

## Curriculum Vitae

LAUREN RACHEL MOO, M.D.

Department of Neurology, Massachusetts General Hospital  
55 Fruit Street, CPZS Suite 340, Boston, MA 02114  
Phone: 617-726-2072 E-Mail: [lmoo@partners.org](mailto:lmoo@partners.org)  
Website: [www.wjh.harvard.edu/~lmoo](http://www.wjh.harvard.edu/~lmoo)

### Education

1988 B.A. Chemistry, College Scholar, Cornell University  
1995 M.D. Tufts University School of Medicine  
1995-1996 Intern in Medicine, Faulkner Hospital  
1996-1999 Resident in Neurology, Johns Hopkins Hospital  
1998-1999 Chief Resident in Neurology, Johns Hopkins Hospital  
1999-2001 Fellow in Cognitive Neurology and Neuropsychology, Johns Hopkins Hospital  
2001-2002 Fellow in Neurotherapeutics, Johns Hopkins Hospital

### Academic Appointments

1988-1991 Science and Math Teacher, Commonwealth School, Boston, MA  
1994-1995 Facilitator, Problem Based Learning, Tufts University School of Medicine, Boston, MA  
2002-2003 Assistant Professor of Neurology, Johns Hopkins School of Medicine, Baltimore, MD  
2002-2003 Visiting Scholar in Psychology, Harvard University, Cambridge, MA  
2003-2005 Instructor in Neurology, Harvard Medical School, Boston, MA  
2003- Affiliate in Psychology, Harvard University, Cambridge, MA  
2005- Assistant Professor of Neurology, Harvard Medical School, Boston, MA  
2008- Part-Time Faculty, Psychology, Boston College, Chestnut Hill, MA

### Hospital Appointments

2002-2003 Active Staff in Neurology, Johns Hopkins Hospital, Baltimore, MD  
2003- Staff in Neurology, Massachusetts General Hospital, Boston, MA

### Licensure & Certification

1999 Maryland State Medical License  
1999 Drug Enforcement Administration  
2000 American Board of Psychiatry and Neurology  
2003 Massachusetts State Medical License

### Professional Memberships

1993-2000 Massachusetts Medical Society  
1998- American Academy of Neurology

- 2000- Society for Behavioral and Cognitive Neurology
- 2001- Cognitive Neuroscience Society
- 2002- Society for Neuroscience

### **Committee and Board Assignments**

- 1989-1991 Faculty Representative, Board of Trustees, Commonwealth School, Boston, MA
- 1994-1995 Admissions Committee, Tufts University School of Medicine, Boston, MA
- 1999-2003 Member, Board of the Hopkins Women's Medical Alumnae Association, Baltimore, MD

### **Community Service**

- 2004- Brain Health Talk for Pre-K and Kindergarteners, Boston Public Schools
- 2006- Clinical and Research mentoring/shadowing for high school students  
Emily Hall, March 2006 (for 3 weeks)  
Camille Simoneau, - Summer 2008 (Women in Science grant awardee)

### **Ad Hoc Reviewer**

- 2001- Annals of Neurology
- 2001- Journal of the International Neuropsychological Society
- 2002- Journal of Neurology Neurosurgery and Psychiatry
- 2003- Aphasiology
- 2004- Neurology
- 2006- Behavioral Neurology
- 2008- Brain

### **Funding Information**

- 2002-2009 Principal Investigator, Mentored Patient-Oriented Research Career Award (K23), NIDCD (DC005068), "Plasticity of Language Cortex in Response to Chronic Brain Lesions"
- 2005-2010 Co-Investigator, NIDCD (R01 DC006842), "Cortical Organization of Noun and Verb Processing" PI: Alfonso Caramazza; Other Co-PI: Alvaro Pascual-Leone

### **Teaching Experience**

#### **Medical School Courses**

- 1994-1995 Problem Based Learning Facilitator, Tufts University School of Medicine  
- Facilitator for 6 second year medical students, 16 week course
- 1999-2002 Instructor, Clinical Skills (Neurology), Johns Hopkins  
- Instructed 4 second year medical students, 3 week course

- 1999-2002 Lecturer, Neurology Clerkship Series, Johns Hopkins  
"Dementia and Cognitive Neurology"  
- Lecture for rotating third and fourth year medical students
- 1999-2002 Lab Instructor, Neurology and Neuropathology Course, Johns Hopkins  
- 16 second year medical students, 3 week course, 10 hours/week
- 2002-2003 Lecturer, Neurology and Neuropathology Course, Johns Hopkins  
"Neurodegeneration and Dementia"  
- Lecture for all second year medical students
- 2002-2003 Course Co-Director, Neurology and Neuropathology Course, Johns Hopkins
- 2003- Neurology Clerkship Examiner, Harvard Medical School
- 2006- Guest Lecturer, Neurology Clerkship Rounds, Harvard Medical School
- 2007- Neurology Unit of Patient-Doctor 2, Harvard Medical School

**Graduate Medical Courses**

- 2002-2003 Lecturer, Neurology Resident Noon Lecture Series, Johns Hopkins  
"MRI Physics and Applications in fMRI"
- 2003- Lecturer, Noon Epilepsy Conference, Massachusetts General Hospital

**Continuing Medical Education**

- 2006-2007 Dementia: A Comprehensive Update  
Course Co-Director  
Lecturer: "Differential Diagnosis of Dementia"
- 2008 Dementia: A Comprehensive Update  
Course Director  
Lecturer: "Differential Diagnosis of Dementia: A Case Based Review"  
& "Mental Status Examination"

**Undergraduate Education**

- 2008- "Abnormal Psychology" Instructor, Boston College Psychology Department  
- Semester long course with 48 students

**Advisory and Supervisory Activity**

- 1999-2001 Faculty Advisor to American Academy of Neurology's Student Interest Group  
in Neurology, Johns Hopkins Chapter
- 2003- Clinical Teaching/Supervision of Epilepsy Fellows and Neurology Residents  
- Precepting residents in Resident's Continuity Clinic, the Cognitive Behavioral  
Neurology subspecialty clinic and both residents and fellows in the Epilepsy  
subspecialty clinic.

**Advisees and Trainees**

- 2000-2002 Jessica (Segal) Langbaum, PhD Public Health Postdoctoral Fellow at  
Banner Alzheimer's Institute

2003-2008	Kevin A. Shapiro, MD, PhD	Intern in Pediatrics, Boston Children's Hospital
2004-2008	Beth Leeman, MD	Clinical Fellow in Neurology, HMS, MGH, BIDMC
2004-2007	Britt Carlson Emerton, MA	Doctoral Candidate in Clinical Neuropsychology, Suffolk University

### Invited Talks

2000	Graduate Audiology Course, Towson University, Towson, MD
2001	Neurology Department Research Seminar, Beth Israel-Deaconess Medical Center, Boston, MA
2001	Research Seminar at the Neurology Center for Excellence in Drug Development, Glaxo Smith Kline, Harlow, UK
2001	Neurology Department Grand Rounds, Medical College of Georgia, Augusta, GA
2002	Department of Family Practice Grand Rounds, University of Maryland, Baltimore, MD
2002	Neuroimaging Research Group, Institute of Psychiatry at the Maudsley, King's College, London, UK
2002	Department of Chemistry Seminar, Haverford College, Haverford, PA
2003	Cognitive Neuroscience Club, Martinos Center for Biomedical Imaging, Charlestown, MA
2004	Senior Biology Tutorial, Harvard University, Cambridge, MA
2005	Introduction to Clinical Neuropsychology for Cognitive Neuropsychology, Harvard University, Cambridge, MA
2007	Functional Neuroimaging for Cognitive Neuropsychology, Harvard University, Cambridge, MA

### Bibliography

#### Original Articles

Lu, R.C., Moo, L.R., & Wong, A.G. Both the 25-kDa and 50-kDa domains in myosin subfragment 1 are close to the reactive thiols. *Proceedings of the National Academy of Sciences* 1986; 83: 6392-639.

Moo, L.R. & Wityk, R. Olfactory and Taste Dysfunction After Bilateral Middle Cerebral Artery Stroke. *Journal of Stroke and Cerebrovascular Disease* 1999; 5: 353-4.

Slotnick, S.D., Moo, L.R., Tesoro, M.A., & Hart, J. Hemispheric asymmetry in categorical versus coordinate visuospatial processing revealed by temporary cortical deactivation. *Journal of Cognitive Neuroscience* 2001; 13: 1088-96.

- Kasim, S., Moo, L.R., Zschocke, J., & Jinnah, H.A. Phenylketonuria Presenting in Adulthood as Progressive Spastic Paraparesis with Dementia. *Journal of Neurology Neurosurgery and Psychiatry* 2001; 71: 795-797.
- Kraut, M.A., Kremen, S., Segal, J.B., Calhoun, V., Moo, L.R., & Hart, J. Object Activation from Features in the Semantic System. *Journal of Cognitive Neuroscience* 2002; 14: 24-36.
- Kraut, M.A., Kremen, S., Moo, L.R., Segal, J.B., Calhoun, V., & Hart, J. Object Activation in Semantic Memory from Visual Multimodal Feature Input. *Journal of Cognitive Neuroscience* 2002; 14: 37-47.
- Polydefkis, M., Yiannoutsos, C., Cohen, B.A., Hollander, H., Schifitto, G., Clifford, E.D., Simpson, D.M., Katzenstein, D., Shriver, S., Hauer, P., Brown, A., Haidich, B., Moo, L.R., & McArthur, J.C. Reduced Intraepidermal Nerve Fiber Density in HIV-associated Sensory Neuropathy. *Neurology* 2002; 58: 115-119.
- Slotnick, S.D., Moo, L.R., Krauss, G., & Hart, J. Large-scale Cortical Displacement of a Human Retinotopic Map. *NeuroReport* 2002; 13: 41-46.
- Moo, L.R., Murphy, K.J., Gailloud, P., Tesoro, M.A., & Hart, J. Tailored Neuropsychological Testing with Provocative Amobarbital Injection Preceding AVM Embolization. *American Journal of Neuroradiology* 2002; 23: 416-421.
- Kraut, M.A., Moo, L.R., Segal, J.B., & Hart, J. Neural Activation During an Explicit Categorization Task: Category- or Feature-Specific Effects? *Cognitive Brain Research* 2002; 13: 213-220.
- Slotnick, S.D., Moo, L.R., Kraut, M.A., Lesser, R.P., & Hart, J. Interactions between thalamic and cortical rhythms during semantic memory recall in human. *Proceedings of the National Academy of Sciences* 2002; 99: 6440-6443.
- Moo, L.R., Slotnick, S.D., Krauss, G., & Hart, J. A Prospective Study of Motor Recovery Following Multiple Subpial Transections. *Neuroreport* 2002; 13: 665-659.
- Segal, J.B., Moo, L.R., & Hart, J. The Effect of Age on Rate of Functional Recovery Following Intracarotid Amobarbital Injection. *Epilepsia* 2002; 43: 659-661.
- Moo, L.R., Slotnick, S.D., Tesoro, M.A., Zee, D.S., & Hart, J. Interlocking-Finger Test: A bedside screen for parietal lobe dysfunction, *Journal of Neurology Neurosurgery and Psychiatry* 2003; 74: 530-2.
- Slotnick, S.D., Moo, L.R., Segal, J.B., & Hart, J. Distinct prefrontal cortex activity associated with item memory and source memory for visual shapes. *Cognitive Brain Research* 2003; 17:75-82.
- Slotnick, S.D. & Moo, L.R. Retinotopic mapping reveals extrastriate cortical basis of homonymous quadrantanopia. *Neuroreport* 2003; 14:1209-13.
- Caplan, D. & Moo, L. Cognitive Conjunction and Cognitive Functions. *Neuroimage* 2004; 21:751-6.
- Ellis, R.J., Evans, S.R., Clifford, D.B., Moo, L.R., McArthur, J.C., Collier, A.C., Benson, C.,

Bosch, R., Simpson, D., Yiannoutsos, C.T., Yang, Y. & Robertson, K. for the Neurological AIDS Research Consortium. Clinical validation of the NeuroScreen. *Journal of Neurovirology* 2005; 11:503-11.

Shapiro, K.A., Moo, L.R. & Caramazza, A. Cortical signatures of noun and verb production. *Proceedings of the National Academy Sciences* 2006; 103:1644-9.

Slotnick, S.D. & Moo, L.R. Prefrontal cortex hemispheric specialization for categorical and coordinate visual spatial memory. *Neuropsychologia* 2006; 44:1560-8.

Finkbeiner, M.S., Slotnick, S.D., Moo, L.R. & Caramazza, A. Involuntary capture of attention produces domain-specific activation. *Neuroreport* 2007; 18:975-9.

Moo, L.R., Emerton, B.C. & Slotnick, S.D. (in press). Functional MT+ lesion impairs contralateral motion processing. *Cognitive Neuropsychology*.

### Chapters and Reviews

Hart, J., Moo, L.R., Segal, J.B., Adkins, E., & Kraut, M.A. Neural Substrates of Semantics. In A. E. Hillis (Ed.), *The Handbook of Adult Language Disorders*. Psychology Press, Philadelphia, 2002: 207-227.

Moo, L.R. Review of Introduction to Functional Magnetic Resonance Imaging: Principles & Techniques by R.B. Buxton, *Neuropsychiatry, Neuropsychology, and Behavioral Neurology* 2002; 15: 262.

Moo, L.R. Review of Diagnostic and Interventional Neuroradiology – A Multimodality Approach, Klaus Sartor Ed., *Annals of Neurology* 2003; 53: 147.

Moo, L.R., Kasim, S., Zschocke, J., & Jinnah, H.A. Phenylketonuria Presenting in Adulthood as Progressive Spastic Paraparesis with Dementia. *Dementia* 2003; 3: 20-21.

### Presentations and Published Abstracts

Lu, R.C., Wong, A. & Moo, L. Topography of Myosin S-1 Domains – The Location of SH1 And SH2 in Relation to 25K and 50K Fragments. 1986 Biophysical Society Meeting (*Biophysical Journal*, 49 (2), A219).

Moo, L.R., Hauer, P.E., Brown, A., Carter, K.M., Skolasky, R.L., Simpson, D., Clifford, D., Schiffito, G., Yiannoutsos, C., Hollander, H., Cohen, B., Berger, J., & McArthur, J.M. Reduced Intraepidermal Nerve Fiber Density in HIV Sensory Neuropathy. Platform presented at 1998 American Academy of Neurology (*Neurology*, 50, A344).

Moo, L.R., Hart, J., Kraut, M., Kremen, S., Crone, N., Lenz, F., & Krauss, G. fMRI of Motor Recovery Following Multiple Subpial Transections. Presented at 1998 American Epilepsy Society Meeting (*Epilepsia*, 39, 90).

Moo, L.R., Crone, N., Krauss, G., & Hart, J. Plasticity of Human Language Cortex. Presented at 2000 American Academy of Neurology (*Neurology*, 54, A101).

Slotnick, S.D., Moo, L.R., Zee, D.S., Tesoro, M.A., & Hart, J. Utility of an Interlocking Finger Test in a Neurologic Examination. Presented at 2000 American Academy of Neurology (*Neurology*, 54, A310).

- Moo, L.R., Tesoro, M.A., & Hart, J. Inter- and Intra-hemispheric Variation in the Neural Basis of Reading. Platform presented at 2000 Society for Neuroscience Meeting. (*Society for Neuroscience Abstracts*, 26, 1588).
- Moo, L.R., Tesoro, M.A., Beyderman, L., Breitstein, J., & Hart, J. Shifts of Cortical Substrates Subserving Word Repetition. Platform presented at 2001 American Academy of Neurology Meeting (*Neurology*, 56, A159).
- Moo, L.R., Slotnick, S.D., Tesoro, M.A., & Hart, J. Intracarotid amobarbital injections confirm differential hemispheric specialization in categorical versus coordinate visuospatial processing. Presented at 2001 Cognitive Neuroscience Society Meeting. (*Journal of Cognitive Neuroscience*, Supplement 1, 104).
- Kraut, M.A., Segal, J.B., Kremen, S., Moo, L.R., & Hart, J. Cortical and Subcortical Activation in Multimodal Binding. Presented at 2001 Cognitive Neuroscience Society Meeting (*Journal of Cognitive Neuroscience*, Supplement 1, 162).
- Moo, L.R., Kraut, M.A., Segal, J.B., & Hart, J. Are There Feature-Specific Neural Regions? fMRI Evidence from an Explicit Categorization Task. Platform presented at 2001 Society for Neuroscience Meeting. (*Society for Neuroscience Abstracts*, 27).
- Majors, H.E., Sepkuty, J.P., Moo, L.R., Hao, L., Lenz, F.A., & Crone, N.E. Multimodal demonstration of redundant upper extremity sensorimotor cortical areas. Presented at 2001 American Epilepsy Society meeting.
- Kraut, M.A., Moo, L.R., Segal, J.B., & Hart, J. Functional MRI Investigations of Brain Regions Involved in Categorizing Objects. Presented at 2001 Radiologic Society of North America meeting.
- Kraut, M.A., Moo, L.R., Segal, J.B., Slotnick, S.D., & Hart, J. Comparison of Neural Activity During Letter and Object Processing. Presented at 2002 American Society of Neuroradiology Meeting.
- Moo, L.R., Segal, J.B., Kraut, M.A., & Hart, J. Distinct Cortical Loci for Hand vs. Foot-related Items in an Implicit Categorization Task. Presented at 2002 Cognitive Neuroscience Society Meeting. (*Journal of Cognitive Neuroscience*, Supplement, 109).
- Moo, L.R., Slotnick, S.D., & Hillis, A.E. Left Prefrontal Activation Varies with Task Difficulty. Platform presented at 2002 Society for Neuroscience Meeting.
- Boatman, D., Moo, L., & Bardhan, N. Lateralization of Auditory Speech Processing and Language by Intracarotid Amobarbital Procedure. Presented at the 2003 American Academy of Neurology Meeting.
- Moo, L.R., & Slotnick, S.D. Retinotopic Mapping of Homonymous Quadrantanopia Reveals Spared Primary Visual Cortex Function. Presented at the 2003 Cognitive Neuroscience Society Meeting. (*Journal of Cognitive Neuroscience* 2003; Supplement 1: 50).
- Boatman, D., Moo, L., & Bardhan, N. Bilateral representation of speech perception on the Wada test. (*Journal of Cognitive Neuroscience* 2003; Supplement 1: 117).
- Moo, L.R. & Slotnick, S.D. fMRI Evidence of Purely Extrastriate Basis for Post-Stroke Quadrantanopia. Presented at 2003 American Neurological Association Meeting.

Moo, L.R. & Slotnick, S.D. Dorsolateral prefrontal cortex activity supports a competition model of word retrieval. Presented at 2003 Society for Neuroscience Meeting.

Shapiro, K.A., Moo, L.R. & Caramazza, A. The cortical organization of grammatical category knowledge. Presented at 2003 Society for Neuroscience Meeting.

Boatman, D., Bardhan, N. & Moo, L. Effects of Unilateral Hemisphere Deactivation on Speech Sound Discrimination. Platform presentation at 2003 American Speech-Language-Hearing Association Convention.

Moo, L.R. & Caplan, D. Neural Evidence for Concreteness Effects in Reading. Platform presented at 2004 Society for Neuroscience Meeting.

Shapiro, K.A., Moo, L.R. & Caramazza, A. Cortical signatures of noun and verb processing. Platform presented at 2004 Society for Neuroscience Meeting.

Press, D.Z., Casement, M.D., Moo, L.R. & Alsop, D. C. Imaging phonologic and semantic networks with fMRI. Presented at 2004 Society for Neuroscience Meeting.

Moo, L.R., Carlson-Emerton, B. & Slotnick, S.D. Functional MT+ lesion impairs contralesional motion processing. Platform presented at 2005 Society for Neuroscience Meeting.

Carlson-Emerton, B., Leveroni, C.L., Buchbinder, B.R., Hirsh, J.A., Martuza, R.L., Costello, D.J., Cole, A.J. & Moo, L.R. Discordant IAP and fMRI Language Lateralization: A Case Report and Cautionary Tale. Presented at 2006 International Neuropsychological Society Meeting.

Moo, L.R., Carlson-Emerton, B. & Slotnick, S.D. Contralateral Motion Processing Deficit Corroborates Temporal-Occipital Seizure Focus. Presented at 2007 American Academy of Neurology Meeting.

Moo, L.R., & Slotnick, S.D. Medial/anterior temporal lobe lateralization of memory for items versus their context. Presented at 2007 Society for Neuroscience Meeting.

Moo, L.R., & Slotnick, S.D. Functional lesion in human MT impairs contralateral motion perception and attention. Poster to be presented at 2008 Society for Neuroscience Meeting.