

New Thinking

Spring 2015
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ABOUT THINKING

A Publication by Cleveland Clinic Lou Ruvo Center for Brain Health



ACHIEVING A **TIPPING POINT**

Cleveland Clinic Lou Ruvo Center for Brain Health has reached a tipping point in its successful development.

Beginning with its initiation as an organization devoted to keeping alive the memory of Lou Ruvo, it has grown into a model Cleveland Clinic organization for neurological care, headquartered in an iconic architectural design by Frank Gehry. Philanthropy, and the amazing support of the Las Vegas community and other devoted donors, have provided the fuel for this meteoric rise.

In terms of financial support, nearly all funds collected can now be dedicated to supporting the programs and research of the Lou Ruvo Center for Brain Health, with little or none going to building and infrastructure costs. This is a remarkable milestone.

The education program of the Lou Ruvo Center for Brain Health is a major aspect of medical education in the city of Las Vegas. We have K-12 programs, with children coming in for short periods of time to experience a medical facility. College students have rotations in the summer and medical students, residents, fellows and other trainees have rotations to grow clinical skills or to participate in physical therapy, occupational therapy or nursing training. Education provides us with the opportunity to build from the beginning with a philosophy of putting patients at the center of all their health care decisions.

New and exciting scientific programs will also be supported with available funds. By building research cores, I can ensure that all clinicians and scientists at the Lou Ruvo Center for Brain Health have available to them resources such as statisticians, database managers and technology experts who can assist with ongoing projects. This focus allows us to amplify careers, accelerate discovery, and enhance and expand the research of the Lou Ruvo Center for Brain Health.

As philanthropy continues, opportunities expand. There is an urgent need to conduct clinical trials of combinations of therapeutic agents. Brain diseases are complex, and

intervention with single agents is unlikely to produce the results that we want for our patients. Carefully chosen combinations of agents are more likely to succeed. The Lou Ruvo Center for Brain Health will be the leader in the development of the methodology and techniques necessary for complex combination trials.

Forward and upward! We are making steady progress in our advance against brain diseases. A tipping point has been reached, a Rubicon has been crossed and the future is calling.

Jeffrey L. Cummings, MD, ScD

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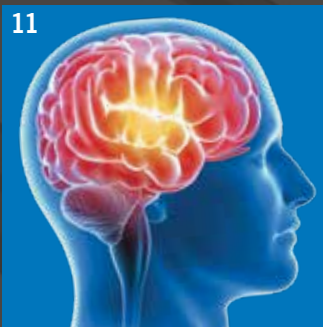
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When a Frank Gehry exhibition opened in Paris, his masterpiece, Cleveland Clinic Lou Ruvo Center for Brain Health, was selected as the cover of the exhibit catalog (see article on page 5).

Photo credit: Iwan Baan

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FIVE YEARS AND STILL GROWING

In September 2014, Cleveland Clinic Lou Ruvo Center for Brain Health marked its fifth anniversary of world-class patient care by convening key constituents on its beautiful Frank Gehry-designed campus.

Under the pervasive optimism of Las Vegas' sunny skies and Mr. Gehry's inspiring architecture, guests released butterflies in celebration of a metamorphosis in healthcare and the center's growing treatment and research capabilities, which are competitive with any Alzheimer's, Parkinson's and multiple sclerosis program in the country.

In just five years, the Lou Ruvo Center for Brain Health has:

- Provided no-cost social services support to more than 3,500 individuals who have made more than 18,000 visits to its free patient and caregiver social service programs
- Facilitated more than 55,000 patient appointments with medical providers
- Opened the only Huntington's Disease Comprehensive Clinic in Nevada
- Received the "Partners in Care" designation from the National Multiple Sclerosis Society — the only center in Nevada to be so honored
- Provided more than 17,000 hours of education, from K-12 students to medical residents

The center has also built one of the largest Alzheimer's disease clinical trials programs in the country, with more than 30 trials. This "multiple shots on goal" approach, as Jeffrey Cummings, MD, ScD, calls it, is critical to finding better treatment for Alzheimer's disease. Dr. Cummings, Director of the Lou Ruvo Center for Brain Health, recently completed an examination of all clinical trials for new Alzheimer's disease drug therapies conducted over a 10-year period. Only one drug succeeded; the other 99.6 percent failed.

However, a breakthrough could come tomorrow or in 10 years. "I don't know how long it will take to get there, but what I do know is that the Lou Ruvo Center for Brain Health has to take the next step, and the next and the next until we find a cure," says Dr. Cummings.



Keep Memory Alive Chairman & Founder Larry Ruvo with Vice Chairman Camille Ruvo



Larry Ruvo celebrates the center's 5th anniversary with his mother, Angie Ruvo



Keep Memory Alive Board Member Michael Severino, left, with Brian Greenspun



Loretta Moses, Clark County Medical Society, guest, and Andrea Bennett, Vegas Magazine

Photo credits: Cashman Photo Enterprises



INSPIRED?

We encourage you to go online to keepmemoryalive.org/donate or contact the Philanthropy Institute at 702.331.7052.

USING THE IMMUNE SYSTEM TO COMBAT ALZHEIMER'S DISEASE



Jeffrey Cummings, MD, ScD

New approaches to treating Alzheimer's disease are needed and are rapidly evolving. One novel approach is to use immune cells to attack the toxic proteins that accumulate in the brains of patients with Alzheimer's disease.

An important immune therapy being developed by Genentech Pharmaceuticals is crenezumab. The results of a preliminary study of this exciting agent were presented at the Alzheimer's Association International Conference in Copenhagen, Denmark, in 2014 by Jeffrey Cummings, MD, ScD, Director, Cleveland Clinic Lou Ruvo Center for Brain Health.

In the study, for which Dr. Cummings chaired the steering committee, approximately 200 patients received either low-dose therapy administered subcutaneously or a placebo, while approximately 250 patients received high-dose therapy administered intravenously or a placebo.

Low-dose crenezumab had no observable benefit and, overall, the study showed no difference between drug and placebo in key outcomes. However, when the study was analyzed to assess the impact on mildly affected patients, a consistent pattern emerged in which those with the least cognitive impairment showed statistically significant benefit from the high-dose therapy. This apparent treatment effect was seen on several neuropsychological tests used in the

study and in a smaller biomarker-based study also conducted by Genentech. A small number of serious side effects was seen in the treatment group, and further study is ongoing to alert researchers to side effects that need to be carefully tracked in follow-on studies.

The crenezumab study is exciting because it is another link in the chain of evidence that suggests a significant and meaningful treatment effect on Alzheimer's disease if we start therapies early enough in patients with only mild symptoms. Several clinical trials have come to this conclusion.

The ultimate application of this principle is to involve patients in prevention trials before they exhibit any symptoms of Alzheimer's disease. The Lou Ruvo Center for Brain Health is conducting two such prevention trials (*see article on page 16*). With earlier and more aggressive therapies, we are more likely to interrupt this devastating disease process and preserve cognitive function in those at risk for Alzheimer's disease.

Immune cells combat toxic protein in brain cells where Alzheimer's is present

For information on participation in clinical trials, please contact us at 855.LOU.RUVO (855.568.7886) or brainhealth@ccf.org.

LOU RUVO CENTER FOR BRAIN HEALTH SELECTED AS COVER OF PARIS' GEHRY EXHIBIT CATALOGUE

When a Frank Gehry exhibition opened at Le Centre Pompidou in Paris in October 2014, Cleveland Clinic Lou Ruvo Center for Brain Health in Las Vegas was selected as the cover of a special exhibit catalog.

The choice was significant, given that Mr. Gehry's many award-winning buildings across America, Europe and Asia represent an architectural career spanning five decades.

Celebrating the opening of Fondation Louis Vuitton, Mr. Gehry's newest building, the exhibit catalog cover features a photo of the interior of the Lou Ruvo Center for Brain Health's dramatic Keep Memory Alive Event Center. The breathtaking image was also displayed on posters throughout Paris promoting the exhibit.

Camille and Larry Ruvo, Vice Chairman and Chairman and Founder of Keep Memory Alive respectively, attended the exhibition opening. "Driving through Paris and seeing the center on posters throughout the city, along with the models, drawings and video of our building, confirmed what I had set out to do: Use Frank Gehry's celebrity to help cure a disease. I'm proud he has allowed us to do so," Mr. Ruvo says.

Larry Ruvo and Frank Gehry broke ground on the Lou Ruvo Center for Brain Health in 2007. The distinctive building

is a symbol of hope, and the center is recognized not only for its stunning design, but for its world-renowned research and patient care.

Since treating its first patient in July 2009, the center has facilitated more than 55,000 patient visits. **For a medical appointment, please call 702.483.6000; for a tour, call 702.263.9797.**



GRAMMY WINNER MICHAEL BUBLÉ JOINS OUR QUEST FOR A CURE

The event was dubbed *Up Close and Personal With Michel Bublé*, “but we didn’t realize just how personal it was,” says Keep Memory Alive Chairman and Founder Larry Ruvo. “While touring our Cleveland Clinic Lou Ruvo Center for Brain Health, Michael called his mom and said, ‘Mom, this is where they’re going to find a cure!’”

During that evening’s riveting concert, in a truly touching moment, four-time Grammy Award-winning artist Michael Bublé told the 300 supporters in attendance he was dedicating “Smile” to his grandmother, Yolanda Teresa Santaga. He had lost her two months earlier to Alzheimer’s, one of the primary diseases treated at the Lou Ruvo Center for Brain Health, and she had just been recognized on the center’s Honor Wall.

Chef Scott Conant is equally committed to Keep Memory Alive. Star of the Food Network’s “Chopped,” he has donated his winnings from the show to support research and treatment at the Lou Ruvo Center for Brain Health. On October 11, he joined Michael Bublé at the Keep Memory Alive Event Center to give supporters a first-hand taste of his celebrated cuisine.

In addition to world-class food and entertainment, highlights of the evening included the auctioning of an in-home dinner for 20 prepared by Chef Conant and a tennis lesson from champions Andre Agassi and Steffi Graf. Larry Ruvo joined Michael Bublé onstage to lead the singing of “Happy Birthday” to Dr. Miriam Adelson, wife of Las Vegas Sands Chairman and CEO Sheldon Adelson.

As the evening’s emcee, Robin Leach, said, “Thanks to the generosity of Las Vegas VIPs, the incredible work at the Lou Ruvo Center for Brain Health will continue so that the cure is discovered right here in Sin City and given to the world. Pray you never need its services, but it’s comforting to know that the nation’s leading research and treatment center is your best next-door neighbor.”



Michael Bublé sings



Michael Bublé sings Happy Birthday with Larry Ruvo



Scott Conant takes the helm in the Keep Memory Alive Event Center kitchen

Photo credit: Kelly Creative

PUTTING MULTIPLE SYSTEM ATROPHY RESEARCH ON THE MAP

Multiple System Atrophy (MSA) is a debilitating neurodegenerative disease. It is rare, affecting only about four in 100,000 people, but it shares many pathologic and clinical features with the better-known and more common Parkinson's disease, for which it is often mistaken.

In fact, the abnormal protein in Parkinson's disease also plays a role in MSA. Unlike for Parkinson's disease, however, few treatments exist for MSA. There is no cure, and most people die within seven to 10 years of diagnosis. MSA progresses rapidly and treatment is aimed at trying to control symptoms, usually with minimal success.

Global Collaboration Takes Action

In an effort to develop a roadmap establishing and prioritizing the next steps in research critical to finding treatments and a cure for MSA, Cleveland Clinic Lou Ruvo Center for Brain Health in November hosted key thought leaders from around the world, including participants from

four continents, 12 countries, 30 academic institutions, 15 pharmaceutical companies and the National Institutes of Health (NIH).

Walter J. Koroshetz, MD, Acting Director of the National Institute of Neurologic Disease and Stroke (part of the NIH), delivered the keynote address. The NIH's involvement is critical because it provides the majority of funding for clinical-based research, notes Ryan R. Walsh, MD, PhD, Director, Parkinson's Disease and Movement Disorders Program at the Lou Ruvo Center for Brain Health.

"The fact that the NIH takes this so seriously is very meaningful," he says.

Previous meetings have focused on MSA, but none has been dedicated to development of a research roadmap, says Dr. Walsh, who chaired the roadmap meeting. Participants formed work groups and decided how to expedite research into this little-understood disease. A Global MSA Task Force will build on momentum from the meeting in an effort to advance MSA treatments as efficiently, aggressively and thoughtfully as possible, and the Lou Ruvo Center for Brain Health will play a leading role. Plans are to publish the roadmap in mid-2015 to galvanize research into MSA and raise awareness around the globe.

"Although MSA and Parkinson's share common pathology and symptoms, MSA is much more rapidly progressive. This



same horrible clinical reality may work to our advantage in research, as MSA's progressive nature may offer a faster answer to whether a new therapy is working," says Dr. Walsh.

One Patient's Fight in Las Vegas

Kerry Simon, an Iron Chef and owner of six restaurants, was diagnosed with MSA and has gone public with his disease and his treatment at the Lou Ruvo Center for Brain Health. He has dedicated himself to raising awareness and funds for the disease. His efforts, including a fundraiser held in February 2014, enabled the roadmap meeting to take place, Dr. Walsh says: "This is a great example of what one person can do."

A Clinic Dedicated to MSA

Chef Simon's efforts also have kick-started a comprehensive clinic for MSA at the Lou Ruvo Center for Brain Health. The clinic will utilize the best neuroimaging diagnostic tools available and provide patient services to manage symptoms. Patients with MSA can be affected by severe symptoms, such as slow movement, problems walking, tremor and stiff muscles. The center has expanded relationships with qualified local providers (*see Adjunct Staff*) in a quality alliance to address other symptoms, including fluctuating blood pressure, sleep and breathing disorders, swallowing difficulties, and gastroenterologic and urinary complications.

To make an appointment, please contact us at 702.483.6000.

ADJUNCT STAFF OF THE MSA COMPREHENSIVE CLINIC



Sean S. Ameli, MD

Cardiologist

Founder, Managing Partner,
Ameli Heart Center, Las Vegas

Dr. Ameli is board-certified. He underwent fellowship training at Cedars-Sinai Medical Center in Los Angeles.



Christopher W. Borsellino, MA, Ed. of Deaf, HH, MS, CCC-SLP, LSVT

Speech and Language Pathologist

Owner, SFS Therapies, Las Vegas

Mr. Borsellino is board-certified in speech pathology and voice training. He received master's degrees from the University of Arizona in Tucson and Nova Southeastern University in Fort Lauderdale.



John "Jack" B. Collier, MD

Pulmonologist

Partner, Pulmonary Specialist Group of Nevada;
Medical Director, Desert Sleep Disorder Center

Dr. Collier is board-certified in pulmonary, critical care and sleep medicine. He underwent fellowship training at Cedars-Sinai Medical Center in Los Angeles.



Frank J. Nemec, MD

Gastroenterologist

Gastroenterology Associates, Las Vegas

Dr. Nemec is board-certified. He completed fellowship training at the University of California, Davis.



Scott Avery Slavis, MD

Urologist

Cleveland Clinic Las Vegas,
Glickman Urological & Kidney Institute

Dr. Slavis is board-certified. He completed fellowship training at Cleveland Clinic.

GET READY TO WITNESS THE POWER OF LOVE

What is the Power of Love™ gala? For its cult following, it's a red-letter day on the calendar around which vacations and other personal commitments are scheduled.

If you haven't yet attended the Power of Love gala, imagine an evening of first-rate headliner entertainment, food prepared by celebrity chefs and wine chosen by master sommeliers. Now imagine that same evening in the entertainment capital of the world.

But this gala is much more than a party. It's an annual celebration of life that exists to raise money for Cleveland Clinic Lou Ruvo Center for Brain Health's programs and services. It reaffirms the critical role of generous donors, all of whom share the mission of eradicating these devastating brain afflictions forever.

After 18 years, Keep Memory Alive's Power of Love gala has become one of Las Vegas' signature celebrity events, and now attracts a national audience. Chefs represent a culinary who's who: Mario Batali, Tom Colicchio, Scott Conant, Todd English, Thomas Keller, Emeril Lagasse, Michael Mina, Masaharu Morimoto and Wolfgang Puck. Following a reception replete with Dom Pérignon, master sommeliers hand-select world-class wine pairings to accompany each chef's preparation.

The statistics around Alzheimer's, Huntington's, Parkinson's, multiple sclerosis and the other degenerative brain diseases addressed at the Lou Ruvo Center for Brain Health affirm that we will all be touched or we will know someone who is. Alzheimer's disease alone is an epidemic, with one in two adults developing the disease by age 85. At least half of us will have it; the rest of us will be caregivers.

Then, entertainment kicks into high gear. Guests have been entertained by legends, A-listers and Grammy Award winners: Bono, Michael Bublé, Snoop Dogg, Gloria Estefan, Cee Lo Green, Enrique Iglesias, Carole King, LL Cool J, Lenny Kravitz, Queen Latifah, Barry Manilow, Ricky Martin, Lionel Richie, Stevie Wonder and many other luminaries.

Won't you join us at the gala in raising funds to find better treatments — and, perhaps one day, a cure — for these diseases that pose an unacceptable future?



Photo credit: Greg Gorman



SAVE THE DATE

JUNE 13, 2015

**POWER OF LOVE GALA:
HONORING VERONICA AND ANDREA BOCELLI
LAS VEGAS, NEVADA**

ALZHEIMER'S | HUNTINGTON'S | PARKINSON'S |
MULTIPLE SCLEROSIS | MULTIPLE SYSTEM ATROPHY

Please join us for an exciting evening of music, philanthropy, entertainment, exquisite wine and cocktails and delectable cuisine by celebrity chef Wolfgang Puck and friends.

Proceeds benefit Cleveland Clinic Lou Ruvo Center for Brain Health.

Interested in attending the gala this summer? Please contact 702.263.9797 or events@keepmemoryalive.org. More information about this year's event, as well as other ways to support Keep Memory Alive, is online at keepmemoryalive.org.

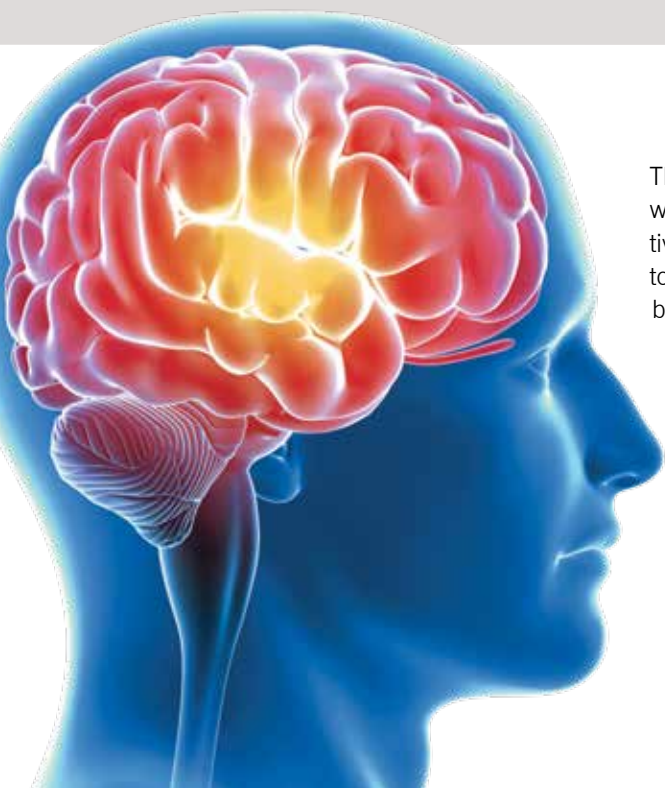
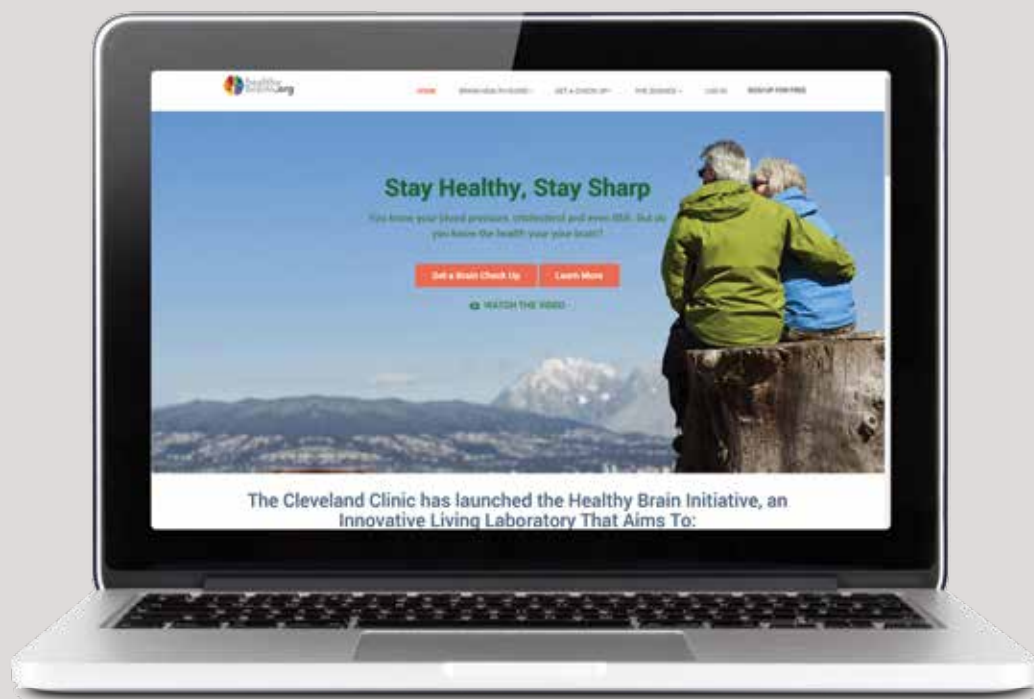


Larry Ruvo, Camille Ruvo, Andrea Bocelli and Veronica Bocelli

INTRODUCING THE HEALTHY BRAINS INITIATIVE

With financial support from the Caesars Foundation, Cleveland Clinic Lou Ruvo Center for Brain Health has developed the Healthy Brains Initiative, an innovative living laboratory that aims to:

- Raise awareness and educate the public about the “Six Pillars of Brain Health”
- Empower people to take actions to improve their brain health and prevent cognitive decline
- Engage the community to create a network of participants willing to advance research through clinical trials



The centerpiece of the initiative is a website, HealthyBrains.org. This interactive platform provides unique assessment tools for users to calculate their own brain health index (BHI) score and offers customized recommendations, health tips and up-to-date scientific information on brain health and on prevention and treatment of brain disorders. Each person who engages with the site has his or her own dashboard to record, review and track progress.

“We all want to take care of our brain,” says Kate Zhong, MD, Senior Director, Clinical Research and Development at the Lou Ruvo Center for Brain Health, who is spearheading the program. “We are very excited to launch this innovative initiative to empower our community to engage with a brain-healthy lifestyle and get involved in advancing research.”

THE SIX PILLARS OF BRAIN HEALTH

Lifestyle plays a key role in brain health. With HealthyBrains.org, people gain a better understanding of their current brain health and get personalized, unique solutions for a healthier brain based on the “Six Pillars of Brain Health.”



PHYSICAL EXERCISE

People who exercise regularly have a lower risk of Alzheimer's disease and stroke. Exercise also improves blood flow, memory and mood, and reduces stress.

Exercise regularly:

- Pump up your heart
- Get into strength training, such as lifting weights
- Work on flexibility and balance
- Stretch with exercises such as yoga
- Improve balance with exercises such as walking backwards



FOOD AND NUTRITION

Eating the right foods, such as a Mediterranean-style diet that emphasizes fresh vegetables and fruit, fish and nuts, helps maintain brain health and can reduce the harmful effects of oxidation in the brain and the risk of Alzheimer's disease and stroke.

Supplementing your diet with omega-3 fatty acids (especially if you don't eat fish) and vitamins E, D and C can benefit brain health. All have anti-oxidant effects, which studies demonstrate can delay onset of cognitive decline and reduce the risk of brain disorders.

Eat smart:

- Enjoy a Mediterranean diet
- Cook fresh; savor the taste
- Don't forget to supplement



SOCIAL INTERACTION

Leading an active social life can protect against memory loss. Maintaining social ties and long-term relationships and having a purpose in life protect against age-related cognitive impairment.

Stay connected:

- Treasure your loved ones
- Have a purpose in life
- Participate in social activities



SLEEP AND RELAXATION

Rest well and manage stress:

- Get at least six hours of sleep
- Meditate
- Stay positive



BRAIN FITNESS

Mental exercise improves brain function and promotes new brain cell growth, decreasing the likelihood of developing dementia. Doing crossword puzzles, playing electronic “brain games,” learning a new skill and taking classes all stimulate brain activity.

Use your mind:

- Build your brain reserve
- Play stimulating games
- Learn new things and get educated



MEDICAL HEALTH

Several medical conditions and unhealthy behaviors, such as hypertension, diabetes and smoking, increase the risk of dementia. Keeping these conditions in check can maintain and improve brain health.

Control medical risks:

- Manage medical conditions; take prescribed medications
- Wear a helmet when biking or playing sports
- Quit smoking

Developing a Network of Clinical Trials Volunteers

The Healthy Brains Initiative represents an ongoing collaborative relationship between participants and researchers. What is most innovative about HealthyBrains.org is its research component: Participants can provide data on their lifestyle and overall health and be included in a “living laboratory” — a population of people who are registered and ready to participate in clinical trials across the nation.

“We are inviting the community to be our scientific partner. Together, we will reduce the risk, delay the onset and find a cure for brain diseases,” says Dr. Zhong.

What motivates people to participate? Initially, some may desire to make a difference in the world by helping to further academic research, but true commitment is achieved when the users themselves gain something from the experience to help them better their own lives in a meaningful way. HealthyBrains.org engages, enables and empowers users by providing them with a centralized resource for brain health information. Not only do users get insightful, practical information based on the “Six Pillars of Brain Health”; the platform also serves as an interactive dashboard tracking a user’s brain health progress over time.

Las Vegas: an ideal site for innovation

Las Vegas is becoming a demonstration site for technology, medical care and scientific discovery. “We see the Healthy Brains Initiative as a community engagement project that will be planned, launched and supported by the people of Las Vegas. Caesars Foundation is a great partner in this important community endeavor. When it comes to brain research, what happens in Vegas benefits the world,” says Dr. Zhong.

“Caesars is committed to the health and well-being of older individuals and we are thrilled to be collaborating with Cleveland Clinic Lou Ruvo Center for Brain Health on the Healthy Brains Initiative.”

— Jan Jones Blackhurst
Executive Vice President, Communications & Government Relations

The Brain Health Initiative is supported by Caesars Foundation, a charitable organization of Caesars Entertainment, which is committed to helping older individuals live longer, healthier, more fulfilling lives.



CAESARS
FOUNDATION®

The will to do wonders®



Kate Zhong, M.D.

Technology Enables Brain Health

One of the most exciting aspects of the Healthy Brains Initiative is its innovative technology that enhances the user experience. Participants can access HealthyBrains.org from anywhere via a desktop computer, laptop, tablet or smart phone. Tips, recommendations, advice and even recipes for good health are available anywhere, anytime. HealthyBrains.org makes achieving brain improvement goals easy and fun.

HealthyBrains.org was designed to be personalized to meet each user's brain health objectives. Some may want to simply browse the site for expert information; others may wish to register to receive regular newsletters, wellness tips and advice on how to incorporate the Six Pillars of Brain Health into their daily lives. Most will want to join the Brain Health Community to access assessments, brain tools, clinical trials, and libraries of information. Most importantly, community members receive a personal dashboard with data spanning blood pressure, heart rate, BMI and BHI to help them track and improve their own brain health.



With all these options for improving your brain health, why not sign up for more information at HealthyBrains.org?



TAU IMAGING ENHANCES PROFESSIONAL FIGHTERS BRAIN HEALTH STUDY

A new imaging technique is adding a valuable dimension to a study on the effects of repeated head trauma in professional fighters.

Positron emission tomography (PET) allows researchers to find and measure levels of abnormal tau protein, a substance that accumulates in the brain cells of some individuals after repeated head trauma. Until now, it has been possible to identify tau protein only in autopsies. But a new tracer used with a PET scan can visualize and measure this protein in living people.

Accumulation of tau protein, when altered, can lead to degeneration of cells in the brain. This condition, termed chronic traumatic encephalopathy (CTE), is what researchers at Cleveland Clinic Lou Ruvo Center for Brain Health have been studying since 2011 in 475 active and retired boxers and mixed martial arts fighters enrolled in the Professional Fighters Brain Health Study. The goal of the study is to develop methods to detect early signs of brain injury and



Elaine Pienschke, Lead Technologist, PET, CT and MRI

determine who may be more likely to develop chronic neurological disorders. Findings will benefit professional fighters as well as other athletes, members of the military and civilians who may experience head trauma.

Until December, examination of the study participants involved only magnetic resonance imaging of the brain, along with assessments of cognition, behavior, balance and speech. Some participants now will be asked to undergo one PET scan to study their levels of tau protein.

“Can you have a little tau in the brain and it still be normal? If so, how much tau is normal? How much will lead to progressive disease?” are among the questions that may now be answered, says Charles Bernick, MD, MPH, Associate Medical Director of the Lou Ruvo Center for Brain Health and principal investigator of the study.

Although other institutions, too, are using this new technology, tau imaging is still in its early stage. It has the potential to become a diagnostic tool as well as a way to measure success of treatments, Dr. Bernick says. In the meantime, it will aid researchers in learning about the natural history and trajectory of CTE. Tau imaging is available through a scientific collaboration with Avid Pharmaceuticals.

Sen. Harry Reid (D-Nev.) and Sen. John McCain (R-Ariz.) have publicly supported Cleveland Clinic’s research efforts on CTE in professional fighters. About 225 more participants are expected to enroll in the study. If you know a professional fighter who might be interested in participating, please encourage the fighter to contact us at 855.LOU.RUVO (855.568.7886) or brainhealth@ccf.org.



Thank you to our sponsors, whose generous donations have made the Professional Fighters Brain Health Study possible:

Arthur Spector

Dan Park

Golden Boy Promotions

Steven DeLonga

The Dream Fund at UCLA

The Lincy Foundation

Top Rank, Inc.

Ultimate Fighting Championship

**Viacom’s Bellator MMA
and GLORY Kickboxing**

PREVENTING ALZHEIMER'S BY REMOVING AMYLOID

Long before people develop Alzheimer's disease symptoms, deposits of a harmful protein known as amyloid begin to accumulate in their brain cells.

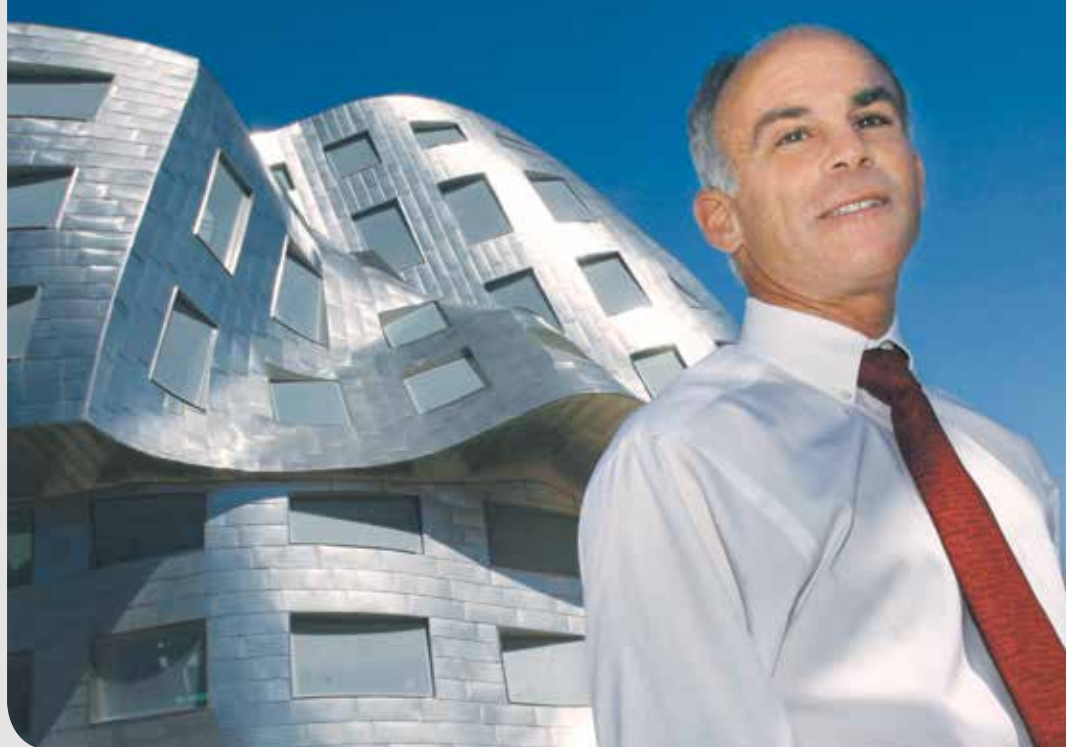
Over time, the amyloid protein forms plaques that impair brain functions, usually beginning with memory. Alzheimer's disease research has focused on trying to develop drugs that remove well-established amyloid plaques in people who have the disease, but this approach hasn't worked.

"If we're going to be successful in treating Alzheimer's disease, we have to get amyloid out of the brain as early as possible," says Charles Bernick, MD, MPH, Associate Medical Director of Cleveland Clinic Lou Ruvo Center for Brain Health.

The center is participating in the Anti-Amyloid Treatment in Asymptomatic Alzheimer's study (known as the A4 study), which is evaluating a new treatment, solanezumab, that has shown positive results in slowing disease progression in previous tests involving more than 1,800 people.

Solanezumab is a synthetic antibody that attaches to amyloid and removes it, just as natural immune cells remove harmful substances from the body. Unlike other agents developed to treat Alzheimer's disease, solanezumab specifically targets amyloid floating in the brain before it becomes lodged in brain cells. The A4 study will test solanezumab in people who have evidence of elevated amyloid accumulation in the brain, but have normal thinking and memory abilities. Having amyloid accumulation doesn't

Charles Bernick, MD, MPH, Principal Investigator of the A4 study



mean that a person will develop Alzheimer's disease; it is one of a number of risk factors, including family history and a genetic predisposition.

People interested in participating in the A4 study will undergo an amyloid PET scan, an imaging test that can detect amyloid plaques in the brain of a living person. Participants will be divided into two groups that will take either the drug or a placebo for three years.

"We are trying to find out if an anti-amyloid drug given early can change the course of the disease," says Dr. Bernick. If the

drug proves effective, "it would be a paradigm shift in the way we think about Alzheimer's. That's what makes this study so exciting. People with risk factors would be tested and, if they had amyloid deposits, they would be treated before developing symptoms."

If you are interested in participating in this potentially groundbreaking study, please contact 855.LOU.RUVO (855.568.7886) or brainhealth@ccf.org. A complete list of clinical trials is online at clevelandclinic.org/brainhealthtrials.

FROM IDEATION TO PUBLICATION

By Justin B. Miller, PhD, Staff Neuropsychologist

Throughout the world, scientific discoveries are made every day. Some are big; many are small but, over time, they may accumulate into a body of scientific evidence that could one day lead to a groundbreaking discovery.



Justin B. Miller, PhD

Scientific findings are published in academic journals that require review by an external panel of scientists before publication. This peer-review process is a means of verifying the scientific credibility of a paper, evaluating its accuracy and determining the validity of the research methods.

Publishing good science in scholarly, peer-reviewed journals is important for both researchers and practicing clinicians. These published articles establish

the foundation of evidence that clinicians use to identify and provide scientifically supported treatments and diagnoses. For researchers, publishing new papers adds to the scientific literature and guides new research that might one day lead to a discovery. In the five years since Cleveland Clinic Lou Ruvo Center for Brain Health opened, our 11 doctors have published more than 160 articles in some of the world's leading scientific journals. Many of our doctors also lend their expertise as peer reviewers.

One of the most recent publications to come from the Lou Ruvo Center for Brain Health was written by its director, Jeffrey Cummings, MD, ScD. His article in the journal *Lancet* reported results from a study showing that new medication for treating symptoms of psychosis in Parkinson's disease was beneficial. Associate Director Charles Bernick, MD, MPH, and Head of Neuropsychology Sarah Banks, PhD, ABPP/CN, recently published results from the first year of the Professional Fighters Brain Health Study (see article on page 15), a longitudinal study of professional boxers and mixed martial artists. Their paper in *Alzheimer's Research and Therapy* demonstrated that greater exposure to head trauma is associated with increased risk of long-term neurological disease.

Frequent, high-level publishing increases the visibility and prominence of the Lou Ruvo Center for Brain Health within the scientific community and solidifies the credibility and reputation of our doctors as thought leaders and experts in neurodegenerative disease. Sometimes, as with the Professional Fighters Study, success in publishing inspires funding of further research, which allows the cycle of discovery to continue.

If you would like to support research at the Lou Ruvo Center for Brain Health, please contact us at 702.331.7052 or hinesg@ccf.org.

MEET THE SCIENTIST BEHIND THE DATA: **DIETMAR CORDES**

Dietmar Cordes, PhD, joined Cleveland Clinic Lou Ruvo Center for Brain Health in August to lead the new Neuroimaging Research Program.

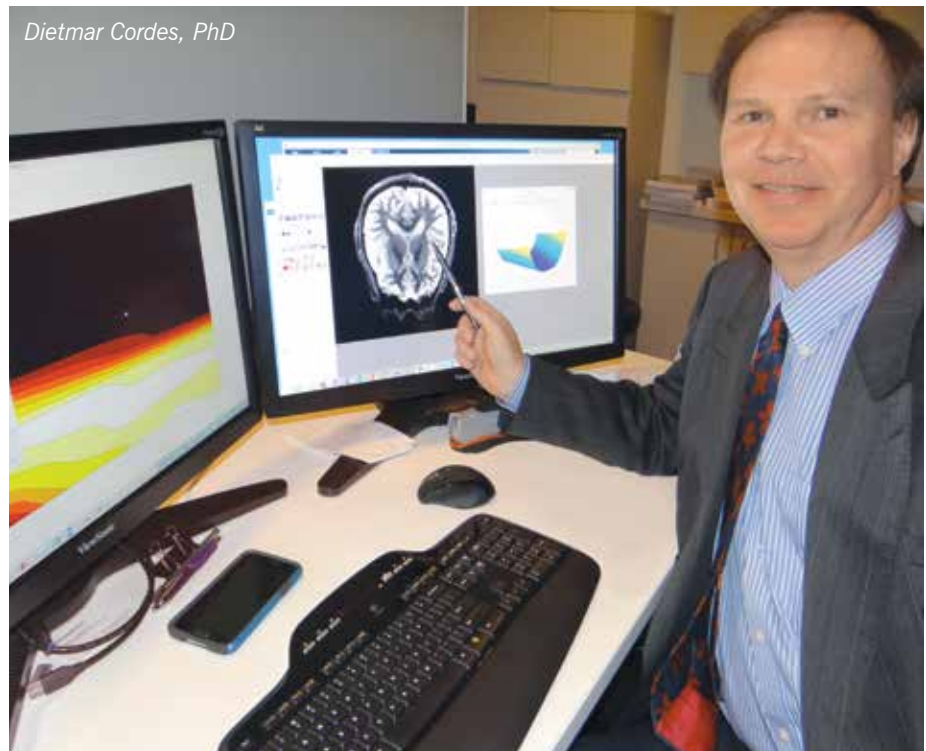
As director, Dr. Cordes is building a strong imaging research program to enhance treatment and monitor the progression of neurological illness. He and his staff are using state-of-the-art neuroimaging and data analysis techniques, some of which he developed himself.

Currently, the main focus of the Neuroimaging Research Program is Parkinson's and Alzheimer's diseases. Dr. Cordes has received funding from the National Institutes of Health for algorithm development in functional MRI (fMRI) and investigation of memory processes in the hippocampus, a small structure in the brain that serves as a dictionary of remembered events. It is affected early in Alzheimer's disease and may be affected in Parkinson's disease.

Dr. Cordes' staff also is analyzing data for Cleveland Clinic's Professional Fighters Brain Health Study, which has been assessing and tracking active and retired professional fighters since 2011 to develop methods to detect early signs of brain injury and learn who may develop chronic neurologic illness. The study is using MRI and state-of-the-art tau imaging (*see article, page 15*) to determine biomarkers for brain injury due to repetitive head trauma.

Dr. Cordes says he was drawn to the Lou Ruvo Center for Brain Health because his research interests and grants align with the center's mission and goals.

"Having access to the best imaging equipment, combined with the massive amounts of data available from the Lou



Ruvo Center for Brain Health, will enable us to get more and better grant funding and make us one of the best research centers," he says.

Dr. Cordes brings 15 years of experience in magnetic resonance imaging (MRI), fMRI and magnetic resonance physics. At the University of Wisconsin Madison, he developed a method to increase the fMRI signal in regions of the body where it is weak, which resulted in a U.S. patent.

Most recently, Dr. Cordes was Associate Professor in the Department of Medical Physics at Ryerson University in Toronto, where he taught

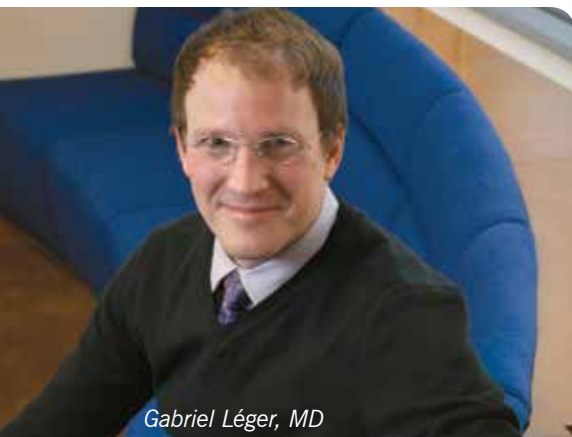
undergraduate physics, medical physics and quantum chemistry. He also is Adjunct Professor at the University of Colorado-Boulder in the departments of Psychology and Neuroscience.

"Dr. Cordes elevates our imaging capability from diagnosis to discovery," says Jeffrey Cummings, MD, ScD, Director of the Lou Ruvo Center for Brain Health. "We are delighted to have recruited this talented scientist to join our team."

DISINHIBITION: WHAT IS IT AND CAN WE TREAT IT?

By Gabriel Léger, MD

Maybe while driving, your loved one has shown more anger and less restraint in dealing with other drivers. Possibly, you've had to change how your bank account is accessed because your significant other has fallen prey to scammers who have gotten away with thousands of dollars of your retirement savings. Perhaps you are frequently embarrassed when your father cannot simply order and eat his dinner, but must make some form of sexual innuendo to the server.



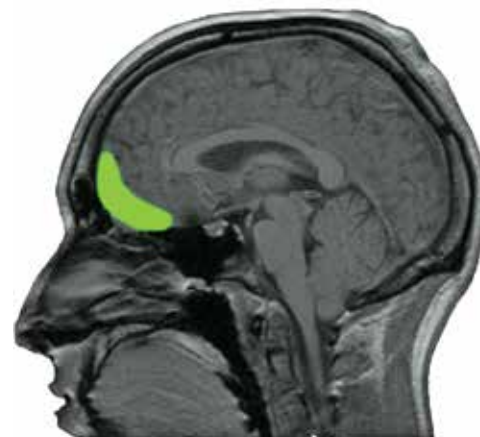
Gabriel Léger, MD

These examples indicate disinhibition, a behavioral manifestation of dementia, present even in the very early stages of disease. Disinhibition is defined as a lack of restraint; for example, a disregard for social conventions, impulsivity or poor risk assessment. It can lead to minor consequences such as embarrassment or social discomfort, but also to significant complications, such as incarceration or injury. Disinhibition is one of a number of behavioral and psychological symptoms of dementia, which when left untreated can accelerate functional decline and need for residential care. Although non-pharmacological approaches to management are encouraged, options are limited in scope and efficacy. Unfortunately, no FDA-approved medications currently exist to treat such symptoms.

Disinhibition is very common in fronto-temporal degeneration, but it can occur in any dementia, including dementia caused by Alzheimer's, vascular or Lewy body disease. Typically, an area of the brain called the frontal lobes — in particular, the part that lies just above the eyes, called the orbitofrontal cortex — is damaged or working less well. Disinhibition commonly follows traumatic brain injury.

Nuedexta™ is a new drug compound approved by the FDA to treat difficulties controlling emotional outbursts, such as those occurring in patients with amyotrophic lateral sclerosis (Lou Gehrig's disease) or multiple sclerosis. Recently, Cleveland Clinic Lou Ruvo Center for Brain Health has successfully tested this drug's ability to help reduce agitation in Alzheimer's disease. The drug is safe and well tolerated, and proved to be helpful.

Doctors at the Lou Ruvo Center for Brain Health believe this medication may also help in reducing disinhibition. We are collaborating with the drug developer, Avanir Pharmaceuticals, and the Alzheimer's Foundation of America in a project to test this hypothesis. We are recruiting patients with disinhibition, regardless of their dementia diagnosis, to participate in this study. If your loved one suffers from a dementia and demonstrates any form of disinhibition, please contact us at 855.LOU.RUVO to get involved in this exciting clinical trial. A complete list of trials is online at clevelandclinic.org/brainhealthtrials.



The frontal lobes, designated in color, help choose appropriate responses during changing social situations. When damaged, disinhibition can occur.

Persons with disinhibition may:

- Disregard more subtle social norms to make offensive jokes or sexual remarks
- Encroach on the personal space of others
- Exhibit childish behavior and a general lack of etiquette
- Inappropriately touch or aggressively approach strangers
- Engage in theft or other criminal behaviors
- Take rash or impulsive actions, such as gambling or repeatedly falling for financial scams
- Develop substance abuse later in life

INTRODUCING OCCUPATIONAL THERAPY

Thanks to a grant from the E. L. Wiegand Foundation, Cleveland Clinic Lou Ruvo Center for Brain Health has expanded its neurorehabilitation program by adding occupational therapy. Occupational therapy (OT) provides wide-ranging services to maximize individuals' ability to perform self-care, work and leisure activities to the best of their ability.

Occupational therapy can be beneficial when symptoms arising from cognitive issues, fatigue or physical impairment make it difficult to perform:

- Activities of daily living: self-feeding, dressing, bathing, grooming or toileting
- Home management tasks: meal preparation, cleaning or laundry
- Work-related tasks: typing, dialing or work requiring fine motor skills

How can occupational therapy help?

By making recommendations and providing training on adaptive equipment, occupational therapists can help patients perform everyday activities with greater ease, satisfaction and independence. An occupational therapist can also help people having difficulty with memory, concentration, organization and other cognitive issues.

OT develops an individual's skills through strengthening and stretching exercises for the upper body, activities to improve coordination and other skills specifically tailored to a patient's level of functioning.

Targeted to the needs of patients with degenerative brain disorders, OT at the Lou Ruvo Center for Brain Health



Marcia Lambert enjoys occupational therapy

provides assessment, treatment and recommendations in:

- Fatigue management
- Cognitive rehabilitation
- Upper body/lower body weakness
- Home modification
- Cooking and homemaking
- Adaptive eating utensils
- Workplace adaptations
- Bathroom equipment use
- Dressing and grooming aids
- Safe driving evaluation

What is cognitive rehabilitation?

While cognitive function cannot be restored, a cognitive rehabilitation program can help establish realistic goals and teach ways to compensate for issues related to memory, concentration and organization, thereby helping a person function more efficiently at work or home.

Cognitive rehabilitation at the Lou Ruvo Center for Brain Health may help people having difficulty with:

- **Memory:** misplacing keys/glasses, forgetting names, missing appointments
- **Attention:** having trouble concentrating on reading or work; losing track in conversation; exhibiting inability to multitask
- **Prioritizing/organizing:** failing to plan/carry out activities or to make lists to tackle projects
- **Problem solving/reasoning:** managing money, balancing a checkbook, planning travel

If you are experiencing issues with fatigue, self-care, memory or concentration, ask your doctor how an occupational therapist might help.

To schedule an appointment, please call 702.483.6000

EDUCATION IN NEURODEGENERATION: INVESTING IN THE NEXT GENERATION

Being a good citizen in the medical community involves mentoring the next generation. In Cleveland Clinic Lou Ruvo Center for Brain Health's first five years, its team of providers has spent more than 17,000 hours delivering education to K-12 students through medical residents in Las Vegas.

"We have conducted a number of fieldtrips for K-12 students in hopes of opening their eyes to a career in science and medicine, and inspiring the next generation of providers who will take over after we're all retired," says Dylan Wint, MD, Director, Education in Neurodegeneration. "On the other end of the educational spectrum, we provide advanced training to individuals who have already completed medical school and wish to specialize in brain health."

Beyond offering rotations to neurology residents from Cleveland Clinic's main campus in Ohio, the Lou Ruvo Center for Brain Health has extended its training opportunities to those living in Las Vegas or wishing to relocate permanently to the city. Such collaborations include internal medicine and family medicine residents from the University of Nevada School of Medicine; Touro University medical, physical therapy and physician assistant students; and University of Nevada Las

Vegas nurse practitioner students as well as graduate students in neuropsychology and social work. Valley Hospital hosts the only neurology residency in Nevada, and all of its residents spend two months at the Lou Ruvo Center for Brain Health.

Upon completion of a PhD program or residency, some individuals pursue a fellowship as a capstone to their professional training. In 2013, the Lou Ruvo Center for Brain Health welcomed its first neuropsychology fellow, Natasha Swan, PhD, and in 2014, Aaron Ritter, MD, began a two-year fellowship in behavioral neurology and neuropsychiatry. Here are their reflections on their experience at the center.

Touro University physician assistant students visit the Lou Ruvo Center for Brain Health



Natasha Swan, PhD

Neuropsychology Fellow

Natasha Swan, PhD, was just finishing a fellowship in behavioral medicine in Boston when she met Sarah Banks, PhD, ABPP/CN, who heads the Lou Ruvo Center for Brain Health's neuropsychology program. Dr. Swan had been using some common neuropsychological assessments with her post-concussion patients and was interested in gaining more specialized knowledge about neuropsychology and the aging brain; Dr. Banks' description of the patient mix at the specialized clinic in Las Vegas intrigued her.

Neuropsychology offers unique insight into the interaction between mind and body, Dr. Swan explains, and the assessments offer an analytical approach to brain health that aids neurologists in making accurate diagnoses.

"Something that has really impressed me is the detail of diagnoses made at the Lou Ruvo Center for Brain Health," she says. "It's important to families and patient care that we are able to differentiate between dementias such as Lewy Body, frontotemporal or Alzheimer's, and understand and manage the varying symptoms accordingly."

Dr. Swan says the fellowship experience has offered a unique glimpse into a multidisciplinary clinic and has exceeded her expectations, both with respect to the knowledge the neuropsychologists bring to the clinic and the exposure she has received to leadership opportunities.

"I've been able to give presentations at medical conferences, be involved in fundraising events, interface with community members and watch philanthropy procure more funding for enhanced research and care," says Dr. Swan.



Natasha Swan, PhD, (left) with Sarah Banks, PhD



Aaron Ritter, MD, (left) with Dylan Wint, MD

Aaron Ritter, MD

Fellow, Behavioral Neurology and Neuropsychiatry

"I was actually reading a book by Dr. Jeffrey Cummings when I received a copy of my interview schedule from Cleveland Clinic and saw his name on my agenda. I couldn't believe this legend in the Alzheimer's research world was actually going to interview me," says Aaron Ritter, MD, of the center's director.

As it turns out, daily interaction with some of the brightest minds in the field has typified Dr. Ritter's fellowship at the Lou Ruvo Center for Brain Health, where he has been exposed to clinical trials, imaging and treatment of patients as a part of the center's memory care team. He has also witnessed the business side of healthcare.

"At an academic center, physicians are usually separated from other disciplines such as fundraising, social services and physical therapy," explains Dr. Ritter. "Here, I've been able to see everything come together across a collaborative care team and the philanthropy that supports great care."

Dr. Ritter started his fellowship with two months at Cleveland Clinic's main campus, where he gained perspective on how large and comprehensive the nationally ranked hospital is and how it operates. Then, he settled into the Las Vegas location of the Lou Ruvo Center for Brain Health. Across both of the center's locations, he noted that physicians are encouraged to spend whatever time is needed with patients. "No one is rushing their care," he says. He now enjoys imparting that philosophy to other trainees, as residents shadow him.

Training at the Lou Ruvo Center for Brain Health leads to certification as a behavioral neurologist and prepares a physician for a career of expert care and research.

DEPRESSION IN NEURODEGENERATION

By Natasha Swan, PhD, and Dylan Wint, MD

Depression (or major depressive disorder) is a group of symptoms that result from changes in brain function. 10 to 20 percent of people will suffer a depressive episode at some point in their lives. Depression can be related to psychological stress, like grief or anxiety, or physical conditions including diabetes, heart disease and nutritional deficiencies. Depression can also strike for no apparent reason.

At Cleveland Clinic Lou Ruvo Center for Brain Health, we recognize that depression is particularly common among individuals who have diseases that affect the brain, such as Alzheimer's disease and Parkinson's disease. Biological changes in the structure, function, and chemistry of the brain can increase the risk of depression. Depression itself can also be an early sign of a brain disease and may increase risk for future cognitive decline.

What does depression look like among those living with a brain disorder?

People with depression have a mostly sad mood or decreased enjoyment of life for at least two weeks. Other symptoms include altered sleep, fatigue, or fluctuations in appetite. Depressed people may also experience changes in the way they think, such as impaired concentration and decision-making or excessive thoughts of guilt, worthlessness, or death.

Depression can go unnoticed since it often looks different in people with degenerative brain disorders because of their problems with memory, awareness, and communication. For example, they might not complain about being sad, but may say things that suggest a negative attitude. Or, irritability and social withdrawal may take the place of sadness.

Depression in caregivers of an individual with a neurodegenerative disorder also frequently goes undetected. Caregivers may try to maintain a positive attitude even when overwhelmed; or become so busy with caregiving that they miss signs of their own illness. However, when negative feelings and thoughts are pervasive and interfere with getting through the day, depression might be the cause.

What can we do about it?

Depression is sometimes hard to treat, but most people respond to approved treatments. Antidepressant medication is the most common treatment and is safe and effective when used appropriately. Call 702.483.6000 and ask your Cleveland Clinic provider if an appointment with a psychiatrist might help.

Mild and moderate depression also responds well to psychotherapy. Non-medical methods of improving mood include exercise, proper sleep habits, stress reduction techniques, and regular participation in leisure activities. The Lou Ruvo Center for Brain Health offers counseling, educational resources, and support groups for patients and their caregivers. For more information, visit keepmemoryalive.org/socialservices.



UROLOGY AND NEUROLOGY: COLLABORATING ACROSS TOWN FOR BETTER PATIENT CARE

In July 2014, Cleveland Clinic Lou Ruvo Center for Brain Health patient Ralph Boshier, 73, was waking up four times a night to go to the bathroom. For a patient like Mr. Boshier with memory loss, inadequate sleep further impairs thinking. When Lou Ruvo Center for Brain Health Neurologist Gabriel Léger, MD, who routinely asks about patients' sleep, learned of Mr. Boshier's problem, he immediately requested an appointment for his patient from Cleveland Clinic Urology, Las Vegas.



L to R – Jay Krishnan, DO, Jennifer Urena, PA-C, Scott Slavis, MD, and Laurie Larsen, MD

"We share an electronic medical records system where we can send a note about the patient's condition to the people who book appointments, and they will choose the appropriate urologist and contact the patient to schedule an appointment. The patient doesn't have to worry about contacting the urologist or making the appointment, which is a great help for patients with neurodegenerative diseases," says Dr. Léger.

Many patients with neurodegenerative diseases also have urological issues, such as incontinence, because both are prevalent in an older population and also because the brain controls bodily functions. "Urologists need a good understanding of neurological disorders so they can determine whether the cause of the problem is urological or neurological and properly diagnose patients," says Dr. Léger.

Mr. Boshier was seen by Cleveland Clinic Urology Physician Assistant Jennifer Urena, who discovered that he was retaining a half-liter of fluid in his bladder, a very large amount. She diagnosed his condition as benign prostatic hyperplasia (BPH), or enlarged prostate with bladder outlet obstruction. Mr. Boshier's International Prostate Symptom Score, a BPH assessment tool, was very high at 19. Ms. Urena prescribed a self-administered catheter and medication.

In a few weeks, Mr. Boshier didn't need the catheter. His score went down to 2 and he no longer woke up at night.

"It was very helpful to have access to Mr. Boshier's records from the Lou Ruvo Center for Brain Health, and to know his diagnosis and what medications he was on. Some urological medications can cause adverse results in older adults," says Ms. Urena.

"Jennifer was really nice, and I was confident that she was doing everything right," says Mr. Boshier, who is relieved to be sleeping through the night again. "Both Cleveland Clinic facilities are really excellent. There are no long waits on the day of the appointment and everything goes smoothly."

If you would like to make an appointment at the Lou Ruvo Center for Brain Health, please contact us at 702.483.6000. For an appointment at Cleveland Clinic Urology, Las Vegas, call 702.796.8669. A complete list of providers at both locations is available online at clevelandclinic.org/Nevada.



Gabriel Léger, MD, with Ralph Boshier

SO MUCH VALUE: LIBRARY HELPS CAREGIVERS FACE THE FUTURE



When someone is diagnosed with one of the illnesses treated at Cleveland Clinic Lou Ruvo Center for Brain Health, the center's library is an excellent place to gain a deeper understanding of what to expect.

"I saw the library advertised on the fliers, and members of my support group recommended it to me," caregiver Barbara Sarhan remembers. "I've always been a big reader, but when my husband was diagnosed with frontotemporal dementia, I discovered that watching the DVDs really helped me. They allowed me to see what people had gone through, instead of just reading about it."

The materials in the Lou Ruvo Center for Brain Health's library help families anticipate what may happen as a disease progresses. "It's been a huge asset for me to understand what my mom is going to face," says caregiver Jan Cribb.

"The librarians let me wander through the shelves or direct me to certain materials after I've explained my challenges, such as bathing my mother or getting legal matters in order," Ms. Cribb says. "I tell people to utilize the library. It contains answers to the questions that concern us caregivers and reduces fear of the unknown."

In caregiver Linda Krause's view, "The librarians here are the most caring and informed I have ever met. They've allowed me to extend my due date and renewed my materials over the phone."

Lou Ruvo Center for Brain Health Social Worker Brittney Gamble, MSW, LSW, points out the convenience: "This is a great place to come and find information

all in one spot and get the personal attention you wouldn't receive in a traditional library. I think it is very helpful for patients and caregivers to have so many resources available that they can access at their own pace."

The Lynne Ruffin-Smith Library — containing books, DVDs and pamphlets on the illnesses treated at our center — is for patients, their care partners and the community to learn and enjoy. Walk-in hours are 10 a.m. to 2 p.m. Mondays through Thursdays. After-hours appointments are available by calling 702.483.6033 or emailing louruvolibrary@ccf.org. To view our catalog online, please visit the library section of keepmemoryalive.org/socialservices.

BRINGING CREATIVITY TO THE CONVERSATION

Modeled after the New York Museum of Modern Art's "Meet Me at MoMA" program, Cleveland Clinic Lou Ruvo Center for Brain Health's "Art in the Afternoon" fosters interesting conversation, creative thinking and memories among individuals experiencing cognitive impairment and their caregivers. Gone are concerns over "forgetting the answer" because reactions to art are subjective and based on each individual's response to art at a given moment in time.

Docent Suzanne Kaplan leads a discussion

Since the August launch of "Art in the Afternoon," Susan Solorzano, Program Manager of Social Services, has received overwhelmingly positive feedback from participants:

"I wanted to tell you how much we enjoyed the program today. Good to get the brain in gear every once in a while!" — Resa Arovas, caregiver to husband, Jack

"I think it's great you're doing this ... absolutely wonderful. We talked a lot about it on our way home and during lunch. It really made a difference for Mary and it made a difference for me to be able to do that with her." — Lorelle Nelson, friend and care partner to Mary Coleman

"The program is a good enrichment for all of us, and something to think about beyond what is happening to us. It takes us to a higher zone of thinking." — Don Holkestad, patient

A goal of the Lou Ruvo Center for Brain Health's social services team is providing educational resources and guidance to help families bring enjoyment to the daily activities of a loved one with a degenerative brain disease. Reducing the isolation typically experienced by care partners is another team goal that "Art in the Afternoon" meets.

Facilitated by volunteer docents who have been trained by the Institute of Art and Medicine at Cleveland Clinic's main campus in Ohio, "Art in the Afternoon" takes place in Las Vegas on the fourth Monday of the month from 11 a.m. to 12:15 p.m. The interactive program



Docent Margie Walton with Art in the Afternoon attendees

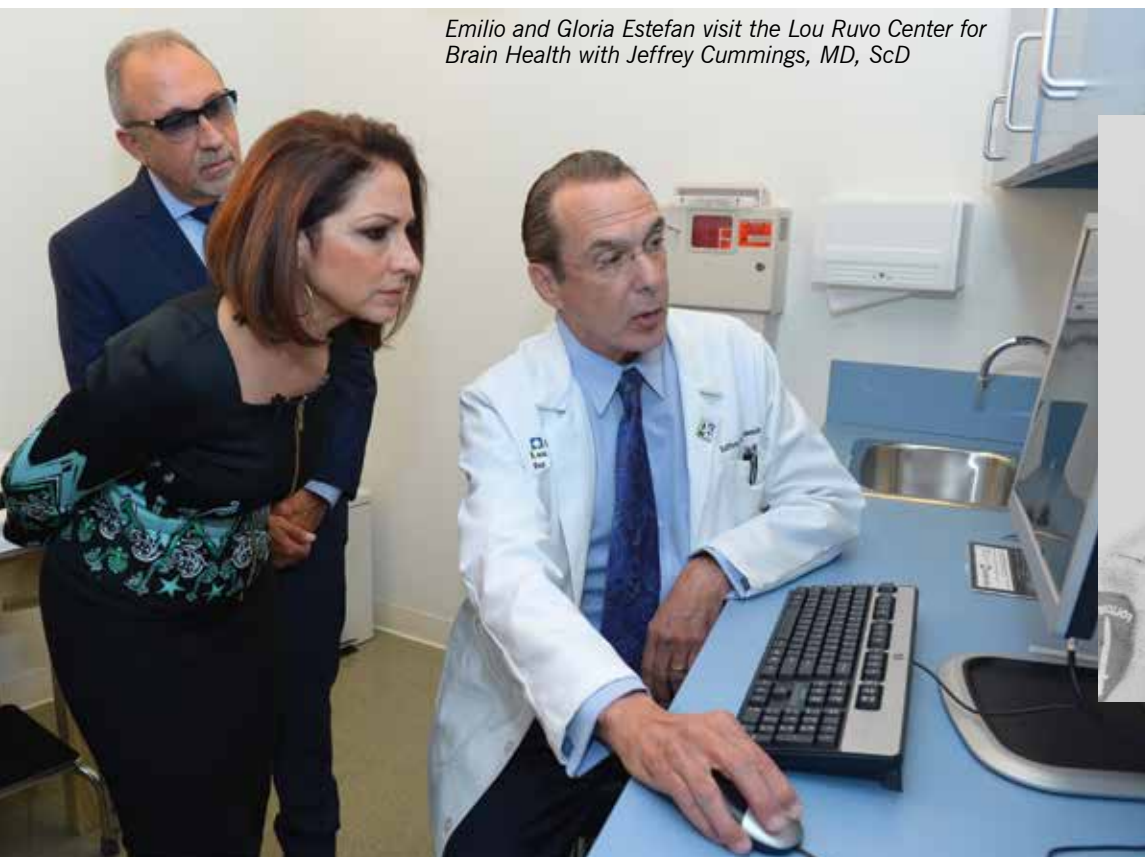
is free and open to anyone living with memory loss, but an RSVP is necessary. Please contact Susan Solorzano at 702.483.6055 or solorzs@ccf.org to reserve a place for you and your loved one or to obtain more information.

Visit our complete calendar of no-cost educational and social services programming at keepmemoryalive.org/socialservices.

ESTEFAN GIFT PROVIDES SUPPORTIVE SERVICES FOR MS PATIENTS AND FAMILIES

Many people with multiple sclerosis (MS) have significant cognitive and physical disabilities that make it difficult for them to manage everyday activities, such as going to medical appointments. They badly need outside assistance, but most do not get it.

Emilio and Gloria Estefan visit the Lou Ruvo Center for Brain Health with Jeffrey Cummings, MD, ScD



Major Jose M. Fajardo

To enable patients to get the services they need to live a fuller life, the Cleveland Clinic Mellen Program for Multiple Sclerosis at the Lou Ruvo Center for Brain Health, Las Vegas, has launched the Major José M. Fajardo Patient Services Program. The Fajardo Program is funded by a generous gift from Grammy Award-winning singer Gloria Estefan and her husband, songwriter and producer Emilio Estefan, in honor of Gloria Estefan's father, who suffered from MS that he developed during his service in Vietnam.

As a caregiver for her father at the end of his life, Gloria Estefan has firsthand experience of the compelling need for a comprehensive approach to MS treatment to help patients and their families. "What happens with a brain disease is very difficult for the patient and for the family taking care of them," notes Mrs. Estefan. "During my father's illness, I put on a brave face, but it was very, very tough on me and my family. Had I had the type of help and support that this patient service program provides, it would have been a lot easier."

Le Hua, Co-Director of the Mellen Program for MS at the Lou Ruvo Center for Brain Health, agreed: "This program is very much needed, and it's great that the Estefans are helping us provide patient-centered, comprehensive care."

The Fajardo Patient Services Program provides direct access to a dedicated patient services coordinator who helps patients with a variety of non-medical issues, such as arranging transportation to medical appointments, securing in-home care, completing applications for financial assistance and getting referrals to clinical trials.

The Estefans were honored at the 2014 Power of Love™ gala



L to R – Quincy Jones, Gloria Estefan, Larry Ruvo and Emilio Estefan



Robert McVey

“The Fajardo Patient Services Program completes the comprehensive approach to MS that is a hallmark of the Lou Ruvo Center for Brain Health, addressing patients’ medical, emotional and quality-of-life needs. It can serve as a model for other health systems to move away from the traditional ‘medical’ model of care,” says Robert McVey, LSW, MSW, Fajardo Program Patient Services Coordinator.

“Patients are excited about having someone help them get through red tape and find resources to address their specific needs,” adds Mr. McVey, who came to the Lou Ruvo Center for Brain

Health in 2014, with more than 20 years of experience connecting patients to needed resources.

“There’s so much more to MS than the physical symptoms. The disease has a major impact on lifestyle and emotional well-being. That’s why our center exists — to provide the extra level of care that can make a critical difference for patients,” says Dr. Hua. “Robert is a very calming presence. He truly cares, is inviting and open, and can draw people out to find out what they really need.”

To schedule an appointment with Robert McVey, please call us at 702.483.6000.

THE MOST PRECIOUS NATURAL RESOURCE: THE OLDER BRAIN

“What are old people for?” asked geriatrician and author Bill Thomas, MD, as he opened his lecture November 5 at Cleveland Clinic Lou Ruvo Center for Brain Health.

The audience, which skewed toward elders, was delighted to hear his rhetorical answer:

“It’s not their arthritic knees or receding hairlines. Elders are needed for their brains. It takes decades to create a brain like yours.”

Despite the value in an older, experienced brain, Dr. Thomas observed, society has an ingrained prejudice against aging: “There’s an entire medical specialty, geriatrics, which measures how much older people have lost — what’s weak, broken, afflicted — so that we can help people cope with their losses.”

He posits that comparing elder adults to younger adults makes no more sense than it would to make a side-by-side comparison of a 45-year-old adult to a child using the physical and emotional metrics of a pediatrician’s well-child visit.

Dr. Thomas said in American society, where elderhood isn’t delineated from adulthood, once adulthood starts in one’s late teens, it lasts forever. From that point on, “If you show evidence of slipping or sliding or losing a step, it’s considered very bad.”

Rather than celebrating the wisdom of an elderly brain, “People internalize this declinist vision of themselves and what their abilities are,” he adds. “They feel if everybody believes it, maybe everybody is right.”

According to Dr. Thomas, the older brain is the most precious natural resource we have. And it’s one the Lou Ruvo Center for Brain Health investigates and treats each and every day.



Bill Thomas, MD

Thanks to support from Harry Winston Brilliant Futures, Cleveland Clinic Lou Ruvo Center for Brain Health was able to collaborate with the University of Nevada School of Medicine and the Sanford Center for Aging to present geriatrician Dr. Bill Thomas, who spoke on a topic that we never lose sight of: the value of the brain.

If you’re interested in joining the mailing list for information on future free educational programming, please contact LouRuvoSocialServ@ccf.org.

HARRY WINSTON
Brilliant Futures™

ALLIED PARTNERS IN PHILANTHROPY: ADVANCING SCIENCE THROUGH CHARITABLE GIVING

As a leading nonprofit organization, Cleveland Clinic shares with patients, donors and the community its altruistic mission to deliver world-class care as well as its business imperative of strong stewardship and sound financial acumen. We're honored when patients and donors alike respond by considering us a community asset, and grateful when allied professionals — who are widely known and trusted as client advisers — join our referral community.

In 2012, Cleveland Clinic established Allied Partners in Philanthropy (APP), a society to thank and recognize allied professionals who help facilitate charitable gifts to Cleveland Clinic. This exclusive society includes attorneys, accountants, bankers, brokers, financial planners and other professionals who have helped clients fulfill their philanthropic vision by making gifts to Cleveland Clinic.

Benefits of joining APP include:

- Invitations to members-only breakfasts or luncheons, including tours of Cleveland Clinic (Ohio, Las Vegas and Florida)
- Member recognition in Cleveland Clinic newsletters

Together, Cleveland Clinic's Gift Planning team and allied professionals are helping the Lou Ruvo Center for Brain Health supporters ensure the future of innovative medical research and patient care.

If you are a supporter of Cleveland Clinic who works with a financial or legal adviser, we encourage you to share your interest in our organization with your adviser.

If you are an allied professional and are working with a client whose philanthropic interests align with our mission, we thank you on behalf of our patients and their families for facilitating your clients' support of the important work of the Lou Ruvo Center for Brain Health.

If you would like to know more about making a gift to the Lou Ruvo Center for Brain Health or guiding a client through the process, please contact Director of Philanthropy Gina Hines at 702.331.7052 or hinesg@ccf.org. She will be pleased to welcome you as a valued member of Allied Partners in Philanthropy.



“As a financial adviser, my foremost goal is to be a great steward of my clients’ resources.

Together, we talk about their wishes for financially providing for the people and organizations that mean the most to them. Frequently, I find that Cleveland Clinic Lou Ruvo Center for Brain Health is a nonprofit that resonates with families.

We make a point of visiting the center and speaking with leadership and research teams, and my clients become inspired. They embrace the hope that better treatment and even a cure will be discovered here in Las Vegas. They give in honor of loved ones and members of our community who have struggled with Alzheimer’s and other degenerative brain diseases.”

— Joe Hollis, First Vice President,
Wealth Management

VOLUNTEER PROFILE: PAUL GARY

Paul Gary was struck by the harsh reality of his parents' brain diseases one night when his father, Bernard, a dignified man and a World War II Bronze Star recipient, walked into their living room in only his underwear: "Dad was explaining he'd been talking to the cat that was on the ceiling, while Mom simply kept watching TV."

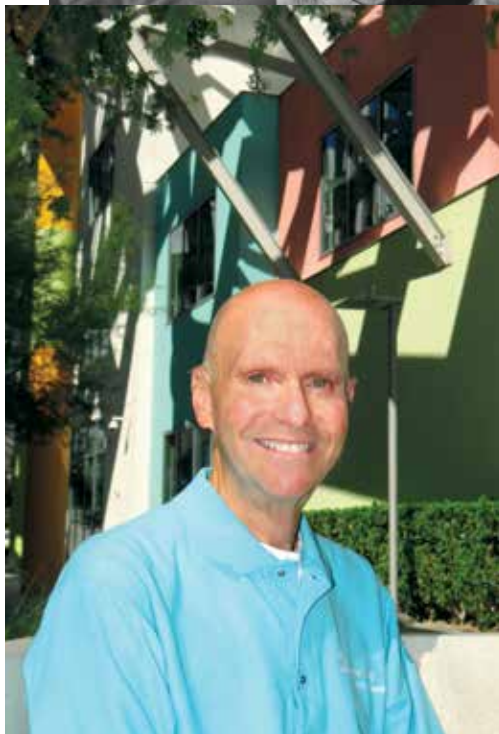
Since 2012, Mr. Gary has been a front desk volunteer at Cleveland Clinic Lou Ruvo Center for Brain Health, assisting family caregivers and patients who live with brain diseases.

"I wish there had been a world-class facility like the Lou Ruvo Center for Brain Health when I was caring for my dad's Parkinson's and my mom's dementia at the same time," he says.

Mr. Gary curtailed a successful management career to become a full-time caregiver and court-appointed plenary legal guardian for his parents. He prioritized their quality of life, initiating nightly walks with his dad and weekly beauty parlor trips for his mom, Jean. These simple acts resonated with his parents and remain fond memories for Mr. Gary, who notes that his parents were also his best friends.

"The decision to will my life insurance policy to the Lou Ruvo Center for Brain Health to support research seems like a fitting memorial to my parents," Mr. Gary explains.

Jean Gary was a nationally renowned artist and President of Pen Women of America, Long Island branch, when declining eyesight led to her inability to paint anymore, and depression and dementia soon set in. In her honor, her son has willed her oil paintings and bronzed sculpture to the Museum of Modern Art in New York.



1976 National Gallery of Art, Washington, DC, National Bi-Centennial Competition Award Winner Jean Gary with Bernard Gary, mother and father of our volunteer, Paul

Paul Gary

VOLUNTEER PROFILE:

AL KATZ, DDS

In Al Katz's view, "The greatest thing about Cleveland Clinic Lou Ruvo Center for Brain Health is that it deals with the most frustrating type of medicine: diseases with no cures. "But as with polio, someday there will be a breakthrough, and my hope is that it will happen right here in Las Vegas."

A retired dentist and a center volunteer since 2012, Dr. Katz hopes his interaction with patients makes them more comfortable during visits for treatment of these incurable conditions. Each interaction makes him grateful, at age 82, to have escaped neurodegenerative disease: "Because I'm grateful, I have very positive feelings for this place, and I like to help however I can."

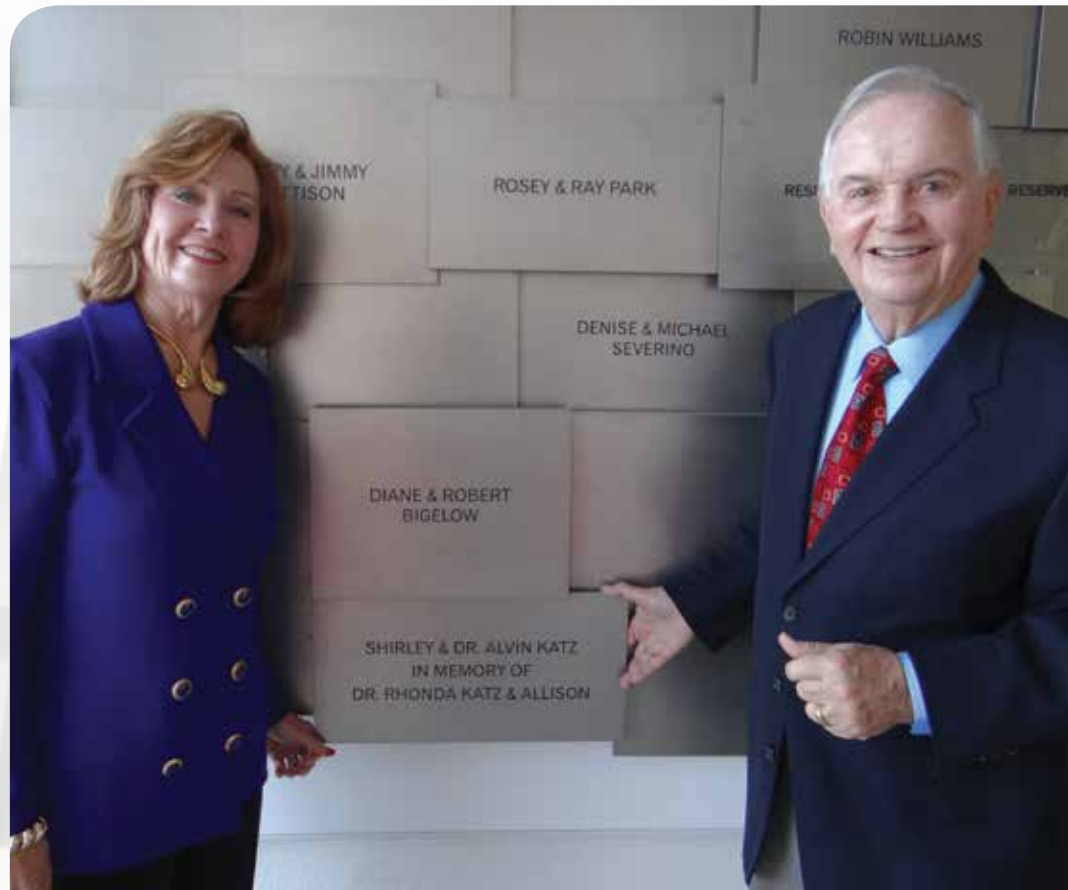
In addition to volunteering in the center's lobby and escorting patients to their appointments, Dr. Katz has served as a normal control in a research study on Parkinson's disease, which claimed his mother. Recently, he made a financial donation to the Lou Ruvo Center for Brain Health in memory of his daughter and granddaughter, whom he lost in 2001.

"My daughter, Rhonda, went to the same dental school I did, was the valedictorian and became the periodontist in my office. We were very close," Dr. Katz recalls.

Through his volunteer work at Nathan Adelson Hospice, Dr. Katz and his wife, Shirley, have learned to better understand grief.

They explain that bereavement at the loss of an adult child is never-ending. Both are incredibly proud of their remaining grandchildren, one of whom recently graduated Phi Beta Kappa from Brown University and is now at Harvard Law School, while another is an aspiring physician.

Dr. Katz believes the world can't have too many physicians. He notes that every area of medicine, from artificial joints to heart care, seems to have improved in recent decades, yet the brain remains a mystery: "It's a little bit of frustration and impatience on my part. It's not for me; it's for the next generation that I seek answers."



Shirley and Al Katz, DDS, unveil the plaque honoring their daughter and granddaughter

EMPLOYEE PROFILE:

GINA HINES

Initially, Gina Hines got to know Cleveland Clinic Lou Ruvo Center for Brain Health through its care for two family members. First, it was her father, Donald Hines, who following suspicion of Alzheimer's was diagnosed correctly with frontotemporal dementia shortly after the center's 2009 opening. Subsequently, her brother, Steve Hines, passed away in 2010, only four months after experiencing his first symptom and receiving a diagnosis of Creutzfeldt-Jakob disease at the Lou Ruvo Center for Brain Health.

"After seeing the great care my family was afforded despite the incurable nature of these diseases, I knew I wanted to do something with my fundraising career that would benefit people and, hopefully, contribute to curing brain disease," explains Ms. Hines, who in 2011 became Director of Philanthropy at the Lou Ruvo Center for Brain Health.

Ms. Hines enjoys connecting with prospective donors who share her passion. One of her most personally satisfying experiences was developing a relationship with the Conrad N. Hilton Foundation that resulted in a \$1.35 million grant to expand the multiple sclerosis program at the Lou Ruvo Center for Brain Health.

"I enjoy identifying donors who share our passion and want to help build and support programs so our doctors can achieve success," says Ms. Hines. "It's fulfilling to see my colleagues be able to pursue their scientific passion, thanks to support from philanthropy."

She knows the doctors appreciate the philanthropic support, but says the point was really driven home when Ryan Walsh,

MD, PhD, Director, Parkinson's Disease and Movement Disorders Program, acknowledged, "You don't get a lesson on philanthropy in medical school."

Ms. Hines, a native Nevadan, was born at Nellis Air Force Base on the outskirts of town, and the family moved into Las Vegas when she was 8. "Back then and even today, Las Vegas is the smallest big city there is," she notes. "We value relationships, helping out a friend or calling someone if you need advice. People who grew up here have a unique quality about them and have proven to be very generous."

Today, relationships with schoolmates and friends, forged over decades, are a poignant reminder of how the Lou Ruvo Center for Brain Health is making a difference in her hometown. "One of the saddest things was seeing a classmate come into the center for treatment a few years ago," says Ms. Hines. "Of course, I wish she hadn't been so sick that she needed our help, yet I'm very proud of the role the Lou Ruvo Center for Brain Health has played in expanding quality healthcare in Las Vegas. It's very gratifying."



JEWELER STEVEN LAGOS RESPONDS TO “THE POWER OF LARRY”

For more than 18 years, jeweler Steven Lagos has provided financial and in-kind support to Keep Memory Alive. His limited-edition designs, customized for Keep Memory Alive, have become coveted collectors' items among top sponsors at our annual Power of Love™ gala. His 2014 cufflink rendition of our Frank Gehry-designed headquarters is perhaps the most prized piece ever.



In front of members of the LAGOS design team in May 2014, Steven Lagos unveils a plaque on Keep Memory Alive's Honor Wall recognizing his long-term commitment to Keep Memory Alive



Jeffrey Cummings, MD, ScD, shows his prized cufflinks to creator Steven Lagos



The first custom item that Mr. Lagos designed for Keep Memory Alive was a spontaneous gift he attributes to the “power of Larry.” Mr. Lagos remembers falling under Larry Ruvo’s spell while attending the Power of Love gala in the late 1990s. Next thing he knew, he was up onstage beside the host, auctioning off a personal, in-home consultation for a custom piece of Lagos jewelry. As two guests competed fiercely for the winning bid, Mr. Lagos decided to double his gift and honor both bids.

“The winning bidder on the second piece loved it so much that she called upon receipt, ecstatically telling me Steven

over-delivered and, in doing so, inspired her to make an additional contribution to Keep Memory Alive,” remembers Larry Ruvo, Chairman and Founder, Keep Memory Alive. “All because of my friend, Steven Lagos.”

As Mr. Lagos told *Forbes* magazine in 2014, “It’s about raising awareness and getting involved. They are doing wonderful work out there at Cleveland Clinic. They’re going to find a cure and remedies. They already are.”

Better treatment — if not a cure — is important to Mr. Lagos, whose own family has not escaped the ravages of

Alzheimer’s disease. He recognizes the toll the disease takes not only on the patient, but on the entire family.

The LAGOS Manifesto, the values under which the company operates, declares: “We make strong jewelry of understated lasting power, that transcends generations and the phases we go through in life.” For Keep Memory Alive, an organization committed to preserving memory for a given individual and for generations to come, LAGOS is indeed a fitting philanthropic partner.

VISITOR PHOTO GALLERY



Photo credit: Cashman Photo Enterprises

Morgan and Karen Cashman unveil their plaque on the honor wall

Unbeknownst to Morgan Cashman, his wife Karen of Cashman Photo Enterprises had been donating photography services to Keep Memory Alive for more than four years. Cashman Photo Enterprises has captured memories of many celebrity visitors, key milestones and events, including the Lou Ruvo Center for Brain Health's fifth anniversary celebration in September 2014 (see article on page 3). We were delighted to join Mrs. Cashman in surprising her husband with the unveiling of a plaque in their honor.



Ben Cohen and Tatiana



Pinnacle Cares

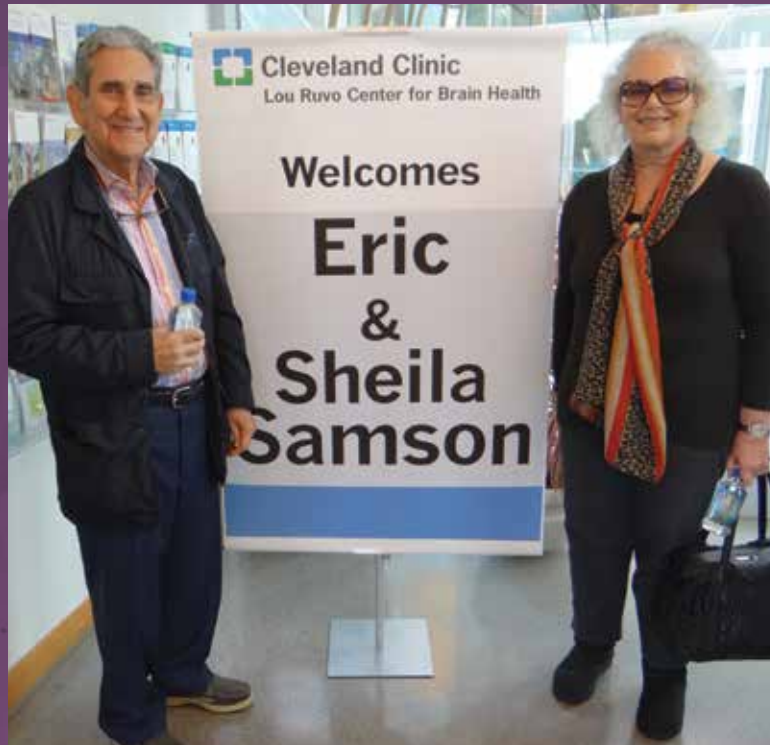
Members of the Pinnacle Cares team from Pinnacle Entertainment present a check to Director Jeffrey Cummings, MD, ScD and Administrative Director Justin Schmiedel. Through employee contributions, Pinnacle Cares raised more than \$27,000 for Keep Memory Alive in 2013, and the funds have been used for research to support brain health.



Michael Keating



Larry Ruvo welcomes Nicholas and Shelley Schorsch



Eric and Sheila Samson



Larry Ruvo with Spain's Chef Ferran Adrià and guest



Maureen and Joe McKenna are recognized on the Keep Memory Alive Honor Wall

Maureen and Joe McKenna honeymooned in Las Vegas 50 years ago, and in 2015 celebrate their golden anniversary at the Keep Memory Alive Event Center. The couple says Cleveland Clinic Lou Ruvo Center for Brain Health inspires them because of the remarkable passion and commitment of its employees as well as founders Camille and Larry Ruvo. "What the center does isn't just about the future; it's also about taking care of people today who need help now."

beautiful inside and out

a frank gehry design



702.263.9797

eventcenter@keepmemoryalive.org

kmaeventcenterlasvegas.com

888 w. bonnevillle ave. las vegas, nv 89106



KEEP MEMORY ALIVE
EVENT CENTER

make your next event a beautiful experience

Designed by legendary architect Frank Gehry, the Keep Memory Alive Event Center is one of the premier event venues in Las Vegas. This extraordinary center provides the flexibility your event needs: indoors or outdoors, it is sure to be beautiful and unforgettable.

By hosting your next memorable celebration at the Keep Memory Alive Event Center, you help us to preserve memory of others. Event proceeds benefit Keep Memory Alive supporting the Cleveland Clinic Lou Ruvo Center for Brain Health.

corporate events • meetings • galas
weddings • birthdays • receptions
retirements • bar/bat mitzvahs • launches
trade shows • presentations • reunions



TRANSFORMING MEALS INTO MEMORIES TO KEEP MEMORY ALIVE

Douglas Dale is “the chef personality in Northern Nevada,” says Larry Ruvo, Chairman and Founder, Keep Memory Alive. “He offered to honor his mother by cooking for us at Keep Memory Alive’s 2014 Summer Shindig at Shakespeare Ranch. It was a delight to introduce him to Chef Emeril Lagasse and our guests, who couldn’t stop talking about this hidden gem of Lake Tahoe.”

Since opening Wolfdale’s in Tahoe City, California, in 1978, Chef and Owner Douglas Dale has most enjoyed the art of transformation through a fusion of East-West cuisine that he calls “cuisine unique.” He explains, “We transform food into cuisine, deficiency into balance and meals into memories.”

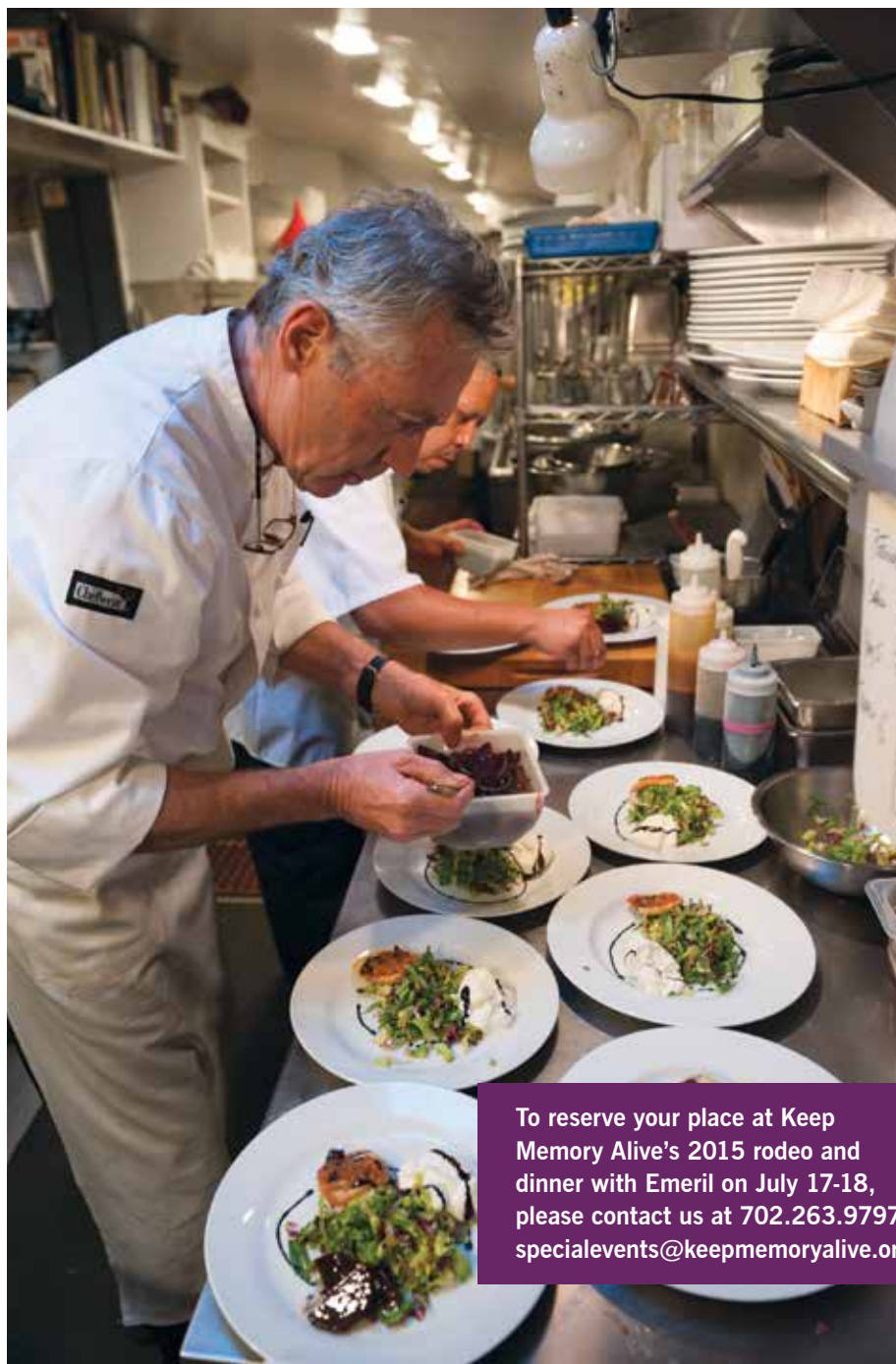
During Keep Memory Alive’s July 2014 rodeo weekend in Tahoe, Chef Dale was delighted by recognition from his peers: “Emeril called me an anomaly, a guy who has stayed with one restaurant and just made it good for years and years. I was really touched that he recognized the consistent quality, which is Wolfdale’s mantra.”

Supporting Keep Memory Alive, an organization committed to funding research into new treatments for preserving memory, was a natural fit for Chef Dale, who says, “My wife and I are extremely motivated to do something about brain disease.”

Both of her parents had cognitive issues, while Chef Dale’s own mother, whom he describes as “mentally crisp, an avid reader and debater until 92,” succumbed quickly to dementia in the last six weeks of her life.

“Larry got me engaged and motivated. I’ve cooked at a couple of Keep Memory Alive’s galas and a number of their other fundraising events,” he says. “I hope to continue in the future. I’m honored to lend my talents as a chef.”

Of Alzheimer’s disease, Chef Dale says, “I think we’ve just begun the fight, but Cleveland Clinic Lou Ruvo Center for Brain Health is leading the charge to slow down or stop the onset of the cognitive diseases that have plagued us.”



Chef Douglas Dale of Wolfdale’s (www.wolfdales.com)

To reserve your place at Keep Memory Alive’s 2015 rodeo and dinner with Emeril on July 17-18, please contact us at 702.263.9797 or specialevents@keepmemoryalive.org.

SUPPORTING THE LOU RUVO CENTER FOR BRAIN HEALTH THROUGH EVENTS

VÉRONIC LEND YOUR VOICE CAMPAIGN

During her summer 2014 run at Bally's Hotel and Casino, singer Véronic DiCaire designated Keep Memory Alive the beneficiary of a portion of ticket sales from eight shows as part of her Véronic Lend Your Voice campaign. In addition, she gave tickets to some family caregivers at Cleveland Clinic Lou Ruvo Center for Brain Health, who enjoyed a well-deserved night out. Philanthropy team member Elaine Taylor says, "Seeing the genuine joy and delight in our caregivers and patients added to the magic of that evening." She and Psychologist Donna Munic-Miller, PhD, report being touched and proud as Véronic spoke passionately from the stage about the work of the Lou Ruvo Center for Brain Health and the difference it is making in the lives of families living with degenerative brain disease.



Host Jayson Woodbridge, center



POKER NIGHT AT HUNDRED ACRE

Hundred Acre winemakers Jayson Woodbridge and Helen Mawson opened their hearts and home to host one of Keep Memory Alive's favorite annual events. Poker Night in September was an opportunity to share our mission with a new group of supporters. For the 50 lucky attendees from around the country, it was a once-in-a-lifetime opportunity to converge upon the Solage Inn in Calistoga, Cal., for an evening of rest and relaxation. The following day was the main event — the competition for most well fed, imbibed and the ultimate prize: poker champion.

This year's champion took home a nine-liter bottle of Hundred Acre wine, which most recently sold at auction for \$126,000. All 50 attendees took home memories of delectable and seemingly never-ending platters of world-class food prepared by Hundred Acre Winery's private chef, as well as poker hands well played and limited-edition wine with cult status quaffed to the heart's content.

VEGAS GIVES

On November 12, The Grand Canal Shoppes at The Venetian-Palazzo and *Vegas Magazine* celebrated the sixth annual Vegas Gives, a lively event honoring eight charitable women making a difference in our community. Elizabeth “Liz” Kaplan was a champion fundraiser, with 100 percent of ticket sales in honor of this great ambassador going to Keep Memory Alive in support of Cleveland Clinic Lou Ruvo Center for Brain Health.

Liz and Tom Kaplan



Vegas Gives class of 2014

Photo credit: Ray Alamo Photography

SAVE THE DATE TO SUPPORT KEEP MEMORY ALIVE

April 29 Vegas Dozen

Hosted by Saks Fifth Avenue, this event celebrates the commitment of 12 Las Vegas men to their community; 100 percent of ticket sales benefit Keep Memory Alive.

July 17-18 Weekend in Tahoe

The annual event at Shakespeare Ranch in Lake Tahoe includes a rodeo, invitation-only picnic at Lori and Michael Milken's home, dinner with celebrity Chef Emeril Lagasse and headline entertainment.

Please contact us at
702.263.9797 or events@keepmemoryalive.org for more information or to join our monthly events email update.

KEEP MEMORY ALIVE

Supporting the Mission of the Cleveland Clinic Lou Ruvo Center for Brain Health



RECOGNIZED FOR EXCELLENCE

In the last half of 2014, Cleveland Clinic Lou Ruvo Center for Brain Health employees were recognized by their community, peers and professional associations for clinical excellence and leadership in their fields.

We celebrate their accomplishments.

Faculty Appointments (Cleveland Clinic Lerner College of Medicine of Case Western Reserve University)

Professor

Jeffrey Cummings, MD, ScD, Director

Assistant Professor



Sarah Banks, PhD, ABPP/CNN,
Head of Neuropsychology



Le Hua, MD, Co-Director,
Mellen Program for MS at the
Lou Ruvo Center for Brain Health



Justin B. Miller, PhD
Staff Neuropsychologist



Ryan Walsh, MD, PhD,
Director, Parkinson's Disease and
Movement Disorders Program

Graduate (Leadership Nevada, Latin Chamber of Commerce)

Heather Davis, RN, Education Coordinator

Judge (Governor's Points of Light Awards)

Volunteer Manager, Southern Nevada and Individual Northern Nevada Candidates Categories

Dee King, Director of Volunteer Services

Expert Testimony (U.S. Senate)

Provided pre-hearing briefing on sports injury and chronic neurological disease

Jeffrey Cummings, MD, ScD

Makers: Women in Nevada History (PBS)



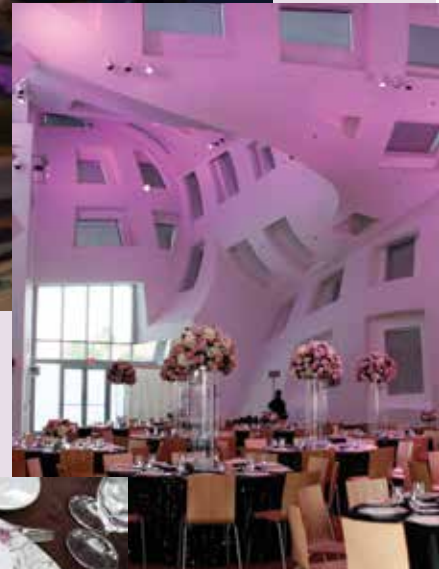
Selected as a participant for this documentary celebrating Nevada's sesquicentennial
Kate Zhong, MD, Senior Director of
Clinical Research and Development

Photo credit: Audrey Dempsey - Infinity



Finalist (BizBash Event Style Awards)

Best Wedding and Events Venue Category
Keep Memory Alive Event Center



CLEVELAND CLINIC EMPLOYEES SUPPORT RONALD MCDONALD HOUSE

One might argue that for those working at a nonprofit organization, every day is an opportunity to make a meaningful contribution to an important mission. But a group of employees at Cleveland Clinic Lou Ruvo Center for Brain Health was looking for even more.

The volunteer opportunity at Ronald McDonald House in Las Vegas called for a team willing to go grocery shopping and prepare a meal in the facility's kitchen to be enjoyed by its guests. For Administrative Coordinator Rhonda Heimer, who has stayed at multiple Ronald McDonald Houses while accompanying her grandson across country for care for a chronic heart condition, volunteering was an opportunity to give back in thanks for the great hospitality her family has received.

Education Coordinator Susan Farris says of the team's experience, "Volunteering was a great way to enjoy fellowship with colleagues and spend time together outside of work, getting to know one another on a different level."

Turns out, Administrative Program Manager LeeAnn Mandarino is keenly competitive at air hockey, Administrative Director Justin Schmiedel likes country music and, among all of our great cooks, Social Services Program Manager Susan Solorzano is the only one who can withstand the odiferous challenge of chopping onions.

Our group of volunteers agreed: Giving back together outside the workplace was a positive experience, and doing more is a goal for 2015.

Lee Ann Mandarino



L to R – Kristyn Brown and Karen Mariano



L to R – Christine Garcia, Dee King and Rhonda Heimer



Nathan Pienschke and Laura Rogers

KEEP MEMORY ALIVE

Supporting the Mission of the Cleveland Clinic Lou Ruvo Center for Brain Health



ALZHEIMER | HUNTINGTON | PARKINSON | ALS | MULTIPLE SCLEROSIS



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Please visit keepmemoryalive.org to learn how you can invest in memories and support the work of Cleveland Clinic Lou Ruvo Center for Brain Health