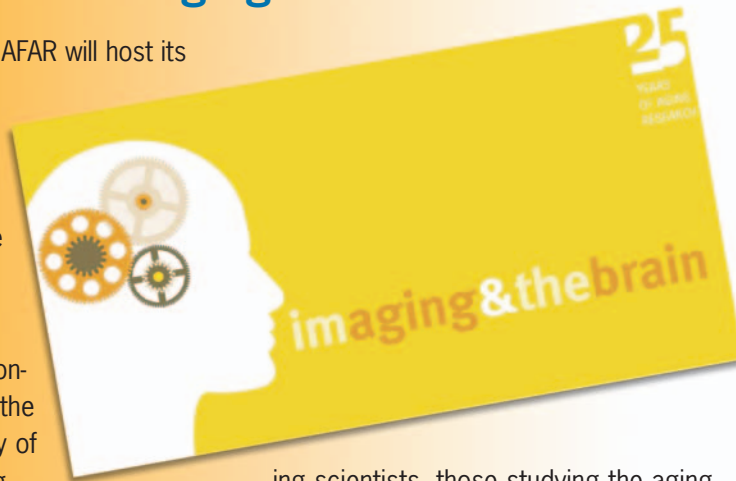


American Federation for Aging Research

Imaging and the Aging Brain

On May 15, 2006, AFAR will host its 25th anniversary dinner that will serve as a kick off to a two-day international conference on imaging and the aging brain.

The conference, conducted jointly with the New York Academy of Sciences, will bring together internationally renowned imag-



ing scientists, those studying the aging brain, industry experts and clinicians to

explore the most current methodologies and their application to brain physiology, behavior and age-related diseases.

An active and renowned scientific committee has put together a premier program featuring leading figures in neuroscience. The committee includes: Mony J. de Leon, Ed.D., New York University, Howard Federoff, M.D., University of Rochester, Joy Hirsch, Ph.D., Columbia University, George M. Martin, M.D., University of Washington, Seattle, John Morrison, Ph.D., Mount Sinai School of Medicine and Al Snider, Ph.D., James N. Jarvie Commonwealth Service.

The dinner will be held at NYC's Essex House, and the conference will be held at NYU. For more information, contact Nancy O'Leary, nancy@afar.org or 212-703-9977.

Researchers Selected for the First Breakthroughs in Gerontology (BIG) Award

Adam Antebi, Ph.D., and Scott D. Pletcher, Ph.D., both assistant professors at Baylor College of Medicine, were selected as the first recipients of the Glenn/AFAR Breakthroughs in Gerontology Awards.

Dr. Antebi's research, "Purification of a lipophilic hormone regulating *C. elegans* diapause and aging" will focus on isolating a key chemical - a lipid that helps to coordinate the "long-live span" program of gene expression in multiple mutants of *C. elegans*. His research could lead to major new lines of investigation in animal models and stimulate synthesis and study of pharmaceuticals that might eventually reg-

ulate the synthesis and metabolism of related hormones in humans.

Dr. Pletcher's research, "Genetic mechanisms of enhanced immune function and delayed functional senescence in *Drosophila melanogaster*" is designed to see how systematic changes in



Selection Committee meets in Santa Barbara.

the strength of innate immunity alter life span and responses to anti-aging diets in the fruit fly, and learn more about which specific genes might be involved in the control of innate immunity, resistance to infection, and longevity.

(A list of all 2005 grantees appears in this newsletter.)

Contents

- Letter from the Executive Director2
- Julie Martin Mid-Career Award2
- AFAR Kicks Off Luncheon Series3
- AFAR Hosts Board Retreat.....3
- New Board Member: Gary Zwerling ..4
- Death of Dorothy Dillon Eweson4
- Celebrating California's Stem Cell Research Contribution5
- 2005 Grants Update6-7

Letter from the Executive Director

For nearly 25 years, AFAR has helped thousands of scientists gain a foothold in the area of aging research. But do they stay in the field? To track the impact of these early grants, AFAR periodically surveys its grantees to see whether they have published their research results, stayed in the field of aging research and gone on to receive additional funding in their initial area of study.

A July 2005 survey of AFAR Research Grant recipients found that 92% have continued work in aging research with 85% continuing the work that they started under their AFAR-sponsored grant. Three out of four grantees have published their AFAR-sponsored research in prominent aging, geriatrics and other scientific publications.

It is significant to note that the majority of scientists reported that their AFAR grant created a “funding track record,” enabling them to obtain funding from additional sources and continue their important research.

We are pleased to see that many promising researchers stayed in the field and that we played a part in that. At the same time, we know that cuts in other sources of funding will prevent many other talented scientists from having that opportunity.

The potential of this research is an inspiring prospect and requires sustained commitment. As we celebrate our 25th anniversary in 2006, and look back on the many grantees we have helped support — 2,100 and counting — we renew our commitment to helping even more scientists at the early and mid-point of their careers.



Stephanie Lederman

Executive Director
Stephanie Lederman

Administrative Manager
Catherine Cullar

Director, Communications
Stacey Harris

Program Officer
Hattie Herman

Director, Development
Nancy O’Leary

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www.beeson.org

AFAR Announces the Creation of the Julie Martin Mid-Career Award in Aging Research



Julie Martin

The Ellison Medical Foundation has created a new Ellison/AFAR research grant program: The Julie Martin Mid-Career Award in Aging Research, named in memory of Julie Martin, the late wife of AFAR’s scientific director, Dr. George M. Martin. This program will support outstanding mid-career scientists who have not been engaged in aging research but whose research is relevant to aging and could lead to novel approaches. Also eligible are aging researchers whose research is high risk with the potential for high payoff in advancing the understanding of basic aging. Up to four four-year awards of \$550,000 will be awarded. Information is available on the AFAR web site (<http://www.afar.org/grants.html>) or contact the grants department at 212-703-9977.

AFAR Kicks Off Health Luncheon Series

AFAR kicked off its new scientists-media luncheon series with two events this summer. Supported through an unrestricted grant from Pfizer Inc, these luncheons feature AFAR grantees speaking one-on-one with top print and broadcast media about cutting edge research in aging.

With the growing interest in the topic of longevity, we held: **The Race...Against Time. Can We Tweak the Aging Process: From Melatonin to Aged Mice** featuring Nir Barzilai, M.D., director of the Institute for Aging Research at the Albert Einstein College of Medicine.



Above, Dr. Richard Miller with Catherine Arnst of *BusinessWeek*. At right, Ruth Coxeter of NBC Nightly News with Dr. Nir Barzilai.



Richard Miller, M.D., Ph.D., associate director for research at the University of Michigan Geriatrics Center and chair of AFAR's research committee, discussed the prospect of life extension in **World Enough and Time: The Science, Politics and Ethics of Longevity Medicine**.

Reporters participating in the luncheons included: *BusinessWeek*, NBC Nightly News, *Parade*, *O (Oprah) Magazine*, *Scientific American*, and *Ladies' Home Journal*.

Future programs will focus on regenerative medicine and the heart and the aging brain in the boomer years.

Dr. Christine Cassel Receives International Recognition



Dr. Christine Cassel

Christine K. Cassel, M.D. was awarded an Honorary Fellowship in the Royal College of Physicians at their Convocation Ceremony in July and an Honorary Fellowship in the European Federation of Internal Medicine during the Opening Ceremony of their annual Congress meeting in Paris in September. Both awards recognize Dr.

Cassel's distinguished service in medicine and her efforts to advance medical professionalism internationally. Dr. Cassel, president and CEO of the American Board of Internal Medicine, is a past president of AFAR.

Join the Terrapin Society

AFAR thanks the first members of its Terrapin Society who made planned gift bequests to AFAR. We are grateful to be recipients from the following estates:

- Berenda Abrams
- Dorothy Dillon Eweson
- Dorothy Brunn Foundation

Members of the Terrapin Society benefit from having the ability to designate a planned gift that provides income and tax benefits for donors while helping to advance scientific research into the causes, treatments, and cures for age-related diseases. For more information about becoming a member, please contact Nancy O'Leary at 212-703-9977.



AFAR Hosts Board Retreat

In May, AFAR held its second board retreat to reassess its mission, analyze the challenges and opportunities in the current research environment, and redefine its goals and strategic plan for the next five years. Thirty board members and staff attended the two-day gathering which took place at the Edith Macy Conference Center in Briarcliff Manor, NY.

Led by board chair Diana Jacobs Kalman, the retreat is part of AFAR's ongoing commitment to review organizational objectives and policies to ensure that they stay relevant in the new research environment.



Spotlight on AFAR's Newest Board Member: Gary Zwerling

Why did you join the AFAR board?

I have been a contributor to AFAR for about 15 years beginning when I was an active partner in Goldman Sachs. During that time, I have become increasingly impressed by how well AFAR executes its mission, the quality and thoroughness of its grant review process, and the extremely low administrative costs of the organization. Few charities can say they have administrative and overhead costs of only about 10% as AFAR does.

I have always been partial toward supporting medical research and am intrigued by how knowledge gained in the lab makes its way to patient care and benefits so many people.

It is my hope that the research AFAR supports will result in a better understanding of the aging process and associated disorders and diseases which will also have broader applications for prevention and treatment of disease. I am also a strong believer that by supporting scientists early in their research careers, AFAR is encouraging them to dedicate their lives to this field. For all of these reasons, I was honored to be asked to join the AFAR board.

How did the relationship with Goldman Sachs come about?

The involvement of Goldman Sachs partners with AFAR all traces back to George Doty. He was one of the most senior partners of the firm at the time he became the chair of AFAR's board and he introduced his partners to the great work of the organization. Since that time, there has always been at least

one Goldman Sachs partner serving on the AFAR board and the significant broad based financial support from Goldman Sachs partners has continued.



Gary Zwerling

What would you like to accomplish as an AFAR board member?

The number of truly high potential research opportunities is still greater than AFAR can financially support given our current level of resources. I hope that we as a board can find ways to increase public awareness of the vital mission of AFAR and expand our

fundraising so that we can afford to support more worthwhile research.

Why do you think research on aging is important?

The percentage of older Americans is increasing and with that comes the likelihood of even more stress on the nation's health care system and budget.

Research on aging holds out the hope of making advances that would promote healthier aging, increase quality of life for older Americans, and reduce those costs to society.

Mr. Zwerling is also a Trustee of Babson College, a member of the Board of Governors of the New York Chapter of the Arthritis Foundation, a member of the Board of Overseers of the Museum of Jewish Heritage — A Living Memorial to the Holocaust, and a Trustee of UJA-Federation of Northern New Jersey.

Death of Dorothy Dillon Eweson

Dorothy Dillon Eweson, dedicated and long-standing AFAR board member passed away in June. Mrs. Eweson served on the AFAR board for more than 20 years. She was an early advocate for research in aging, supporting programs that have enabled scientists to pursue careers in the field and contribute to discoveries that impact the onset and progression of many age-related diseases. We are grateful for her long-standing commitment and generosity and will truly miss her.



Celebrating California's Contribution to Stem Cell Research, AFAR Hosts Scientific Symposium in San Francisco

On October 18th, more than 70 scientists, biotechnology and foundation representatives convened at AFAR's premier event, *Stem Cells and Aging: Celebrating the Promise*, held in San Francisco.



Dr. Irving Weissman, director of the Stanford Institute for Stem Cell Biology and Regenerative Medicine.

Leading California-based scientists discussed the state of stem cell research, its relevance in understanding the basic mechanisms of aging and its regenerative applications for heart disease, cognitive repair and cell renewal in aged tissue. Speakers included: Drs. Helen Blau, Thomas Rando and Theodore Palmer from Stanford University School of Medicine, Yerem Yeghiazarians from



Symposium moderator, Dr. George M. Martin.

the University of California, San Francisco and Cal Harley from Geron. The symposium was moderated by AFAR's scientific director, Dr. George M. Martin.

AFAR's *Great Expectations* dinner followed with guest speakers, Dr. Zach Hall, president of the California Institute for Regenerative Medicine, Dr. Irving Weissman, director of the Stanford Institute for Stem Cell Biology and Regenerative Medicine and Dr. Richard Sprott, executive director of The Ellison Medical Foundation.

The program is part of AFAR's geographic expansion efforts to open a California-based affiliate.



George M. Martin, Zach Hall, Helen Blau, Diana Jacobs Kalman, Cal Harley, Richard Sprott and Yerem Yeghiazarians.

In the Lab With...

Adam Gazzaley, M.D., Ph.D.



Adam Gazzaley, M.D., Ph.D.

The impact of the normal aging process on cognition and the brain has been an interest of mine since I started graduate school in 1992. For my thesis work as an M.D. Ph.D. student at Mount Sinai School of Medicine, I studied alterations in neurotransmitter receptors in the hippocampus of old animals. This allowed me to identify molecular changes in neurotransmitter systems that may impair memory and attention in older adults. After completing a neurology residency at the University

of Pennsylvania, I continued research on the neural mechanisms of cognitive changes that occur with normal aging, though this time in humans. Receiving a post-doctoral grant from AFAR really helped facilitate this transition, allowing me to embark on a new scientific direction at the University of California, Berkeley. Mentored by Mark D'Esposito and Robert Knight, I learned how to apply the techniques of functional magnetic resonance imaging (fMRI) and electroencephalography (EEG)

to study how changes in brain activity compare to cognitive impairments in older adults.

We used fMRI and EEG to first establish biomarkers of top-down modulation in young adults. Top-down modulation is the neural mechanism that affects our ability to selectively focus on relevant information and ignore distracting or irrelevant information, thus establishing a foundation for both attention and

continued on page 7

2005 Grants Update

AFAR is pleased to announce that this year, 105 students and junior faculty from across the country have been awarded grants totaling more than \$12 million to advance the field of aging research. This includes the Beeson Career Development Award and Medical Student Training Program, which are funded in collaboration with the National Institute on Aging.

AFAR Research Grants

AFAR provides up to \$60,000 for a one- to two-year award to junior faculty M.D. and Ph.D.s to do research that will serve as the basis for longer term research efforts. AFAR-supported investigators study a broad range of biomedical and clinical topics including the causes of cellular senescence, the role of estrogen in the development of osteoporosis, the genetic factors associated with Alzheimer's disease, the effects of nutrition and exercise on the aging process, and much more.

Rajendra S. Apte, M.D., Ph.D.
Washington University

S. Thomas Carmichael, M.D., Ph.D.
University of California, Los Angeles

Christopher J. Chang, Ph.D.
University of California, Berkeley

Jim R. Fadel, Ph.D.
University of South Carolina

Insoo Kang, M.D.
Yale University

Radhakrishnan Nagarajan, Ph.D.
University of Arkansas

Olav Rueppel, Ph.D.
University of North Carolina, Greensboro

Hongbing Wang, Ph.D.
Michigan State University

Tian Wang, Ph.D.
Colorado State University

AFAR Affiliate Research Grant Program

Southeast Affiliate

Paul Holtzheimer, M.D.
Emory University

Anna Moore, Ph.D.
Emory University

Dan Sorescu, M.D.
Emory University

Ohio Affiliate

Erik D. Andrus, Ph.D.
Case Western Reserve University

Upstate New York Affiliate
Vera Gorbunova, Ph.D.
University of Rochester

Pfizer/AFAR Innovations in Aging Research Grant Program

This program seeks to support M.D. and Ph.D. investigators who are working in the basic biology of aging and in translational areas of aging research, focusing specifically on four

areas: cancer, cardiovascular disease, stroke and Alzheimer's disease. Up to nine two-year grants of \$200,000 are awarded.

Katrin Andreasson, M.D.
Johns Hopkins University

Steven Artandi, M.D., Ph.D.
Stanford University

Anne Brunet, Ph.D.
Stanford University

Fen-Biao Gao, Ph.D.
University of California, San Francisco

Adam Gazzaley, M.D., Ph.D.
University of California, Berkeley

Michael S. Grotwiel, Ph.D.
Virginia Commonwealth University

Jiyan Ma, Ph.D.
The Ohio State University

David K. Simon, M.D., Ph.D.
Harvard Medical School

Zhiming Suo, M.D.
Midwest Biomedical Research Foundation

Beeson Career Development Award

The National Institute on Aging, the NIH Office of Dietary Supplements, The John A. Hartford Foundation, Atlantic Philanthropies (USA), the Starr Foundation, and an anonymous donor collaborate on this initiative to sustain and promote the research careers of clinically-trained individuals who are pursuing research careers in aging. This program awards \$600,000 – \$800,000 over three to five years to up to 12 physician-scientists.

Liana Apostolova, M.D.
University of California, Los Angeles

Malaz Boustani, M.D., M.P.H.
Indiana University

Jennifer Brach, Ph.D.
University of Pittsburgh

Arleen Brown, M.D., Ph.D.
University of California, Los Angeles

Cynthia Carlsson, M.D.
University of Wisconsin

Daniel Goldstein, M.D.
Yale University

Wendolyn Gozansky, M.D., M.P.H.
University of Colorado

Leanne Groban, M.D.
Wake Forest University

Arti Hurria, M.D.
Memorial Sloan - Kettering Cancer Center

Pearl Seo, M.D., M.P.H.
Duke University

Dellara Terry, M.D., M.P.H.
Boston University

Glenn/AFAR Breakthroughs in Gerontology (BIG) Awards

This program provides timely support to a small number of pilot research programs that may be of relatively high risk but offer significant promise of yielding transforming discoveries in the fundamental biology of aging.

Adam Antebi, Ph.D.
Baylor College of Medicine

Scott Pletcher, Ph.D.
Baylor College of Medicine

Merck/AFAR Junior Investigator Awards in Geriatric Clinical Pharmacology

Appreciating the critical need for developing more physicians with a command of geriatric clinical pharmacology, the Merck Company Foundation and AFAR created the Merck/AFAR Junior Investigator Awards. Two grants of \$120,000 are awarded.

Muralindhar Beeram, M.D.
University of Texas Health Science Center at San Antonio

Steven M. Handler, M.D.
University of Pittsburgh

Ellison Medical Foundation/AFAR Senior Postdoctoral Research Program

This program encourages and furthers the careers of postdoctoral fellows (both M.D.s and Ph.D.s) in the fundamental mechanisms of aging. Up to three fellowships of \$100,000 are awarded.

Johannes H. Bauer, Ph.D.
Brown University

Malene Hansen, Ph.D.
University of California, San Francisco

Supriya Srinivasan, Ph.D.
University of California, San Francisco

Medical Student Summer Research Training in Aging Program

Eight- to twelve-week awards of up to \$5,200 encourage medical students - particularly budding researchers - to undertake research projects and consider a career in geriatrics. AFAR collaborates with the NIA and several foundations to continue and strengthen the original Hartford/AFAR Medical Student Geriatric Scholars Program.

Thomasina Bailey
SUNY Upstate

Alan Bengtzen
Emory University

Jeremy Broadnax
Case Western University

Ariel Bulua
Mount Sinai School of Medicine

Olatubosun Chinwokwu
St. Louis University

Neela Dasgupta
Johns Hopkins University

Mita Deoras
Northeastern Ohio Universities

Ohm Deshpande
Weill College of Medicine at Cornell University

Sharon Engel
Emory University

David Fish
University of New England

Andrew Fisher
University of Pittsburgh

Michael Ford
Weill College of Medicine at Cornell University

Daniel Freedberg
Harvard Medical School

Molly Fuentes
University of Michigan

Gina Fujikami
University of Hawaii

Shanti Ganesh
Duke University

Matthew Garrett
Case Western Reserve University

Benjamin Goldsmith
Mount Sinai School of Medicine

Elizabeth Goodman
Washington University

Jacqueline Green
Emory University

Joy Guerrieri-Bang
University of New England

Paul Gunn
Case Western Reserve University

Nitin Gupta
University of Michigan

Elizabeth Harlow
Emory University

Ben Harris
Mount Sinai School of Medicine

Maxwell Hill
University of Cincinnati

Jessica Holmes
Case Western Reserve University

John Hopkins
University of North Carolina at Chapel Hill

David Horowitz
Johns Hopkins University

Brian Houston
Emory University

Evan Howe
Case Western Reserve University

Christine Hung
Case Western Reserve University

Kathleen Khong
Northwestern University

Alexander Larson
The Ohio State University

Sandy Liang
Mount Sinai School of Medicine

Ovidiu Marina
Case Western Reserve University

Eric McLoney
The Ohio State University

Leland Metheny
Case Western Reserve University

Kyauna Miller
Case Western Reserve University

Margaret Moscato
Emory University

Anjali Nigalaye
University of Chicago

Shantanu Nundy
Johns Hopkins University

Theodore Pasquali
University of California, Los Angeles

Laura Raducha-Grace
University of Pittsburgh

Simha Ravven
Tulane University

Brandon Roberts
Case Western Reserve University

Shawn Rosen
University of Rochester

Alexandra Shaw
Mount Sinai School of Medicine

Megan Skibitsky
University of California, Los Angeles

Lon Steinberg
Albert Einstein College of Medicine

Malini Sur
Mount Sinai School of Medicine

Ryan Takenaga
Johns Hopkins University

Ezra Teitelbaum
Mount Sinai School of Medicine

Christie Tung
Case Western Reserve University

Brant Ullery
Weill Medical School at Cornell University

Ryan Ungaro
Mount Sinai School of Medicine

Jeanie Wang
Northeastern Ohio University

Deborah Weener
University of Michigan

Deniel Wei
Case Western Reserve University

Aimee Wing
Case Western Reserve University

Victor Wu
Emory University

Priscilla Yee
University of Hawaii

Jacqueline Yuen
University of Michigan

Andrea Zapeda
University of Michigan

David Zinn
Brown University

For a complete list of our review committees, please visit our web site at <http://www.afar.org/committee.html>

In the Lab.....

continued from page 5

memory processes. We revealed that this involves both the enhancement of brain activity associated with relevant information and the suppression of brain activity associated with irrelevant information. Continuing to use this approach, we studied cognitive changes that occur during normal aging, and in doing so discovered an age-related deficit in top-down modulation. Specifically, this is an inability of healthy older adults to suppress brain activity associated with distracting, irrelevant information. Importantly, this filtering deficit correlated

with impairments in short-term memory for relevant information, thus establishing the first direct link between a selective suppression deficit and short-term memory impairment in normal aging.

It was encouraging to find that a subgroup of the older adults we studied did not experience the suppression deficit or the accompanying short-term memory impairment and another subgroup performed just as well as younger adults. This provided additional opportunities for studying successful versus unsuccess-

ful aging. AFAR supported me again with a Pfizer/AFAR Innovations in Aging Research Grant to conduct further studies to identify the individual variability of the older population. This grant will serve to continue the research focus that I initiated as a fellow and launch my career as an independent scientist.

Dr. Gazzaley is an assistant professor of neurology and physiology at the University of California, San Francisco, and an adjunct assistant professor of neuroscience at the University of California, Berkeley. He received a 2005 Pfizer/AFAR Innovations in Aging Award and a 2002 Glenn/AFAR Post-Doctoral Fellowship.

Support AFAR

Yes, I'd like to support AFAR's important work on aging research and age-related diseases and conditions.

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11th Floor
New York, NY 10018

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