

'NEURO CROSS-FIT TRAINING' Can Video Games Elevate Human Minds?

BY RICH MCMANUS

Dr. Adam Gazzaley thinks mankind can do a whole lot better than a pill or a small molecule to enhance the brain and its core functions—perception, memory, goal-setting, compassion and wisdom. Modern humans, he concedes, are pretty good at optimizing physical performance—strength, flexibility, speed and agility. But with respect to the brain, “we’re not doing so well there.”

His increasingly popular intervention—as evidenced by the size of his Neuroscape Lab, his many global speaking engagements

(more than 450 so far) and the number of large companies jostling to collaborate with him—is video gaming.

“Neuro cross-fit training—that’s what we’re going for,” Gazzaley told a packed balcony C in Natcher Bldg. on Nov. 5. He predicts “a paradigm change, an entirely new class of medicine within the next 4 years”—the prescription of video games, both to enhance wellness and to address cognitive deficits.

A neuroscientist at the University of California, San Francisco, Gazzaley visited NIH at the invitation of the Office of Behavioral and Social Sciences Research to discuss “Video Games and Neuroscience: A Vision of the Future of Medicine and Education.”

Years ago, he wondered whether a custom-designed game could enhance cognitive control in older, normal adults. He



Dr. Adam Gazzaley is crafting video games that can benefit people ill and well.

SEE GAZZALEY, PAGE 4

PAINKILLERS OF CHOICE

Prescription Opioid Use May Be Decreasing, but Heroin Use Is Increasing

BY ERIC BOCK

One million Americans regularly use heroin. At least another million misuse or abuse prescription pain relievers. These estimates were provided by Dr. Eric C. Strain at a Contemporary Clinical Medicine: Great Teachers Grand Rounds Lecture in Lipsett Amphitheater recently.



Dr. Eric C. Strain

These numbers could well be higher, but it’s hard to come up with an exact estimate,

SEE PAINKILLERS, PAGE 8

IS THE MICROBIOME OUR PUPPETEER?

Cryan Explains Gut Feelings, Thoughts and Behaviors

BY ELLEN O'DONNELL

“What he did took guts.” “I had butterflies in my stomach the whole time.” Language is full of expressions suggesting a connection between our gastrointestinal system, emotions, thoughts and behavior. It’s a concept that may actually make neurobiological sense, according to Dr. John Cryan.

Cryan is a neuropharmacologist and internationally recognized scientist in the area of interactions between the brain and enteric microbes. He is professor and chair in the department of anatomy and neuroscience and principal investigator in the APC Microbiome Institute at University College Cork, in Ireland. His recent talk in Masur Auditorium was part of NCCIH’s Integrative Research Lecture Series.

The topic of the human microbiome,

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CFC effort does denim. See story, p. 5.

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OHR Hosts Virtual Q&A on Leave Policies, Programs, Dec. 8

The Office of Human Resources encourages all NIH federal civilian employees to join it on www.yammer.com on Tuesday, Dec. 8 for a question-and-answer session on leave policies and programs. Four 1-hour sessions will provide employees with an opportunity to talk with experts about:

- General Questions on Leave Types and Usage (noon-1 p.m.)
- The Family and Medical Leave Act (1-2 p.m.)
- Workers' Compensation (2-3 p.m.)
- Leave Sharing Programs, such as VLTP and the Leave Bank (3-4 p.m.)

Participants may post their questions prior to and during the event and experts will be responding during the sessions. The Q&A will continue to be available after the Yam Jam is complete.

If you have any technical issues and/or require assistance in order to participate in the Yam Jam, contact Sandra Scarbrough at (301) 402-3866.

Fencer Pinkus Stands Out at Worlds

Dr. Larry Pinkus, who runs the vascular cell and molecular biology study section at the Center for Scientific Review, won a silver medal in the individual sabre in his age group (70+) at the 2015 Veterans World Championship held recently in Limoges, France.

"I was undefeated all day and seeded number 1 until losing the final match against a French fencer,"



he said. "This was the 7th USA World Championship Team I have been on and the 4th individual medal I have won in my career."

Pinkus was also on the gold medal-winning USA sabre team, which consisted of two fencers from each age group. "We won all 6 of our matches," he said. "I won 9 of my 10 bouts in the team competition and both of my bouts

in the first-place match against Germany, which USA won by a score of 30-28 points. Although I had injured my left Achilles tendon in the individual, which slowed me down, I forgot about that and felt no pain while fencing. However, the rest of the time I was limping. Adrenaline is a remarkable thing!"

Pinkus began fencing in college at Johns Hopkins University. He won the sabre championship of Virginia 5 times, regional championships and many other tournaments. He also was president of the NIH Fencing Club from 1992 until 2007, when the gym in Bldg. 10 was closed.



'Doctors Caucus' Visits NIH

On Nov. 16, five members of the House GOP Doctors Caucus—a group of 18 medical providers in Congress who use their expertise to shape health care policy—visited NIH. NIH director Dr. Francis Collins welcomed the group to the Clinical Center's medical board room for updates on the BRAIN and Precision Medicine initiatives, among other topics. The caucus members included (top, from l) Rep. Larry Bucshon (Indiana), Reps. Diane Black and Phil Roe (both of Tennessee), Rep. Andy Harris (Maryland) and Rep. Ralph Abraham (Louisiana). On the NIH side of the table were (below, from l) NIGMS director Dr. Jon Lorsch, NIH principal deputy director Dr. Lawrence Tabak, Collins, NIBIB director Dr. Roderic Pettigrew and NIDA director Dr. Nora Volkow. The group also visited NINDS's functional and restorative neurosurgery unit, which is mapping the cognitive and functional networks of the brain.

PHOTOS: ERNIE BRANSON



Leave Bank Enrollment Ends Dec. 14

Open enrollment for the 2016 NIH Leave Bank is under way and will end on Dec. 14. Protecting your income while helping others has never been this easy. Enrollment in the Leave Bank is open to all NIH federal employees. The membership period will begin on Jan. 10, 2016.

The Leave Bank is a pooled bank of donated annual and restored leave available to eligible members. It acts like an insurance policy for your paycheck and amounts to paid leave for members who have exhausted all of their leave and are affected by a personal or family medical emergency.

To become a 2016 member, access ITAS during open enrollment and join under "Leave Bank Membership." If you are currently a 2015 Leave Bank member, your membership will automatically continue into 2016, unless you use ITAS to opt out. The annual membership contribution is one pay period's worth of annual leave accrual (4, 6 or 8 hours).

More information about the benefit can be found at <http://nihleavebank.od.nih.gov>. Questions may be directed to the NIH Leave Bank Office at (301) 443-8393 or LeaveBank@od.nih.gov.

Extramural Deputy Lauer Emphasizes Data-Driven Decisions

BY MANJU SUBRAMANYA

As an academic cardiologist at the Cleveland Clinic in the 1990s, Dr. Mike Lauer was forced to think of measurable outcomes as part of the DNA of the clinic.

“It wasn’t enough to say ‘I am doing a good job as a doctor.’ There had to be a set



of measures to figure out how well I was doing,” said Lauer, an Albany Medical College graduate.

That data-driven approach is what Lauer brings to his new job as NIH deputy director

for extramural research and director of the Office of Extramural Research, where he is responsible for providing grant policies and guidance, ensuring research integrity and compliance and managing the electronic processing of grant applications. With more than 80 percent of NIH’s \$30.3 billion annual budget funding medical research worldwide through grants, steering NIH’s grant portfolio is a huge responsibility.

“Medicine should be a scientific endeavor. So we should apply the same rigorous, scientific approach to how we fund biomedical research,” Lauer said.

“What excites me about OER is that we sit on a massive amount of data. With analysis, we have a great opportunity to take this thinking to a higher level.”

Lauer distinguished himself at NHLBI where, as director of the Division of Cardiovascular Sciences, he and colleagues conducted a data analysis showing that the institute had spent more than \$2 billion on small clinical trials on heart disease that had a poor record of publishing results.

“It raised the question—should we be selective in what we fund?” said the paper’s lead author Dr. David Gordon, with whom Lauer had conducted the analysis. Indeed, NHLBI plans to fund fewer and

more in-depth studies, so that resources can be focused on trials with more meaningful results.

“Although very early in his tenure, Dr. Lauer has already demonstrated great facility with analytics and a strong resolve to using a data-driven approach in all decision-making,” said Dr. Larry Tabak, NIH principal deputy director.

Tabak cited Lauer’s expertise in clinical trials design as another plus.

At NHLBI, Lauer was often tapped for large NIH initiatives—co-chairing a cohort design committee for the Precision Medicine Initiative and helping build PCORnet, a network designed to make clinical research affordable.

Lauer came to NIH in 2007 on the advice of a mentor who told him that NHLBI would be an exciting, vibrant place to work. Lauer, with a busy clinical practice at the Cleveland Clinic and having helped set up a new medical school at Case Western Reserve University, was not so sure.

“NIH was like a black box to me,” he recalled. “I sent in my grant applications, checked off all the boxes and that was it. But when I met with the search committee, I was really taken. I was fascinated by the kind of policy issues [under discussion] and how thoughtful the conversations were.”

Lauer grew up in Philadelphia, the son of a physicist/engineer and a teacher/artist. His father, James Lothar Lauer, had settled there after fleeing Vienna and the Nazis in 1938 and marrying his mother, Stefanie Blank, who had fled Berlin. His younger sister, Ruth Lauer-Manenti, is a well-known yoga teacher and artist known as Lady Ruth. “My credibility at NHLBI shot up after people found out she was my sister,” Lauer said with a chuckle.

As a first grader, Lauer struggled to read. After hearing from a concerned teacher, his parents sat him down and taught him the skill. It was as if a light bulb went on. Given a chapter to read in class, Lauer read the whole book. And when the teacher asked a question, he inadvertently revealed the ending, much to her chagrin and delight.

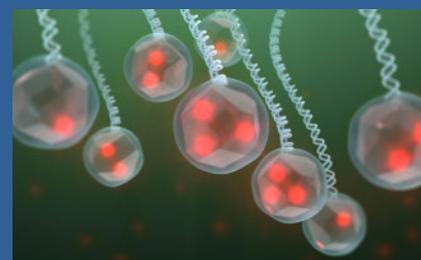
Today, Lauer is a voracious reader, consuming books on economics, public policy, religion and history. He is also a prolific writer, with over 300 scientific papers. He served for 7 years as a contributing editor for the *Journal of the American Medical Association* and wrote a “Today’s News”

internal blog at NHLBI. At OER, he has begun a blog called Open Mike at NIH.

Colleagues acknowledge his intellectual heft and describe him as a fine scientist, a hard worker, a man of wide-ranging interests, open to new ideas, well-liked and a humane boss.

Lauer is married to Dr. Robin Avery (whom he met during his residency at Massachusetts General Hospital), an infectious diseases physician at Johns Hopkins Hospital and expert in transplant-related infections. They have two sons, Nathan, a licensed pilot pursuing aeronautical engineering and computer science at the University of Maryland, and Danny, a junior at Brandeis University studying biology and environmental sciences.

“We have been blessed,” Lauer said. **R**



ON THE COVER: Detail of artwork used on 2013 cover of *Journal of the American Chemical Society* shows functionalized fluorescent nanodiamonds for biological imaging applications.

IMAGE: NIH MEDICAL ARTS

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Gazzaley

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was frustrated with a range of limitations including poor assessment of deficits that took no advantage of available tools, poor targeting (mostly small molecules rather than entire neural networks), lack of a personalized strategy that acknowledged individual variability, a unimodal approach that treated a single drug as a kind of holy grail and an “open loop” of treatment that struck him as a sloppy, repetitive cycle of “make another appointment in a few weeks if you don’t feel better.”

The same issues exist in education, he noted. “This is just not good enough.”

Gazzaley’s goals were treatments that were targeted, personalized, multi-modal and closed-loop (that is, pitting brain vs. machine, with a measureable index of improvement or lack thereof).

The technological revolution of the past 20 years, including virtual reality, motion-capture and artificial intelligence, provides a diverse array of tools that can be used not to entertain or distract, but to heal, Gazzaley realized.

★ ★ ★

*“We are ancient brains,
living in a modern world.”*

—DR. ADAM GAZZALEY

★ ★ ★

Interested in enhancing cognitive control, he sought a way to “flexibly and dynamically interact with reality,” in order to buttress attention, working memory and goal management.

“We are ancient brains, living in a modern world,” he said. “But can we flip this all around” and ultimately elevate our minds?

His hunch was that technology could provide a powerful experience capable of enhancing brain plasticity, via video gaming. Nothing off the shelf—Halo, Call of Duty, Grand Theft Auto—would do. Rather, his lab built closed-loop systems designed to effect specific brain changes and circuits.

They built NeuroRacer, which can be used as both a diagnostic and an intervention. Among its lessons: “Decrements in cognitive control with age are most pronounced

between one’s 20s and 30s.” And, older participants can be trained to get better, and the improvements persist over time.

He says the new “digital medicines” can compete with “the incumbents” (drugs) already. He and colleagues hope to present their tools to the FDA as a new class of therapeutics, with applications targeting such diagnoses as attention deficit disorder, depression, traumatic brain injury, Alzheimer’s disease and autism.

The Neuroscape Lab creates a variety of interactive media to challenge the brain in a particular way, and is able to capture all data in real time, from the whole body, he said.

An app called ACE (adaptive cognitive evaluation) will be able to perform cognitive assessments remotely, Gazzaley said; a 1 million-person study is anticipated, using the tool.

Six new games, he said, are in production. He is particularly fond of a body-brain trainer that includes both cognitive and physical challenges. An avid beta-tester of his own products, Gazzaley said, “It’s incredibly eye-opening. I plan to do it every year.” The benefits, he said, “are unlike any molecule we have right now.”

In collaboration with Grateful Dead drummer Mickey Hart, Gazzaley has developed Rhythmicity, a game designed to improve a person’s rhythm and therefore, it is hoped, cognition.

Another game uses Oculus VR technology, creating an undersea-scape designed to strengthen attention. Gazzaley said 5 manufacturers are poised to deliver VR platforms in time for the holidays. VR, he predicted, will likely dominate 2016 as a gaming environment.

Another game, Meditrain, focuses on meditation and controlled breathing.



Gazzaley is clearly excited about the potential for carefully built games to deliver health benefits. “The real win will happen when we see how they work with one another, in a multi-modal way,” he said.

Not far off are games that will allow users to “navigate through their own brain, with a joystick. It will be very surreal, very fun.”

Decrying the blunt effect of pills, Gazzaley said the therapeutic games he envisions would still be valuable if they only helped patients get by with less medication. But he’s more optimistic, envisioning games that “are like a gamma knife, aimed at specific processes.

“To me, this is the epitome of personalized medicine—functional personalization,” he concluded. “I feel very strongly about the importance of games and fun. What we’re doing is not trivial, just because it’s a game. Humans engage very deeply through play.”

The entire talk is available at <http://videocast.nih.gov/summary.asp?Live=16963&bhcp=1>.

NINR Hosts 30th Anniversary Opening Symposium

The National Institute on Nursing Research recently hosted its scientific symposium Advancing Science, Improving Lives, opening the institute's 30th anniversary year. Nearly 700 individuals registered for the event at Natcher Conference Center.

Said NINR director Dr. Patricia Grady, "We are pleased that so many scientists, students and others from across the country joined us to acknowledge 30 years of nursing science at NIH. We thank NIH director Dr. Francis Collins and so many of our NIH colleagues for marking this important anniversary with us."

In addition to Collins, who gave the first keynote address of the day, were other keynoters Dr. Deborah Trautman, CEO of the American Association of Colleges of Nursing; Dr. Joe Selby, executive director of the Patient-Centered Outcomes Research Institute; and Dr. Hannah Valantine, NIH chief officer for scientific workforce diversity.

Director of ceremonies Bill Novelli of the McDonough School of Business at Georgetown University emphasized the importance of nurses in the global research enterprise. "NINR and nurse scientists play a pivotal role at NIH and in research circles across the country and around the world," he said. Novelli noted his own commitment to the field of nursing, including his service on the Institute of Medicine report *The Future of Nursing: Leading Change, Advancing Health*.

Collins' schedule is always packed and the day of the NINR symposium was no exception. Arriving with "split-second timing" for his keynote address after making a cross-campus rush, he noted that "there has hardly ever been a time with as much excitement and buzz about progress in biomedical research as there is right now." He praised NINR's accomplishments and its role in cross-institute collaborations to advance NIH's mission.

In her address on the many ways in which diversity enhances the research enterprise, Valantine put a new spin on an old saying: "Great minds think differently." She described programs at NIH that are designed to promote diversity among research scientists and thanked NINR for its participation in them.

NINR invited experts on the institute's key themes of wellness, self-management, symptom science and end-of-life/palliative care to present their research. The symposium also featured scientific posters from 139 researchers, selected from more than 400 submissions. Topics included pain, chronic illness, cancer care and mHealth, among many others.

"At our 25th anniversary symposium just 5 years ago, our poster session had only 82 posters,"



At left, NINR director Dr. Patricia Grady presents Dr. Xiaomei Cong with the award for best poster in the New Investigator category. At right, Dr. Hannah Valantine, NIH chief officer for scientific workforce diversity, told the audience, "Great minds think differently."

PHOTOS: ERNIE BRANSON



Grady noted. "This increase is a reflection not only of the growth and interest in the field of nursing science, but also of the depth and breadth of the research in the field."

NINR was founded following a 1983 report by the Institute of Medicine recommending inclusion of nursing research in the mainstream of biomedical and behavioral science. The Health Research Extension Act of 1985 authorized the National Center for Nursing Research at NIH. Dr. Ada Sue Hinshaw became NCNR's first permanent director in 1987. NCNR later achieved institute status, and in 1995, Grady became NINR director—a position she still holds.

Though anniversaries are a natural time to reflect on the events that have led us to this point, Grady seized the opportunity to envision the future: "It is with great optimism and enthusiasm that I look forward to the challenges and opportunities that we'll face together as we continue to advance science and improve lives." **R**



'Jean Jacket Day' Supports CFC

Team sports jerseys were not the only way for NIH'ers to show their support of the 2015 Combined Federal Campaign. Members of the Information Resources Management Branch, NINDS, recently decided to have a "Jean Jacket" day to promote CFC awareness. Staff gathered in the back parking lot at 6101 Executive Blvd. to demonstrate their dedication. "Along with building camaraderie, we thought it would also be a good cause," said Sue Titman, deputy chief of the branch.



Dr. John Cryan (l) is greeted by NCCIH deputy director Dr. David Shurtleff.

PHOTOS: BRYAN EWSICHEK

Cryan

CONTINUED FROM PAGE 1

or the community of microbes that live in and on our bodies, has expanded in interest beyond scientific circles to the public in the past few years. While the microbial cells in our bodies outnumber our human cells by about 10 to 1, they have been largely unstudied until recently. One major effort close to home has been the NIH Common Fund Human Microbiome Project to characterize human “microbiota” (i.e., the microorganisms in a specific region) and their role in human health and disease. Today, work is going on around the globe to explore the microbiome, its interactions and effects and potential approaches to manipulate it for health benefits, as with probiotics.

Probiotics are live microorganisms that, when administered in adequate amounts, confer a health benefit on the host. The idea that probiotics could improve health is not a new one, Cryan noted. “Most of the things we call ‘probiotics’ today are not really probiotics, because they have not been proven to have a known health benefit.” He summarized work by his team and others on some specific strains of “friendly” bacteria, as might be found in fermented foods.

Gut bacteria, said Cryan, are “little factories” that not only digest food and vitamins, but also “pump out all sorts of substances depending on the substrates [base materials] they have,” from short-chain fatty acids, to neurotransmitters, to novel “neuroactives” not yet described or discovered. These metabolites produce chemicals that can

influence the brain, the body (e.g., the immune and hormonal systems) and behavior, though many specifics as to how are not yet known. Among Cryan’s accomplishments has been identifying that microbiota-brain communication is a two-way street in which the vagus nerve is central: “As we like to say, ‘what happens in vagus’ affects your emotions.”

Stress and how it affects the brain and body—as well as related problems such as anxiety, depression, irritable bowel syndrome

and drug dependence—are his lab’s major focus, because “stress has wide-scale effects in the body, including on the gut,” Cryan said. “In our pro-stress Western world, the incidence of stress-related disorders is increasing. Looking for novel ways to intervene to manage and treat those symptoms is very important.”

• • •
“We’re beginning to see, as in Pinocchio, a kind of puppet and puppeteer relationship, especially early in life, between the brain and microbiome.”

—DR. JOHN CRYAN

• • •
Cryan described some of his better-known studies in animals. For example, in a controlled study in healthy mice published in 2011, his team fed one group plain broth and the other group the same broth infused with *Lactobacillus rhamnosus* bacteria. He found that the infused broth modulated the gut microbiota; produced an array of neurochemical changes, including to neurotransmitter receptors in the brain (e.g., receptors for GABA, which are targeted by anti-anxiety drugs); and reduced anxious and depressed behavior.

A specialized, 100 percent sterile facility in Cork has made it possible for the team to study specific questions about disorders in germ-free animals (who lack normal gut

microbiota) over time. Autism, for example, interests them, as it has a strong incidence of gastrointestinal symptoms. It is a genetic disorder, Cryan said, but it might be possible to affect some of autism’s symptoms by targeting the microbiome.

In one study, his team took mice raised germ-free and studied their social patterns. Normal, healthy mice are social animals, but the germ-free mice preferred to isolate rather than socialize with other mice and to not socialize with new mice, versus the ones they knew. The germ-free mice also showed more repetitive behaviors. “It tells us,” Cryan said, “that for normal social responding, we need the appropriate repertoire of bacteria in our gut. This is also in line with the growing body of literature and other emerging autism models that the microbiome is at play.”

Cryan has identified several “critical windows” for gut microbiota development and in which it might be most possible to transform them: early life, adolescence and old age. But, “on the whole, it’s the early-life period that’s instrumental for informing the microbiome composition, which informs our immune system and may shape aspects of brain development as well,” he said.

• • •
People receive their gut microbiome at birth, in a kind of “priming”—from their mother if a vaginal birth, or from skin and the birthing environment (like a hospital) if by Caesarean section. The latter mode of delivery creates “quite a different microbiome,” Cryan said, that makes people respond to stress differently throughout life, e.g., with higher levels of anxiety or depression. However, he added, many other early-life factors also affect the gut microbiome and rewire gut-brain signaling, including diet; exposure to antibiotics; hospitalization; stress, disease and/or infections in the mother; gestational age; and even where one lives (e.g., a “green environment” or an inner city).



Gut check time: Cryan discusses the microbiome.

Elderly people's microbiomes are being studied, too. Changes in the microbiome in this age group have been correlated with negative changes in functional outcomes such as frailty, cognitive function and inflammation, Cryan said. This was seen in a study by his colleague Paul O'Toole at Cork, when participants moved from life in their regular community to a nursing home or "rehab." Why did their health worsen? The answer was diet: the participants had eaten a more diverse, less-processed diet before they entered the care facility; this gave them a more diverse microbiome. Cryan's team has found that another factor, chronic stress, "adds fuel to the fire" of the normal aging process and may give rise to some conditions commonly seen in this population such as cognitive impairment, anxiety, depression and social isolation. Currently, he is looking at behavioral changes at older ages in animals and whether there is a relation to microbiome changes.

Cryan and his colleagues Ted Dinan and Catherine Stanton in Cork have coined a term, "psychobiotics," to describe probiotics in which the intended benefits are to mental health. "Small studies [in this area] have been emerging and more are coming," he said. His team is studying it in the context of stress-related and neurodevelopmental disorders. In a controlled study in healthy mice, for example, one group of mice received a *Lactobacillus rhamnosus* probiotic for several weeks. Compared to non-probiotic controls, the stressed mice "were more chilled out," said Cryan. "They behaved as if they were on Valium or Prozac," showing reduced anxiety and behavioral despair. Changes were seen in their physiology and neurochemistry that were not seen in controls. Another study found lower anxiety and improved working memory in mice who

had received a bifidobacteria supplement.

But Cryan cautioned against jumping to conclusions about benefits to humans from any of these approaches using lactic acid bacteria. The vast majority of studies so far have been in animals. Human studies are in early stages and "black boxes" exist—for example, how bacteria in the gut potentially signal the brain.

Cryan closed with another strategy to manipulate the microbiome: fecal transplantation. Yes, it is what it sounds like: transplanting the intestinal bacteria in fecal matter from one individual to another. "It might not sound that great," Cryan said. "But if you had *Clostridium difficile*, a hospital-borne infection, you would [take it], because [it has shown] a 90-percent success rate. People are looking at newer, more aesthetically pleasing ways to deliver this 'new old' medicine. Does it have any effect on brain health? I'm not aware of any human data and I'm scared to see what I might find on YouTube."

In an animal study, Cryan said, Dr. Stephen Collins at McMaster University took two strains of mice with different microbiomes and different behaviors and performed fecal transplants between groups. Post-transplant, each group switched behaviors to those of the opposite group on specific tasks related to anxiety or cognition. So, Cryan suggested, "If you have to get a fecal transplant, in addition to having the donor worked up for infectious disease, you might want to get a good psychological profile of him or her, just in case."

He concluded, "My message today is that your state of gut will affect your state of mind. To have a healthy brain, we may need a healthy gut. We're beginning to see, as in Pinocchio, a kind of puppet and puppeteer relationship, especially early in life, between the brain and microbiome... In the 20th century, all the focus in microbial medicine was on killing [microbes] with antibiotics and saving lives at the same time, which was great. But now we can really appreciate the importance of the microbiome in having a beneficial effect on health, including brain health."

Cryan's lecture can be viewed at <http://videocast.nih.gov/Summary.asp?File=19216&bhcp=1>. NCCIH's portal of science-based information on probiotics is at <https://nccih.nih.gov/health/probiotics>. 

Mider Lecture Features NIAID Immunologist Germain, Dec. 9

Dr. Ronald Germain, chief of the Laboratory of Systems Biology and the lymphocyte biology section at the National Institute of Allergy and Infectious Diseases and



associate director, Trans-NIH Center for Human Immunology, Autoimmunity and Inflammation, will deliver the annual G. Burroughs Mider Lecture as part of the 2015–2016 NIH Director's Wednesday Afternoon Lecture

Series. His talk, "Imaging Immunity," will be held on Dec. 9, 3–4 p.m. in Masur Auditorium, Bldg. 10.

Germain received his M.D. and Ph.D. from Harvard University in 1976, the latter degree for research with Baruj Benacerraf, recipient of the 1980 Nobel Prize in physiology or medicine. Since that time, Germain has investigated basic immunobiology, first on the faculty of Harvard Medical School and since 1982 at NIH. He sits on several academic scientific advisory boards and co-founded the NIH immunology interest group and NIH systems biology interest group. Germain and his colleagues have made key contributions to our understanding of major histocompatibility complex class II molecule structure-function relationships, the cell biology of antigen processing and the molecular basis of T cell recognition. More recently, his laboratory has been focused on the relationship between immune tissue organization and dynamic control of adaptive immunity at both the initiation and effector stages.

Germain's lecture will have many fascinating images of the immune system. The immune system has three major components involving barrier function, innate immunity and adaptive immunity; his talk will integrate information on all three levels to develop a comprehensive picture of how the immune system operates to provide host protection against infection.

The Mider lecture, established in 1968, recognizes an NIH intramural scientist's outstanding contributions to biomedical research and honors the first director of NIH laboratories and clinics. For lecture information and reasonable accommodation, contact Jacqueline Roberts, (301) 594-6747 or robertsjm@mail.nih.gov.



Strain says heroin use seems to be on the rise.

PHOTOS: ERNIE BRANSON

Painkillers

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said Strain, director of the Center for Substance Abuse Treatment and Research and executive vice chair of Johns Hopkins Bayview Medical Center's department of psychiatry and behavioral sciences.

Heroin and prescription painkillers are opioids, he explained. Both decrease pain. Opioids attach to proteins called opioid receptors. These proteins can be found in the brain, spine and gastrointestinal tract. When taken as prescribed, opioid painkillers can safely and effectively manage pain. When abused, high doses of opioids can cause severe respiratory depression and death.

Opioid use may lead to addiction or physical dependence. Physical dependence is not the same as addiction, Strain said. Patients with cancer pain who take opioids, for example, may experience physical withdrawal symptoms if they forget to take their dose. These patients do not exhibit the signs of addiction, which is the compulsive use of a substance that may interfere with work and other life activities.

In the late 1990s and early 2000s, doctors began aggressively treating chronic pain with opioids, Strain said. These drugs were also aggressively marketed. As a result, more people began taking painkillers. With increased use came potential for misuse. In 2000, 2.78 million people admitted to misusing prescription painkillers within the past month. By 2012, that number had risen to 4.82 million.

According to the most recent data from the federal National Survey on Drug Use and Health (NSDUH), 4.33 million people admit to misuse. "It appears that we're seeing some stabilization or even a decrease in prescription opioid misuse," Strain said.

• • •
"It appears that we're seeing some stabilization or even a decrease in prescription opioid misuse."

-DR. ERIC C. STRAIN

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States such as Maryland require doctors to take continuing medical education courses on the prescription of opioids. Strain noted that it appears that providers are appropriately becoming more careful about prescribing opioids and noted that his own recent experience with a dental procedure provided an example of this.

However, the most recent information from NSDUH indicates what Strain called a "worrisome" rise in heroin use. He encouraged the audience to focus not on the absolute numbers when looking at NSDUH results, but rather the change over time. Between 2013 and 2014, people who admitted to heroin use within the past month increased from 681,000 to 914,000.

"This suggests to me that we're seeing a shift from prescription painkillers to heroin," he said.

There are four FDA-approved drugs used to treat problematic opioid use (or opioid addiction) and that help users to stop using heroin or prescription painkillers.

Two common medications used to treat opioid use disorders are buprenorphine and methadone. A third is LAAM (not currently marketed in the U.S.) and the fourth is naltrexone, an opioid antagonist. Buprenorphine and methadone are well-studied and offer "a great value to people who suffer from" opioid use disorders. Strain reported that at least 300,000 patients are taking buprenorphine, but said he has heard estimates that this number may be considerably higher. He added that at least 250,000 patients are taking methadone in the U.S.

Buprenorphine is usually taken once daily in tablet or film form, which resembles a mouthwash breath strip. It can be prescribed in an office setting, provided a physician has been authorized by the Drug Enforcement

Agency to prescribe it.

Strain called it a partial agonist, which means buprenorphine reduces withdrawal symptoms by blocking opioid receptors without activating them. Methadone, on the other hand, is an agonist, which activates opioid receptors.

Buprenorphine tablets and the film could be dissolved and injected. However, most tablet forms typically contain naloxone (an opioid antagonist), and if dissolved, "would precipitate withdrawal." Strain said it makes the user sick. "It's gotten out in the [drug] culture that it's not something to do," he said.

Methadone has been in use since the 1960s. By law, it only can be given through an opioid treatment program, Strain said. Patients must be part of a program to receive a dose. They also receive behavioral therapy such as counseling or social support.

When used correctly, these drugs can help people stop using heroin and prescription painkillers by suppressing withdrawal symptoms and opioid cravings over time and blocking the effects of other opioids.

Contingency management therapy—a behavioral therapy that can be used as a positive incentive approach to assist in motivating patients to follow their treatment plan—is another strategy that can be "a powerful and strong incentive" when used with treatments like methadone. For example, if patients meet their treatment goals they might be able to take their dose without visiting a program.

Strain concluded that public health officials are using the strategies of providing pharmaceutical and non-pharmaceutical treatment and training for physicians who prescribe opioids in hopes of reducing heroin use and prescription painkiller misuse and abuse. **R**

NIAMS Director Katz Awarded Honorary Doctorate

In recognition of his contributions to the field of dermatology, NIAMS director Dr. Stephen Katz (c) recently received the degree of doctor of science *honoris causa* from University College Dublin (UCD), Ireland. The ceremony took place at the 1st International Symposium on Future in Dermatology: Inflammation in Dublin, where Katz delivered the lecture, "The Future of Dermatology in the 21st Century." Katz is joined by UCD Prof. Frank Powell (l) and UCD president Prof. Andrew Deeks.



Large Study Compares Two CPR Methods Used By EMS

In a study published online Nov. 9 in the *New England Journal of Medicine*, researchers found that cardiopulmonary resuscitation (CPR) administered by emergency medical services (EMS) providers following sudden cardiac arrest that combines chest compressions with interruptions for ventilation resulted in longer survival times and shorter hospital stays than CPR that uses continuous chest compressions. Although compressions with pauses for ventilation lead to more hospital-free days within 30 days of the cardiac arrest, both methods achieved similar overall survival to hospital discharge, the study noted.

The compressions with interruptions consisted of 30 compressions then pauses for two ventilations. The continuous chest compressions consisted of 100 compressions per minute with simultaneous ventilations at 10 per minute. In both groups, EMS providers gave ventilations using a bag and mask.

The study, funded in part by NHLBI, is the largest of its kind to date to evaluate CPR practices among firefighters and paramedics and suggests the importance of ventilation in CPR by EMS providers, the investigators say.

“Current CPR guidelines permit use of either continuous chest compressions or interrupted chest compressions with ventilations by EMS providers,” said principal author Dr. Graham Nichol of the University of Washington-Harborview Center for Prehospital Emergency Care in Seattle. “Our trial shows that both types of CPR achieve good outcomes, but that compressions with pauses for ventilations appears to be a bit better.”



10 Percent of U.S. Adults Have Drug Use Disorder at Some Point in Their Lives

A survey of American adults revealed that drug use disorder is common, co-occurs with a range of mental health disorders and often goes untreated. The study, funded by NIAAA, found that about 4 percent of Americans met the criteria for drug use disorder in the past year and about 10 percent have had drug use disorder at some time in their lives.

“Based on these findings, more than 23 million adults in the United States have struggled with problematic drug use,” said NIAAA director Dr. George Koob. “Given these numbers, and other recent findings about the prevalence and under-treatment of alcohol use disorder in the U.S., it is vitally important that we continue our efforts to understand the underlying causes of drug and alcohol addiction, their relationship to other psychiatric conditions and the most effective forms of treatment.”

A diagnosis of drug use disorder is based on a list of symptoms including craving, withdrawal, lack of control and negative effects on personal and professional responsibilities. The fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5) no longer uses the terms abuse and dependence. Instead, DSM-5 uses a single disorder rated by severity (mild, moderate and severe) depending on the number of symptoms met. Individuals must meet at least two of 11 symptoms to be diagnosed with a drug use disorder.

Lucentis Found Effective for Diabetic Retinopathy

A clinical trial funded by NEI has found that the drug ranibizumab (Lucentis) is highly effective in treating proliferative diabetic retinopathy (PDR). The trial, conducted by the Diabetic Retinopathy Clinical Research (DRCR) Network, compared Lucentis with a type of laser therapy called panretinal or scatter photocoagulation, which has remained the gold standard for PDR since the mid-1970s. The findings demonstrate the first major therapy advance in nearly 40 years.

“These latest results from the DRCR Network provide crucial evidence for a safe and effective alternative to laser therapy against proliferative diabetic retinopathy,” said NEI director Dr. Paul Sieving. Results were published online Nov. 16 in the *Journal of the American Medical Association*.

Treating abnormal retinal blood vessels with laser therapy became the standard treatment for PDR after NEI announced results of the Diabetic Retinopathy Study in 1976. Although laser therapy effectively preserves central vision, it can damage night and side vision; so, researchers have sought therapies that work as well or better than laser but without such side effects.

A complication of diabetes, diabetic retinopathy can damage blood vessels in the light-sensitive retina in the back of the eye. As the disease worsens, blood vessels may swell, become distorted and lose their ability to function properly. About 7.7 million U.S. residents have diabetic retinopathy, a leading cause of blindness among working-age Americans. Among these, about 1.5 percent have PDR.

Birx To Give NIAID Kinyoun Lecture, Dec. 15

Ambassador-at-large Dr. Deborah Birx, a renowned HIV/AIDS expert, will deliver the 2015 Joseph J. Kinyoun Memorial Lecture on Tuesday, Dec. 15 at 3 p.m. in Lipsett Amphitheater, Bldg. 10. She will discuss how data are being leveraged to save lives and drive progress toward sustained control of the global HIV/AIDS pandemic.

Birx is the U.S. global AIDS coordinator and U.S. special representative for global health diplomacy. She oversees implementation of the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR), the largest commitment to combat a single disease by any nation in history.



PEPFAR collects and analyzes data to understand health care service cost, quality and achievements at community care sites around the globe. Birx will describe how use of these detailed data has been critical for understanding local HIV prevalence, determining the quality and cost of services and defining key gaps. She will discuss how PEPFAR is working with host countries to use these data to refocus programs for maximal impact.

Over the past 30 years, Birx has focused on HIV/AIDS immunology, vaccine research and global health. As director of the U.S. Military HIV Research Program, she helped lead the landmark RV144 HIV vaccine trial in Thailand, which provided the first evidence that a vaccine could provide protection against HIV infection. From 2005 to 2014, as director of the Division of Global HIV/AIDS at CDC, Birx led the agency’s implementation of PEPFAR programs around the world.

Since 1979, NIAID has hosted an annual public lecture in honor of Kinyoun, a pioneer of modern scientific research. He founded the Laboratory of Hygiene, the forerunner of NIH, in 1887, launching a new era of scientific study of infectious diseases.

People with Skin Condition Needed

A research team with NCI is testing whether the medication anakinra is an effective therapy to treat adults with pustular skin diseases. If you have an inflammatory pustular skin condition, you may be interested in participating. For more information, call 1-866-444-2214 (TTY 1-866-411-1010) and refer to study 13-C-0071.

Reed Is CSR Division Director

Dr. Bruce Reed has joined the Center for Scientific Review as director of its Division of Neuroscience, Development and Aging. He comes from the University of California, Davis, where he has been a professor of neurology and associate director of its NIH-funded Alzheimer's Disease Center as well as a neuropsychologist at Veterans Affairs Northern California in Martinez.

"The search committee and I were compelled by Dr. Reed's impressive expertise and experience," said CSR director Dr. Richard Nakamura. "He is a well-published neuroscientist in a variety of fields including Alzheimer's and he has significant management experience." Nakamura noted that Reed also brings valued extramural perspectives, including those of a long-time reviewer. He also has served as chair of CSR study sections on adult psychopathology and disorders of aging and clinical neuroscience and neurodegeneration.

Reed earned his Ph.D. from the State University of New York at Stony Brook School of Medicine and he did his postdoctoral training at Braintree Hospital in Massachusetts, in conjunction with Tufts New England Medical College and Boston University Medical College.

His research has expanded our understanding of risk factors—especially vascular factors—that accelerate cognitive decline in old age, as well as factors such as cognitive reserve that protect against decline. He is an expert in neuropsychological and brain imaging methods and he has extensive experience in the use of demographically diverse aging cohorts to better understand the heterogeneity of cognitive aging.

Helzlsouer Named Associate Director of NCI Division

Dr. Kathy Helzlsouer has been named an associate director and chief medical officer in NCI's Division of Cancer Control and Population Sciences (DCCPS). She will direct the Epidemiology and Genomics Research Program, which includes



Dr. Bruce Reed



Dr. Kathy Helzlsouer

the Office of the Associate Director, Clinical and Translational Epidemiology Branch, Environmental Epidemiology Branch, Genomic Epidemiology Branch, Methods and Technologies Branch and Risk Factor Assessment Branch.

Dr. Robert Croyle, DCCPS director, said, "Dr. Helzlsouer is a highly accomplished epidemiologist and clinician with a broad vision of cancer epidemiology, prevention and control. She brings a valuable blend of medical, scientific and leadership skills, which will be a strong asset for NCI and DCCPS."

Helzlsouer is board-certified in medical oncology. Prior to joining NCI, she was a professor in the department of epidemiology at Johns Hopkins Bloomberg School of Public Health. Since 2004, she directed the Prevention & Research Center, which she established at Mercy Medical Center in Baltimore. Helzlsouer led a team of health care specialists in cancer risk assessments, clinical research and support programs for cancer patients and their families. She also is an associate editor of the *Journal of the National Cancer Institute* and a member of NCI's PDQ screening and prevention editorial board.

Her research interests are focused in cancer etiology and prevention, cancer survivorship and clinical and translational research. Helzlsouer is a recipient of the Martin D. Abeloff Award for Excellence in Public Health and Cancer Control for her service on the Maryland State Council on Cancer Control.

Helzlsouer completed her M.D. at the University of Pittsburgh School of Medicine, her internal medicine residency at the University of Virginia and her medical oncology fellowship at Johns Hopkins University. She also earned a master of health science at Johns Hopkins University.

Gammie Appointed Director of NIGMS Division

Dr. Alison Gammie recently joined NIGMS as new director of its Division of Training, Workforce Development and Diversity (TWD).

TWD is the focal point for NIGMS programs aimed at developing a strong and diverse biomedical research workforce. The division supports a variety of research training, career development and diversity-building activities at the undergraduate through faculty levels. In addition, it manages the NIH Common Fund initiative on Enhancing the Diversity of the NIH-Funded Workforce.



Dr. Alison Gammie

"NIGMS has a deep and long-standing commitment

to research training, workforce development and diversity," said NIGMS director Dr. Jon Lorsch. "Dr. Gammie's experience in research, teaching, mentoring and outreach, coupled with her vision and energy, position her exceptionally well to lead our broad range of TWD activities."

Before coming to NIGMS, Gammie was a senior lecturer in the department of molecular biology at Princeton University, where she also directed the Program for Diversity and Graduate Recruitment in Molecular and Quantitative Biology and served on a number of diversity-related committees. In addition, she led the university's Summer Undergraduate Research Program in Molecular and Quantitative Biology and was an associate clinical member at the Cancer Institute of New Jersey. Gammie's research focused on understanding how defects in DNA mismatch repair lead to cancer.

Gammie said she comes to NIGMS "with the hope of making changes on a national level such that the biomedical research workforce reflects the diversity found in our country." Among her priorities: "encouraging excellence in training, promoting the full range of scientific career possibilities for trainees and stimulating successful strategies to increase diversity in the biomedical research workforce."

Gammie earned a B.A. in biology from Reed College and a Ph.D. in molecular biology from Oregon Health & Sciences University. She conducted postdoctoral research at Princeton University. Among her honors are the American Society for Microbiology's William A. Hinton Research Training Award and mentoring and teaching awards from Princeton.

Plude Named Associate Director of CSR Division

Dr. Dana Plude has joined the Center for Scientific Review as associate director of its Division of Receipt and Referral. He will also serve as CSR's new research integrity officer.

"We're pleased Dr. Plude has agreed to take on these important responsibilities," said Dr. Richard Nakamura, CSR director. "He has extensive experience adroitly serving the scientific community while navigating complex scientific and administrative situations. This experience will be invaluable as he helps to coordinate the referral of incoming NIH grant applications to CSR peer review groups and NIH institutes and centers and as he investigates allegations of misconduct by researchers and reviewers."

Plude has been chief of CSR's biobehavioral and



Dr. Dana Plude

behavioral processes integrated review group (IRG) and scientific review officer for its cognition and perception study section. He also has been acting chief of CSR's population sciences and epidemiology IRG.

"His exceptional abilities have been proven over and over again," said Nakamura. He noted that Plude has—at different times—served as acting director of CSR's Division of AIDS, Behavioral and Population-based Studies and as acting extramural research integrity officer for NIH's Office of Extramural Research.

During his 13-year tenure at CSR, Plude also served as a referral officer and a scientific review officer for small business and special emphasis panels in the biobehavioral and behavioral processes IRG.

Before joining CSR, he was associate professor and associate chair in psychology at the University of Maryland for 17 years. He earned a Ph.D. in psychology from Syracuse University, where he specialized in lifespan development and mental function in the elderly. His basic and applied research centered on aging, selective attention and memory.

NINDS's Reich Honored by ANA

Dr. Daniel Reich, chief of the translational neuroradiology unit in the NINDS Division of Neuroimmunology and Neurovirology Branch, recently received the Derek Denny-Brown Young Neurological Scholar Award from the American Neurological Association (ANA) in Chicago.

The award—ANA's most prestigious honor—recognizes early- to mid-career neurologists and neuroscientists in the first 10 years of their career who have made outstanding basic and clinical scientific advances toward the prevention, diagnosis, treatment and cure of neurological diseases.

The award is named for Dr. Derek Denny-Brown, a pioneering neurologist who was instrumental in making neurology an independent and highly respected field of medicine. During his career, Denny-Brown trained more than 300 neurologists and his research greatly contributed to understanding many neurological disorders. He served as ANA president from 1959 to 1960, and as a Fogarty scholar-in-residence at NIH in 1972.

Reich, a tenure-track investigator, was acknowledged for his work on developing new, advanced magnetic resonance imaging techniques to understand the origins of disability in multiple sclerosis and related disorders and discovering ways to apply those methods to patient care and clinical trials of new drugs.



Dr. Daniel Reich

"The Denny-Brown award is a great honor for me personally, but earning it is really a testament to the fantastic team approach in our clinical neuroimmunology group at NINDS," said Reich. "I also think it is a recognition that modern imaging tools are not only useful for clinical purposes, but they can allow us to approach biological mechanisms of brain diseases in living people. In some ways, this idea has become the centerpiece of my career."

Reich earned his doctorate in visual neurophysiology from the Rockefeller University in 2000 and his medical degree from Cornell University in 2002. He completed residencies in neurology and diagnostic radiology and a clinical fellowship in neuroradiology at Johns Hopkins Hospital. Before coming to NIH, Reich performed postdoctoral research at Hopkins, during which he applied MRI—particularly diffusion-weighted imaging—to study MS.—**Shannon E. Garnett**



Vickie Southers

Southers Moves to NIGMS as Deputy EO

Vickie Southers was recently appointed deputy executive officer of NIGMS. In her new position, she works closely with the NIGMS executive officer to manage the institute's administrative policies, planning and operations, including those related to

acquisitions, financial management, information technology, management analysis, human capital and ethics.

Prior to joining NIGMS, Southers worked in the Office of Human Resources as chief of the Workforce Enhancement Branch. In that role, she oversaw or managed a number of major NIH human relations activities including the honorary awards, employee engagement, mentoring and competencies programs. She also spearheaded the development of the NIH onboarding program and the restructuring of the NIH new employee orientation. Southers has a B.A. in government and political science from George Mason University and certifications in workforce development and strategic workforce planning.

NIH Communicator Moore Mourned

Guy W. Moore, 93, who retired in 1979 as chief of the News Branch in the Office of the Director, died on Nov. 13.

Moore came to NIH in 1960 as deputy director of the information office in the Division of General Medical Sciences after having served as the first information officer of the Medical Research and

Development Command of the Army's Office of the Surgeon General. Following his retirement from NIH, he wrote *The NIH: How It Works*, published by Science and Health Publications in 1980.

Moore was born in Retta, Okla. He earned both his B.A. (radio-journalism, 1950) and his M.A. (history, 1952) from the University of Oklahoma.

His master's thesis, slightly recast, was published by the University of Oklahoma Press in 1954 as *The Case of Mrs. Surratt*. The book was an account of the controversial trial and execution of Mary Surratt for her alleged involvement in the assassination of President Abraham Lincoln.

Moore entered the U.S. Civil Service in 1944 in military intelligence with the Army Signal Corps. After World War II, he was stationed in the American embassy in Montevideo, Uruguay. After returning to Washington, D.C., in 1946, he married Hazel Avenell Cartwright of Arlington, Va., in 1948. She died in 1986.

Moore is survived by two daughters, Anne Tarquinio of Rockville and March Moore of Bethesda; and five grandchildren.

A longtime astronomer, Moore was a member of the Northern Virginia Astronomy Club and contributed his observations to *Sky and Telescope*. Also an avid birdwatcher, he belonged to the Northern Virginia Bird Club and participated in the National Audubon Society's annual bird count for many years. **R**

VOLUNTEERS SOUGHT

Study Seeks Healthy Older Adults

Healthy older adults ages 55-75 are invited to participate in an outpatient research study investigating the benefits of omega-3 oil and blackcurrant supplements on vascular health. The goal of the study is to determine whether the supplements improve blood flow and blood vessel function that can affect your heart. Eligible participants must be medication-free and in good general health. The study will be carried out in an outpatient clinic and includes 4 visits over 6 months. Compensation is provided. For more information, call 1-800-411-1222 (TTY 1-866-411-1010) and refer to study 14-NR-0034.

Patients with Hepatitis Needed

NIDDK is seeking patients, 18 years and older, with hepatitis D infection to participate in a study determining whether the use of 2 medications can help to treat chronic hepatitis D infection. Study duration is 48 weeks, with both an inpatient stay and outpatient visits at the Clinical Center. For more information, contact the Office of Patient Recruitment, 1-866-444-2214 (TTY 1-866-411-1010). Refer to study 15-DK-0170.

Improved Bikeways May Lure More Out of Cars

There are at least three mental approaches to bicycle commuting, according to transportation planners. There is the 1 percent who are considered “strong and fearless.” There are 30 percent who say “No way, no how.” And about 60 percent describe themselves as “interested, but concerned.”

It is the latter category that tantalizes both the NIH Bicycle Commuter Club and the Montgomery County planning department, whose representative David Anspacher addressed NIH’ers Nov. 18 in Bldg. 35.

“Our goal is to increase the number of commuters on bicycles,” said Dr. Vernon Anderson, chair of the NIHBC.

Some coming improvements might accomplish club goals. A new Bikeshare dock is slated to be set up near the Gateway Center at the Medical Center Metro station, said Joe Cox, chief of transportation services in the Office of Research Services. And an underground pedestrian tunnel will be built, starting this winter, under Rockville Pike at the Metro station, to make crossing busy MD 355 much safer.

Additionally, dedicated bike lanes—separated from vehicle traffic—are planned for both the White Flint sector north of NIH and at the Shady Grove Life Sciences Center, where NCI has a major presence.

‘Confronting Violence, Improving Women’s Lives’ Opens at NLM

The National Library of Medicine recently opened a display, *Confronting Violence, Improving Women’s Lives*, which is open to the public in the History of Medicine Division in Bldg. 38 until Aug. 19, 2016. The display is also the subject of a companion web site and traveling banner display.

The display details the history of nursing in relation to domestic violence and related research. Activists and reformers in the United States have long recognized the harm of domestic violence and sought to improve the lives of women who were battered. During the late 20th century, nurses took up the call. They worked to reform a medical profession that failed to acknowledge violence against women as a serious health issue. Beginning in the late 1970s, nurses were in the vanguard as they pushed the larger medical community to identify victims, adequately respond to their needs and work toward the prevention of domestic violence. *Confronting Violence* was developed by the Exhibition Program at NLM and guest curated by Dr. Catherine Jacquet, an assistant professor of history and women’s and gender studies at Louisiana State University.

Kimberly Suiters from ABC 7/WJLA-TV emceed the opening event. Acting NLM Director Betsy Humphreys welcomed attendees and acknowledged the accomplishments of the nurses



NIH bicycle commuters can look forward to installation of a Bikeshare dock near the Medical Center Metro station.

The model for these improvements is the \$56 million Indianapolis Cultural Trail, Anspacher said.

The county is in the midst of revising a decade-old Bicycle Master Plan, he explained. While the first county bike plan was created in 1978, the current master plan—intended to last for 20 years—needs updating at the halfway point. “This will be our first set of consolidated recommendations since 2005,” Anspacher said.

The project began in July and is slated to last 2 years. Five public meetings were held during the

fall to acquaint citizens with details.

The plan’s major goals are to recommend bikeways and to identify long-term bike parking locations, Anspacher said. “Our goal is to eventually have bike parking at all Metro stations.”

The plan will not design new bikeways, change speed limits or enforce roadway laws, he cautioned.

Meeting attendees—many of whom seemed to be hardy 1 percenters—made numerous comments about NIH-specific issues, including the abrupt removal, without warning, of safe bicycle access to the west side of campus due to an expansion of

Suburban Hospital on Old Georgetown Rd.

Anspacher concluded his presentation with assurances that Montgomery County leadership has never been more enthusiastic about promoting bikeways and is determined that the county will eventually be a national leader in the field.

To keep abreast of the county’s Bicycle Master Plan, follow it on Twitter: @MCBikePlan or register for email updates at montgomeryplanning.org/bikeplan.—**Rich McManus**



On hand at the opening of the new NLM display were (from l) Betsy Humphreys, acting NLM director, and nurses Dr. Barbara Parker, Dr. Jacquelyn Campbell, Dr. Doris Campbell and Dr. Daniel Sheridan, along with exhibition curator Dr. Catherine Jacquet, ABC 7’s Kimberly Suiters and Patricia Tuohy, head of NLM’s Exhibition Program.

PHOTO: LISA HELFERT

highlighted in the exhibition. “You don’t solve a problem by turning your head aside and ignoring it,” she said. “We’re very lucky to have people here today who didn’t turn their heads aside and actually went to work on an important problem.”

Dr. Jacquelyn Campbell, professor at Johns Hopkins School of Nursing and one of the early pioneers in domestic violence nursing, was the first nurse to speak. She lauded the work NIH has done in supporting domestic violence research and noted the increasing success in outcomes of connecting battered women with the help they need.

She remarked on new inquiries into traumatic brain injury and HIV prevalence and their connections to domestic violence, noting, “There are many new frontiers to get to.”

Jacquet addressed the history and development of domestic violence nursing. She highlighted the unique role nurses played in health care and concluded with a call to action, noting that “any of us can make change” happen.

The full program can be viewed at <http://videocast.nih.gov/Summary.asp?File=19163&bhcp=1>.—**Dan Caughey**