# CVNR NEWSLETTER CENTER for VISUAL and NEUROCOGNITIVE REHABILITATION



# A Message from the CVNR Director, Dr. Joe Nocera

As Director of the Center for Visual and Neurocognitive Rehabilitation (CVNR), I am honored to reflect on our past achievements, highlight our ongoing advancements, and share our vision for the future. This year is especially significant as we celebrate the 40th anniversary of the CVNR—a milestone that underscores our decades of dedication to improving the lives of Veterans through cutting-edge rehabilitation research.

## Past: A Legacy of Innovation and **Impact**

Over the years, the CVNR has been at the forefront of groundbreaking research aimed at addressing visual and neurocognitive impairments among Veterans. Our work has led to significant advancements in rehabilitation strategies, improving quality of life and independence for those affected by visual impairment, stroke, and neurodegenerative conditions. The contributions of our talented researchers have shaped rehabilitation science, influencing care practices both within and beyond the VA healthcare system.

## Present: Advancing Research and **Expanding Knowledge**

We continue to push boundaries in neurocognitive and visual rehabilitation research. I am particularly excited about the strides we are making in PTSD and TBI research. With recent funded and published work, we are deepening our understanding of their impact on cognition and sensory processing in Veterans. These efforts are paving the way for novel interventions that can enhance treatment outcomes for Veterans experiencing these conditions and related cognitive challenges.



Additionally, our team remains committed to fostering collaborations across disciplines to explore innovative rehabilitation techniques. Whether through advanced neuroimaging studies, cutting-edge assistive technologies, or novel behavioral interventions, we are dedicated to translating research findings into meaningful clinical applications that will impact Veterans.

#### **Future: Looking Ahead**

As we look forward, our vision is clear: to build upon our successes and continue to lead research that improves the lives of Veterans. Some of our key priorities include:

Expanding our work in visual and neurocognitive rehabilitation by leveraging new technologies and therapeutic approaches.

- Strengthening partnerships with VA healthcare providers to ensure research findings are rapidly and effectively integrated into Veterans clinical care.
- Enhancing our focus on aging and neurodegenerative disease research to address the growing needs of our Veteran population.
- Supporting the next generation of scientists through mentorship and training programs that cultivate innovation and excellence in rehabilitation research.

#### Celebrating 40 Years of Excellence

This year, we proudly celebrate the 40th anniversary of the CVNR, acknowledging the dedication and perseverance of our researchers, staff, collaborators and research volunteers who have contributed to our success. This milestone is not only a testament to our past achievements but also a reminder of our ongoing mission to serve those who have served our nation.

As we honor this legacy and chart the path forward, we do so with deep gratitude and renewed purpose. The challenges our Veterans face continue to evolve, and so must we—through innovation, collaboration, and an unwavering commitment to service. Together, we will continue to advance rehabilitation science and improve the lives of those who have sacrificed so much for our country.

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# Researcher Update

# Dr. Sheila Rauch offers a look into the Gulf War study



Dr. Sheila Rauch, CVNR's new Associate Executive Director, has been conducting research and providing PTSD and Anxiety Disorders treatment for over 25 years. Her research focuses on examination of mechanisms involved in the development and treatment of PTSD and physical health issues related to trauma and improving access to effective interventions. Dr. Rauch's ongoing Gulf War research study uses repetitive transcranial magnetic stimulation (rTMS) as a treatment for alleviating chronic pain and co-morbid symptoms in Gulf War Veterans.

#### Q: What are the implementation details of the Gulf War study?

A:"The study randomizes Gulf War Veterans with headache pain to receive either rTMS or sham treatment. Our aim is to determine the effectiveness of rTMS on headache pain in Gulf War Veterans, while also looking at impact on related mental health symptoms such as PTSD and depression."

#### Q: What is rTMS and why is it a good approach for chronic pain?

**A:** "Repetitive transcranial magnetic stimulation (rTMS) uses magnetic stimulation to activate or deactivate certain parts of the brain associated with chronic pain. There are few truly effective chronic pain management treatments, and non-opioid options that work are especially important."

#### Q: What is the Veteran Participants' contribution to what you are currently learning?

A: "Since rTMS requires daily sessions to be effective, our Veterans are contributing to our knowledge about effective non-opioid interventions for pain through their patience and diligence in attending study sessions and assessment visits. They are really a great group to work with who appreciates the study and are providing insight into if the treatment works, as well as what our next steps to implement that may be needed."

#### Q: What information would you give a future participant about the ongoing recruiting study?

A: "We only need one more participant and we are excited to be close to our goal. I would suggest anyone interested who served in the Gulf War and who is experiencing chronic headache pain should reach out to our team as soon as possible."

Please visit the CVNR website at varrd.emory.edu to learn more about Dr. Rauch and other ongoing studies!

# Participant Profile

### Meet Jerry Feldman: US Army Infantry Veteran, CVNR Community Advisory Panel Member, and Parkinson's Foundation Ambassador

"Research is extremely important and necessary to develop improved treatments, make better therapies and ultimately discover cures for our Veterans. I learned about VA research and the CVNR as a participant in the VA Whole Health for Life program. My Parkinson's diagnosis set me on a journey to get educated and involved in research that I could personally benefit from. I participated in an adapted Tango dance study for Veterans with Parkinson's disease, led by Dr. Madeleine Hackney. She conducts research at the Atlanta VA CVNR and Emory University- I have since participated in other adapted Tango and movement studies. I love to dance! As a research participant, I have gained a better understanding of strategies and methods to manage my



Parkinson's and slow its progression. I have also bolstered my self-confidence, improved my attitude, become more hopeful and made some great friends along the way!"

# Staff Spotlight

# Brandon Jones, exercise study coordinator

Brandon A. Jones is a dedicated Health Science Specialist who coordinates multiple CVNR research studies. Brandon's primary focus is on Dr. Arash Harzand's Smart Move study for Veterans experiencing Peripheral Arterial Disease. Brandon was



born and raised in Atlanta, GA. He earned a Bachelor of Science from Hampton University and since then has built a career rooted in healthcare.

Before joining the CVNR, Brandon gained extensive experience at Emory Healthcare as a phlebotomist and Emory University as a research coordinator. That is where he developed a passion for patient care and project management.

Now, Brandon continues that commitment by ensuring research studies run smoothly, ultimately improving healthcare outcomes for Veterans.

Outside of work, Brandon enjoys spending time with family and friends and expressing creativity through photography and design. His dedication to both science and art highlights a well-rounded passion for making an impact in multiple ways.

# Community Outreach

## The CVNR partners with Wellstar Health System to Improve Care for Patients with Aphasia and Cognitive-Communication Impairments

In February 2025, CVNR research speech-language pathologists Liz Tibus and Dr. Amy Rodriguez created a computer-based learning module (CBL) for nurses and other professionals at Wellstar Health System. The CBL, titled "Optimizing Care of Patients with Cognitive Impairments: Supportive Strategies," focuses on identifying patients with cognitive impairments and useful communication tips, cognitive strategies, and behavioral management techniques that can be implemented when interacting with individuals with dementia and other cognitive impairments. This is the second CBL created by the Rodriguez Lab in collaboration with Jaclyn Dorsey, who is a speech-language pathologist at Wellstar and who served as a member of CVNR's Community Advisory Panel.

The CBL's are part of the Sunflower Project at Wellstar, which aims to bring awareness to individuals with hidden disabilities. The first CBL focused on aphasia and supported communication techniques to improve patient care for individuals with language impairment. It was created in June 2023 and has since been viewed by over 450 nurses and other professionals providing patient care. Ms. Dorsey says, "Patient's families are reporting a change in culture around aphasia. They feel that there is increased advocacy and greater access to the tools needed to give these patients a voice in their care." The plan is for the second CBL to be widely implemented, as well. Some of the communication tips from the CBL are shared below.

#### **Communication Tips**



Be sure the environment is calm and free of distractions.



Address the person with dementia by name.



Maintain eye contact.



If the patient wears hearing aids, make sure they are worn and turned on.



Do not talk about the person as if she/he isn't there.



Address the person as an adult; avoid using child-like language or tone.



Present one idea at a time.



Don't abruptly switch topics. Provide a transition if changing topics.



Speak slowly and clearly.



Supplement your words with gestures.



Ask questions that require a "yes" or "no" response. Allow time for an answer.



Repeat or rephrase responses to clarify their message.



Give enough time for the person to respond; do not interrupt them.



Write a key word or phrase to communicate.



Try fill in the blank: "I need " supplemented by a picture.



If communication is still difficult, try again

# New PTSD Research Funding

# Dr. Erica Duncan, MD awarded a Department of Defense grant for research on PTSD

Dr. Erica Duncan, MD, PTSD investigator at the CVNR, was awarded a Department of Defense grant for nearly \$4 million over the course of 3 years. The study investigates the effect of using a noninvasive neurofeedback device called PRISM to reduce symptoms of PTSD in US Veterans.

The device operates by providing patients real time feedback on their brain's EEG signal from the amygdala, the fight or flight region of the brain. Using machine learning and a wearable neurofeedback interface, participants observe a waiting room where the avatars alter their behavior in response to the signal from the participant's amygdala. If the amygdala's response is heightened, the avatars scream, argue, pace, and a baby may even cry. As participants use mental strategies that help them visualize control over the avatars, the avatars on screen can also become calmer.

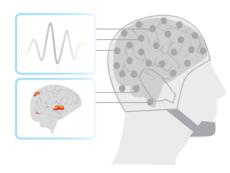
Participation in the project requires 15 sessions twice per week. While the FDA has already approved PRISM as an adjunctive treatment, Dr. Duncan recognized the importance of applying PRISM in a double-blind study on US Veterans prior to its application as a treatment for PTSD. The study will take place over four VA sites including Atlanta, Charlestown, Boston, Birmingham and two civilian sites at NYU and Rochester, with enrollment likely to begin in April 2025.

Dr. Duncan is a professor with tenure in the Department of Psychiatry and Behavioral Sciences. Her office and lab are at the Atlanta VA, where she serves as an attending Psychiatrist; Director of Research for our Neuromodulation Program; and Director of her research laboratory, the Psychophysiology and Cognition Laboratory.

If interested in participating Dr. Duncan's PRISM study, contact Dr. Duncan (*Erica.Duncan@va.gov*) or Sid Imes (*simes@emory.edu*).



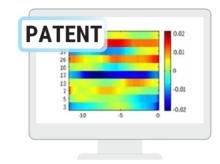




Simultaneous fMRI and EEG acquisitions



Advanced Statistical Models



Brain area-specific **EEG-fMRI- Pattern (EFP) Biomarker** 



Atlanta VA Health Care System 1670 Clairmont Road Decatur GA 30033

# CVNR NEWSLETTER

CENTER for VISUAL and NEUROCOGNITIVE REHABILITATION

Thank you for your continued commitment to advancing Veteran healthcare!

To learn about participating in research please contact us!

(404) 728-5064 CVNR.Registry@va.gov

Visit our website

CVNR Participant Registry
Enrollment as of April 2025

**261 Active Participants**