

# Courting GoodHEALTH



The Ninth Circuit Wellness Committee Newsletter

Wellness Website: <http://wellness.circ9.dcn> 

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## Are Judges Super-Agers? UCSF Memory and Aging Center Invites Ninth Circuit Judges to Participate in Aging and Cognition Study

Cognitive decline with age is not inevitable. If you follow a group of normal 70-year-olds over a decade, around 15 percent will exhibit striking declines in cognition and functional abilities, many will see only subtle changes in memory and select cognitive abilities, and a handful will demonstrate stable cognitive function and perform at levels comparable to subjects half their age. What explains this incredible variability in aging trajectories? Could our occupation influence how our brains age?

At several of the Ninth Circuit's annual circuit conferences and transitions seminars, Dr. Bruce Miller, a professor in neurology at the University of California, San Francisco, has spoken about brain health. The Ninth Circuit Wellness Committee works with Dr. Miller, the Memory and Aging Center ("MAC") at UCSF and its staff to arrange for presentations and trainings and to speak with the senior judges at the pre-retirement seminar. After hearing Dr. Miller speak a few years ago, a senior judge suggested to Dr. Miller that he should study judges' brains as they relate to cognitive functioning over time. Based on that suggestion, the MAC, which Dr. Miller co-founded, is undertaking a study to do just that.

The MAC conducts a large number of observational research studies for healthy volunteers and for people with specific diagnoses, one of which is the Hillblom Aging Network. The Hillblom Aging Network is a longitudinal study conducted by a multi-disciplinary group of scientists looking at the effects of aging on



**Interested in participating in the study?  
Please call or email:**

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cognition in older adults. The two-fold purpose of the study is to better understand what healthy aging is and identify the earliest changes associated with degenerative brain disease.

The Hillblom Aging Network has a cohort of several hundred volunteers over age 50 with only minor or no memory problems, most of whom have been

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# 2018 Spring Health Observances

## April

National Child Abuse Prevention Month  
National Donate Life Month  
Oral Cancer Awareness Month  
Testicular Cancer Awareness Month  
Women's Eye Health and Safety Month  
April 3 Sexual Assault Awareness Day of Action  
April 5 National Alcohol Screening Day  
April 10 National Youth HIV and AIDS Awareness Day  
April 22-28 World Immunization Week  
April 24 World Meningitis Day  
April 28 National Prescription Drug Take Back Day  
April 30-May 4 Air Quality Awareness Week

## May

Arthritis Awareness Month  
Global Employee Health and Fitness Month  
Melanoma/Skin Cancer Detection and Prevention Month  
National Asthma and Allergy Awareness Month  
National Stroke Awareness Month

National Teen Pregnancy Prevention Month  
Preeclampsia Awareness Month  
May 5 Hand Hygiene Day  
May 6-12 National Neuropathy Awareness Week  
May 9 Walk and Bike to School Day  
May 18 HIV Vaccine Awareness Day  
May 20-26 National Hurricane Preparedness Week  
May 31 National Senior Health & Fitness Day  
May 31 World No Tobacco Day

## June

Alzheimer's & Brain Awareness Month  
Cataract Awareness Month  
Myasthenia Gravis Awareness Month  
National Migraine and Headache Awareness Month  
National Scleroderma Awareness Month  
June 3-9 Rip Current Awareness Month  
June 3 National Cancer Survivors Day  
June 27 National HIV Testing Day

## If you are interested in reading more about healthy brain aging, here are some suggestions:

John Medina, "Brain Rules for Aging Well: 10 Principles for Staying Vital, Happy, and Sharp," 2017

How come I can never find my keys? Why don't I sleep as well? Why do my friends keep repeating the same stories? What can I do to keep my brain sharp? Scientists know. Your Aging Brain, by developmental molecular biologist Dr. John Medina, gives you the facts – and the prescription to age well – in his engaging signature style. – Publisher's summary

Judith Horstman, "The Scientific American Healthy Aging Brain," 2012

A new and positive message about growing older, The Scientific American Healthy Aging Brain is an indispensable user's manual on how preserve what you've got, minimize what you've lost, and optimize the vigor and health of your brain as you grow older. – Publisher's summary

Gretchen Reynolds, "For Your Brain's Sake, Keep Moving," N.Y. Times, October 4, 2017

Shlomo Breznitz, "Maximum Brainpower: Challenging the Brain for Health and Wisdom," 2012

"Our cognitive skills are not fixed. At all ages the brain has the ability to respond to new information and new stimuli. Our intellectual abilities are a combination of our inherent genetic gifts and the lifelong consequences of all of the decisions we make that either positively or negatively contribute to our cognitive fitness."

Lisa Feldman Barrett, "How to Become a 'Superager,'" N.Y. Times, December 31, 2016

William R. Klemm, Ph.D., "What Happens to the Aging Brain: You Can Combat Brain Aging," Psychology Today, posted November 14, 2012

Leslie Barker, "7 Tips to Keep Your Brain as Sharp as Your Body," Chicago Tribune, March 9, 2018

Allen Cone, "Brain Imaging Shows Memory Loss Differs by Age," March 7, 2018, available at [https://www.upi.com/Health\\_News/2018/03/07/Brain-imaging-shows-memory-loss-differs-by-age/9401520452902/](https://www.upi.com/Health_News/2018/03/07/Brain-imaging-shows-memory-loss-differs-by-age/9401520452902/) 

# Sandra Day O'Connor Courthouse Hosts Conference on the Aging Brain

A biennial conference titled "The Aging Brain: Medical, Legal, and Ethical Perspectives," was held on December 8, 2017, at the Sandra Day O'Connor United States Courthouse in Phoenix, Arizona. The Center for Law, Science and Innovation at the Arizona State University Sandra Day O'Connor College of Law organized the program of stellar presentations by preeminent doctors, lawyers, law professors and judges. Senior District Judge Roslyn O. Silver introduced a panel called "Scientific Developments in Aging and Dementia: Pre-Symptomatic Screening for Neurodegenerative Diseases," which discussed changes that occur before the symptomatic onset of memory loss and related symptoms of Alzheimer's disease. Dr.

Richard Caselli, a neurologist from the Mayo Clinic, explained the distinguishing factors between Alzheimer's disease and dementia and spoke about

preclinical tests, advanced detection methods and possible interventions for neurodegenerative diseases. Longitudinal testing has shown more precisely how long before diagnosis that cognitive changes become significant. Many people want preclinical genetic and/or biomarker testing despite a lack of therapy, understanding or potential risks. A survey showed that 71 percent would want a baseline assessment if testing was covered by insurance, and 41 percent were willing to pay out of pocket for testing.

A panel on the ethical, legal and social implications of the aging brain included Dr. Cynthia Stonnington from the Mayo Clinic, Professor Henry T. Greely from Stanford Law School, and attorney Jalayne Arias, an assistant professor at UCSF's Memory and Aging Center (MAC). Dr. Stonnington discussed the evidence behind whether supplements, brain games, exercise and diets create resistance to neurodegenerative diseases. She noted that there is a decreased risk of mild cognitive impairment for those who engage in mentally stimulating activities and get adequate sleep, nutrition and exercise. Programs that claim "protection" against dementia with interventions such as brain games or diet supplements are promising more than has been proven.

Jalayne Arias and MAC are leading two research studies that examine legal, ethical and policy questions related to preclinical biomarker tests. She is evaluating the potential legal and ethical challenges associated with finding Alzheimer's disease biomarkers in asymptomatic patients. For instance, are there anti-discrimination protections (from discrimination by an employer, health, life or long-term insurer) that might affect someone with an early diagnosis, and what kinds of financial, legal and social decisions do these patients make? The study found that in 43 states, insurers are explicitly permitted to use medical information for underwriting purposes. Gaps in legal protections that fail to protect research

subjects from discrimination by long-term care and disability insurers are particularly concerning because individuals with Alzheimer's disease and dementia ultimately need

long-term care services. To maximize subject protections and advance valuable research, policymakers, investigators and research institutions must revise laws to limit discrimination and develop practices that inform research participants of risks associated with loss of confidentiality.

Professor Katherine Pearson from Pennsylvania State University Dickinson School of Law spoke on a panel relating to competency and incapacity and the ethical rules concerning representation of a client with diminished capacity. Professor Pearson who is the daughter of the late District Judge Earl H. Carroll of Arizona, related court cases in which conveyances were set aside or conservatorships created or terminated due to findings about capacity. The American Bar Association, the American Psychological Association and the National College of Probate Judges collaborated to publish handbooks on assessing diminished capacity, and there are separate handbooks for use by judges, lawyers and psychologists.

The ASU Center for Law, Science and Innovation will hold this conference again in winter 2019. 



followed longitudinally, some for over 15 years. The volunteers participate in study procedures such as research and clinical measures of cognition; neuroscience metrics of judgment and decision making; questionnaires about sleep, exercise, diet and other lifestyle factors; interviews with a study partner (someone who knows the subject well and can comment on any changes over time in memory, thinking, personality or behavior); brain MRI; genetic data gathering (DNA and RNA); neurological testing; health history; clinical labs; measures of inflammation; and detection of Alzheimer's biomarkers through molecular PET imaging and other methods. The assessment team reviews each subject after each evaluation visit and follows up with the subject and his or her physician as needed.

One potentially important factor that influences how one's brain ages is one's occupation. Several studies have suggested that people whose jobs require complex work with people or data have higher cognitive scores and fewer dementia diagnoses at age 70. The Hillblom Aging Network has gleaned important insights from its current cohort of so-called "superagers," referring to older subjects with high baseline abilities who show minimal or no change across several years of study. These findings have led to specific studies looking at the potential impact of diet, physical exercise, inflammation, sleep and cognitive activity. To study how cognitive activity affects brain wellness, the Hillblom Aging Network includes subjects whose careers require extensive processing of spatial information, such as architects and engineers and those who work in the more verbally heavy legal profession.

In furtherance of this research, the MAC invites judges within the Ninth Circuit to participate in the Hillblom Aging Network. The inclusion of a large cohort of judges will enable the study to address the following research aims: (1) What is the effect of cognitively-engaging careers on brain function and structure; and (2) What impact does a cognitively-engaging career have on rates of change in brain function and structure? The Hillblom Aging Network will test its hypotheses that subjects in the judge/attorney group and the engineer/architect group will show fewer signs of Alzheimer's-type brain changes (amyloid plaques and hippocampal volumes) and slower rates of change in processing speed, memory and brain volume, compared to subjects from less cognitively demanding professions.

The MAC proposes to enroll 30 to 50 judges into the Hillblom Aging Network. The study seeks judges age 60 and over, and the cohort will include active, senior, retired

and recalled judges. Participation in the study will involve an in-person baseline visit and in-person follow-up visits approximately every two years (if the subject is willing). The Wellness Committee supports this study and committee members will be participating.

The initial consultation will take place in June, July or August of this summer. The in-person visit may involve the following procedures:

- Cognitive testing: verbal and spatial processing speed, working memory, and episodic memory; executive functioning (set shifting, inhibition, decision making); language functions; spatial cognition; social cognition.
- Neurological exam
- Blood draw: DNA, RNA, plasma, serum
- Brain MRI: structure, diffusion, functional metrics
- Informant interview
- Questionnaires: health history, lifestyle, early developmental history
- Alzheimer's biomarkers: detected by PET scans or other methods

Subjects may also be invited to participate in online data collections and other projects between visits. So far, 29 judges from all over our circuit have expressed interest in participating in the study. If you are interested or would like more information, please call or email:

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