

Atlanta VA Center for Visual and Neurocognitive Rehabilitation

40th Anniversary | 1985 - 2025

Special Edition



VA



U.S. Department of Veterans Affairs

Veterans Health Administration
Office of Research & Development

Meet the CVNR Leadership Team



CVNR leadership team (left to right): Joe Nocera, Jeffrey Boatright, Lisa Calas, Anna Woodbury, Sheila Rauch, and Andrew Feola.

Message from CVNR Leadership

As we celebrate the 40th anniversary of the Atlanta VA Center for Visual & Neurocognitive Rehabilitation, we reflect with deep gratitude on the decades of dedication, innovation, and service that have shaped our journey. To the Veterans who have entrusted us with their stories, the researchers and clinicians who have driven discovery, and the staff, partners, and supporters who've helped carry our mission forward—we thank you. Each of you has been part of building a legacy rooted in care, impact, and progress.



About Our Center

Our mission is to develop novel, clinically-relevant rehabilitative approaches based on scientific discoveries that improve the health and quality of life of Veterans with visual or neurocognitive deficits. **Our purpose** is to enhance Veterans' health by conducting research on the rehabilitation of visual and related neurological impairments.

CVNR Strategic Themes

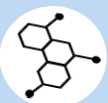
The Center enhances Veterans' Health by focusing on 3 strategic themes:



Enhancing function with novel rehabilitation methods for Veterans with visual and/or brain impairments and related comorbidities.



Optimizing exercise and other interventions for translation to rehabilitation practice.



Personalizing visual and neurocognitive rehabilitation by identification and use of biomarkers.

Our investigators and staff come from a variety of backgrounds and collaborate to synergistically develop novel approaches and foster the translation of scientific discoveries into clinically relevant treatments. Most of our investigators also hold academic appointments at Emory University, Georgia Institute of Technology, Georgia State University, or Morehouse School of Medicine.

Our Investigators

- Katie Bales, PhD
- Jeffrey Boatright, PhD
- Michael Dattilo, MD, PhD
- Erica Duncan, MD
- Andrew Feola, PhD
- Madeleine Hackney, PhD
- Arash Harzand, MD, MBA
- Michelle LaPlaca, PhD
- April Maa, MD
- Joe Nocera, PhD
- Machel Pardue, PhD
- Jeanie Park, MD, MS
- Ashley Prichard, PhD
- Sheila Rauch, PhD, ABPP
- Amy Rodriguez, PhD
- Jennifer Stevens, PhD
- Camille Vaughan, MD, MS
- Kevin Wang, PhD
- Anna Woodbury, MD, MSc, CAC
- Shan Ping Yu, MD, PhD

Visit our website to learn about our Investigators and Center Research!



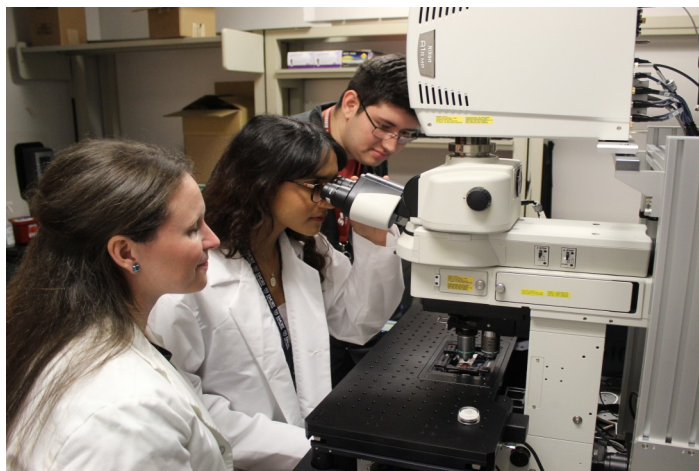
How does your research impact Veteran Healthcare?

“

Age-related retinal diseases, such as AMD, are one of the leading causes of vision loss and blindness in older adults. AMD is projected to affect 5.44 million people by 2050 and has a higher prevalence in our Veteran population. Due to limitations of diagnosis, current treatments are administered only after the disease has significantly progressed, and these treatments are often expensive, complicated, and invasive. Clinical trials and retrospective studies suggest that AMD patients may respond to some neuroprotective treatments, such as exercise, to protect retinal function.—**Katie Bales, PhD**”

“

My work over the last 15 years has consistently demonstrated exercise as one of few proven interventions that attenuate age-related declines in both motor and cognitive functioning. We have successfully implemented our exercise programs in research settings and are translating our work to the clinical setting to potentially impact larger numbers of Veterans with technology and Tele-Health. For example, in early 2021 we implemented Gerofit, a proven, clinical implementation exercise program that promotes health and wellness for Veterans, in the Atlanta VA.—**Joe Nocera, PhD**”



“ Our research impacts Veteran healthcare by 1) improving the diagnosis of chronic widespread pain syndromes and working towards a better biomarker for pain and its treatment outcomes, and 2) providing better pain treatment options and alternative solutions in order to combat the opioid epidemic.”

— **Anna Woodbury, MD, MSc, CAC**



“ My work has helped prevent blindness and/or treat eye problems in hundreds of thousands of Veterans and helped to further the development of telehealth tools that improve access to eye care, especially for the rural and homeless Veterans. My research helps Veterans to maintain a high quality of life by promoting health equity in their ability to access eye care.”

—**April Maa, MD**

“ Our clinical drug discovery research is leading to treatments that slow vision loss after eye injury or during ongoing retinal degeneration or glaucoma. Our exercise research has led some clinicians to “prescribe” moderate exercise as part of an overall approach to ocular health. We are hopeful that our ongoing preclinical drug and exercise research will continue to lead to clinical and lifestyle interventions that prevent or delay vision loss in patients with retinal disease or glaucoma.”

—**Jeffrey Boatright, PhD**



What sparked your interest in rehabilitation and/or the VA?



“During my clinical fellowship, my supervisor asked if I wanted to help with a research project at the VA. So as not to disappoint, I said “Sure!”. I recall my first day of VA orientation. I was filled with so much pride that I had the opportunity to serve Veterans. After my clinical fellowship ended, I continued to work in the VA as a research speech-language pathologist on aphasia treatment studies. That early experience in VA research completely transformed my thinking and eventually led me to pursue my doctoral degree in Rehabilitation Science and return to the VA as an investigator within the CVNR. —**Amy Rodriguez, PhD**”

“In my work I study the mental and brain health impacts of traumatic stress. Although access to mental health care is quite fragmented across the U.S., the VA is one place where patients can consistently access high-quality evidence-based care. The VA model is inspiring, and I hope that other healthcare systems can adopt our practices. —**Jennifer Stevens, PhD**”



“Translational and clinical research is challenging but extremely rewarding. Being able to participate in translational research allows me to actualize the reasons that I decided to pursue a dual degree, M.D. and Ph.D., program, to bring the ‘bench to the bedside.’ It is also an honor and a privilege to serve the Veteran population, to be able to give back to those who gave so much of themselves. — **Michael Dattilo, MD**”

“ My interest in rehabilitation and the VA system stems from a longstanding commitment to translational neuroscience and serving populations with high unmet medical needs. During my time working with DoD- and VA-funded TBI consortia, I saw firsthand the urgent need for better diagnostics, treatment pathways, and rehabilitative tools tailored for military personnel and Veterans. The VA provides a uniquely integrated clinical and research environment where discoveries can meaningfully impact lives. This mission-aligned ecosystem motivates my continued focus on developing real-world solutions for neurologic injuries and recovery. —**Kevin Wang, PhD** ”

“ I have been a clinician-scientist in the VA system for my entire career. My goal of improving treatment and developing personalized treatment for Veterans with schizophrenia has kept me at the VA. The unique collaborative esprit de corps in the CVNR makes it a pleasure to come to work everyday. —**Erica Duncan, MD** ”



“ My interest in women’s health and rehabilitation research was sparked during my PhD studies at the University of Pittsburgh. It was there that I first witnessed the transformative impact of understanding how factors like age, menopause, and treatment strategies affect patient care. The integration of science, compassion, discovery, and meaningful patient outcomes deeply resonated with me. My interest in the VA system developed later, as I learned more about the evolving healthcare needs of Veterans—particularly women, whose presence and unique health challenges have grown within the VA. I was drawn to the VA’s commitment to long-term, patient-centered care and its strong support for research and innovation. Being part of a system that honors those who have served, while advancing rehabilitation science, strongly aligns with both my personal values and professional goals. —**Andrew Feola, PhD** ”



How is your work changing the way we think about medicine and science?



“ Based on our previous pre-clinical experiments, we identified an early loss of retinal neuron function in Veterans with diabetes. Furthermore, treatment with dopamine drugs restored these delays when given for just two weeks. Importantly, treating these early neuronal delays could also protect against later stage vascular changes that are responsible for significant vision loss. My current funding capitalizes on all of our previous diabetic retinopathy work as it investigates whether neuronal dysfunction is associated with, or even causes, late stage vascular changes, and whether early treatment of neuronal deficits with dopamine can prevent later stage deficits – questions that are critical in translating our work to the clinic. – **Machelle Pardue, PhD** ”

“ Our research has developed several new technologies as powerful tools for brain research. For example, we created the optochemogenetics technology that can manipulate and control brain neuronal activities in a non-invasive manner. This approach will likely enable us to reach brain regions in vivo without surgery and invasive procedures. Due to a better understanding of the central control of brain/body temperature, we are now able to cool animals and hopefully humans using a pharmacological drug for protection against brain injuries. This pharmacological cooling method is feasible for clinical applications and will likely save lives. Our recent research supported by VA grants has disclosed a novel pathogenic mechanism mediated by hyperactivities of neuronal cells and the NMDA receptor in the early stage of Alzheimer's disease, which provides new therapeutic targets beside amyloid proteins. ”

—**Shan Ping Yu, MD, PhD**

“ With my advisor and team at Washington University in St. Louis, I was the first to demonstrate the potential efficacy of tango versus traditional exercise (featured in the New York Times Science section), solo dancing, and ballroom dance for mobility and quality of life for people with Parkinson’s. We also examined Tai Chi early in people with PD and were the first to provide evidence of efficacy of a PD-tailored exercise class. With my CDA2, we created a novel foot movement task and dissociated adapted tango into training that consists exclusively of externally guided movement (following), or internally guided movement (leading). Tango classes are now offered around the world for people with PD, and dance concepts are being included in physical therapy regimens. The next step is to identify biomarkers of improvement and progress rehabilitation’s principles. My music- and dance-based intervention and assessment have been translatable to other populations (e.g., older Veterans with low vision, older Veterans living with dementia), which speaks to the generalizability of my work. ”

—**Madeleine Hackney, PhD**

“ Since 2016, our team has been challenging the assumption that older adults aren’t interested in or capable of using digital health tools. In fact, we’ve shown that many of the patients we serve—especially those over 65—already own smartphones and are eager to use them to manage their health. This has helped narrow the digital divide in chronic disease care and opened new possibilities for engaging patients in virtual rehabilitation programs. ”

—**Arash Harzand, MD, MBA**



“ When I started in VA in 2005, PTSD clinics were modeled on the idea that PTSD can be managed but not treated and that the best we can do for our Veterans with PTSD is to help them cope. Through my work and the work of many others in the PTSD research community, we now know that there are effective treatments for PTSD, such as prolonged exposure therapy. We are working to get treatments out to the Veterans and civilians who need them. We are pushing treatment out of specialty mental health and into primary care and peer-based formats. We are striving to enhance access by providing VA care on college campuses and ensuring that stigma is reduced. In addition, my work contributes to clinical decision making as we clarify what treatments work best for whom and who may be best able to respond to treatment, who may need treatment augmentation, and who may need more support and management long term. ”

— **Sheila Rauch, PhD**



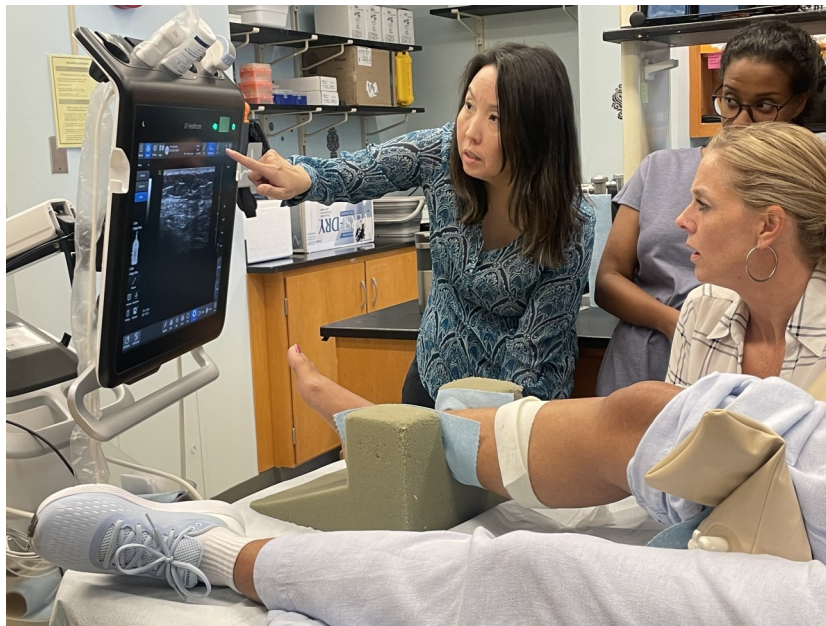
“ My research could shift the treatment paradigm for persons with Parkinson disease and urinary symptoms to focus on behavioral treatment first rather than drug therapy. Reducing unnecessary drug treatment is important for older adults, and particularly for those living with diseases like Parkinson disease, where multiple drug treatments are needed for other symptoms. ”

— **Camille Vaughan, MD**

“ Although epidemiologic studies have shown a direct link between PTSD and future risk of hypertension and cardiovascular disease, the mechanisms that underlie this connection were unknown. My laboratory was the first to show that sympathetic nervous system reactivity is heightened in PTSD using rigorous, gold-standard techniques. In CKD, we showed for the first time that the reflex activation of the sympathetic nervous system (i.e. the exercise pressor reflex) is augmented. Now that we have begun to unravel the mechanisms that contribute to abnormal neural control of the circulation in both conditions, we can develop new therapies to improve autonomic function and hemodynamics in our patients.

—Jeanie Park, MD, MS

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CVNR Timeline: 40 Years & Counting

An Era Begins

The Atlanta VAMC Rehabilitation R&D Center of Excellence is established with an underlying theme of aging.

- Center Mission: to understand through research the problems of elderly and disabled Veterans that impact quality of life, and apply those understandings to development of concepts, techniques and devices that improve functional independence and quality of life.

The First Five Year Plan

- The Five-Year Plan (1990-1995) addresses complex programs and issues in aging related to Musculoskeletal Function, Sensory and Motor Function, Cognitive Function, Wellness and Health Maintenance, and Safety and Mobility.

1985

- Center Director: Frank Coombs (1985-1993)
- Visual Rehabilitation research becomes a primary focus of the center. (1991)
- Acting Center Director: Bill de l'Aune (1996-1997)



Bettye Rose Connell (BRC) and Jon Sanford; long time Center investigators and collaborators studying the relationship between environmental factors and older adult quality of life.



Bill de l'Aune; Sensory impairment Investigator and statistician of the Center for many years.

2007

- The Five-Year Plan (2007-2012) focuses on aging Veterans with vision loss and comprises four R&D areas: Functional Vision, Sensorimotor Processing & Goal-Directed Movement, Cognition & Perception, and Environmental.
- The Research Participant Registry begins. (2008)
- BRC Memorial Lecture Series begins. (2011)

2011

Renewed and Implemented

The Rehabilitation Research center, that included vision loss and mobility research areas, was approved.

- Center Mission: To improve the function, independence, and quality of life of Veterans aging with disabilities and those acquiring disabilities as they age.
- Center creates three research support groups: National Advisory Group, Consumer Advisory Group, and Internal Steering Group.

1997

- Center Director: Joe Ouslander (1997-2001)

A New Name and Mission

The Center is renamed the Rehabilitation Research and Development Center of Excellence for Aging Veterans with Vision Loss.

- Center Mission: Enhance the quality of life for aging Veterans through applied, multi-disciplinary rehabilitation research and development.

2002

- Center Director: Ron Schuchard (2001-2011)



Holly Hudson; Research coordinator for Joe Nocera, Keith McGregor, and Bruce Crosson for many years.



Research team members at Krish Sathian's Thank You and Farewell party.

2025

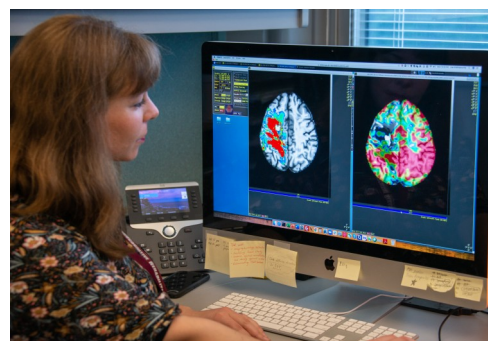
- The Center is named the Center for Visual and Neurocognitive Rehabilitation.
- Center Director: Krish Sathian (2011-2017)
- Acting Center Director: Bruce Crosson (2017-2019)
- Center Director: A.M. Barrett (2019-2022)
- Center Director: Joe Nocera (2022-present)

CVNR Career Development Awardees



For 40 years, the CVNR has united an exceptional breadth of expertise with a passion for teaching, mentoring, and inspiring the next generation. From the very beginning, one of our core principles has been that expertise carries with it a responsibility—a responsibility to share knowledge, nurture talent, and empower others to carry the mission forward. This commitment has been woven into every facet of our work. Whether training students, guiding early-career scientists toward impactful research, or mentoring clinicians in advancing Veteran-centered care, we are invested in cultivating future leaders. These individuals will expand our legacy, ensuring that our dedication to Veterans endures for decades to come.

- Rachael Allen, PhD
- Katie Bales, PhD
- Claire Barnes, PhD
- Ian Campbell, PhD, PE
- Andrew Feola, PhD
- Paul Garcia, MD
- Strawberry Gatts, PhD
- Patti Griffiths, PhD
- Audrey Guthrie, PhD
- Madeleine Hackney, PhD
- Courtney Hall, PhD
- Arash Harzand, MD, MBA
- Karri Hawley, PhD
- Ben Hampstead, PhD, ABPP/CN
- Wei Huang, MD
- Giri Krishnamurthy, PhD
- Lisa Krishnamurthy, PhD
- Keith McGregor, PhD
- Chris Mizelle, PhD
- Anna Moore, PhD
- Joe Nocera, PhD
- Sharon Polensek, MD, PhD
- Ashley Prichard, PhD
- Christopher Ray, EdD
- Monica Serra, PhD
- Camille Vaughan, MD, MS
- Todd White, PhD
- Anna Woodbury, MD, MSc, CAC





Center for Visual & Neurocognitive Rehabilitation 40th Anniversary Event

Friday, August 15, 2025

Atlanta VA Medical Center

Pete Wheeler Auditorium, Room GA104

8:45AM - 9:00AM

Program Prelude Video

9:00AM - 11:00AM

Introduction - Joe Nocera, PhD

Speaker - Machele Pardue, PhD

From Bench to Bedside: Detecting Diabetic
Eye Disease

Speaker - Sheila Rauch, PhD

Translating Research to the Clinic

Speaker - Madeleine Hackney, PhD

GeroFit: Background & Impact to Veterans

GeroFit Demo/ Movement Break

Speaker - Camille Vaughan, MD

Training the Next Generation

Awards

Closing - Joe Nocera, PhD

11:00AM - 12:00PM

Networking/ Special Focus Areas

PROGRAM



Joseph Maxwell Cleland
Atlanta VA Medical Center
1670 Clairmont Road
Decatur, GA 30033

Phone: 404-728-5064
Email: cvnr@va.gov
Website: varrd.emory.edu

VA



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