

Curriculum Vitae

Date Prepared: June 29, 2020
Name: Dorothy Powe Holinger
Office Address: 1108 Beacon Street, Suite 4 C, Brookline, MA 02446
Work Phone: 617- 735-1131; 617-667-8672
Work Email: dholinge@bidmc.harvard.edu
Place of Birth: Providence, RI

Education

1979	BA	English and Biology	Brown University
1984	MS	Psychology	University of Michigan
1990	PhD	Psychology (William C Stebbins, PhD)	University of Michigan

Postdoctoral Training

06/89-6/91	Research Fellow	Clinical Research Training Program in Biological & Social/Developmental Psychiatry (Robert W McCarley, MD and Stuart L Hauser, MD, PhD)	Harvard Medical School
06/89-06/92	Clinical Fellow	Psychiatry (Psychology Division)	Beth Israel Deaconess Medical Center

Faculty Academic Appointments

7/91-6/02	Instructor	Psychiatry (Consolidated)	Harvard Medical School
7/01-7/07	Instructor	Psychiatry	Harvard Medical School
1/09-7/15	Instructor	Psychiatry	Harvard Medical School

Appointments at Hospitals/Affiliated Institutions

07/9-06/91	Research Fellow	Psychiatry (Brain Potential Imaging Laboratory - Ass. Dir.)	Massachusetts Mental Health Center
07/89-06/93	Research Associate	Laboratories of Psychiatric Research in Psychology	McLean Hospital
07/89-06/92	Clinical Fellow	Psychiatry	Beth Israel Deaconess Medical Center
10/94-07/07	Staff Psychologist	Psychiatry and Neurology	Beth Israel Deaconess Medical Center
07/07-	Staff Psychologist	Neurophysiology Laboratory	Beth Israel Deaconess

01/08-	Affiliate Member	Neurology Psychiatry Neuroimaging Laboratory Psychiatry	Medical Center Brigham and Women's Hospital
--------	------------------	--	---

Committee Service

Local

1997-2000	Admissions Committee 4 hours/weeks, 4 weeks/year	Beth Israel Deaconess Medical Center Psychology Intern Selection
-----------	---	---

Other Professional Positions

1993-1999	Visiting Research Scientist in Psychology	Bedford VA Medical Center
-----------	---	---------------------------

Professional Societies

1984-	American Psychological Association	Member
1989-	Sigma Xi Scientific Research Society	Member
1992-2005	American Psychological Society*	Member
2005-	Association for Psychological Science*	Member (* = Name Change)
1994-2008	Society for Neuroscience	Member

Editorial Activities

Brain Imaging and Behavior
Cognitive Brain Research
Journal of Psychiatric Research
Journal of Geriatric Psychiatry and Neurology
Neuroreport
Schizophrenia Research

Honors and Prizes

1983	University Fellowship	University of Michigan	Psychology Department
1988	Dissertation Fellowship	University of Michigan	Psychology Department
1989	Dissertation Award	University of Michigan	Horace Rackham Graduate School NIMH
1989-1991	NRSA	NIH	
1991-1999	Sigma Xi	University of Michigan	
1999-	Sigma Xi	Harvard University	
2012	APS Fellow	Association for Psychological Science	“Recognition of sustained outstanding contributions to the advancement of psychological science”

Report of Funded and Unfunded Projects

Funding Information

Past

- 1992-1994 Anatomical & Biological Study of Temporal Lobe Asymmetries & Handedness in Schizophrenia
Low Beer Foundation at Montreal Neurological Institute
Co-PI (\$200,000; Indirect = 25%) (PI: Albert Galaburda, MD)
The major goal of the study was to determine whether there were anatomical and biological asymmetries in the temporal lobes based on handedness.
- 1996-1999 P300 and Handedness in Schizophrenic Females
NIH NIMH R03 MH 55179
PI (\$100,000; (Indirect = 67%)
The major goal of the study was to determine whether there were P300 differences based on handedness in women with schizophrenia.
- 2001-2005 Williams Syndrome: Bridging Cognition and Genes (Program Director: Dr. Ursula Belugi): Brain Cytoarchitectonic Characterization of Williams Syndrome (Project PI: Dr. Albert Galaburda, MD)
The major goal of the study was to determine whether cell size and cell-packing density abnormalities characterized postmortem visual and auditory cortices.
- 2001-2005 Neurophysiology of Behavior
Tessie Wolf Family Foundation
PI (\$40,000; Indirect = 15%)
The major goal of the study was to determine whether P300 was affected in participants by changes in filter settings.

Current

- 2014- Beth Israel Deaconess Medical Center, Neurology Research Fund
How Grief affects the Physiology and Psychology of Bereavement
PI (Annual Monies, \$1500; Indirect = 15%)
The major goal of the project was to write a book that describes what grief does to the human self of the bereaved survivor: physiologically, its effect on the brain, the heart and the body; and psychologically, its effect on the emotion of bereavement. The book, The Anatomy of Grief, will be released by Yale University Press, September 1, 2020.

Report of Local Teaching and Training

Teaching of Students in Courses

- | | | |
|-----------|---|---|
| 2008-2010 | “Brain and Behavior: Research Methods and Technologies”
Harvard Summer School Semester | Harvard University

6 hrs/week (+ 1 hr/wk office hrs) for 7 weeks |
|-----------|---|---|

Clinical Supervisory and Training Responsibilities

- | | | |
|-----------|---|---|
| 1996-2000 | Emergency Unit Psychiatry Division
Supervisor/Preceptor Psychology Interns | Beth Israel Deaconess Medical Center
4-6 hours/month |
|-----------|---|---|

Laboratory and Other Research Supervisory and Training Responsibilities

1995-1996	Cognitive Electrophysiology Laboratory/BI Interim Laboratory Director	2 hours/month
1996-1999	Cognitive Electrophysiology Laboratory/BI Conduction/Supervision of P300 research	4 hours/week
1997-1999	Cognitive Electrophysiology Laboratory/BI Laboratory Meeting Updates/Presentations	1-2 hours/bi-monthly
1997-1999	Cognitive Electrophysiology Laboratory/BI Evoked Potentials Peer Training	2-4 hours/bi-monthly
1997-1999	Cognitive Electrophysiology Laboratory/BI Thought Disorder Protocol Peer Training	4 hours/bi-monthly
2000-2005	Dyslexia Laboratory/ Beth Israel Deaconess Medical Center	2-4 hours/bi-monthly
	Laboratory Weekly Meetings/Updates	1-2 hours weekly
	Postmortem dissection/supervision/training	4 hours/bi-monthly (variable)

Formally Supervised Trainees

1991-2005	Supervised 13 students who obtained an MD, PhD or another advanced degree, and who made important contributions to the research work as evidenced by co-authorship on publications or abstracts
2011	Audrey Lucero, PhD, University of Oregon, Assistant Professor Senior honors thesis Advisor: Boston University, P300 and Thought Disorder in Left- and Right-Handed Schizophrenic Males; Thesis awarded "Highest Distinction," 1998
2006	Gauri Pandit Jaboin, PhD, Psychologist, Private Practice, Nolensville, TN Pandit GR, Holinger DP , Ives JR, Gruber L, and Schomer DL. P300 and Handedness in Women. EPIC XII Conference. July, 1998

Local Invited Presentations

1993	P300 in Schizophrenia: Reversed Temporal Lobe Asymmetries in Left- and Right-Handed Schizophrenic Subjects /Grand Rounds/CME Department of Psychiatry, Beth Israel Deaconess Medical Center
1993	Electrophysiology and Handedness in Schizophrenia/Psychiatry Lecture Series/CME Department of Psychiatry/Edith Norse Veterans Hospital, Boston University
1996	Electrophysiological, Structural and Histological Abnormalities of the Temporal Lobe in Schizophrenia/Grand Rounds/CME Festschrift Presentation to honor Dr. Fred Frankel, Professor and Chair Department of Psychiatry, Beth Israel Deaconess Medical Center
1998	P300 in Schizophrenia: Reversed Temporal Lobe Asymmetries in Left- and Right-Handed Schizophrenic Subjects: An Update/Psychiatry Grand Rounds/CME Department of Psychiatry/Edith Norse Veterans Hospital, Boston University

Report of Regional, National and International Invited Teaching and Presentations

Invited Presentations and Courses

Local

- 2003 (July) Embryogenesis and the Developing Brain/Dyslexia Laboratory/ Beth Israel Deaconess Medical Center
- 2003 (Oct.) Genes and the Developing Brain/Dyslexia Laboratory/Beth Israel Deaconess Medical Center
- 2004 Cytoarchitectonic Project Update/Salk Institute Video Conference/Beth Israel Deaconess Medical Center (Co-Presenter with Dr. Galaburda) (6 hours)

Regional

- 1991 Schizophrenia: Evoked Potentials Related Cognitive Complexity and Handedness/Yale Psychiatric Institute, New Haven, CT

National

- 2002 (Mar.) Brain Cytoarchitectonic Characterization of Williams Syndrome/Salk Institute for Biological Studies, La Jolla, CA
- 2002 (Sept.) Scientific Update, Thematic and Integrative Links among Williams Syndrome Projects: Bridging Cognition and Genes Program Project/ Rancho Santa Fe, CA/Salk Institute for Biological Studies, La Jolla, CA sponsored

International

- 1986 Evoked Potentials III Conference/West Berlin, Germany

Report of Clinical Activities and Innovations

Current Licensure and Certification

- 1992- Massachusetts Board of Psychology Health Service Provider License #6367

Practice Activities

- | | | | |
|---------------|-------------------------------|--|------------------|
| 1992-
2000 | Psychotherapy and Evaluations | Psychiatry/Beth Israel
Deaconess Medical Center | 20 hours/week |
| 2005- | Private Clinical Practice | Psychotherapy/Brookline, MA | 10-12 hours/week |

Report of Scholarship

Publications

Research investigations

1. Benjamin M, McKeachie WJ, Lin YG, **Holinger DP**. Test Anxiety: Deficits in Information Processing. *J Ed Psychol* 1981;73(6):816-824.
2. Holinger PC, **Holinger DP**, Sandlow J. Violent Deaths among Children in the United States, 1900-1980. An Epidemiologic Study of Suicide, Homicide, and Accidental Deaths among 5-14-Year-Olds. *Pediatrician: Internat J Child Adoles Health* 1985;12(1):11-19.
3. **Holinger DP**, Faux SF, McCarley RW, Shenton ME, Sokol NS, Seidman LJ, Green AI. Reversed Temporal Region Asymmetries of P300 Topography in Left- and Right-handed Schizophrenic Subjects. *Electroencephalogr and Clin Neurophysiol* 1992;84(6):532-537.
4. **Holinger DP**, Shenton, ME, Wible, CG, Donnigo, R, Kikinis, R, Jolesz, McCarley, RW. Superior

Temporal Gyrus Abnormalities and Thought Disorder in Left-Handed Schizophrenic Males. *Am J Psychiatry* 1999;156(11):1730-1735.

5. **Holinger DP**, Hill SA, Martin DL, Faux SF, Ives JR, Schomer DL. Reappraisal of Filter Effects on P300 Voltage and Latency. *J Clin Neurophysiol* 2000;17(3):331-335.
6. Galaburda AM, **Holinger DP**, Bellugi U, Sherman GF. Williams Syndrome: Neuronal Size and Neuronal-Packing Density in Primary Visual Cortex. *Arch Neurol* 2002;59(9):1461-1467.
7. Galaburda AM, **Holinger DP**, Mills D, Reiss A, Korenberg JR, Bellugi U. Williams Syndrome: A Summary of Cognitive, Electrophysiological, Anatomofunctional, Microanatomical and Genetic Findings. *Rev Neurol* 2003;36 Suppl 1:S132-7.
8. **Holinger DP**, Bellugi U, Mills DL, Korenberg JR, Reiss A, Sherman GF, Galaburda AM. Relative sparing of primary auditory cortex in Williams Syndrome. *Brain Res.* 2005;1037(1-2):35-42.

[Non-peer reviewed scientific or medical publications/materials in print or other media](#)

Proceedings of Meetings

Holinger DP, Shevrin H, Williams WJ, Marshall RE. Evoked Potential Correlates of Categorization in Psychiatric Patients. In: Barber C, Blum T. *Evoked Potentials III: The Third International Evoked Potentials Symposium*. West Berlin, Germany. Boston (MA): Butterworths, 1987:375-380.

Reviews, Chapters, and Editorials

Holinger DP, Galaburda AM, Harrison PJ. Cerebral Asymmetry. In: Roberts G, Harrison PJ, editors. *The Neuropathology of Schizophrenia*. Oxford, England: Oxford University Press, 2000:171-191.

Books

Holinger DP. *The Anatomy of Grief*. New Haven and London: Yale University Press, 2020.

Letter to Editor

McCarley RW, Faux SF, Shenton ME, Nestor, PG, **Holinger DP**. Is There P300 Asymmetry in Schizophrenia? *Arch Gen Psychiatry* 1991;48:380-381.

[Thesis](#)

Holinger, DP. *Brain Potentials and Cognitive Dysfunction in Schizophrenia*, Ann Arbor (MI): University of Michigan; 1990.

[Narrative Report \(limit to 500 words\)](#)

My research at Harvard has been the study of the human brain in schizophrenia and in Williams Syndrome (WMS). In living subjects, I used Event-Related Potentials and MRI to study the Superior Temporal Gyrus (STG). In postmortem brains, I used an optical dissector method to measure cell packing density and cell size in auditory and visual areas of the brain. From 1991-2005, my research time ranged from 80-90%, and my clinical time, providing psychotherapy (focus: bereaved patients) and psychological evaluations, was 20%. Research in schizophrenia included my tenures as a postdoctoral fellow (1989-1991) and as faculty (1991-2007), and research in Williams Syndrome (WMS) as faculty from 2009-2015).

My focus on the STG, a brain area specialized for language and hearing, is based on its conceptual connection with thought disorder and auditory hallucinations, hallmark symptoms of schizophrenia. Since handedness and gender are often overlooked in schizophrenia, I targeted those variables in my neuroimaging studies. In P300 studies of males with schizophrenia, patients showed lower voltages on the right- or left—depending on handedness. In contrast to the males, P300 voltages for right-handed female patients were symmetrical. Both male and female patient groups showed lower voltages compared to the control groups.

Using a structural approach, an MRI study of left-handed schizophrenic males showed lower volumes bilaterally in the posterior STG. There was also a positive correlation with thought disorder and lower tissue volume in the right STG for the left-handed patients. Together, these electrophysiological and structural findings show a convergence with auditory and language abnormalities in schizophrenia, reflecting what may be the influence of neurodevelopmental factors. These results also demonstrate how important it is to separate gender and handedness as discrete variables in studies of schizophrenia.

In 2000, my research shifted from MRI and P300 studies of schizophrenia to the study of cytoarchitectonics—the measurement of postmortem neurons—in the auditory and visual cortices in WMS. Williams Syndrome is a neurodevelopmental disorder with a hemizygous deletion on chromosome 7. It is characterized by moderate mental retardation, severe visuospatial deficits, relative language strengths and musical ability. Neuronal measures in the postmortem Williams' brains showed a relative preservation in the auditory cortex. In contrast, cell measures in the visual cortex pointed to an underlying visual/spatial impairment. These results are congruent with the auditory strengths and visuospatial deficits in this disorder.

In addition to research, my teaching and administration responsibilities included: laboratory meetings, training/supervising RAs and lab personnel, updates and presentations to the lab, visiting faculty, and students. Supervision of psychology interns in the Emergency Unit (Psychiatry Division), amounted to 4-6 hours/week from 1996-2000. Time on the selection committee for psychology interns amounted to 4-5 hours/week for 4-6 weeks/year from 1997-2000.

My university teaching—in Harvard University's Summer School—was a seminar-size class, "Brain and Behavior: Research Methods and Technologies," that covered the methods and technologies used in brain research. The class included: visits to several laboratories in the Longwood Medical area, an observation of a postmortem brain dissection, and lectures by several researchers discussing their work. Teaching, office hours, and preparation totaled 30 hours/week for 7 weeks for 3 summer semesters (2008-2010).

The effects of my research, clinical work, and teaching have informed and enhanced my experience as an academic psychologist, enabling me to communicate my knowledge to patients, students and colleagues. These activities have also led to my most recent endeavor: a book that I have written about grief, *The Anatomy of Grief*. Published by Yale University Press, the book uses humanistic and physiological approaches to describe grief's impact on the bereaved. In taking illustrative examples from literature, music, poetry, paleoarcheology, personal experience, memoirs, and patient narratives, it describes what happens in the brain, the heart, and the body of the bereaved.