

## CURRICULUM VITAE

**DATE PREPARED:** February 10, 2009

### **PART I: General Information**

**Name:** BRADFORD CLARK DICKERSON

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Gerontology Research Unit  
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### **Education:**

1990 B.S. (Biomedical Engineering), Southern Methodist University  
1999 M.D., U. OF ILLINOIS COL. OF MEDICINE  
2005 M.M.SC. (Clinical Investigation), Harvard Medical School/Massachusetts Institute of Technology

### **Postdoctoral Training:**

01/99-12/00 Intern in Medicine, Medicine, Brigham and Women's Hospital  
07/00-06/02 Resident in Neurology, Neurology, Partners (MGH and BWH)  
07/02-06/03 Chief Resident in Neurology, Neurology, Partners (MGH and BWH)  
09/02-09/03 Research Fellow, Gerontology Research Unit & Martinos Imaging Center, Neuroimaging, Massachusetts General Hospital  
07/03-06/05 Fellow in Cognitive and Behavioral Neurology, Cognitive and Behavioral Neurology, Brigham and Women's Hospital

### **Licensure and Certification:**

2002 Diplomate of National Board of Medical Examiners  
2003 Massachusetts Board of Registration  
2005 Diplomate of American Board of Psychiatry and Neurology

### **Academic Appointments:**

1999-2001 Clinical Fellow in Medicine, Harvard Medical School, Boston, MA  
2000-2003 Clinical Fellow in Neurology, Harvard Medical School, Boston, MA  
2003-2006 Instructor in Neurology, Harvard Medical School, Boston, MA  
2006-2008 Assistant Professor of Neurology, Harvard Medical School, Boston, MA  
2008- Associate Professor of Neurology, Harvard Medical School, Boston, MA

### **Hospital or Affiliated Institution Appointments:**

06/99-06/00 Intern in Medicine, Brigham and Women's Hospital, Boston, MA  
07/00-06/03 Resident in Neurology, Partners Neurology (Massachusetts General Hospital & Brigham & Women's Hospital), Boston, MA  
07/02-06/03 Chief Resident in Neurology, Partners Neurology (Massachusetts General Hospital & Brigham & Women's Hospital), Boston, MA  
07/03- Associate Neurologist, Brigham and Women's Hospital, Boston, MA  
09/03- Assistant in Neurology, Massachusetts General Hospital, Boston, MA

### **Hospital and Health Care Organization Clinical Service Responsibilities:**

2003- Attending Physician in Neurology, Brigham and Women's Hospital  
2004- Attending Physician in Neurology, Massachusetts General Hospital

### **Major Administrative Responsibilities:**

2005- Director of Clinical Applications, MGH Morphometry Analysis Center, Massachusetts General Hospital  
2005- Co-Director, Neuroimaging Group, Gerontology Research Unit, Massachusetts General Hospital

2008- Director, Frontotemporal Dementia Unit, Massachusetts General Hospital

**Major Committee Assignments:**

**Affiliated Inst**

1996-1999 James Scholar Program for Independent Study Advisory Committee, University of Illinois College of Medicine

2001-2007 BWH Department of Internal Medicine Resident Selection Committee, Brigham and Women's Hospital

2005-2007 Core data committee [Chairperson], Brigham and Women's Hospital (Memory Disorders Unit)

2006- Clinical Research Steering Subcommittee, Alzheimer's Disease Research Center, Massachusetts General Hospital

2007- Partners Brain Imaging Guidelines Committee, Partners Healthcare System

**Regional**

2004- Medical and Scientific Advisory Committee, Alzheimer's Association, Greater Massachusetts Chapter

2005- Organizing committee [Founding Chairperson], Charles River Association for Memory biannual meeting

**National**

2004 Grant review committee, Fidelity Research Foundation

2004 Grant review committee, Retirement Research Foundation

2005 Grant review committee, National Science Foundation

2006- Grant Review Committee, Alzheimer's Association

2006- External grant review committee, Rush University, Chicago, IL

2008 NIH Neurological, Aging and Musculoskeletal Epidemiology study section, National Institutes of Health

2008 NIH Special Emphasis Panel, National Institutes of Health

**International**

2005-2006 Neuroplasticity in Recovery of Brain Function: Insights From Animals and Humans, Winter Conference on Neural Plasticity (invited session chair)

2007 Grant Review Committee, Wellcome Trust for Biomedical Research

2008 Grant review committee, Dutch Research Council

2008 Grant review committee, Canadian National Medical Research Council

2008 Grant review committee, Health Research Board, Ireland

2008 Grant review committee, Alzheimer's Society of the United Kingdom

**Professional Societies:**

1990- American Medical Writers Association, Member

1995- American Medical Association, Member

1996- Society for Neuroscience, Member

1997- American Association for the Advancement of Science, Member

1999- Massachusetts Medical Society, Member

2002- American Academy of Neurology, Member

2003- Organization for Human Brain Mapping, Member

2004- Cognitive Neuroscience Society, Member

2004- Behavioral Neurology Section, American Academy of Neurology, Member

2004- Society for Behavioral and Cognitive Neurology, Member

2005- Charles River Association for Memory, Founding Co-Chairperson

**Editorial Boards:**

2004- Ad-Hoc Reviewer, Hippocampus  
2004- Ad-Hoc Reviewer, Medical Physics  
2004- Ad-Hoc Reviewer, Brain  
2004- Ad-Hoc Reviewer, Neurobiology of Aging  
2005- Ad-Hoc Reviewer, Neuroimage  
2005- Ad-Hoc Reviewer, Archives of Psychiatry  
2005- Ad-Hoc Reviewer, Journal of Neuroimaging  
2005- Ad-Hoc Reviewer, Neurology  
2005- Ad-Hoc Reviewer, Journal of Neuroscience  
2005- Ad-Hoc Reviewer, Archives of Neurology  
2005- Ad-Hoc Reviewer, Human Brain Mapping  
2006- Ad-Hoc Reviewer, The Lancet  
2006- Ad-Hoc Reviewer, Cerebral Cortex  
2006- Ad-Hoc Reviewer, Alzheimer's Disease and Associated Disorders  
2006- Ad-Hoc Reviewer, Journal of the International Neuropsychological Society  
2006- Ad-Hoc Reviewer, Learning and Memory  
2006- Ad-Hoc Reviewer, Psychiatry Research: Neuroimaging  
2006- Ad-Hoc Reviewer, Brain Imaging and Behavior  
2006- Ad-Hoc Reviewer, Lancet Neurology  
2007- Ad-Hoc Reviewer, Journal of Neuroimaging  
2007- Ad-Hoc Reviewer, Journal of Neurology  
2007- Ad-Hoc Reviewer, Neuropsychologia  
2007- Co-Editor, Frontiers in Neuroscience  
2008- Ad-Hoc Reviewer, Brain Imaging and Behavior  
2008- Ad-Hoc Reviewer, Brain and Cognition  
2008- Ad-Hoc Reviewer, CNS Spectrums  
2008- Co-Editor, Open Neurology Journal  
2008- Ad-Hoc Reviewer, Radiology  
2008- Ad-Hoc Reviewer, Brain Research  
2008- Ad-Hoc Reviewer, Cortex  
2008- Editorial board, Hippocampus

**Awards and Honors:**

1995-1999 James Scholar Program for Independent Study (research conducted in Morrell lab, Rush University), U. Of Illinois Col. Of Medicine  
1995 Walter Rice Craig Summer Research Fellowship (conducted in lab of W.T. Greenough), U. Of Illinois Col. Of Medicine  
1996 Honorable Mention, Student Research Day, U. Of Illinois Col. Of Medicine  
1996-1997 Rush University Scholars Fellowship (Rush University Scholar Fellowship (F & L Morrell lab) , Rush University, Chicago IL  
1997 Second place in Sigma Xi session of research forum, Rush University  
1998 Alpha Omega Alpha, U. Of Illinois Col. Of Medicine  
1999 David M. Olkon Honors Scholarship, U. Of Illinois Col. Of Medicine  
2003-2005 Clinical Investigator Training Program, Harvard Medical School  
2007 MGH Scientific Advisory Committee Poster of Distinction Award, Massachusetts General Hospital

## **Part II: Research, Teaching, and Clinical Contributions**

### **A. Narrative report of Research, Teaching, and Clinical Contributions**

My research seeks to understand the neuroanatomic and neurophysiologic substrates of memory, language, and other cognitive function in health, aging, and disease. I use structural and functional neuroimaging tools, as well as quantitative behavioral instruments, to study healthy younger and older individuals and those with cognitive impairment, including Alzheimer's disease and frontotemporal dementias. An important line of this research has involved technical advances and development of reliable methods for anatomic and physiologic neuroimaging measurements, as well as pushing the limits of high resolution and high field MRI technology and computational neuroanatomy. I have identified in vivo anatomic and physiologic correlates of memory function, and have begun to translate some of these measures into potential biomarkers of Alzheimer's disease. In particular, I was the first to report the observation that some individuals with mild cognitive impairment, the first symptomatic phase of Alzheimer's disease prior to dementia, demonstrate hyperactivation of memory-related brain regions, which may be an indication of attempted physiologic compensation for pathologic change. I hope that these markers will be useful for identifying individuals who would be candidates for clinical trials of novel therapies for Alzheimer's disease and related neurodegenerative disorders. I have recently begun a series of clinical research studies investigating the brain-behavioral basis of frontotemporal dementias, one aim of which will be to translate these cognitive-behavioral and imaging measures into biomarkers. In parallel with this work, I founded the MGH Frontotemporal Dementia Unit, which is a clinical-research unit that includes as its mission the provision of comprehensive multidisciplinary clinical care with the ultimate goal of translating research findings into methods for improved diagnosis and treatment. In my weekly clinic, I see patients with disorders of behavior and cognition (including many patients with neurodegenerative dementias). I seek to identify clinical problems that I can pursue through my research, and attempt to use the insights I gain through research to provide better clinical care. I take care of patients and supervise residents through a month of hospital service each year. I teach at a local and national level on the topics of behavioral neurology, memory function, Alzheimer's disease, frontotemporal dementias, and magnetic resonance imaging. I mentor students, research assistants, neurology and psychiatry residents and fellows, and neurology, psychiatry, and radiology junior faculty on research methods and career development.

### **B. Funding Information**

2002-2007	Investigator, N.I.H., P01 AG04953, Neuroimaging And Neuropsychological Studies Of Patients With Memory Problems
2003-2005	P.I., Company (Janssen), 210109, Psychophysical and fMRI studies of the effect of the cholinesterase inhibitor galanthamine on visual perceptual learning
2003-2008	P.I., N.I.H., K23AG22509, Structural-functional MRI Studies of Memory in MCI & AD
2004-2006	P.I., Company (Pfizer), A9001128, Development and analysis of automated region of interest identification for MRI: An MRI reliability and validity study
2005-2008	P.I., Company (Pfizer), 219340, Longitudinal MRI Morphometric Methods Analysis
2006-2011	Investigator, N.I.H., R01-AG027435, Evolution of memory-related fMRI activation over the course of MCI and AD
2006-2007	P.I., N.I.H., High-resolution MRI of brain function & structure in aging & MCI: A pilot study
2007-2009	P.I., Foundation, NIRG-07-58852 , Ultra-high resolution MRI of medial temporal lobe in MCI: A pilot study
2006-2011	Co-Investigator, N.I.H., R01 AG027435, Evolution of memory related fMRI over the course of MCI and AD
2007-2012	P.I., N.I.H., R01 AG029411, Medial temporal lobe subregions in aging, MCI and AD:Structural and functional MRI
2008-2010	P.I., N.I.H., R21AG029840, Ultrahigh-resolution MRI in vivo and ex vivo MRI of human medial temporal lobe
2008-2013	Co-Investigator, N.I.H., R01 NS062028, Small vessel disease and beta-amyloid deposition in mildly impaired cognition

Pending P.I., Foundation, Alzheimer's Association, Biomarkers for Neurodegenerative Dementias

Pending P.I., N.I.H., R01, Translating cognitive and imaging science into tools for clinical research in progressive aphasia

**C. Report of Other (Non-Funded) Activities**

P.I. Brain-behavioral relationships in progressive aphasia and other frontotemporal dementias: Detailed language and MRI assessments

**D. Report of Teaching**

**1. Local contributions**

**b. Graduate Medical Courses**

2003-	<u>MGH Psychology Post-doctoral Seminar Series</u>			<i>contact time</i>	<i>prep time</i>
	Lecturer	6 Post-doc Students		1 hours/year for 1 year(s)	5 hours/year for 1 year(s)
2004-	<u>Behavioral Neurology Elective</u>			<i>contact time</i>	<i>prep time</i>
	Attending	10 Medical Students 12 Residents		10 hours/month for 12 month(s)	1 hours/month for 12 month(s)
2004-	<u>Neurologic Neuroimaging Elective</u>			<i>contact time</i>	<i>prep time</i>
	Attending	2 Residents		30 hours/year for 1 year(s)	5 hours/year for 1 year(s)
2005-	<u>Ward attending</u>			<i>contact time</i>	<i>prep time</i>
	Attending	4 Medical Students 4 Residents		75 hours/month for 1 month(s)	30 hours/month for 1 month(s)

**c. Local Invited Presentations**

**Grand Rounds**

2004- Alzheimer's Disease: Clinical and Research Update, Spaulding Rehabilitation Hospital

2005- Alzheimer's Disease: Research Update, Map Through the Maze Regional Alzheimer's Conference  
Lecturer: 50 participants, 1.5 hours contact time per year, 20 hours prep time per year

2005- Early diagnosis of Alzheimer's disease: A missed opportunity, Winchester Hospital  
Lecturer: 65 participants, 1 hour contact time per year,

20 hours prep time per year

- 2006- Grand Rounds: Early detection of Alzheimer's disease: New opportunities, Youville Hospital  
Lecturer: 30 participants, 1 hour contact time per day,  
20 hours prep time per day
- 2006- Advances in Alzheimer's Research and Treatment, North Shore Medical Center (Union Hospital), Lynn, MA  
Lecturer: 10 participants, 1 hour contact time per year,  
20 hours prep time per year
- 2007 Cortical structure and function in aging and Alzheimer's disease, Brigham and Women's Hospital Behavioral Neuroscience Rounds  
Lecturer: 25 participants, 1 hour contact time per year,  
20 hours prep time per year
- 2007 Cortical structure and function in aging and Alzheimer's disease, Massachusetts General Hospital Department of Neurology  
Lecturer: 35 participants, 1 hour contact time per year,  
20 hours prep time per year
- 2008 Where does Alzheimer's Disease begin in the brain: a paradigm shift. New insights from novel in vivo imaging and postmortem data, 963rd meeting of the Boston Society of Neurology and Psychiatry  
Lecturer: 80 participants, 2 hours contact time per day,  
10 hours prep time per day

#### **Other**

- 2006- Advances in High-resolution MRI imaging: Clinical applications, Massachusetts General Hospital: Martinos Center Siemens Collaborative Roundtable  
Lecturer: 40 participants, no contact time reported, 20 hours prep time per year

#### **Seminar**

- 2004- Visual Memory and Alzheimer's Disease, Massachusetts Institute of Technology Brain & Cognitive Sciences seminar series  
Lecturer: 7 participants, 2 hours contact time per year,  
10 hours prep time per year
- 2005- Memory-related medial temporal lobe activity in mild cognitive impairment: Testing the compensatory hypothesis, Boston University Center for Memory and Brain seminar series  
Attending: 20 participants, 1.5 hours contact time per year,  
20 hours prep time per year
- 2005- Anatomy and Physiology of Memory in Mild Cognitive Impairment, Boston University Alzheimer's Disease Research Center seminar series  
Lecturer: 38 participants, 1 hour contact time per year,  
15 hours prep time per year

- 2005- Neural correlates of free recall: An event-related fMRI study, Harvard University Cognitive Psychology seminar series  
Attending: 25 participants, 1.5 hours contact time per year, 20 hours prep time per year
- 2006- Medial temporal lobe function and structure: Aging, MCI, and Alzheimer's disease, Massachusetts Institute of Technology: Brain & Cognitive Sciences Corkin lab meeting  
Lecturer: 9 participants, 2 hours contact time per year, 5 hours prep time per year
- 2006- Brain structure and function in very early Alzheimer's disease: Insights from MRI of living humans, Boston University Alzheimer's Disease Research Center Seminar Series  
Lecturer: 35 participants, 1 hour contact time per year, 20 hours prep time per year
- 2006- The cortical signature of Alzheimer's disease: Reliability and applications, Massachusetts General Hospital Gerontology Research Unit seminar series  
Lecturer: 29 participants, 1 hour contact time per year, 20 hours prep time per year
- 2007 Cortical structure and function in aging and Alzheimer's disease, Massachusetts General Hospital Martinos Center Brain Mapping Seminar  
Lecturer: 24 participants, 1 hour contact time per year, 20 hours prep time per year
- 2007 Clinical prediction of cognitive decline: Use of CDR-SB and neuropsychological testing, Massachusetts General Hospital  
Lecturer: 40 participants, 1 hour contact time per day, 10 hours prep time per day

**Seminar (CSAIL seminar series)**

- 2006- Computational challenges in measuring brain structure and function in aging, MCI, and AD, Massachusetts Institute of Technology  
Lecturer: 12 participants, 2 hours contact time per day, 15 hours prep time per day

**d. Continuing Medical Education Courses**

- 2006 Harvard Annual Psychiatric Neuroscience Course: A Primer for Clinicians-- Neuroimaging and the Neurobiology of AD  
Lecturer: 40 participants, 2 hours contact time per day, 30 hours prep time per day
- 2007 Dementia: A Comprehensive Update  
Lecturer: 100 participants, 1 hour contact time per year, 50 hours prep time per year
- 2007 Harvard/MIT/MGH Short course on multimodal neuroimaging

Lecturer: 57 participants, 1 hour contact time per day,  
10 hours prep time per day

2008                    Dementia: A Comprehensive Update  
Lecturer: 100 participants, 1 hour contact time per day,  
20 hours prep time per day

**e. Advisory and Supervisory Responsibilities in Clinical or Laboratory Setting**

2004-                    3 Residents for 100 hrs/year, Precepting in lab, Harvard Medical School

**f. Leadership Roles**

2003-                    Preceptor, Harvard Behavioral Neurology Elective, Harvard Medical School  
Responsibility: Supervise the elective experience of Harvard Medical Students  
with special interest in behavioral neurology  
Special Accomplishments: I supervised Alice Chen-Plotkin in designing and  
executing this elective which received credit as an elective.

2004-                    Lecturer, HST 583: Functional Magnetic Resonance Imaging: Data Acquisition  
and Analysis, Harvard Medical School  
Responsibility: Have given 5 lectures in this HST course in 2004, 2006, and  
plan to do so again every other year.

**g. Advisees/Trainees**

<i>Training Duration</i>	<i>Name</i>	<i>Current Position</i>
2004-2006	Rahul Desikan	Other: MD, PhD student
2005-2007	Rebecca Melrose	Post-doctoral psychology fellow, UCLA
2005-2007	Keith Vossel	Behavioral Neurology Fellow, UCSF
2005-2007	Richard King	Assistant Professor of Neurology, Univ of Texas Southwestern
2006-2007	Lindsay Barker	Other: Post-doctoral psychology fellow, Brigham & Women's
2006	David Koh	Other: MIT student
2006-2007	Frida Polli	Other: Post-doctoral research fellow, MIT
2007	Min Deng	Other: Medical Student
2007	Christine Lai	Other: High school student
2007-2008	Daisy Sapolsky	Other: Staff Speech Pathologist, MGH
2008-	Liang Wang, M.D.	Other: Current post-doctoral fellow
2008	Aaron Shmookler	Other: Medical student, University of Toledo, OH
2008	Dina Gozman	Other: Medical student, Ohio State University Coll Medicine
2008-	Ugwechi Amadi	Other: Undergraduate Student, MIT
2008-	Kimiko Domoto-Reilly, M.D.	Other: Neurology resident, MGH/BWH
2008-	Scott McGinnis, M.D.	Other: Instructor in Neurology, HMS
2008-	Stephane Poulin, M.D.	Other: Current post-doctoral fellow
2008-	Lucille Pellerin, M.D.	Other: Current post-doctoral fellow

2009- Belen Pascual, Ph.D. Other: Current post-doctoral fellow

## 2. Regional, national, or international contributions

### a. Invited Presentations

#### Regional

2006 Grand Rounds: Memory-related brain function and structure in aging, MCI, and AD, Brown University Department of Neurology *[Invited Lecture]*

2007

2008 Brain networks and memory dysfunction, Charles River Association for Memory Biannual Meeting plenary talk *[Invited Lecture]*

2009 The cortical signatures of neurodegenerative dementias, Bedford VA GRECC Grand Rounds *[Invited Lecture]*

#### National

2004 Visual encoding in questionable Alzheimer's disease, Cognitive Neuroscience Grand Rounds, Johns Hopkins Hospital *[Invited Lecture]*

2005 Medial temporal lobe function and structure: Health, cognitive impairment, and Alzheimer's disease, Washington University Alzheimer's Disease Research Center *[Visiting Professorship]*

2007 The cortical signature of Alzheimer's disease, University of Pittsburgh Alzheimer Center *[Invited Lecture]*

2007 The cortical signature of Alzheimer's disease: Abnormalities in the anatomy and activity of the cerebral cortex, Emory University Alzheimer Center *[Invited Lecture]*

2008 Advances in the early diagnosis of Alzheimer's disease: Imaging biomarkers, Christ Hospital, Chicago, IL *[Invited Lecture: Psychiatry Grand Rounds]*

2008 Network dysfunction in Alzheimer's disease, NIH Workshop on Epilepsy and Dementia (Invited lecture)

#### International

2004 Functional and Structural MRI in Questionable Alzheimer's Disease: Relationships to Clinical Impairment and Future Decline, 9th International Conference on Alzheimer's Disease and Related Disorders *[Invited Lecture]*

2005 Functional MRI in Mild Cognitive Impairment: Relationships to Clinical Status and Risk of Dementia, Winter Conference on Neural Plasticity (Guadeloupe) *[Invited Lecture]*

2006 Functional neuroimaging of plasticity in neurological disorders, Winter Conference on Neural Plasticity (Barbados) *[Invited Lecture]*

2006 Functional neuroimaging of dementia, French Neurological Society, Centennial Celebration of Professor Alzheimer (Paris) *[Invited Lecture]*

2006 The cortical signature of Alzheimer's disease: Quantitative measures of

neocortical anatomy in living humans, University College of London, Centre for Neuroimaging Techniques[Invited Lecture]

#### **b. Professional Leadership Roles related to Teaching**

- |      |          |                                                                                                                                                                                                                                    |
|------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2006 | National | American Academy of Neurology<br>MRI of Degenerative Diseases in AAN full-day course on Update on MRI: Techniques and Applications (invited lecture during a national CME course for the American Academy of Neurology).           |
| 2007 | National | American Academy of Neurology<br>Session co-chair, Functional Neuroimaging Scientific Session, AAN 2007 Annual Meeting                                                                                                             |
| 2008 | National | American Academy of Neurology<br>Functional MRI in Neurologic Disorders in AAN full-day course on Update on MRI: Techniques and Applications (invited lecture during a national CME course for the American Academy of Neurology). |
| 2008 | National | American Academy of Neurology<br>Session Co-Chair, Learning and Memory Scientific Session, AAN 2008 Annual Meeting                                                                                                                 |
| 2009 | National | American Academy of Neurology<br>Memory systems of the brain in AAN half-day course on Primer of Cognitive Neurology (invited lecture during a national CME course for the American Academy of Neurology).                         |

#### **3. Description of Teaching Award(s) Received**

- |      |                                                                                                          |
|------|----------------------------------------------------------------------------------------------------------|
| 2001 | Outstanding Resident Teacher in Neurology<br>Harvard Medical School                                      |
| 2002 | Partners in Excellence Award (Neurology Chief Residents)<br>Harvard Partners Neurology Residency Program |
| 2005 | Mentor of the Year Award<br>Harvard Partners Neurology Residents                                         |

#### **E. Report of Clinical Activities**

- |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2003-2006 | Neurology, Behavioral neurology Brigham and Women's Hospital<br><u>Clinical Activity Description:</u> I evaluate and treat patients in the Division of Cognitive and Behavioral Neurology at BWH on a weekly basis. These patients are complex cases with dementia, head injury, or other disorders causing cognitive and behavioral symptoms. Many are referred for high-level consultation.<br><u>Patient Load:</u> 5/week; High level of complexity |
| 2003-     | Neurology, Massachusetts General Hospital<br><u>Clinical Activity Description:</u> I see patients on the MGH General Neurology Consultation service one month per year. Many of these cases require complex consultative evaluations for diagnostic and therapeutic purposes.<br><u>Patient Load:</u> 3/day for one month; Mid to high level complexity                                                                                                |
| 2006-     | Neurology, Memory disorders Massachusetts General Hospital<br><u>Clinical Activity Description:</u> I evaluate and treat patients in the Memory Disorders Unit/Alzheimer's Disease Research Center at MGH on a weekly basis. These patients are complex cases with dementia or other disorders causing cognitive and behavioral symptoms. Many are referred for high-level consultation.                                                               |

Patient Load: 5/week; High level of complexity

### Part III: Bibliography

#### Original Articles

1. deToledo-Morrell L, Goncharova I, **Dickerson B**, Wilson RS, Bennett DA. From healthy aging to Alzheimer's disease: in vivo detection of entorhinal cortex atrophy. *Ann NY Acad Sci.* 2000;911:240-253.
2. deToledo-Morrell L, **Dickerson BC**, Sullivan MP, Spanovic C, Wilson R, Bennett DA. Hemispheric differences in hippocampal volume predict verbal and spatial memory performance in patients with Alzheimer's disease. *Hippocampus.* 2000;10:136-142.
3. Goncharova II, **Dickerson BC\***, Stoub TR, deToledo-Morrell L (\*authors contributed equally). MRI of human entorhinal cortex: a reliable protocol for volumetric measurement. *Neurobiol Aging.* 2001;22(5):737-45.
4. **Dickerson BC**, Goncharova I, Sullivan MP, Forchetti C, Wilson RS, Bennett DA, Beckett LA, deToledo-Morrell L. MRI-derived entorhinal and hippocampal atrophy in incipient and very mild Alzheimer's disease. *Neurobiol Aging.* 2001;22(5):747-54.
5. **Dickerson BC**, Salat DH, Bates JF, Atiya M, Killiany RJ, Greve DN, Dale AM, Stern CE, Blacker D, Albert MS, Sperling RA. Medial temporal lobe function and structure in mild cognitive impairment. *Ann Neurol.* 2004;56(1):27-35.
6. **Dickerson BC**, Salat DH, Greve DN, Chua EF, Rand-Giovannetti E, Rentz DM, Bertram L, Mullin K, Tanzi RE, Blacker D, Albert MS, Sperling RA. Increased hippocampal activation in mild cognitive impairment compared to normal aging and AD. *Neurology.* 2005;65(3):404-11.
7. Desikan RS, Segonne F, Fischl B, Quinn BT, **Dickerson BC**, Blacker D, Buckner RL, Dale AM, Hyman BT, Albert MS, Killiany RJ. A computer-generated labeling system for subdividing the human cerebral cortex on MRI scans into gyral-based regions of interest. *Neuroimage.* 2006;31(3):968-980.
8. Wright CI, Williams D, Feczko E, Barrett LF, **Dickerson BC**, Schwartz CE, Wedig MM. Neuroanatomical correlates of extraversion and neuroticism. *Cerebral Cortex.* 2006;16(12):1809-1819.
9. Han X, Jovicich J, Salat D, van der Kouwe A, Quinn BT, Czanner S, Busa E, Pacheco J, Albert M, Killiany R, Maguire P, Rosas D, Makris N, Dale A, **Dickerson BC\***, Fischl B\* (\*authors contributed equally). Reliability of MRI-derived measurements of human cerebral cortical thickness: The effects of field strength, scanner upgrade and manufacturer. *Neuroimage.* 2006;32(1):180-194.
10. Atri A, Locascio JJ, Lin JM, Yap L, **Dickerson BC**, Grodstein F, Irizarry MC, Growdon JH, Greenberg SM. Prevalence and effects of lobar microhemorrhages in early-stage dementia. *Neurodegenerative Diseases.* 2006;2:305-312.
11. Celone KA, Calhoun VD, **Dickerson BC**, Atri A, Chua EF, Miller SL, DePeau K, Rentz DM, Selkoe DJ, Blacker D, Albert MS, Sperling RA. Alterations in memory networks in mild cognitive impairment and Alzheimer's disease: an independent component analysis. *Journal of Neuroscience.* 2006;26(40):10222-10231.
12. Wright CI, Feczko E, **Dickerson BC**, Williams D. Neuroanatomical correlates of personality in the elderly. *Neuroimage.* 2007;35(12):263-272.
13. Wright CI, **Dickerson BC**, Feczko E, Negreira A, Williams D. A Functional Magnetic Resonance Imaging Study of Amygdala Responses to Human Faces in Aging and Mild Alzheimer's Disease. *Biol Psychiatry.* 2007 Dec 15;62(12):1388-95. Epub 2007 Mar 6.
14. Feczko E, Augustinack JC, Fischl B, **Dickerson BC**. An MRI-based method for measuring volume, thickness and surface area of entorhinal, perirhinal, and posterior parahippocampal cortex. *Neurobiology of Aging.* 2007 Sep 10. [Epub ahead of print].
15. **Dickerson BC**, Feczko E, Augustinack JC, Pacheco J, Morris JC, Fischl B, Buckner RL.

Differential effects of aging and Alzheimer's disease on medial temporal lobe cortical thickness and surface area. *Neurobiology of Aging*. 2007 Sep 13. [Epub ahead of print]

16. Diamond EL, Miller S, **Dickerson BC**, Atri A, DePeau K, Fenstermacher E, Pihlajamaki M, Celone K, Salisbury S, Gregas M, Rentz D, Sperling RA. Relationship of fMRI activation to clinical trial memory measures in Alzheimer disease. *Neurology*. 2007;69(13):1331-41.
17. **Dickerson BC**, Miller SL, Greve DN, Dale AM, Albert MS, Schacter DL, Sperling RA. Prefrontal-hippocampal-fusiform activity during encoding predicts intra-individual differences in free recall ability: An event-related functional-anatomic MRI study. *Hippocampus*. 2007;17(11):1060-1070.
18. **Dickerson BC**, Sperling RA, Hyman BT, Albert MS, Blacker D. Clinical prediction of AD dementia across the spectrum of mild cognitive impairment. *Archives of General Psychiatry*. 2007;64(12):1443-1450.
19. Fennema-Notestine C, Gamst AC, Quinn BT, Pacheco J, Jernigan TL, Thal L, Buckner R, Killiany R, Blacker D, Dale AM, Fischl B, **Dickerson BC\***, Gollub RL\*. [\*authors contributed equally]. Feasibility of multi-site clinical structural neuroimaging studies of aging using legacy data. *Neuroinformatics*. 2007;5(4):235-245.
20. **Dickerson BC**, Fenstermacher E, Salat DH, Wolk DA, Maguire RP, Desikan R, Pacheco J, Quinn BT, van der Kouwe A, Greve DN, Blacker D, Albert MS, Killiany RJ, Fischl B. Detection of cortical thickness correlates of cognitive performance: Reliability across MRI scan sessions, scanners, and field strengths. *Neuroimage*. 2008;39(1):10-18.
21. Smith EE, Egorova S, Blacker D, Killiany RJ, Muzikansky A, **Dickerson BC**, Tanzi RE, Albert MS, Greenberg SM, Guttmann CR. Magnetic resonance imaging white matter hyperintensities and brain volume in the prediction of mild cognitive impairment and dementia. *Arch Neurol*. 2008;65(1):94-100.
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