-legal and disability evaluations, and
- 5) design and implementation of research in neuropsychology

It is expected that many residents will be preparing for academic careers in clinical neuropsychology, geriatric psychology, or a related specialty within professional psychology. Others will likely be planning careers primarily as practitioners, working as neuropsychologists in general hospitals or psychiatric facilities.

## **CURRICULUM**

### **Supervised Clinical Work**

This is the major component of the residency experience, estimated to require 60% of the fellow's time and effort. Fellows will conduct psychological and neuropsychological evaluations, including the administration, scoring and interpretation of standardized and newly developed tests, under the supervision of core program faculty (all full-time School of Medicine faculty). The patients seen are those referred to the Johns Hopkins Hospital Cortical Function Laboratory (primarily inpatients) or the Johns Hopkins University Medical Psychology Clinic (primarily outpatients). Inpatients are referred from all of the Phipps Psychiatric Service's eight specialty units (including geriatric, neuropsychiatry, affective disorders, eating disorders, substance abuse, and pain treatment), as well as the Hospital's medical and surgical units. The major referral sources of outpatients are the Johns Hopkins specialty services (especially Geriatric and Neuropsychiatry, Transplant Service, and neurology specialty clinics). In addition, outpatients are referred by generalist and specialist physicians in the community, attorneys, government agencies, and insurance company case managers.

Although this residency program is within the Johns Hopkins Department of Psychiatry and Behavioral Sciences, our clinical services (Cortical Function Lab and

Medical Psychology Clinic) are primary neuropsychology resources for the Departments of Neurology and Neurosurgery as well. For example, we have programmatic relationships with the epilepsy surgery program (including the performance of Wada procedures) and the Parkinson's disease surgery program. In addition, our Department of Psychiatry has a longstanding commitment to the care of patients with neuropsychiatric disorders, including Alzheimer's disease, Huntington's disease, and other dementias, and traumatic brain injury.

Residents ordinarily conduct neuropsychological assessments 3 to 4 days per week. On each of these days, the resident works with one of the core faculty who supervises his or her clinical work. The number of patients seen on a "clinical day" depends on several factors, including case complexity, the anticipated length of each evaluation, and the availability of assistance from psychometric technicians. As part of their assessment of inpatients, residents interact with the attending and resident physicians on the inpatient services. They gather relevant information about their patients from the house officers and discuss the clinical questions that the assessment is intended to answer. The neuropsychology residents typically discuss their evaluation findings with inpatient treatment team and/or present them at ward rounds.

Neuropsychology residents receive advanced training and supervised experience in conducting clinical interviews of patients and collateral informants, test selection, synthesizing test results with aspects of history and the results of other diagnostic procedures, case formulation, planning and implementing interventions, and communicating effectively with patients, families, physicians, and other referral sources.

In addition to training in clinical neuropsychological assessment and consultation, residents are encouraged to develop and carry a case load of 2-3 patients for ongoing treatment. Some cases are likely to involve psychotherapy for patients with affective, anxiety, or behavior disorders; others might require treatment for cognitive deficits related to an acquired brain injury. The most challenging patients are often those with pre-existing psychiatric disorders who then undergo behavioral changes due to acquired brain injury. Again following an apprenticeship model, residents receive supervised training in the treatment of such patients.

Because all of the supervising psychologists are full-time faculty members who share a suite of offices with the residents, clinical supervision is readily available. Indeed, residents usually confer with their supervisor before, during, and after each patient encounter. Although most of the supervision is on a one-to-one basis, residents also are expected to present their clinical cases during Morning Report (described below). As the fellowship progresses, the resident ordinarily is expected to assume greater responsibility for, and autonomy in, clinical decision making and management.

## Supervised Research

Although the focus of this program is clinical service delivery, all residents are expected to engage in research as well. This typically involves participation in ongoing research projects with the program faculty, and averages 20% of his/her time and effort. Former residents have co-authored several publications with Division faculty. The following is a brief outline of each core faculty members' research interests and representative publications:

Dr. Jason Brandt's research interests include: amnesia, presymptomatic indicators of Huntington's disease, variability in pattern and rate of cognitive decline in Alzheimer's disease and other dementias, epilepsy and its surgical treatment, neuropsychological test development

Brandt, J., Shpritz, B., Munro, C.A., Marsh, L. & Rosenblatt, A. (2005). Differential impairment of spatial location memory in Huntington's disease. *Journal of Neurology, Neurosurgery, and Psychiatry*, 76, 1516-1519.

Brandt, J. & VanGorp, W.G. (2006). Functional ("psychogenic") amnesia. *Seminars in Neurology*, 26, 331-340.

Brandt, J. (2007). Neuropsychological crimes and misdemeanors. *The Clinical Neuropsychologist*, 21, 553-568.

Dr. David Edwin's research interests include: psychosocial issues in organ transplantation, neuropsychology of organ failure, neuropsychology of white matter diseases

Dr. Cynthia Munro's research interests include: neurobiological mechanisms underlying sex differences in the prevalence and clinical manifestation of psychiatric disorders affecting cognition, with specific emphasis on the influence of sex hormones

Munro, C.A., Lyketsos, C.G. (2006). Cognitive response to sertraline treatment for depression in Alzheimer's disease: A possible sex effect. *Research and Practice in Alzheimer's Disease*, 11, 361-365.

Munro, C.A., McCaul, M.E., Wong, D.F., Oswald, L.M., Zhou, Y., Brasic, J., Kuwabara, H., Kumar, A., Alexander, M., Ye, W., Wand, G.S. (2006). Sex differences in striatal dopamine release in healthy adults. *Biological Psychiatry*, 59, 966-974.

Munro, C.A., Oswald, L., Weerts, E., McCaul, M.E., Wand, G.S. (2005). Hormone responses to stress in abstinent alcohol-dependent subjects and social drinkers with no history of alcohol dependence. *Alcoholism: Clinical and Experimental Research*, 29, 1133-1138.

Dr. David Schretlen's research interests include: correlates of structural brain MR imaging in normal aging and neuropsychiatric disorders, work disability, methods of inference in clinical neuropsychology.

Schretlen, D.J., Munro, C.A., Anthony, J.C. & Pearlson, G.D. (2003). Examining the range of normal intra-individual variability in neuropsychological test performance. *Journal of the International Neuropsychological Society*, 9, 864-870.

Schretlen, D.J., Inscore, A.B., Jinnah, H.A., Rao, V., Gordon, B. & Pearlson, G.D. (2007). Serum uric acid and cognitive function in community-dwelling elderly adults. *Neuropsychology*, 21, 136-140.

Schretlen, D.J., Cascella, N.G., Meyer, S.M., Kingery, L.R., Testa, S.M., Munro, C.A., Pulver, A.E., Rivkin, P., Rao, V.A., Diaz-Asper, C.M., Dickerson, F.B., Yolken, R.H., Pearlson, G.D. (2007). Neuropsychological functioning in bipolar disorder and schizophrenia. *Biological Psychiatry*. 62, 179-186.

Dr. Ola Selnes's research interests include: cognitive outcomes after coronary artery bypass grafting, HIV-related dementia, vascular dementia.

Selnes, O.A. & Vinters, H.V. (2006). Vascular cognitive impairment. *Nature Clinical Practice: Neurology*, 2, 538-547.

Selnes, O.A. McKhann, G.M., Borowicz, L.M., Jr. & Grega, M.A. (2006). Cognitive and neurobehavioral dysfunction after cardiac bypass procedures. *Neurologic Clinics*, 24, 133-145.

Selnes, O.A. (2005). Memory loss in persons with HIV/AIDS: Assessment and strategies for coping. *The AIDS Reader*, 15, 289-292.

Dr. Marc Testa's research interests include: neuropsychology of epilepsy and epilepsy surgery, material-specific memory, Wada procedure, psychogenic non-epileptic seizures, regression-based test norming.

Testa, S.M., Schefft, B.K., Privitera, M.D. & Yeh, H.-S. (2004). Warrington's Recognition Memory for Faces: interpretive strategy and diagnostic utility in temporal lobe epilepsy. *Epilepsy & Behavior*. 5, 236-243.

Testa, S.M., Schefft, B.K., Szaflarski, J.P., Privitera, M.D. & Yeh, H.-S. (2007). Mood, personality, and health-related quality of life in epileptic and psychogenic seizure disorders. *Epilepsia*, 48, 973-982.

Dr. Julianna Ward's research interests include: frontal-subcortical circuitry and behavior, neuropsychological disorders of the basal ganglia, obsessive-compulsive disorder, schizophrenia.

## **Didactic Program**

All residents are required to attend and/or participate in the following conferences, rounds, seminars, etc. (within the time constraints imposed by their clinical activities):

*Department of Psychiatry Grand Rounds* (Mondays, 11:00 -12:30 p.m.): Clinical faculty present patients who exemplify specific disorders or treatment issues to the Psychiatrist-in-Chief, followed by a review of relevant literature and their own research on the topic.

*Departmental Research Conference* (Tuesdays 12:00 - 1:00 p.m.): Departmental faculty and guest speakers present current research on topics related to neuropsychiatry.

*Morning Report* (Daily, 8:30 - 9:00 a.m.): All neuropsychology residents meet with the program faculty, technicians, and other trainees to review patients recently seen for clinical assessment or treatment, and to review current day's schedule. Teaching follows the "recitative" method, and focuses on issues of clinical assessment, diagnostic formulation, and treatment strategies. This activity also helps residents refine their skills in the communication of clinical findings to colleagues and prepare for the ABCN/ABPP Work Sample and Fact Finding examinations.

*Medical Psychology Seminar* (Tuesdays, 4:00 - 5:00 p.m.): Faculty psychologists and physicians present highly interactive seminars on a broad array of ethical, clinical, and research topics to Division members and guests. Residents are expected to contribute at least one presentation to this series each year.

*Neuropsychology Journal Group* (Tuesdays, 1:00 - 2:00 p.m.): Each week, an article appearing in the current research literature is selected by a faculty member or resident and read by all attendees. That person is responsible for leading the group discussion of the article, critiquing the research, arguing theoretical points, and discussing its implications.

*Medical Psychology Brown-Bag Lunch* (Fridays 12:00 - 1:00 p.m.): Once a week, the fellows and faculty eat lunch together and discuss matters related to research, clinical work, or professional matters (e.g., interesting ethical dilemmas, licensure and board certification process, economics of clinical practice, upcoming national and international meetings). While this meeting is as much social as didactic, it has proven to be a very useful forum for residents' professional development.

In addition to these required activities, a large number of elective specialty conferences are open to all residents. The ones they attend depend on their individual interests and time schedules. A small sampling of these is listed below.

*Neurology Grand Rounds* (Thursdays, 8:00 - 10:00 a.m.)

*Brain Cutting* (Tuesdays, 2:00 - 3:00 p.m.)

*Neuropsychiatry Conference* (Thursdays, 4:00 - 5:00 p.m.)

*Motivated Behaviors Rounds* (Wednesdays, 1:00 - 2:00 p.m.)

*Service Rounds* (Fridays, 10:00 - 12:00 p.m.)

*Epilepsy Conference* (Tuesdays, 8:30 - 10:00 a.m.)

*Transplant Service Meeting* (Thursdays, 2:00 - 4:00 p.m.)

Finally, all fellows are encouraged to become actively involved in relevant professional organizations and attend national scientific meetings.

## **ADDITIONAL INFORMATION**

Typically, this two-year Postdoctoral Residency in Clinical Neuropsychology accepts one or two new residents each year. Thus, there are at least two postdoctoral fellows in residence at any given time.

The fellowship stipends follow NIH guidelines. Stipend levels for 2007-2008 are: \$36,996 for first-year residents and \$38,976 for second-year residents. Individual health insurance coverage is also provided. In addition, each fellow is provided an allowance of \$1,000 per year to cover part of the costs of attending a scientific or professional meeting, books, journals, or other appropriate training expenses.

## **CORE FACULTY**

Jason Brandt, Ph.D., ABPP(CN)  
Professor  
Department of Psychiatry and Behavioral Sciences  
Department of Neurology  
Director, Division of Medical Psychology

David Edwin, Ph.D.  
Associate Professor  
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