

CURRICULUM VITAE

SELAM NEGASH

Mayo Clinic

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EDUCATION

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|-------------------|--|
| 2006 – present | Master of Science candidate in Clinical Research
Mayo Graduate School, Mayo Clinic Rochester, MN |
| 2003 – present | Post-doctoral Fellowship, Cognitive Neuroscience
Alzheimer's Disease Research Center, Mayo Clinic Rochester |
| 1998 – 2003 Ph.D. | Neuroscience
Georgetown University, Washington, DC |
| 1993 – 1997 BS | Psychology, <i>Magna Cum Laude</i>
University of District of Columbia, Washington, DC |

RESEARCH AREAS

Successful Aging; Mild cognitive impairment; Cognitive aging; Implicit and Explicit Learning Systems.

HONORS AND AWARDS

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| 2006 | Travel Fellowship, International Congress of Alzheimer's Disease, 2006 |
| 2004 | Travel Fellowship, Third Annual Workshop in Cognitive Neuroscience of Category Learning |
| 2002 – 2003 | AARP Andrus Foundation Doctoral Leadership Development Award |
| 2002 | Advanced Training Institute in fMRI, APA: Invited participant |
| 2002 | Emerging Minority Scholars in Aging Research Workshop, NIA |
| 1997 | Academic Excellence Award, University of District of Columbia |

GRANT SUPPORT

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| 2006 – 2010 | K12 RR023263-03 (Clinical Research Scholar)
Mayo Clinic Multidisciplinary Clinical Research Career Development Award (NIH Roadmap K12) |
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- 2006 Research Supplement to Promote Diversity in Health-Related Research, NIA
2003 – 2005 Postdoctoral Fellowship, Diversity Program in Neuroscience, APA
2001 – 2003 Minority Predoctoral Fellowship (NRSA), NIA

PROFESSORIAL MEMBERSHIPS

Society for Neuroscience (SfN)
Cognitive Neuroscience Society (CNS)

INVITED TALKS

- 2008 KL2 Scholar Forum, Mayo Clinic, Rochester, “Successful Aging: Definitions and Predictors”
2004 *Alzheimer’s and Parkinson’s Disease Seminar Series*, Mayo Clinic, Rochester, “Implicit Learning in Mild Cognitive Impairment”
2002 *NIA Regional Meeting on Aging Research*, Georgetown University, Washington DC, “Aging and Implicit Sequence Learning”
2002 *Neuroscience Seminar*, Georgetown University, Washington DC, “Contextual Learning and Mild Cognitive Impairment”
2002 *Career Day*, Sligo Creek Elementary School, Washington DC, “Research in neuroscience”
2001 *Neuroscience Seminar*, Georgetown University, Washington DC, “What is Learned in Implicit Sequence Learning?”
2000 *Second Annual Psychology Colloquium*, University of the District of Columbia, Washington DC, “Implicit learning and aging”

TEACHING

- 2003 Guest lecturer: “Neurodegenerative Diseases of Aging”, Catholic University of America, Psychology Department
2002; 2003 Run Excel workshop for Research Methods and Statistics courses, Georgetown University, Psychology Department
2000 Lecturer: “Implicit Learning and Aging”, Howard Hughes Summer Institute, Georgetown University
1997 – 1998 Teaching Assistant: Introduction to Neuroscience and Statistics courses, University of District of Columbia, Psychology Department

PEER REVIEWED PUBLICATIONS

Negash, S., Smith, G.E., Aakre, J., Pankratz, S., Geda, Y.E., Knopman, D.S., Boeve, B.F., Ivnik, R.J., & Petersen, R.C. (Submitted) Modeling successful aging: Definition and selection of working criteria. *American Journal of Geriatric Psychiatry*.

Wenger, M.J., Negash, S., Petersen, R.C., & Petersen, L. (In Press). Modeling and Estimating Recall Processing Capacity: Sensitivity and Diagnostic Utility in Application to Mild Cognitive Impairment. *Journal of Mathematical Psychology*.

Negash, S., Greenwood, P.M., Sunderland, T., Parasuraman, R., Geda, Y.E., Knopman, D.S., Boeve, B.F., Ivnik, R.J., & Petersen, R.C. & Smith, G.E. (2009). The Influence of Apolipoprotein E Genotype on Visuospatial Attention dissipates After Age 80. *Neuropsychology*. Jan;23(1):81-9.

Kantarci K, Weigand SD, Przybelski SA, Shiung MM, Whitwell JL, Negash S, Knopman DS, Boeve BF, O'Brien PC, Petersen RC, Jack CR Jr. (2009). Risk of dementia in MCI: combined effect of cerebrovascular disease, volumetric MRI, and 1H MRS. *Neurology*. 2009 Apr 28;72(17):1519-25.

Negash, S., Geda Y.E., Petersen, R.C. (2008). Neuropsychological characterization of mild cognitive impairment. *Handb Clin Neurol*. 88:499-509.

Petersen, R.C., Negash, S. (2008). Mild cognitive impairment: an overview. *CNS Spectr*. 2008 Jan;13(1):45-53. Review.

Kantarci K, Petersen RC, Przybelski SA, Weigand SD, Shiung MM, Whitwell JL, Negash S, Ivnik RJ, Boeve BF, Knopman DS, Smith GE, Jack CR Jr (2008). Hippocampal volumes, proton magnetic resonance spectroscopy metabolites, and cerebrovascular disease in mild cognitive impairment subtypes. *Arch Neurol*. Dec;65(12):1621-8.

Negash, S., Petersen, L.P., Geda, Y.E., Knopman, D.S., Boeve, B.F., Smith, G.E., Ivnik, R.J., Howard, D.V., Howard, J.H. Jr., & Petersen, R.C. (2007). Effects of ApoE Genotype and Mild Cognitive Impairment on Implicit Learning. *Neurobiology of Aging*. 28(6):885-93.

Negash, S., Boeve, B.F., Geda, Y.E., Knopman, D.S., Smith, G.E., Ivnik, R.J., Howard, D.V., Howard, J.H. Jr., & Petersen, R.C. (2007) Implicit Learning of Sequential Regularities and Spatial Contexts in Corticobasal Syndrome. *Neurocase*. 13(3):133-43.

Geda Y.E., Boeve B.F., Negash S., Graff-Radford N.R., Knopman D.S., Parisi J.E., Dickson D.W., Petersen R.C. (2007). Neuropsychiatric Features of Pathologically Confirmed Cases of Corticobasal Degeneration. *Journal of Neuropsychiatry and Clinical Neuroscience*, 19: 77-80.

Whitwell, J.L., Petersen, R.C., Negash, S., Weigand, S.D., Ivnik, R.J., Knopman, D.S., Boeve, B.F., Smith, G.E., & Jack, C.R., Jr (2007). Patterns of Atrophy differ among Specific Subtypes of Mild Cognitive Impairment. *Archives of Neurology*. 64(8):1130-8.

Smith, G.E., Pankratz, V.S., Negash, S., Petersen, R.C., Boeve, B.F., Knopman, D.S., Lucas, J., Ferman, T., Graff-Radford, N., Ivnik, R.J. (2007). A Plateau in Pre-Alzheimer Memory Decline: Evidence for Compensatory Mechanisms? *Neurology*, 10;69(2):133-9.

Geda, Y.E., Knopman, D.S., Mrazek, D.A., Edland, S.D., Jicha, G.A., Smith, G.S., Negash, S., Boeve, B.F., Ivnik, R.J., Petersen, R.C., Walter A. Rocca, W.A. (2006). Depression, APOE Genotype, and the Incidence of Mild Cognitive Impairment: A Prospective Cohort Study. *Archives of Neurology*, 63(3):435-40.

Negash, S., Howard, D.V., Japikse, K. C., & Howard, J. H., Jr (2003). Age-Related Differences in Implicit Learning of Non-Spatial Sequential Patterns. *Aging, Neuropsychology, and Cognition*, 10(2): 108-121.

Japikse, K. C., Negash, S., Howard, D.V., & Howard, J.H., Jr (2003). Intermanual Transfer of Procedural Learning after Extended Practice on Probabilistic Sequences. *Experimental Brain Research*, 148(1):38-49.

BOOK CHAPTERS AND CONFERENCE PROCEEDINGS

Geda Y.E., Negash S, Petersen R.C. Memory Disorders. In Maletta, G (Editor). *Principles and Practice of Geriatric Psychiatry*. Baltimore: Lippincott, 2006.

Negash S, Geda Y.E., Petersen R.C. Mild Cognitive Impairment: Clinical Characterization. In Burns, Alistair; Ames, David; O'Brien, John (Eds). *Dementia (3rd Ed)*. London: Hodder Arnold Publishers, 2005.

Negash, S & Petersen R.C. Societal Influences that Affect Cognitive Functioning in Old Age. *Conference Proceedings, Penn State Social Structure Conference, 2004*.

PUBLISHED ABSTRACTS AND CONFERENCE PRESENTATIONS

Negash, S., Smith, G.E., Pankratz, S., Aakre, J., Geda, Y.E., Knopman, D.S., Boeve, B.F., Ivnik, R.J., & Petersen, R.C. Differentiating between successful aging and typical aging using a longitudinal cohort in Mayo Alzheimer's Disease Patient Registry. Society for Neuroscience, 2009.

Negash, S., Smith, G.E., Aakre, J., Pankratz, S., Geda, Y.E., Knopman, D.S., Boeve, B.F., Ivnik, R.J., & Petersen, R.C. Modeling successful aging: Definition and selection of working criteria. Society for Neuroscience, 2008.

Wenger, M.J., Negash, S., Petersen, R.C., & Petersen, L. Modeling and estimating recall processing capacity: sensitivity and diagnostic utility in application to mild cognitive impairment. Society for Neuroscience, 2008.

Negash, S., Petersen, L.P., Geda, Y.E., Knopman, D.S., Boeve, B.F. Smith, G.E., Ivnik, R.J., Howard, D.V., Howard, J.H. Jr., & Petersen, R.C. Implicit learning and APOE genotype in healthy old-old adults. Society for Neuroscience, 2006; 810.7, P16

Negash, S., Geda, Y.E., Pankratz, V.S., Knopman, D.S., Boeve, B.F. Smith, G.E., Ivnik, R.J., & Petersen, R.C. Progression of Cognitive Impairments in Mild Cognitive Impairment: What is the Next Domain to be Impaired after Memory? Alzheimer's and Dementia: The Journal of the Alzheimer's Association 2006;2(3): Suppl 1, S292.

Negash S, Geda YE, Petersen LE, Knopman DS, Boeve BF, Smith GE, Ivnik RJ, Howard DV, Howard JH Jr, Petersen RC. Implicit learning and depression in mild cognitive impairment (Abstract P7). J Neuropsychiatry Clin Neurosci 2006 Spr; 18(2):272.

Negash, S., Smith, G.E., Geda, Y.E., Knopman, D.S., Boeve, B.F. Ivnik, R.J., Greenwood, P.M., Sunderland, T., Parasuraman, R., & Petersen, R.C. Effect of ApoE Genotype on Visuospatial Attention Changes is Reduced Late in Life. Journal of Cognitive Neuroscience (Suppl), 2006; D23.

Petersen R, Roberts R, Boeve B, Geda Y, Negash S, Ivnik R, Rocca W, Knopman D Cognitive subtypes of Mild Cognitive Impairment. Neurology, 2006;66 (Suppl. 2):A60.

Whitwell JL, Negash S, Petersen RC, Ivnik RJ, Weigand SD, Kantarci K, Knopman DS, Boeve BF, Senjem ML, Smith GE, Ferman TJ, Jack CR Jr. Regional grey matter loss in specific subtypes of Mild Cognitive Impairment. Neurology 2006;66 (Suppl. 2):A122.

Petersen R, Roberts R, Boeve B, Geda Y, Negash S, Ivnik R, Rocca W, Knopman D. The cognitive subtypes of mild cognitive impairment in a population-based study. Alzheimer's and Dementia: The Journal of the Alzheimer's Association 2006;2(3): Suppl 1, S82

Negash, S., Petersen, L.P., Geda, Y.E., Knopman, D.S., Boeve, B.F., Smith, G.E., Ivnik, R.J., Howard, D.V., Howard, J.H. Jr., & Petersen, R.C. Effects of ApoE Genotype on Implicit Learning Systems in Healthy Older Adults. Cognitive Aging Conference, Atlanta, GA, 2006.

Negash, S., Boeve, B.F., Geda, Y.E., Knopman, D.S., Smith, G.E., Ivnik, R.J., Howard, D.V., Howard, J.H. Jr., & Petersen, R.C. Implicit Learning of Sequential Regularities and Spatial Contexts in Corticobasal Syndrome Patients. International Neuropsychological Society Meeting, Boston, MA, 2006.

Negash, S., Petersen, L.P., Geda, Y.E., Knopman, D.S., Boeve, B.F. Smith, G.E., Ivnik, R.J., Howard, D.V., Howard, J.H. Jr., & Petersen, R.C. Mild Cognitive Impairment and Implicit Learning: Dissociation between Sequence Learning and Contextual Cueing. Society for Neuroscience, 2005; 408.15.

Geda YE, Knopman DS, Edland S, Mrazek DM, Jicha G, Smith GE, Negash S, Boeve BF, Ivnik R, Petersen RC, Rocca WA. Depression is Associated With Incident Mild Cognitive Impairment: A Prospective Cohort Study. International Psychogeriatrics 2005;17 (Suppl. 2): F170.

Negash, S., Petersen, LP., Geda, Y.E., Knopman, DS., Boeve, BF. Smith, GE., Ivnik, RJ., Howard, DV., Howard, JH. Jr., & Petersen, RC. Implicit Sequence Learning and Contextual Cueing in Mild Cognitive Impairment. Society for Neuroscience, Sixteenth Annual Meeting of Diversity Program in Neuroscience, 2004.

Negash, S., Harris, M.R., Howard, J.H., Jr, & Howard, D.V. Age-Related Differences in Implicit Learning of Short Higher-Order Sequential Patterns. *Journal of Cognitive Neuroscience* 2003; (Suppl), 74, 204.

Harris, M.R., Negash, S., Howard, D.V., & Howard, J.H., Jr. Age Related Time of Day Effects on Higher Order Implicit Sequence Learning and Contextual Cueing. *Journal of Cognitive Neuroscience* 2003; (Suppl), 143, 192

Negash, S., Breuninger, M.M., Howard, J.H., Jr, & Howard, D.V. Effects of a Secondary Task on Implicit Learning of Higher Order Regularities: Implications for Aging. Gerontological Society of America Meeting, San Diego, CA, 2003.

Negash, S., Howard, D.V., & Howard, J.H., Jr, Vaidya, C.J., & Romain, R.C. Age-Related Differences in Implicit Learning of Second-Order Deterministic Patterns. *Cognitive aging Conference*, Atlanta, GA, 2002.

Negash, S., Howard, J. H., Jr., Aisen, P.S., Ward, C., & Howard, D.V. Spatial Contextual Cueing in Patients Diagnosed with Mild Cognitive Impairment and Mild Alzheimer's Disease. *Society for Neuroscience*, 2002; Program No. 424.13.

Negash, S., Howard, D.V., Japikse, K., & Howard, J. H., Jr. Aging and the Role of Effectors in Implicit Learning of Non-Spatial Probabilistic Sequences. *Society for Neuroscience*, 2001; Program No. 638.1.

Negash, S., Howard, D.V., & Howard, J.H., Jr, & Durkin, K. Age-related differences in implicit learning of non-spatial stimuli in a serial reaction time task. Poster presented at the *Cognitive aging Conference*, Atlanta, GA, 2000.

Japikse, K. C., Negash, S., Howard, D.V., & Howard, J.H., Jr. Effects of a Fixed Inter-stimulus Interval on Implicit Sequence Learning. Poster presented at the annual meeting of the APA, Washington DC, 2000.