

Atlanta VA Rehab R&D



Center for Visual and Neurocognitive Rehabilitation

WINTER 2017

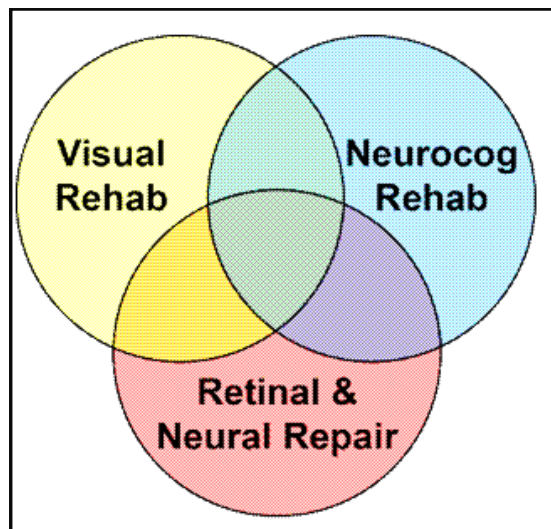
SPECIAL EDITION

CVNR AWARDED FIVE MORE YEARS OF FUNDING!

We are excited to announce that the Rehabilitation Research and Development (R&D) Service of the Department of Veterans Affairs recently awarded the Atlanta VA Center for Visual and Neurocognitive Rehabilitation (CVNR) \$4.5 million to continue our research programs for another five-year period, from October 1, 2017 through September 30, 2022.

The CVNR is one of only 13 Rehabilitation R&D Centers across 168 VA Medical Centers nationwide. The Rehabilitation R&D Center is a national mark of distinction for the Atlanta VA Medical Center (VAMC), being funded via a highly competitive application and review process. The researchers at the CVNR are committed to our mission of fostering the best possible health and well-being of Veterans by conducting research in the rehabilitation of visual and neurocognitive problems.

The CVNR brings together interdisciplinary expertise to conduct research informing healthcare approaches and rehabilitation solutions. The combination of brain research with our long-standing leadership in vision research offers the VA an invaluable resource for developing evidence-based, patient-centered therapies to improve brain and visual dysfunction that results from injury and/or disease. We are committed to moving research along the translational pipeline so that interventions reach our Veterans as early as feasible.



CVNR's Areas of Focus

The CVNR continues its three main areas of focus. The **Visual Rehabilitation Program**, led by CVNR Executive Director, **Krish Sathian, MD, PhD**, targets rehabilitation of visually impaired Veterans. The **Neurocognitive Rehabilitation Program**, led by CVNR Executive Associate Director, **Bruce Crosson, PhD**, targets rehabilitation of Veterans with neurocognitive

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problems. The **Retinal & Neural Repair Program**, led by **Machelle Pardue, PhD**, CVNR Associate Director for Scientific Projects, uses animal models to explore the mechanistic basis of visual and neurocognitive rehabilitation.

In the next five-year cycle, the CVNR will emphasize synergy between our Programs through three Integrative Projects, each involving investigators and approaches from multiple programs. We also have two active Scientific Cores — a Neuroimaging Core and a Molecular Biology Core — and will add an Exercise Core and a Tele-rehabilitation Core over the next several years. These Cores function to enhance integration of our focus areas to enhance rehabilitative approaches for Veterans with a range of visual and neurocognitive challenges.

The accomplishment of the CVNR's renewal would not have been possible without the input and assistance of many dedicated collaborators, administrators and staff. We are grateful to the Atlanta VAMC leadership for their support, and would especially like to thank **Dr. David Bower**, Chief of Staff; **Dr. Michael Hart**, Associate Chief of Staff for Research; and **Mr. Antonio Laracuente**, Director of Research Operations, for their consistent encouragement and help.

We also wish to thank the many people who — throughout our history — have served as **participants in our research studies**. Without their generosity and dedication, none of the advances we have made and hope to make in the future would be possible.

Congratulations to CVNR Investigators on their Newly Funded VA Projects



L-R—Drs. Rodriguez, Sathian, & Woodbury

We extend a warm welcome to **Anna Woodbury, MD**, one of our new Career Development Awardees (CDA). Her project, entitled **Feasibility Study: fMRI Evaluation of Auricular PENFS for Fibromyalgia**, will determine if a percutaneous electrical neural field stimulation (PENFS) device, a non-pharmacologic treatment, provides cost-effective pain management to improve quality of life for Veterans with fibromyalgia.

Amy Rodriguez, PhD and **Krish Sathian, MD, PhD** each received Small Projects in Rehabilitation Research (SPiRE) awards. Dr. Rodriguez's study, **Acute Exercise Effects on Word Learning in Aging and Stroke-induced Aphasia**, aims to improve the way healthy older adults

and those with stroke-induced aphasia learn and remember words. She will also study the factors that cause exercise-induced improvements in learning.

Dr. Sathian is interested in whether using computerized spatial cognitive training of blind Veterans leads to real-world improvements in their ability to do wayfinding tasks. If so, the findings of his study, **Spatial Cognitive Training in Visual Impairment**, could provide a simple method of spatial cognitive training that could be done remotely as a telerehabilitation intervention.

Research Results Highlights

Griffiths PC, Whitney K, Kovaleva M, Hepburn K. Development and Implementation of Tele-Savvy for Dementia Caregivers: a Department of Veterans Affairs Clinical Demonstration Project. *The Gerontologist*, 2016 Feb; 56(1): 145-54. doi: 10.1093/geront/gnv123

In their study, entitled, "Development and Implementation of Tele-Savvy for Dementia Caregivers: a Department of Veterans Affairs Clinical Demonstration Project," Dr. Griffiths and her colleagues created a program especially for family members and friends providing care for a Veteran with dementia. Using a tried and true curriculum, the Savvy Caregiver Program team video-taped hours of lectures, vignettes and expert panel discussion, all designed to teach caregivers about dementia and train them to be 'Savvy Caregivers' which includes caring for oneself. The pilot study provided iPads and training for caregivers to participate for six-weeks from their homes by engaging in daily video content and once-weekly tele-video conferences with a group of their caregiving peers and program facilitators. The CVNR and Emory Alzheimer's Disease Research Center (ADRC) sponsored a community version of the pilot in which participating caregivers used personal computers and tablets. The programs were very successful. Savvy Caregivers showed reductions in caregiver burden, depression and anxiety scores and increased their feelings of mastery and competence.

The success of the pilot study led to a randomized controlled trial funded through the National Institute of Aging (NIA) to test the effectiveness of Tele-Savvy in a national sample of caregivers and will be one component of a multi-site grant funded by the Offices of Rural Health and sponsored by the Geriatrics and Extended Care, Caregiver Support and Offices of Connected Care Service Lines. Collectively these projects will accelerate expansion of the program nationally for improved access to, and adoption of, high quality, innovative rehabilitative programs for Veteran-Caregiving dyads living with dementia — regardless of geographic location or personal resources. This should lead to both superior care and increased satisfaction with care for Veterans and their families.

Hackney ME, Hall CD, Echt KV, Wolf SL. Multimodal exercise benefits mobility in older adults with visual impairment: A preliminary study. *J Aging Phys Activity*. 2015 Oct; 23(4): 630-9. doi: 10.1123/japa.2014-0008

Evidence-based recommendations for interventions to reduce fall risk in older adults with visual impairment are lacking. Previous studies found adapted tango dance (Tango) and a balance and mobility program (FallProof) improved older persons' mobility, balance, and quality of life (QOL). This study compared how well Tango and FallProof worked for 32 individuals, aged 51-95, with mild to severe visual impairment. Participants were assigned to Tango or FallProof, to complete twenty, 90-min lessons within 12 weeks. Participants underwent assessment of balance, dual-tasking, endurance, gait and vision-related QOL. The balance reactions of participants in both groups improved ($p < .001$). Endurance, cognitive dual-tasking and vision-related QOL may have improved more for Tango than FallProof. Group differences and gains were maintained up to one month after the study. Both programs could be effective rehabilitation options for older Veterans with visual impairment because participants may improve their mobility and QOL while reducing fall risk.



Center for Visual and Neurocognitive Rehabilitation

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**For information about participating
in research at our Center, call (404) 728-5064 or
visit our website at <http://www.varrd.emory.edu/>**



Upcoming Events:

Seventh Annual Bettye Rose Connell Distinguished Lecture

SPONSORED BY THE CENTER FOR VISUAL AND NEUROCOGNITIVE REHABILITATION (CVNR)
AND THE EMORY CENTER FOR HEALTH IN AGING

Alex Mihailidis, Ph.D., P.Eng., Director of the Intelligent Assistive Technology and Systems Lab at the University of Toronto and President elect of the Rehabilitation Engineering and Assistive Technology Society of North America

Keynote Address: Tuesday, April 11, 2017 Rollins School of Public Health, Emory University - Klamon Room

Research Seminar: Wednesday, April 12, 2017 Atlanta VA Medical Center, The Gathering Place

Check our website for more information — <http://www.varrd.emory.edu/>

Emory ADRC 13th Brain Health Forum

Sponsored by the Emory Alzheimer's Disease Research Center
Tuesday April 25, 2017 8:00 am—2:30pm

For more information, go to — <http://alzheimers.emory.edu/>

