INSIDE THIS ISSUE
• Science Updates Pg. 3
• Friends Fund New Scientists Pg. 4
• 2018 Legacy Award Dinner Pg. 6
• Program Spotlight Pg. 7

Bill and Georgeann McRaven: National Spokespersons for The BrainHealth® Project

During the 2018 Legacy Award Dinner recently held at the Brain Performance Institute, Admiral (ret.) William McRaven and his wife Georgeann were announced as the national spokespersons for The BrainHealth Project.

The BrainHealth Project is a multi-year research collaboration of brain scientists and change-makers from around the world, all focused on unlocking the brain's potential by doubling cognitive performance. Led by the Center for BrainHealth at The University of Texas at Dallas, the Project has four distinct components:

1) It will be the largest-ever endeavor to measure human cognitive capacity, enrolling 120,000 people of various ages, social, racial and economic backgrounds, and tracking their brain performance over 10 years.

2) It will include interventions to empower study participants in maintaining and improving their own brain health, based on what is already scientifically demonstrated to work.

3) It will measure human brain capacity by developing a brain scan model to measure brain health.

4) It will create a large-scale database of brain health data, which is expected to be the largest of its kind.

Continued on Page 8
As I reflect on the many things for which I’m grateful this holiday season, I am reminded of the generosity, compassion, and dedication of friends like you. Thanks to your steadfast support of the Center for BrainHealth and the Brain Performance Institute, we are making a real and resonant impact in the lives of countless individuals across the spectrum of brain health. From military veterans navigating the transition back to civilian life, to middle school students on the cusp of their academic careers, to individuals looking for hope in the midst of a dementia diagnosis, we are changing people’s lives with meaningful, measurable brain science innovations. We are deeply thankful for the crucial role you play in this work.

Looking ahead, I am excited about the truly limitless possibilities that await us. Brain science is a rapidly growing, ever-evolving field of study, and we are fortunate to count some of the world’s top brain scientists among our ranks. As you’ll read in this quarter’s issue, we are in the midst of a large-scale, global initiative to unlock the mysteries of the human brain – The BrainHealth Project. The sky is the limit!

Thank you for joining us on this journey.

Kimber Hartmann, JD
Executive Director of Development, Strategy and Innovation

My recent commentary in the Dallas Morning News was prompted in part by Canada’s legalization of recreational marijuana. Both scientific and public opinion converge on the fact that there is still very little known about how cannabis use might have both beneficial and harmful effects on health.

Consider the first plant-based cannabis compound (cannabidiol or CBD) FDA-approved for epilepsy. Scientific research led to its approval, but many important questions are left unanswered. For whom would this drug be most effective? What are the risks and side effects? What are the long-term effects? Prescribers and patients will pioneer largely uncharted territory. There should be greater confidence in decisions related to health.

Funding constraints are likely to continue in the U.S. because research relies heavily on federal agencies for financial support.

To continue the important work of determining how to harvest the health benefits of cannabis while minimizing its detrimental effects, we must rely on those who share the same awareness and obligation. I invite you to visit our website to see the variety of research projects underway and in need of funding – both for my lab and those of my colleagues.

We remain grateful for your ongoing support of the science that is so crucial for BrainHealth.

Francesca Filbey, PhD
Professor, Director of Cognitive Neuroscience Research of Addictive Disorders
Endowed Bert Moore Chair of BrainHealth
Associate Provost

Imagine waking up every single day and doing something you’ve never done before. Bonnie Pitman created this daily practice seven years ago and will share her personal journey of living with chronic illness and how transforming an ordinary day to an extraordinary day has helped her live life with joy and compassion. Learn how this simple practice can boost your own brain performance and enhance your life.

Bonnie Pitman
Director, Art-Brain Innovations, Center for BrainHealth, Distinguished Scholar in Residence, UT Dallas, Former Director, Dallas Museum of Art

---

STAFF MESSAGES

Kimber Hartmann

Francesca Filbey

---

www.centerforbrainhealth.org
@BrainHealth
@BetterMyBrain
CenterForBrainHealth
@centerforbrainhealth
@brainperformanceinstitute
Science Should Guide Policy Regarding Cannabis

(Adapted from a recent op-ed that first ran in the Dallas Morning News)

Cannabis (marijuana) use is a fact — legal in some places and not in others. Either way, science should inform policy.

Elsewhere, research has yielded insights only possible due to the ability to study substances in a scientific and controlled setting: red wine has properties desirable to help improve cholesterol, and cocaine is an excellent topical anesthetic for certain medical procedures.

But what about cannabis? As cannabis develops into a mainstream industry, what has scientific research told us about the risks or benefits? In the U.S., cannabis remains a Schedule 1 drug like heroin and LSD, placing extreme limits on scientific research. This means only research-graded cannabis produced and supplied by the U.S. government can be used. As such, what is being studied is not reflective of actual use.

And scientists must rely on self-report by research participants, which may be inaccurate and makes it impossible to verify or quantify factors such as type, potency and quantity of various compounds in cannabis.

Lastly, there are still misconceptions about whether cannabis has any direct influence on criminal activity, although the overall weight of the evidence suggests that cannabis use does not cause people to commit more crime.

Despite petitions to re-classify cannabis so it is less prohibitive of scientific research, federal policies ignore the need to understand the drug. Hence, we remain in the dark about its real effects on the brain, the body, and human behavior. A better approach for policymakers would be to embrace science.

Francesca M. Filley is a Center for BrainHealth professor of cognition and neuroscience and associate provost at The University of Texas at Dallas. Alex R. Piquero is a professor of criminology and associate dean for graduate programs at The University of Texas at Dallas.

The Dallas Morning News

Our Eyes Don’t Lie… Or Do They?

Linda Nguyen, a teaching assistant in Dr. Krawczyk’s lab, recently completed a study of the psychology and neuroscience of trust and lie detection using cross-cultural populations — East Asian and Caucasian. About 50 people underwent fMRI to gauge blood oxygen levels in the brain while being tested on a variety of tasks such as the Implicit Association Test and making explicit decisions about whether people were lying or telling the truth.

The study found that at an explicit level, participants were only slightly more accurate than chance at detecting lies. This result is consistent with other research done on lie detection.

At an implicit level, ethnicities showed an own-race bias when it came to making evaluations about deception. Thus, East Asian subjects were more likely to rate East Asians as telling the truth, and Caucasian subjects were more likely to rate Caucasians as telling the truth.

In a separate task, East Asian participants did not show a detectable bias for or against their own race at an implicit level, while Caucasian participants showed a pro-Caucasian bias in judgments of trustworthiness. This provides interesting perspective to the cross-section of culture with trust and deception, paving the way for more research to understand the neural mechanisms of how we detect lies.

The team is currently recruiting participants for upcoming deception detection studies. For more information, please contact Linda Nguyen at linda.nguyen@utdallas.edu.

Micro-expressions Affect Perceptions

Humans are social beings who rely on a multitude of cues to understand and engage with other people.

In a previous study Dr. Krawczyk’s lab about personal trait decision-making, we found a set of frontal lobe activation regions using brain imaging. We also found several individual differences in how people evaluated traits including honesty, wisdom, and friendliness.

In a follow-up study, we evaluated people’s emotions as they judged their own traits using the same task. We sought to determine if there are differences in emotional valence using facial recognition technology on a computer-based task.

We found that participants showed significant emotional micro-expressions when evaluating positively framed traits about themselves. We plan to conduct further research that will include physiological measures (EGR, EEG, eye tracking, and brain stimulation).

NOTE: Rick Cole has re-enlisted in the U.S. Army and is now pursuing his PhD at the Uniformed Services University.

Enhancing SMART for Veterans with TBI

Our previous research demonstrated the effectiveness of our unique cognitive training program, SMART (Strategic Memory Advanced Reasoning Training) in individuals with traumatic brain injury (TBI). Our current study looks to expand these benefits by adding transcranial Direct Current Stimulation (tDCS) to potentially ‘prime’ brain networks to learn the strategies.

tDCS is a device that sends mild electrical current to specific parts of the brain, like jumper cables for the brain. We hope to see even greater changes in veterans with TBI who receive the tDCS stimulation before SMART training, with a second objective of potentially gaining insight into the neurobiology underlying tDCS.

The study is currently recruiting participants. If you are a veteran aged 19-55 with a suspected brain injury, please contact Jenny Howland at jenny.howland@utdallas.edu.

SCIENCE UPDATES

Our Four-Week Series: Wednesday, 1/16, 1/23, 1/30 and 2/6. Time: 6:30 – 8:00 PM

Price: $160

Register: centerforbrainhealth.org/calendar
Friends Fund New Scientists

The Center for BrainHealth’s Friends of BrainHealth donor circle announced five Distinguished New Scientist Awards at the annual Friends of BrainHealth Scientist Selection Luncheon, sponsored by Katherine and Bob Penn and held at the Dallas Country Club. The scientists will use the funding to lead independently designed research studies:

Namrata Das, MD, MPH – Friends of BrainHealth Distinguished New Scientist
The Role of Sleep in Brain Energy Metabolism and Cognition in Individuals at Risk of Alzheimer’s Disease

Lyndahl Himes, MS – Katherine and Bob Penn Distinguished New Scientist
Neural Mechanisms of Mindfulness Meditation and Depression

Katie Hinds, MS, CCC-SLP and Susan Larkin, MS, CCC-SLP – Jennifer and Peter Roberts Distinguished New Scientist
Starting Strong: Using SMART to Empower College Students’ Personal and Academic Success

Dinesh Sivakolundu, MD – Linda and Joel Robuck Distinguished New Scientist
Identifying Biomarkers for Early Estimation of Brain Age

Kathryn West, PhD – Visionary Friend Distinguished New Scientist
Understanding Neural Mechanisms of Multiple Sclerosis

The Friends of BrainHealth has raised more than $2.5 million for research since its inception in 2008. For more information about joining Friends, please visit centerforbrainhealth.org/friends.

Meet the 2019 Chairs

Roger C. Gault, AIA
“I became aware of the Center for BrainHealth years ago when my friends Suzanne and Lance Charrier began inviting me to lectures and functions at the Center. The mission of the Center became personal for me after a family member was severely affected by repeated concussions, and others by various forms of dementia. I am so excited about the progress that the Center is making in the area of Brain Health research.”

Brill Garrett
“The research and programs that the Center for BrainHealth and Brain Performance Institute deliver have far-reaching impacts for our community, our country, and our world. Serving alongside Roger as this year’s chairs of the Friends of BrainHealth is an honor. I am so grateful to be part of it.”

We are truly grateful to the Friends, whose support helps advance brain research and launch the careers of our future scientist leaders.

Dr. Sandra Bond Chapman, founder and chief director of the Center for BrainHealth
Hoglund Foundation Makes a Major Gift to Support Educational Outcomes

The Hoglund Foundation has awarded a grant of $500,000, to be paid over three years, to the Center for BrainHealth in support of its work with youth education. Specifically, this gift will support the enrollment, training, and assessment of several thousand adolescents through The BrainHealth Project.

Of the 120,000 total participants the Center plans to enroll in the Project, approximately 20,000 will be youth. Students will participate in the Center’s evidence-based cognitive training, Strategic Memory Advanced Reasoning Training (SMART), delivered in their classrooms via their teachers.

The impact of successive years of receiving SMART on students’ cognitive performance, test scores, and academic trajectory will be monitored with the ultimate goal of effecting lasting change in educational policy.

This generous gift is the second the Center has received from the Hoglund Foundation. In 2014, the Foundation awarded the Center a grant of $500,000 in support of the Brain Performance Institute’s new building, which opened to the public in October 2017.

Teresa and David Disiere Among First Supporters of The BrainHealth Project

Longtime Center for BrainHealth supporters Teresa and David Disiere recently made a gift of $500,000 to support the Center’s latest, most ambitious initiative: The BrainHealth Project.

With an overarching goal of achieving major, measurable advances in brain health, The BrainHealth Project will assess myriad health data points in 120,000 individuals over a period of ten years. In addition, the Project will offer personalized interventions based on the most current, evidence-based knowledge, and it will measure their efficacy.

The Disieres’ generous gift will specifically support the technology and infrastructure needed to capture, store, and analyze the significant volume of data that will be collected. In particular, this gift enables the Center to create an online platform for participants to access training and monitor their progress; build out an online format for the delivery of the Center’s evidence-based cognitive training, Strategic Memory Advanced Reasoning Training (SMART); and deliver cognitive and neuropsychological assessments to participants online.

The Center for BrainHealth is a world leader in strengthening brains through trainings that reshape brain networks and their neurotransmitter systems. It is one of only a handful of entities committed to building reserve and resilience as preventive measures in the healthy brain, as well as re-establishing cognitive and emotional functioning after acute medical treatment for brain injury and disease.
On October 23, the Center for BrainHealth® presented Admiral William McRaven and his wife Georgeann with its highest honor, the 2018 Legacy Award. This annual award recognizes individuals whose vision and dedication to brain research enable the Center to explore and advance the vast potential of the human mind. The evening’s speakers featured dinner chair Patty Huffines, UT Dallas President Dr. Richard Benson, chief director of the Center for BrainHealth Dr. Sandra B. Chapman, chief of emergency medicine service at Dallas VA Medical Center Dr. Stephen Burgher, co-leader of The BrainHealth Project Dr. Geoff Ling, honorary dinner chair Jason Garrett, and Admiral and Mrs. McRaven.

2018 Center for BrainHealth Legacy Award Dinner
Honoring Admiral and Mrs. William McRaven
Brain Healthy Habits at Work

Building on the success of its programs and trainings for individuals, the Brain Performance Institute is expanding to corporations and work teams. The interactive learning and team-building experiences are tailored for each group and can run from a half day to two days in length. Topics include the power of innovation, enhancing decision-making, optimizing stress, mindfulness, and more.

Several groups pilot tested the corporate experience in 2018, including Communities Foundation of Texas. According to chief relationship officer Monica Egert Smith, "The emphasis was on practical applications, and you left with 2-3 things that you could do in your day-to-day life that would have a significant impact. Little things that will have a huge impact. The experience of doing it together – my team is 20 people – and to have a shared language and approach, all had a tremendous amount of value. This isn’t just fluffy stuff, this has true impact.”

“This is a real retention and development tool for employees,” she continued. “Everyone can relate with the stress and challenges of a job, so to help employees navigate that stress and give them tools to manage it can make a daily difference in someone’s quality of life.”

The Dallas City Manager’s office also recently held a retreat for its top staff. City Manager T.C. Broadnax said, “The continued success of our organization is rooted in the training and development of our executive and senior management team. The Brain Performance Institute challenged each of us personally and professionally by teaching us tools and strategies to be more effective in how we use our brains to solve problems, develop innovative solutions and unlock our creative potential. The sessions were engaging, practical and thought-provoking, and I’m confident they will help us reach our full potential.”

For more information, please contact Dee O’Neill, Head of Corporate and Executive Solutions, at dee.onell-warren@utdallas.edu or 972-883-3329.

Taking Time for Tea Time, sponsored by Bank of Texas

On October 17, as participants enjoyed the brain-healthy practice of slowing down to make time for the things that delight us, Darren McGrady, former personal chef to Queen Elizabeth II, Princess Diana and Princes William and Harry, offered entertaining stories from his years in service of the royal family.

In Memoriam: Caroline Rose Hunt

1923-2018

It is no exaggeration to say that Caroline Rose Hunt left an indelible mark on Dallas. The philanthropist, hotelier, author, world traveler, gourmet, entrepreneur, mother of five, grandmother of 19 and great-grandmother of 23 was 95.

“Caroline Hunt was raised in the age of steel magnolias -- beautiful, charming and powerful. She was the quietest, boldest and most creative lady in real estate in the city.”

Debbie Francis, past advisory board chair

Photo: David Woo

“A positive spirit, an inquisitive mind and a caring nature... all were exemplified by Caroline Hunt. She was truly an inspiration to me and countless others.”

Monica Egert Smith
Chief Relationship Officer
Communities Foundation of Texas

NOTE: Excerpts Taken From Dallas Morning News Obituary That Ran On November 13, 2018.
We are all vulnerable to craving – whether it’s a compulsion to constantly check social media, binge eat, smoke, or other behaviors we may find ourselves uncontrollably repeating. Why are bad habits so hard to overcome? Do our own minds hold the key to conquering the cravings we know are unhealthy for us?

Using examples from clinical studies, Dr. Brewer will describe why habits hold the key to conquer the cravings. Learn why the special properties of the dopamine system in the prefrontal cortex play such a central role.

Explore ways to think outside the box and question some of the things you thought you knew about how to improve thinking, reasoning, or self-control. Learn why the special properties of the dopamine system in the prefrontal cortex play such a central role.

Learn about the latest breakthroughs in frontotemporal dementia research and approaches to reduce the impact of dementia worldwide.

Dr. Diamond will invite you to see the whole person (mind and body, intellect and emotions) as fundamentally interrelated. She will look at different approaches, such as computerized training, neurofeedback, physical activity, and mindfulness, as well as the roles of stress, pride, hope, shame, and belonging.

Learn about the latest breakthroughs in frontotemporal dementia research and approaches to reduce the impact of dementia worldwide.

While Alzheimer’s disease is common in older people, frontotemporal dementia is the most common cause of dementia in people under the age of 60. The search for reliable, specific biomarkers and treatments is urgently moving ahead through the work of innovative collaborations between laboratory scientists and clinical scientists using tools from genetics, proteomics, and molecular imaging. Bring your empathy, hope, and excitement to learn more about the frontal lobes and their essential role in human life.

We Need Your Support!

Your gift will help us continue to extend BrainHealth throughout the community.

Please make your donation at brainhealth.utdallas.edu/donate/

Continued from page 1

3) It will make use of big data analytics, enabling the development of an objective, predictive and standardized set of “brain health vitals.”

4) It will accelerate further discovery by making the largest cognitive dataset ever collected freely available to researchers worldwide.

An initiative of this scope, size and complexity requires spokespersons of an equally formidable stature. Bill and Georgann are the epitome of a power couple whose myriad accomplishments have touched the lives of many thousands of people. Bill is a true American hero with a storied military career. Knowing that active and past military personnel are particularly vulnerable to brain injury and impairment, he understands the importance of showing them ways to enhance their cognitive capacity so that tomorrow is better than today. Looking to the future, he is deeply aware that our country’s military successes will rely more than anything else on the cognitive edge of our men and women in uniform. Georgann brings her own perspective and understanding of military caregivers, who often endure significant stress in their own roles and can benefit immensely from understanding how to take care of their brain health. Brain health is also a deeply personal issue for her since neurodegenerative disease has impacted her own family, as it has so for many others.

Following his retirement from military service, Bill took on another high-profile leadership role, this time in higher education. During his tenure as Chancellor of the UT System, his passion for brain health was evidenced in the Brain Health Quantum Leap which put attention on the critical need to understand, prevent, treat and cure the diseases of the brain. Being at the head of an institution educating more than 235,000 students, he experienced at close range how cultivating brain-healthy habits and innovative thinking will propel the next generation to success in a rapidly changing environment.

The statistics don’t lie. As a society, our cognitive faculties are not keeping pace with our physical health and longevity. But science has revealed that this does not have to be the case. People of all ages, backgrounds and levels of physical health stand to benefit significantly and measurably from improved brain health. This is the ultimate goal of The BrainHealth Project, and we are deeply thankful that Bill and Georgann McRaven are lending their powerful voices to raise awareness about this important and ambitious endeavor.

For more information about the Project and enrollment, visit TheBrainHealthProject.org.