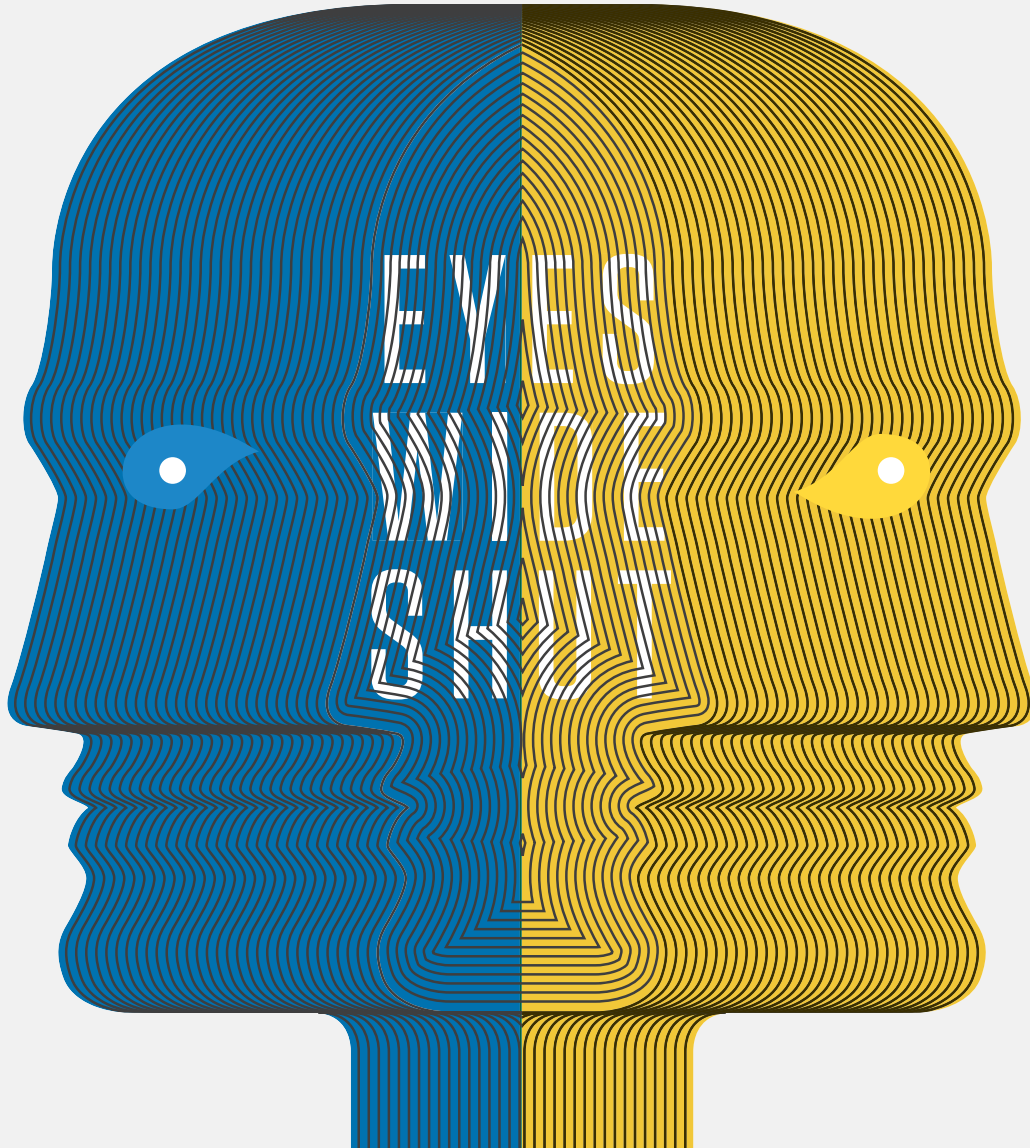


# Partners *in* Discovery



## UCLA PHYSICIANS SOLVE SLEEP PROBLEMS

It turns out that there is some truth to your mother's old saying, "Early to bed and early to rise makes a man healthy, wealthy and wise," truth to the healthy part, at any rate. Sleep builds the immune system; yet about 40 million people in the United States suffer from chronic sleep disorders, and the effect of sleep loss on work performance alone costs the country billions of dollars in lost productivity.

Continued on page 05

## Chair's Column



John C. Mazziotta, M.D., Ph.D.  
Chair, Department of Neurology  
Stark Professor of Neurology  
David Geffen School of Medicine at UCLA

"We look toward working together to harness an engine of success and drive basic science and clinical research."

It's the perfect storm. There have probably never been more opportunities or obstacles to solving neurologic disease than the current situation presents. Why would this be so?

First, the general public is aware of and concerned about neurologic diseases. These disorders are in the news every day and it is nearly impossible to find an individual who has not had a family member or friend affected by one of the many disorders that attack the nervous system.

Second, the general public is concerned that they, or their family members, will be stricken by a neurologic disease directly. References to Alzheimer's disease have permeated the daily lexicon of individuals in all walks of life. Most people are aware that neurodegenerative diseases represent an epidemic in the modernized world as the population ages. It has also become clear to public officials and to the public, in general, that Alzheimer's disease alone has the capacity to bankrupt most industrialized countries by 2050.

Third, basic science research is poised to deliver to clinical investigators vast new opportunities for the treatment of all neurological diseases. To return to the example of Alzheimer's disease, a treatment that would delay its onset by only five years would drop the prevalence of the disorder to 50%. A ten-year delay would reduce the prevalence by 75%.

Fourth, NIH funding is flat and the budget line continues to decrease for clinical and basic science research. The current research expenditures on neurologic disorders are a tiny fraction of the costs required to provide care for individuals with these problems.

Fifth, clinical reimbursement dollars will fall in the coming years. This reduces the margin of academic medical centers, the private sector medical care industry and other entities to support research and novel new treatments.

Thus, it is the perfect storm: Vast research potential for finding new treatments with little funding to support it. It is also the perfect opportunity: A knowledgeable public that recognizes the consequences of inactivity and lost opportunities for success. The junction between the storm and the opportunity is philanthropy. We look toward working together to harness an engine of success and drive basic science and clinical research to the urgently needed products of better and safer treatments and, ultimately, cures for neurologic disorders. This won't be easy and it won't happen spontaneously but with the right plan and commitment to succeed it can and will happen.

A handwritten signature in black ink, reading "John Mazziotta".

Support Fundraising for Neuro-Oncology Research!

Save The Date!

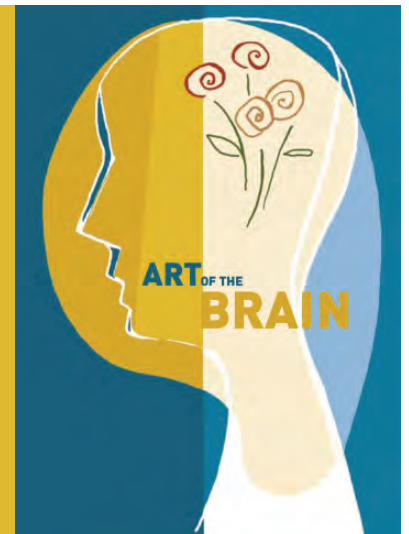
Art of the Brain -13th Annual Gala

"The Art of Singing and Speaking for Joy"

**Saturday, October 6, 2012**  
UCLA Schoenberg Hall  
6:30 pm to 10:00pm

For more information contact  
Luzianne D. Fernandez:  
(310) 206-3610 or by email at:  
[LDFernandez@mednet.ucla.edu](mailto:LDFernandez@mednet.ucla.edu)

Illustration by Nancy Nemoy



"We know our dad wanted something that would go on in her name forever..."

-Pete Smith



Elaine and Gene Smith

## A Gift to Endow a Chair in Alzheimer's Disease Research

The Department of Neurology is pleased to announce the establishment of the P. Gene and Elaine Smith Chair in Alzheimer's Disease Research.



Gene Smith (second from left) flanked by his children

"My dad, Gene Smith, has been the driving force behind the establishment of this chair," says Pete Smith. "After my mom died, he really wanted to do something for Alzheimer's research. My mom (Elaine Atwood Smith) developed Alzheimer's four to five years before her death in July of 2010, and my dad cared for her until the family intervened. We moved her into a facility two-and-a-half years before she died and Dad visited her every day. We don't know how he did it."

As it happens, Josh Grill (Joshua D. Grill, Ph.D., Neurology Education & Recruitment Core Director and Director of the Katherine and Benjamin Kagan Alzheimer's Disease Treatment Development Program) spoke about the UCLA program at an event in a private home in Santa Barbara. Pete and his father attended and were impressed. "Josh was so inspiring that we started a dialogue about a contribution to research at UCLA. We discussed this chair for over a year."

Gene Smith was a Missouri farm boy who started with nothing. He attended the University of Missouri as an undergraduate and earned an advanced degree in Electrical Engineering from Massachusetts Institute of Technology (MIT), where he met Elaine Atwood.

"They were married for 62 years and it was a great marriage," says Pete. "They were each other's best friend. The two of them did everything together. They traveled the world until

they were in their 80s. My mother was a strong, independent woman and she knew things were changing. In one of our last conversations, she said, 'You know, we've had such great times as a family. I know things are coming to an end for me.'"

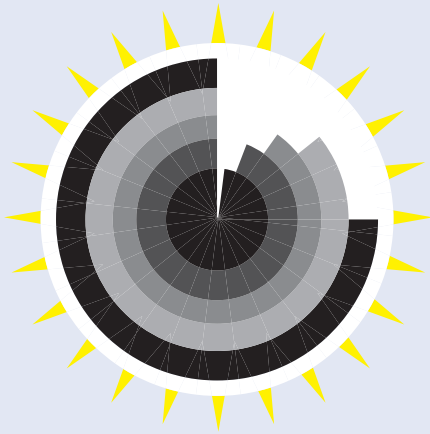
Pete and his four siblings, Sylvia, Randy, Scott and Mark, grew up all over the country, living in New York, Massachusetts, North Carolina and California as Gene pursued his career. The jobs he is proudest of include working as a technical advisor on nuclear disarmament talks and on the moon landing. Since retiring, Gene was awarded a fellowship to serve as a scientific advisor to the U.S. Senate. He also loves outdoor activities and discussing politics. His children all agree, "Our dad is a very accomplished guy."

He is a philanthropic guy, as well. When his son, Scott, died of colon cancer in 1997, the family donated to colon cancer research in Scott's honor. Through the Trust for Public Land, the Smiths saved a one-square-mile parcel in the Sierras from development. "My dad said that one was for him," Pete explains. "This endowed chair—the P. Gene and Elaine Smith Chair in Alzheimer's Disease Research—will be his last big donation. He told me, 'This one's for your mom.' We know our dad wanted something that would go on in her name forever and we're very supportive of that." ■



## “Lack of quality sleep is a serious health issue in modern society,”

Gene Block

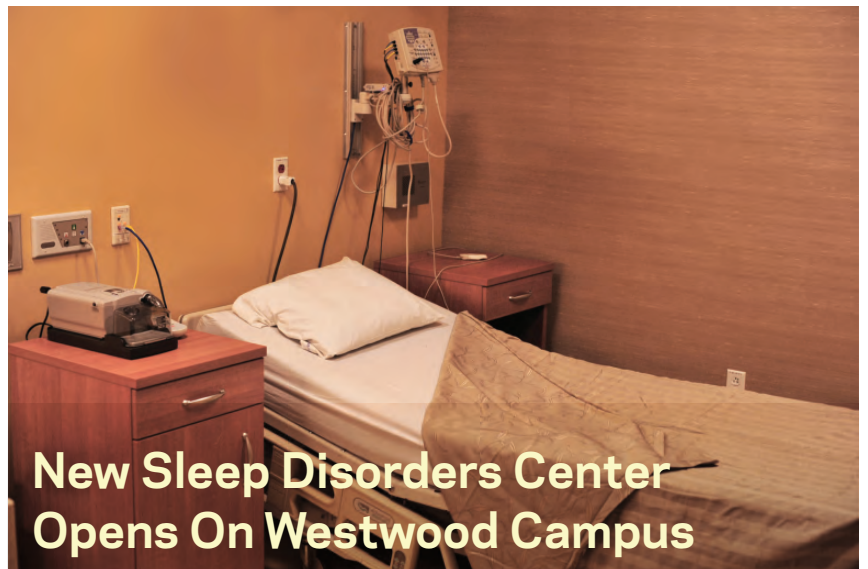


## Circadian Rhythms & Aging

**UCLA Chancellor Gene Block** is a Professor of Psychiatry and Biobehavioral Science. His research investigating circadian rhythms and aging aligns with that of Alon Y. Avidan, M.D., M.P.H., Director of the UCLA Sleep Center, on several projects.

Chancellor Gene Block's research investigates the cellular basis of circadian rhythms, delving into the neurobiology of the central 24-hour clock that is located in the hypothalamus. Over the past several years, he has expanded his studies to investigate the impact with regard to aging. Recently published research, conducted in collaboration with UCLA Professor Christopher Colwell, demonstrates that the rhythmic electrical signals from the central hypothalamic clock are attenuated during aging. This reduction may be responsible for alterations in the sleep cycles of the elderly and for difficulties with daytime alertness.

“Lack of quality sleep is a serious health issue in modern society,” says Chancellor Block. “I believe studies being conducted by sleep researchers at UCLA should provide insights into how to remedy the effects of sleep deprivation on aging, disease, and the demands of an increasingly 24/7 society.”



## New Sleep Disorders Center Opens On Westwood Campus

UCLA has a new, multi-disciplinary, comprehensive sleep laboratory facility on its Westwood campus.

The UCLA Sleep Disorders Center, directed by Alon Y. Avidan, M.D., M.P.H., and managed by Heather Beadles, M.B.A., R.P.S.G.T., features pediatric-friendly accommodations for eight and a comfortable lounge for patients and families, all housed within a sleek, elegant, space created with a nod to midcentury design.

The new UCLA Sleep Disorders Center is part of the Clinical and Translational Research Center (CTRC), which encompasses more than 15,000 gross square feet on the B-level of the UCLA Center for Health Sciences. The use of natural stone; wood; wall coverings; and softer, warmer colors contribute to a relaxing, tranquil, almost spa-like environment for patients, says Avidan. Key design elements include grass-cloth accent walls; a soothing, modern color scheme; and contemporary lighting. Flat-screen TVs in each room allow patients to comfortably view sleep-related educational videos. Patient parking is available

directly adjacent to the main entrance of the facility, offering not only convenience, but also safety, especially if there is a need to enter or exit the facility after hours.

“Our new facility raises the bar for sleep centers,” Avidan enthuses. “It is superbly equipped to treat the growing number of people suffering from sleep disorders. Waiting time for an appointment has improved noticeably. Patients can get in to have their studies done in just a few weeks, rather than months, and the expanded space allows us to fit in patients who may need to see us on an urgent basis.”

The Westwood facility has opened in conjunction with a new second location in Santa Monica for conducting sleep studies. Formerly part of the Santa Monica Bay Physicians practice, the UCLA Santa Monica sleep laboratory is located at 524 Colorado Avenue.

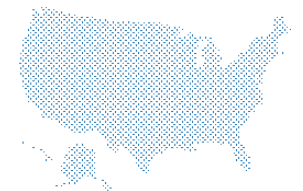
Phone: (310) 26-SLEEP, (310) 267-5337

Fax: (310) 267-1062

[www.sleepcenter.ucla.edu](http://www.sleepcenter.ucla.edu)

## UCLA Sleep Disorders Center Factoids:

Sleep  
Disorders  
Are  
More Common  
Than  
You Think.



FACT

About 40 million people in the U.S. have a chronic sleep problem.

## The UCLA team designs personalized treatment programs to manage patients' sleep problems.

Continued  
from Cover

"When sleep disorders interfere with daytime function, we need to evaluate and manage them," says Alon Avidan, M.D., M.P.H., director of the UCLA Sleep Disorders Center, which has moved to sleek and spacious new quarters on the grounds of the old emergency room on the Westwood Campus (see adjacent story). This can be difficult when only a fraction of patients discuss sleep issues with their physicians, he explains.

Untreated, chronic sleep disorders can have a domino effect on one's lifestyle, causing cognitive difficulties, psychiatric illness and depression, impairing alertness, and increasing the risk of high blood pressure, heart disease, and stroke.

Enter the SDC, which Avidan hopes will become a major resource for physicians in the community. The nationally accredited program with more than a half-century's experience in the diagnosis and management of sleep disturbances is a recognized leader and pacesetter in the clinical practice of sleep medicine and sleep research. The Center's highly trained and experienced staff includes physicians, who are Board certified in Sleep Medicine, and registered polysomnographic technologists, who are proficient in evaluating and diagnosing a range of sleep difficulties in adults and children, as well as providing patient education.

UCLA sleep physicians and technologists use the state-of-the-art equipment to monitor sleeping patterns and diagnose a broad spectrum of sleep disorders that go far beyond insomnia and sleep apnea. They include restless leg syndrome, a very disturbing condition in which patients have the urge to move their legs at night; parasomnias—abnormal behavior phenomena, such as sleep terror, REM sleep behavior disorder (acting out dreams), and somnambulism (sleep walking) that occur during sleep; narcolepsy (severe sleepiness during inappropriate hours); bruxism (teeth grinding); sleep-related

eating disorder (SRED); shift work sleep disorder; and jet lag syndrome, to name a few.

"We monitor eye movements, muscle tone, brain waves, heart rhythm, air flow, chest and abdominal movements in order to have a window into someone's brain and bodily functions when they sleep," Avidan explains. The UCLA team then designs personalized treatment programs to manage patients' sleep problems.

Continuity of care is another UCLA hallmark, he says, noting that the vast majority of the sleep studies in Southern California are done by sleep physicians who may not see their patients again. "At UCLA, we follow our patients regularly. If they're experiencing difficulties with their continuous positive airway pressure (CPAP) machines (used to treat sleep apnea), we make the necessary adjustments and monitor compliance to ensure that patients receive the high quality and comprehensive care that will bring success."

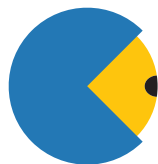
Sleep physicians at UCLA also provide novel treatments for sleep disorders that have not responded to traditional therapies. "We try to help patients who have failed previous therapies for sleep apnea. For instance, we are able to prescribe new and innovative treatment approaches for sleep apnea using specially fit CPAP masks and custom-fit dental appliances fabricated by our faculty at the UCLA School of Dentistry, which is just across from the Sleep Center," Avidan states.

The UCLA Sleep Disorders Center has been accredited continuously by the American Academy of Sleep Medicine and takes great pride in providing the community outstanding patient care and leadership in sleep research and sleep education. Current plans are under way to establish multispecialty and multidisciplinary programs to manage sleep apnea and insomnia, as well as a new fellowship program in sleep medicine.

# R<sub>x</sub>

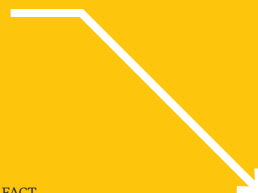
FACT

Approximately 10 million people in the U.S. use prescription sleep aids.



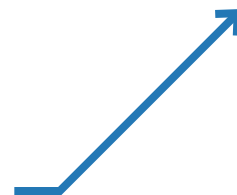
FACT

More than 30% of the population suffers from insomnia.



FACT

The effects of sleep loss on work performance may cost \$18 billion annually in lost productivity.\*



FACT

People who suffer from sleep deprivation are 27% more likely to become overweight or obese.

# Autism: New Treatment Strategies

## Progress in Genetics Enables Research to Identify Early Markers and Improve Early Diagnosis

A little over a decade ago, the neurodevelopmental condition known as autism was a peripheral concern in the field of Neurology, the subject of little funding and scant research efforts into its causes and treatment. In 2012, autism is known to affect approximately one in every 166 children in the United States, and the disorder stands at the epicenter of the field after an explosion in progress both in understanding its causes and in beginning to develop effective treatments.

**Dr. Daniel Geschwind** has been at the forefront of these revolutionary advances. His program's mission has involved collaboration with many investigators at UCLA and elsewhere, and the training of dozens of graduate students and post-doctoral fellows who have now entered the field of autism research.

One of the areas of most rapid progress has been in genetics, where researchers at UCLA have exerted major efforts into identifying genes that increase the risk for autism. These efforts, led by Dr. Geschwind and collaborators, now permit identification of genetic causes in up to one out of five children with autism. Ten years ago, virtually no genetic causes were known.

The Geschwind lab and colleagues currently are working to identify remaining genes and to use this information to develop therapies. The identification of new genes is greatly facilitated by the fact that key areas of entire human genomes can be sequenced for under \$1000. Within one year the complete genome will reach this cost-effective milestone. "I expect that the whole genome sequencing of thousands of autism patients will identify many more genes, and that such approaches will become part of clinical practice within the next several years," says Dr. Geschwind.

Once a gene is identified, there is a clear road to understanding disease mechanisms and developing new therapies, another key goal of autism research program at UCLA. Recent advances by UCLA researchers have included identifying the brain mechanisms contributing to autism by using Magnetic Resonance Imaging (MRI) to measure brain activity. This work in

brain mapping has shown that the frontal and temporal lobe regions of the cerebral cortex are disconnected from other regions of the brain that form circuits responsible for language learning and social cognition. Along with other studies, this suggests that a developmental disconnection of multiple brain areas underlies autism. In another very important study published last year in the journal *Nature*, Dr. Geschwind's group studied post-mortem brains from autistic patients using technology that permitted study of all genes in the genome. They found a clearly shared set of changes in the brains of autistic subjects versus neurological controls. This is the first demonstration that, despite very diverse genetic origins of autism, there are likely to be shared final common pathways in the disease. This provides significant hope for treatment strategies.

Recent discoveries of Autism's causal genes have enabled researchers to explore therapeutic strategies with new scientific models. Dr. Geschwind's lab developed the first scientific model of autism based on genetic findings and are using this model to create novel drug-based therapies for different aspects of autism.

Similarly, another new technology allows researchers to model autism in a dish using stem cells that recapitulate key features of the disorder, permitting development of improved treatments. Recently, the Geschwind lab has published several papers using these models, providing key advances in the field using human neural stem cells to grow neurons with mutations that cause autism. These cell lines, representing "autism in a dish," will be used for high throughput screens aimed at identifying potential new therapeutic compounds.

Early diagnosis is another key goal of current research. It is becoming fairly clear that behavioral and cognitive testing alone is not sufficient to accurately diagnose autism prior to one year of age, and perhaps until 18 months. Researchers at UCLA are at the forefront of identification of early markers of the disorder using electroencephalography (EEG), which measures brain electrical activity to identify patterns that may separate children with autism or related conditions from typically developing infants. This research, although early, seems very promising. The ultimate goal is to incorporate EEG with genetic and other blood biomarkers to improve early diagnosis and knowledge of a child's clinical trajectory, and again provide a personalized signature that could be useful for treatment planning and prognosis.



# Why We Do This

## William Buxton, M.D.

Health Sciences Associate Clinical Professor of Neurology  
David Geffen School of Medicine at UCLA  
Neurologist, UCLA-Santa Monica Neurological Associates

## Verna R. Porter, M.D.

Chief, Division of Neurology / UCLA Medical Center,  
Santa Monica Health Sciences Associate Professor of Neurology  
David Geffen School of Medicine at UCLA / Medical Director,  
UCLA-Santa Monica Neurological Associates

Theirs is a true partnership. They attended UCLA as undergraduates, followed by UCLA Medical School. They chose to specialize in neurology and did their residencies at UCLA. Did they know each other? Not until they met at a local church while both were on call. The rest, as they say, is history.

Meet Bill Buxton and Verna Porter-Buxton. The physicians, both neurologists with UCLA-Santa Monica Neurological Associates, established in 2002, say they complement each other in terms of patient care. Verna specializes in neuro gerontology and neuro behavior; Bill, in clinical neurology—EEGs, EMGs, peripheral nerve and muscle disorders, and epilepsy.

"We are a high quality, intense practice within the academic medical setting, which means we not only interact with patients, but also with faculty and students. We give lectures and talks, and we teach," Verna explains.

"We really enjoy the interaction with residents and students," Bill adds.

The two feel fortunate that they are able to bring the quality for which UCLA stands to the community. "UCLA has a unique commitment to excellence and compassionate care, and we can rely strongly on our colleagues to make sure the patient gets complete care," he says. "For the two of us, it's nice to be able to work together. It's a fantastic situation, really. We can have complete trust in the other person."

The couple married a year after they met and the UCLA-Santa Monica Neurological Associates practice opened four years later. Dr. Doojin Kim and Dr. Shamsa Velani have joined the practice along with Dr. Clifford Segil, who formerly was with Santa Monica Bay Physicians. The group covers UCLA Medical Center, Santa Monica, as

well as Saint John's Medical Center. "Santa Monica as a community has many assisted-living and convalescent facilities, which translates to high patient volume for us," Bill says. Their dream is that one day UCLA-Santa Monica Neurology will receive an endowment gift and the practice will be named for the benefactor.

While they decided to specialize in neurology for different reasons, both physicians are inspired by the field. Bill wanted a specialty that would enable him to keep learning with passion for many years to come. "One day on the way home it occurred to me that the days I would spend with neurology patients were the ones I kept thinking about and looking forward to the most."

Verna, a Santa Monica native, had always been fascinated by the brain. "It controls people's behavior and why they do what they do. It encompasses so many areas," she says.

"Neurological problems visibly impact people's ability to go through their daily lives. We can see tangible results when we treat people—it's rewarding to see them get back to their regular routines after stroke or spinal cord injury," Bill explains.

The couple is very much a part of the Santa Monica community. Not only is their practice located there, but they live and attend church in the community. Both are active in their kids' school. Bill, who was born in northern Mississippi, serves on the Board of Trustees of Upward Bound House and is a member of Rotary. "Santa Monica is like a small town, like where I grew up," he says.

"All the things we do make us visible here; they connect us with the community," Verna adds.



"UCLA has a unique commitment to excellence and compassionate care, and we can rely strongly on our colleagues to make sure the patient gets complete care."

The two complement each other on the home front, as well—important when you are the parents of three boys, ages 12, 8, and 6. "Being in the same practice allows us to cover each other," they say. The couple's passion for their chosen field has rubbed off on the 12-year-old. According to Verna and Bill, he wants to be a neurologist.

UCLA-Santa Monica Neurology Associates welcomes new patients at 1328 16th Street, Suite 309, in Santa Monica. Hours are 8:00 a.m. to 5:00 p.m. Monday through Friday. (310) 319-5098 ■



(left to right)  
Daniel H. Geschwind, M.D., Ph.D., Barbara Vickrey, M.D., M.P.H.,  
John Mazziotto, M.D., Ph.D.

## Two UCLA Neurology Faculty Members Elected to Institute of Medicine

Two members of the UCLA Department of Neurology have been elected to the National Academies' prestigious Institute of Medicine (IOM). **Daniel H. Geschwind, M.D., Ph.D.**, Gordon and Virginia MacDonald Distinguished Professor, Departments of Neurology, Psychiatry, and Human Genetics, and Director, Program in Neurogenetics and Center for Autism Research and Treatment, Semel Institute, David Geffen School of Medicine, and **Barbara Vickrey, M.D., M.P.H.**, Professor and Vice Chair for Academic Affairs, Director, Health Services Research Program, Department of Neurology, David Geffen School of Medicine, join a class of 65 new members and five foreign associates.

Membership in the Institute of Medicine is considered one of the highest honors in the fields of health and medicine and recognizes individuals who have demonstrated outstanding professional achievement and commitment to service. Chosen by current active members, candidates undergo a highly selective process.

"Each of these new members stands out as a professional whose research, knowledge, and skills have significantly advanced health and medicine, and their achievements are an inspiration. The Institute of Medicine is greatly enriched by the addition of our newly elected colleagues," said IOM President Harvey V. Fineberg.



## The Power of Philanthropy

### Renee and Meyer Luskin Endow Nation's First Chair In Migraine and Headache Studies

"I'm deeply honored to be associated with the Luskins, they are remarkably thoughtful, kind, and compassionate individuals."

Dr. Charles

Above (from left):  
Dr. John Mazziotta,  
Dr. Andrew Charles,  
Renee and Meyer Luskin,  
Chancellor Gene Block,  
Dr. A. Eugene Washington

The generosity and vision of UCLA alumni Renee and Meyer Luskin has enabled the Department of Neurology at the David Geffen School of Medicine at UCLA to establish the nation's first chair dedicated to headache research. Dr. Andrew C. Charles, a professor of neurology and director of UCLA's Headache Research and Treatment Program, has been named the first holder of the Meyer and Renee Luskin Chair in Migraine and Headache Studies.

"We are very happy to support the work of Dr. Andrew Charles, and for the millions of people, including our daughter Andrea, who endure migraines and other headache maladies," said Meyer Luskin. "We look forward to the help that Dr. Charles' research will provide."

The Luskins are longtime donors to the university, with gifts that include a transformative contribution in January 2011 to support academic programs and capital improvements. Meyer Luskin earned a bachelor's degree in economics at UCLA in 1949 and an M.B.A. from Stanford University in 1951. He founded a diversified company that is now exclusively an animal-feed product manufacturer. Renee Luskin was awarded her bachelor's degree in sociology at UCLA in 1953.

"I'm deeply honored to be associated with the Luskins," said Dr. Charles. "They are remarkably thoughtful, kind, and compassionate individuals."

Dr. Charles was awarded his medical degree at UCLA, where he completed his internship in medicine and his residency and fellowship in neurology. He and his team were

the first to show that females have a lower threshold for the waves of brain activity that appear to be an important trigger for migraines, which may help explain why three times as many women as men are affected. Also, the group recently played a key role in identifying and characterizing a new gene that causes migraines to run in families.

Charles' laboratory, using brain imaging and physiological techniques, investigates the basic biology involved in migraine headaches. Under his direction, the UCLA Headache Research and Treatment Program also researches new therapies, educates healthcare providers, and offers up-to-date treatments. The Luskin Chair will support translational research aimed at bringing new therapies to patients in order to improve the standard of care.

The university recently honored the Luskins and Dr. Charles and celebrated the endowment with a dinner at the Chancellor's residence.

"Dr. Charles has proven himself to be one of the most insightful and innovative scientific investigators we have within the UCLA Department of Neurology," said Dr. John Mazziotta, Associate Vice Chancellor, UCLA Health Sciences; Executive Vice Dean; Stark Professor and Chair of the Department of Neurology and Director of the UCLA Ahmanson-Lovelace Brain Mapping Center. "The ongoing generosity of Meyer and Renee continues to humble us here at UCLA. Their gift is insightful in that it will endow the first academic chair in the country dedicated to migraine research. This gift promises to move Dr. Charles' research forward in finding better treatments and, ultimately, a cure for a disorder that affects so many people around the world." ■





Hostess and fundraiser Herma Altshule (second from left) plays bridge with longtime friends Noelle Siart, Jeanne Bernstein, and Myrna Frankel (clockwise).

## Cards for a Cause:

### Bridge Tournament Nets Proceeds for Parkinson's Disease

What happens when a fun-loving woman with many devoted friends and a passion for bridge decides to play cards for a cause? In the case of Herma Altshule, the UCLA Department of Neurology—in particular, the research of Jeff Bronstein, M.D., Ph.D.—benefited.

Mrs. Altshule, interior designer, wife, mother, grandmother, and avid bridge player, decided to hold a fundraiser with a friend in honor of the friend's daughter, who has Multiple Sclerosis. The event, which took place at the Altshules' spacious, light-, art-, and orchid-filled contemporary home, was a success and inspired Herma to do another fundraising event on her own. This one would be a bridge tournament and benefit Parkinson's disease at UCLA and Dr. Bronstein's research.

"I was diagnosed with Parkinson's disease four-and-a-half years ago. I adore Dr. Bronstein, and that's why I wanted to do this," she explained.

An avid bridge player for 12 years, Herma charged \$100 per ticket. Sixty-eight people signed on. "We had 17 tables set up all over the house, including upstairs. The event started at 3:00 p.m. and we played bridge for three hours," she continued. "We played duplicate bridge, North

South against East West. The East West people move every round."

Herma's bridge teacher, Victor Anikovich, served as tournament director and gave out master points—guests' "perks" for playing in the tournament. After bridge, the players were treated to an elegant Italian dinner, underwritten by Herma and her husband, Joel Altshule, who took up the game a few years ago and is, in Herma's words, "a pretty good" player. Their daughter has begun to play and their daughter-in-law says she will do the same.

Herma also hosted a jewelry party to benefit Parkinson's Disease at UCLA. The event featured pieces by *Jewels of the Empress* from Sun Valley, Idaho, where the Altshules had a vacation home for 14 years. Herma persuaded the jewelry designer, Esmeralda, to agree that 25% of the proceeds would go to the charity.

"The day of the jewelry party it was pouring rain and a lot of people didn't show up," Herma said. "Fortunately, we had a few big hitters."

The two events raised \$11,000 for Parkinson's disease. Clearly, Herma Altshule's generosity, spirit, and fundraising savvy make her the biggest hit of all.

## Meet Our Fellows



Mollie Johnston is happy to be in Southern California. The Minnesota native and University of Minnesota Medical School graduate, a Fellow in Headache, Oral Facial Pain and Interventional Pain Management, wanted to specialize in anything but pain management.

Johnston, who suffered from migraines as a child, was 12 when her father had a stroke and from that time forward, she wanted to be a doctor. She thought she wanted to go into stroke medicine.

UCLA was her first choice for residency. "UCLA is so strong in every subspecialty and I wanted to explore them all to make the best decision for my career," she says. "Neurology is such a hot area. UCLA Neurology is #1 in funding from the NIH (National Institutes of Health), and there are excellent research opportunities here," she explains. "I was so impressed by all the brain power within the department."

Johnston decided to specialize in pain management for a number of reasons. "People are demonized because they have pain. Pain specialists are few and far between and I feel that these underserved patients need someone to treat them," she explains. "Without the brain, you don't feel pain. The brain controls the body. There is a huge future in this area and a lot of research is going on. It is one area in which you can see immediate relief, and it also offers treatment options. It's really rewarding. Unlike other areas of Neurology that are less treatable, there is always something else to do. If one medication doesn't work, there are others that may. It's important for the patients not to lose hope and give up."

For Johnston, the field is inspiring, and the interventional aspect is cutting-edge. "The area is like peeling an onion. It has psychological aspects, neurological aspects, neurophysiological aspects, and you have to know head and neck anatomy. Facial pain encompasses so many areas—it can be from TMJ."

Currently, under the supervision of Sheldon E. Jordan, M.D., Johnston does ultrasound, X-ray, and EMG (electromyogram), focusing on the head and neck. She has nothing but rave reviews for all of her Department of Neurology professors. "Andy Charles, Shelly Jordan, Marisa Chang, and Bob Merrill in the School of Dentistry have all shown me so much."

Johnston and her Greek-American husband, who relocated from New York to Los Angeles to be with her, were married a year ago in Greece. Her father, long recovered from his stroke, walked her down the aisle.

## You Can Make A Difference!

The Department of Neurology at the David Geffen School of Medicine at UCLA is an academic department dedicated to understanding the human nervous system and to improving the lives of people with neurological diseases.

The Department of Neurology has many pressing needs to continue our mission. You can direct your charitable gifts of cash, securities, real estate, art, or other tangibles to our greatest needs, under the direction of Dr. John Mazziotta, Chair of the Department, or to specific research, training, laboratories, or programs of specific physicians or diseases. For more information please contact Patricia Roderick, Director of Development, UCLA Department of Neurology, (310) 267-1837 or [proderick@support.ucla.edu](mailto:proderick@support.ucla.edu).

## MEET A SCIENTIST

# Carlos Portera-Cailliau, M.D., Ph.D.

Carlos Portera-Cailliau is young, personable, and approachable—hardly fitting the stereotypical image of a nerdy scientist. It goes without saying that he is beautifully educated and super-smart.

Born and raised in Madrid, Spain, Dr. Portera-Cailliau earned a B.A. in Biochemistry & Cell Biology from U.C. San Diego in 1990. He attended the Johns Hopkins School of Medicine and obtained an M.D.-Ph.D. (Neuroscience) degree in 1997. After completing a residency program in Neurology at Massachusetts General Hospital and Brigham & Women's Hospital, teaching affiliates of Harvard Medical School, in Boston in 2001, Dr. Portera-Cailliau moved to Columbia University for a post-doctoral research fellowship and further training in Movement Disorders. He completed a second post-doctoral fellowship at Cold Spring Harbor Laboratory, a private, non-profit institution in New York, before joining the faculty of the David Geffen School of Medicine at UCLA in November 2004. He has dual appointments in the Departments of Neurology and Neurobiology and is a member of UCLA's Brain Research Institute (BRI) and ACCESS, an umbrella graduate-admissions program in the Life and Biomedical Sciences. He is the recipient of the prestigious Dana Foundation Brain and Immuno-imaging Award and of an RC1 challenge grant from the National Institutes of Health as part of the American Recovery and Reinvestment Act. In 2011, he was elected to membership in the American Neurological Association.

Dr. Portera-Cailliau is interested in how neurons are wired together during brain development. When this finely orchestrated process goes wrong, it can lead to disorders such as autism, intellectual impairment, epilepsy, or

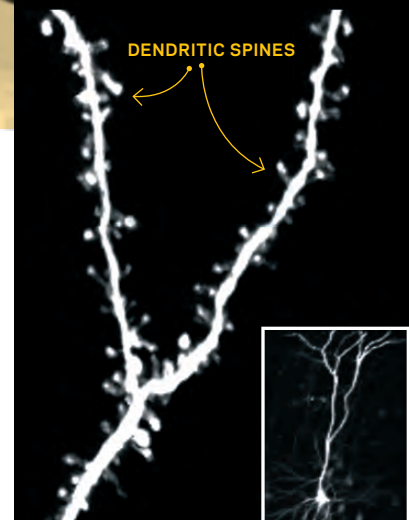
schizophrenia. He is particularly interested in these neuropsychiatric disorders because the brain appears normal or, in scientific terms, it lacks "distinct neuropathological features." Therefore, he believes, the underlying problem must be a very subtle defect in the connections or signals between neurons. "We're trying to understand how the brain is wired in order to identify novel molecular targets that can be exploited for therapeutic purposes in these devastating disorders," he says.

Portera-Cailliau explains that the process of forming connections between neurons in the cerebral cortex, which controls cognitive functions, is experience-dependent in normal development. "After birth, we are exposed to sensory experiences which shape our neurons. They grow and adapt to change in the environment. With autism—in particular, fragile X Syndrome, which is the most common inherited type of autism, caused by a mutation, we think one problem is that neurons are not able to adapt to new sensory perceptions."

By age 1 or 2, the fragile X child exhibits many autistic symptoms. He is anxious and cognitively impaired; language develops slowly and is abnormal. Researchers identified the gene responsible and an experimental model was created. In 2010, Dr. Portera-Cailliau published a seminal paper showing that dendritic spines, the tiny structures on the surface of neurons that receive synapses, are abnormally unstable in the experimental model of fragile X. Synapse stability

"A neuron (newr-on; also known as a neurone or nerve cell) is an electrically excitable cell that processes and transmits information by electrical and chemical signaling. Chemical signaling occurs via synapses, specialized connections with other cells.

A typical neuron possesses a cell body, dendrites, and an axon. Dendrites are thin structures that arise from the cell body, often extending for hundreds of micrometers and branching multiple times, giving rise to a complex "dendritic tree."



Images of dendritic spines taken with a two-photon microscope. Spines are the tiny appendages that protrude from the branch-like processes of neurons in the brain. The inset shows a pyramidal neuron in the cerebral cortex. In fragile X syndrome, spines are abnormally immature and unstable.

is important for learning and this might explain why affected children have learning impairments. His lab now studies how this comes about, using a variety of techniques, ranging from molecular biology to calcium imaging, and 2-photon microscopy (cutting-edge fluorescent microscopy). "We take pictures of the synapses in the living, intact brain. We can alter the sensory environment and see the effects on synapses and circuits. Our hypothesis is that in fragile X Syndrome, they fail to respond to environmental changes and, therefore, have no 'synaptic plasticity.' We want to understand why."

Dr. Portera-Cailliau is married to UCLA neurologist, Dr. Yvette Bordelon. They have two children— Marcos, age 6, and Elena, age 4.



## MEET OUR VOLUNTARY FACULTY

**UCLA's voluntary faculty** comprises a group of dedicated physicians who help us ensure that UCLA Neurology residents receive the best medical education possible. Our voluntary faculty has grown from only a few neurologists in the 1950s and 1960s to 63 as of 2012. Many of them have been and are accomplished full-time academicians, and some have successful private practices. The commitment of these doctors in offering their clinical expertise and time without financial remuneration speaks to their generosity of spirit and is deeply appreciated.



## Lance Fogan, M.D., M.P.H.

Dr. Lance Fogan is a Renaissance man—neurologist, teacher, writer, world traveler, gourmet cook, husband, father, grandfather, and soon-to-be-published novelist. UCLA Neurology students are the lucky beneficiaries of his seasoned approach.

Dr. Fogan has taught neurology to third-year medical students and psychiatry and primary care residents at Olive View-UCLA Medical Center for more than 10 years. He covers the most common neurological problems any physician faces, and he does it with a particular technique. “I imitate the patient—confusion, aphasia, weakness, tremors, gait abnormalities, etc.—and I get the students to consider what disease they’re dealing with and what questions to ask in order to arrive at a diagnosis,” he says. “I love doing this and the students reassure me that my technique is very effective.” In addition, Dr. Fogan leads Olive View’s neuropathology sessions (dissecting the brain) when brain specimens become available.

A literature buff, Dr. Fogan attended night school literature classes at a local junior college for six years, exhausting all the Shakespeare classes that were offered. In 1988, he won the American Academy of Neurology History of Neurology Prize for his paper: The Neurology in Shakespeare.

“I’ve been taking a private literature/writing class every Saturday for 12 years. We’ve read the world’s great literature—I’m still getting educated,” he says. The class inspired him to write a novel, *Conner’s Little “Dings,”* about a third-grader doing poorly in school. “Because his dad is on his second tour in Iraq, everyone thinks the boy’s school problems are due to stress and anxiety. They all miss his unrecognized complex partial seizures, which cause blank-outs. It’s epilepsy,” Dr. Fogan explains. The novel is based on his 40-plus years of clinical practice and teaching. His website, [LanceFogan.com](http://LanceFogan.com), features excerpts from the novel, along with his epilepsy blogs. “I tweet to attract readers to my website and blog in order to build a base of potential readers.” Concurrently, he is looking for an agent to represent the book.

Dr. Fogan retired from Kaiser Permanente Medical Center in Panorama City in 1997, after serving for 16 years as neurology department chief. During his 26-year tenure with Kaiser, he took three sabbatical study leaves in London, England.

How does he feel about teaching in retirement? “I can say that it is wonderful and I can heartily recommend it to anyone.” ■

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**Christine Bower Baca,  
M.D., M.H.S.**

Assistant Professor, Department of Neurology  
David Geffen School of Medicine at UCLA and  
West Los Angeles Veteran's  
Health Administration of Greater Los Angeles

When Christine Bower Baca was an undergraduate student at Brown University, she initially thought that she wanted to go into business. That ended when she took Economics. Fortunately for UCLA, she took a Neuroscience course and loved it.

"I ranked the UCLA Neurology residency program #1 because I knew it had a unique environment and amazing faculty that would allow me to grow the most," she says. "As a medical student, I knew I wanted to enter the field because the brain is so complex and the intersection of brain and behavior is fascinating. Epilepsy tells you a lot about brain function. It's satisfying to help people with complex conditions."

Dr. Baca's clinical focus is medically refractory epilepsies—those that don't respond to medical treatment. As a Robert Wood Johnson Research Fellow in Health Services, her research centered on potential barriers to coordinated care for patients with epilepsy. She is particularly interested in examining the care of vulnerable groups such as persons with limited or no insurance, racial/ethnic minorities, children, and persons with language barriers. She also assesses quality of life outcomes in adolescents with childhood-onset epilepsy. Additionally, Dr. Baca is exploring new research projects related to post-traumatic epilepsy in returning veterans from Iraq and Afghanistan. "TBI—Traumatic Brain Injury—puts people at risk of

developing epilepsy, and now we're seeing an influx of returning veterans with TBI," she says.

As an attending epileptologist at the Epilepsy Monitoring Units at UCLA and the new Epilepsy Center of Excellence (ECOE) at the West LA VA, she performs diagnostic testing and intensive pre-surgical evaluations for adults with medically refractory seizures. Epilepsy patients are impacted not only by seizures, but also depression and anxiety. "It really takes a team of health care providers; everyone has an integral and important role in caring for each patient. It is this multidisciplinary team approach that I really enjoy," says Baca.

Baca has a lot to juggle. Aside from dual appointments as Assistant Professor in the Department of Neurology at UCLA and the Veterans' Administration, one of 16 national Epilepsy Centers of Excellence, she is a wife and expectant mother. She and her husband met during an NIH (National Institutes of Health) summer internship. They had a long-distance relationship while he was at UC San Diego. Their son is three, and the family is preparing for the imminent birth of twins. ■