



JOHNS HOPKINS
M E D I C I N E

SCHOOL OF MEDICINE

Department of Psychiatry and Behavioral Sciences

Postdoctoral Residency in Clinical Neuropsychology



Revised November 29, 2010

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 develop in 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 was one of the original members of the *Association of Postdoctoral Programs in Clinical Neuropsychology (APPCN)*, but is no longer participating in the match program.

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 1990, the Division switched its focus to postdoctoral training and accepted its first clinical fellows. These “residents” are able to take full advantage of the many clinical and research opportunities that are available only at a premier academic medical center like Hopkins. 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 one of the best hospitals in America by *U.S. News and World Report* every year for over 20 years.

GOALS OF THE RESIDENCY PROGRAM

The purpose of the fellowship program is to provide Ph.D. psychologists with two years¹ 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.

¹ See page 5 for a description of the “three-year option.”

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 and the Parkinson's disease (PD) surgery program. Our fellows are involved in performing Wada procedures and preoperative neuropsychological exams of patients receiving focal resections for epilepsy and deep brain stimulation for PD. 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 our three full-time psychometrists. 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 may opt 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), where all of the faculty can provide input. As the fellowship progresses, the resident ordinarily is expected to assume greater responsibility for, and autonomy in, clinical decision making and management.

If fellows become involved in a major way with one of the faculty's research programs, and can secure stipend support from one of those studies, they may "buy out" up to two clinical days per week. In this case, the fellow may request to spread his/her fellowship over three years, to insure that s/he accumulates the necessary clinical hours to seek ABPP certification in clinical neuropsychology and to bring research projects to fruition. This three-year model has worked very successfully for several fellows in the recent past.

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, cognitive changes in mild cognitive impairment and early Alzheimer's disease, epilepsy and its surgical treatment, deep brain stimulation for movement disorders, neuropsychological test development

Brandt, J. (2007). 2005 INS Presidential Address: Neuropsychological crimes and misdemeanors. *The Clinical Neuropsychologist*, 21, 553-568.

Brandt, J., Inscore, A.B., Ward, J. *et al.* (2008). Neuropsychological deficits in Huntington's disease gene carriers and correlates of early "conversion." *Journal of Neuropsychiatry and Clinical Neurosciences*, 20, 466-472.

Brandt, J., Aretouli, E., Neijstrom, E. *et al.* (2009). Selectivity of executive function deficits in mild cognitive impairment. *Neuropsychology*, 23, 607-618.

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 magnetic resonance imaging in normal aging and neuropsychiatric disorders, functional disability, methods of inference in clinical neuropsychology, psychometrics, and the use of transcranial direct current stimulation to enhance cognitive function.

Schretlen, D.J., Winicki, J.M., Meyer, S.M., Testa, S.M., Pearlson, G.D. & Gordon, B. (2009) Development, psychometric properties, and validation of the Hopkins Adult Reading Test (HART). *The Clinical Neuropsychologist*. 23(6), 926–943.

Schretlen, D.J., Vannorsdall, T.D., Winicki, J.M., Mushtaq, Y., Hikida, T., Sawa, A., Yolken, R.H., Dickerson, F.B. & Cascella, N.G. (2010). Neuroanatomic and cognitive abnormalities related to Herpes Simplex Virus Type 1 in schizophrenia. *Schizophrenia Research*, 118, 224–231.

Schretlen, D.J., van der Hulst, E.J., Pearlson, G.D. & Gordon, B. (in press). A neuropsychological study of personality: Openness in relation to intelligence, fluency, and executive functioning. *Journal of Clinical and Experimental Neuropsychology*.

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. Tracy Vannorsdall's research interests include: neuropsychology of cerebral ischemia, serum biomarkers of cognitive aging, structural brain imaging (voxel-based morphometry and diffusion tensor imaging), and transcranial direct current stimulation.

Vannorsdall, T.D., Cascella, N.G., Rao, V., Pearlson, G.D., Gordon, B., & Schretlen, D.J. (in press). A morphometric analysis of neuroanatomic abnormalities in traumatic brain injury. *Journal of Neuropsychiatry and Clinical Neurosciences*.

Vannorsdall, T.D., Waldstein, S.R., Kraut, M., Pearlson, G.D., & Schretlen, D.J. (2009). White matter abnormalities and cognition in a community sample. *Archives of Clinical Neuropsychology*, 24(3), 209-217.

Vannorsdall, T.D., Jinnah, H.A., Gordon, B., Kraut, M., & Schretlen, D.J. (2008). Cerebral ischemia mediates the effect of serum uric acid on cognitive function. *Stroke*, 39, 3418-3420.

Dr. Julianna Ward's research interests include: neuropsychological disorders involving the basal ganglia, including systemic lupus erythematosus (SLE) and schizophrenia; frontal-subcortical circuitry and implicit learning and memory; implicit learning and memory (i.e., procedural knowledge) and adaptive functioning; and, epilepsy and cognition.

Testa, S.M., Ward, J., Crone, N.E., & Brandt, J. (2008). Stimulus type affects Wada memory performance. *Epilepsy and Behavior*, 13(3): 458-462.

Brandt, J., Inscore, A.B., Ward, J., Shpritz, B., Rosenblatt, A., Margolis, R., Ross, C.A. (2008). Neuropsychological deficits in Huntington's disease gene carriers and correlates of early "conversion." *Journal of Neuropsychiatry and Clinical Neurosciences*, 20: 466-472.

Ward, J., Sheppard, J.M., Shpritz, B., Margolis, R., Rosenblatt, A., & Brandt, J. (2006). A four-year prospective study of cognitive functioning in Huntington's disease. *Journal of the International Neuropsychological Society*, 12: 445-454.

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.

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

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

Liver Transplant Selection Meeting (Thursdays, 4:00 - 5:00 p.m.)

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

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

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

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

CURRENT POSITIONS OF FORMER FELLOWS

The following table shows the current professional positions held by recent graduates of our fellowship program in clinical neuropsychology:

Name	Residency Years	Current Position
Lei Lu, Ph.D.	2002-2004	Staff Neuropsychologist Outpatient Mental Health Samaritan Medical Center Watertown, NY Consultant Clinical Training and Assessments i3 Research Carey, NC
Angela Buffington, Ph.D.	2003-2005	Assistant Professor Department of Medicine Mayo Clinic Staff Psychologist Mankato Clinic, Ltd. Mankato, MN
Lisle Kingery, Ph.D.	2003-2005	Scientific Director Clinical Training and Assessments i3 Research Carey, NC
Angeli Inscore, Psy.D.	2004-2006	Staff Neuropsychologist Department of Veterans Affairs Medical Center Baltimore, MD
S. Marc Testa, Ph.D.	2004-2007	Staff Neuropsychologist Department of Veterans Affairs Medical Center Baltimore, MD Instructor in Medical Psychology (part-time) Department of Psychiatry and Behavioral Sciences The Johns Hopkins University School of Medicine Baltimore, MD
Tracy Vannorsdall, Ph.D.	2006-2009	Instructor in Medical Psychology Department of Psychiatry and Behavioral Sciences The Johns Hopkins University School of Medicine Baltimore, MD
Laura Wulff, Ph.D.	2007-2009	Staff Neuropsychologist Brooks Rehabilitation Hospital Jacksonville, FL
Sally Long, Ph.D.	2008-2010	Assistant Professor Department of Neurology Georgetown University School of Medicine Washington, D.C.

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 2011-2012 are: \$37,740 for first-year residents and \$39,756 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
Department of Psychiatry and Behavioral Sciences

Cynthia Munro, Ph.D.
Assistant Professor
Department of Psychiatry and Behavioral Sciences

David J. Schretlen, Ph.D., ABPP(CN)
Associate Professor
Department of Psychiatry and Behavioral Sciences
Department of Radiology and Radiological Sciences

Ola Selnes, Ph.D.
Professor
Department of Neurology
Department of Psychiatry and Behavioral Sciences

Tracy D. Vannorsdall, Ph.D., ABPP(CN)
Instructor
Department of Psychiatry and Behavioral Sciences

Julianna Ward, Ph.D.
Assistant Professor
Department of Psychiatry and Behavioral Sciences

APPLICATION PROCEDURES

To apply for the fellowship, please send a c.v. and a letter outlining your academic and professional interests to our program coordinator, Ms. Laura Szymanik, at lszyman7@jhmi.edu.

Please also arrange for three letters of recommendation to be sent to Dr. Brandt, in care of Ms. Szymanik.

We do not require academic transcripts or sample clinical reports; please do not send them.

The deadline for applications is January 1. Early applications are encouraged.

We typically receive a very large number of applications, and not all applicants can be offered interviews. Those whom we wish to interview will be notified.

Interviews are conducted at the annual meeting of the International Neuropsychological Society (INS) in February. For those not attending the INS meeting, interviews will be arranged at the Johns Hopkins Hospital either before or shortly after the February meeting.