

American Federation for Aging Research

The Science of Healthier Aging

AFAR Awards Grants to Scientists Studying Biology of Aging

**Understanding Mechanisms of Aging as a Means to Understanding Diseases of Aging
First Half-Year Awards Exceed \$2 Million; More to be Selected in the Fall**

Eighteen early and mid-career scientists were selected as the 2006 recipients of three AFAR-supported grant programs. These scientists will study a broad range of subjects covering the biological processes of aging and age-related diseases. The awards, the AFAR Research Grant, the Julie Martin Mid-Career Awards in Aging Research and the Ellison Medical Foundation/AFAR Senior Postdoctoral Research Program, together provide grants of more than \$2 million each year.

Each of the more than 200 proposals received were first reviewed by AFAR's National Scientific Advisory Council — a volunteer corps of 200 of the nation's leading researchers on aging — who made recommendations to AFAR's Research Committee. After a one-day deliberation, the Research Committee, led by Richard Miller, MD, PhD, Professor of Pathology and Associate Director for Research at the University of Michigan Geriatrics Center, made its final selections in May.

"This year's selections represent the best and the brightest new talent our nation has to offer in the field of aging research," said Dr. Miller. "It is through a greater understanding of the biological processes of aging and the interplay of genes, hormones, diet and even

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New President Begins Term



Terrie Fox Wetle, PhD, a former Deputy Director of the National Institute on Aging (NIA), began her term as President of AFAR. The two-year term is effective immediately.

Dr. Wetle is Associate Dean of Medicine for Public Health and Public Policy, and Professor of Community Health at Brown University. In addition to her position at the NIA, Dr. Wetle also held positions at Harvard Medical School and Yale University as Assistant Professor of Medicine and Director of the Program in Long Term Care Administration, respectively.

As a gerontologist, Dr. Wetle has studied health status and service systems for older adults, with a focus on functional status and quality of life, and epidemiology of diseases common in aging. She has had a particular interest in long term care and in end-of-life care, from the perspectives of older persons, their families, and the service professionals who provide care. Her research includes ethical issues in

elder care specifically, and in public health more generally. She has a special interest in qualitative and mixed methods research, with a book on the topic under publication.

"I have always been an enthusiastic supporter of AFAR and its mission to assist early and mid-career scientists, helping them to gain a foothold in the field of aging research and geriatric medicine," said Dr. Wetle. "The work of AFAR is particularly important at a time when aging research holds such promise, but when greater numbers of scientists are competing for fewer and fewer research dollars," she added.

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Top Neuroscientists Gather at Imaging Conference on the Aging Brain

Nobel laureate Eric Kandel joined leading neuroscientists and industry experts to speak at the *Imaging and the Aging Brain* conference, sponsored by AFAR and the New York Academy of Sciences and held at NYU's Kimmel Center on May 16 and 17, 2006.

Conference presentations focused on recent technological advances in brain imaging and how it is transforming the way researchers understand normal and pathologic aging processes.



Eric Kandel, MD



Dr. Kandel presented the keynote address about the biology of memory and age-related memory loss; how we learn, how we form memories, how we store them and how we retrieve them.

Other featured presenters included:

Wendy Suzuki, PhD, Associate Professor, Neural Science, New York University, presented research about memory signals in the macaque monkey medial temporal lobe. Her research looks into how new memories are formed in the brain and how memory is impaired through aging.

Scott Small, MD, the Herbert Irving Assistant Professor in Neurology at Columbia University, presented data on imaging studies in the hippocampal areas of humans, monkeys and mice. The hippocampus is an area of the brain that controls memory and both Alzheimer's disease and the normal aging process target the hippocampus. Dr. Small's work has helped identify the different molecular changes that distinguish AD from normal age-related decline.

Mark A. Mintun, MD, Professor of Radiology and Psychiatry, discussed his work using a new imaging agent, Pittsburgh Compound B (PIB) to track the build-up of amyloid plaque in the brain. While it has long been known that amyloid plaque is a hallmark of Alzheimer's disease, scientists could not measure these plaques until after autopsy.

Combining PIB with a PET scan, Dr. Mintun and his colleagues have developed a quantitative test that has the potential to predict the onset of Alzheimer's disease many years earlier than current methods. If confirmed by ongoing studies, this method would allow early and better treatment to slow or stop the formation of these plaques. Dr. Mintun is also investigating the use of PIB as a biomarker of aging and disease.

Eric Reiman, MD, Executive Director of the Banner Alzheimer's Disease Institute at the University of Arizona, discussed brain imaging and genomics research in the study of Alzheimer's disease and aging. His work focuses on detecting and tracking the earliest brain changes in people at risk for Alzheimer's disease — in many cases decades before the onset of possible memory and thinking problems — and developing a way to identify and evaluate effective treatments to prevent it.

Complete conference information including multimedia presentations can be found at www.nyas.org/AgingBrain.

AFAR gratefully acknowledges major underwriters of this conference which include: The Alzheimer's Association, Anonymous, Elan, GE Healthcare, Institute for The Study of Aging, International Brain Research Foundation, Johnson & Johnson, National Institute on Aging/NIH, Ohio Valley Imaging Solutions, Pfizer and Sanofi-aventis.

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GE Healthcare Supports Early-Career Scientists Studying the Aging Brain

Four neuroscientists were awarded the first AFAR-NYAS-GE Healthcare Neuroimaging Prize for Junior Investigators. The award, which was presented at the *Imaging and the Aging Brain* conference sponsored by the American Federation for Aging Research and the New York Academy of Sciences (www.nyas.org), was established by GE Healthcare (www.gehealthcare.com) as a way to support and recognize outstanding academic and scientific accomplishments in the area of neuroimaging.



AFAR Scientific Director George M. Martin, MD, (center) with award winners.

Recipients of the \$1,500 award include:

Juebin Huang, MD, PhD

University Hospital of Cleveland/Case Western Reserve University
Diffusion Tensor Imaging of Normal Appearing White Matter and its Correlation with Cognitive Functioning in MCI and AD

Bonita L. Marks, PhD

Duke University, Center for the Study of Aging and Human Development
Role of Aerobic Fitness and Aging on Cerebral White Matter Integrity

Grace E. Stutzmann, PhD

Rosalind Franklin University / The Chicago Medical School
Enhanced Intracellular Calcium Release Results from Upregulated Ryanodine Receptors in Mutant PS1-Expressing Alzheimer Mouse Models

Marc Weisskopf, PhD, ScD

Harvard School of Public Health
Magnetic Resonance Spectroscopy in the Neurologic Assessment of Adult Lead Poisoning

“Given the limited funding streams available to young researchers today, GE’s generosity helps the next generation of neuroscientists continue to advance and refine imaging techniques that will allow

us to better identify and treat age-related brain diseases at the earliest possible stages,” said Stephanie Lederman, Executive Director of AFAR.

“GE Healthcare is proud to help early-career scientists further their careers and the field of imaging,” said Dr. Jean-Luc Vanderheyden, Global Molecular

Imaging Leader at GE Healthcare. “Imaging science has been at the forefront of helping us understand how the brain works, providing a non-invasive means to help detect alterations in brain function. It is through support of the next generation of scientists that we will gain an even greater knowledge of the brain’s workings,” he added.

McCarter Heads AFAR Research Committee

Roger McCarter, PhD, a leader in research on the physiology of aging mammals, will Chair AFAR’s Research Committee, which makes the final selections on recipients of the AFAR Research Grant and other select grant programs.

Dr. McCarter, Professor of Biobehavioral Health at Penn State University, is President-Elect of the Gerontological Society of America, past President of the American Aging Association, Executive Editor of the journal *Aging Clinical and Experimental Research* and President of the International Biogerontology Resources Institute. He was trained as a physiologist, specializing in studies of the contraction of skeletal muscle. For many years his



research at the University of Texas Health Science Center in San Antonio focused on mechanisms of action of calorie restriction in

aging. More recently, he joined colleagues at the Center for Developmental and Health Genetics at the Penn State University in exploring the interactions of genes and environment as determinants of healthy aging.

He takes over from Richard Miller, MD, PhD, who chaired this committee since 2002. AFAR thanks Dr. Miller for his outstanding dedication and many years of leadership.

AFAR Celebrates 25 Years of Advancing Great Minds in Science

On May 15th, more than 170 people turned out to celebrate AFAR's 25th anniversary. With the theme *Advancing Great Minds*, AFAR honored prominent leaders from the corporate, scientific and foundation communities — those doing the science and those who work to provide the funds and leadership that advance scientific progress in aging research.

Honorees included: Joshua Lederberg, PhD, Nobel Laureate and President Emeritus, The Rockefeller University; Robert D. Terry, MD, Professor Emeritus of Neurosciences at the University of California, San Diego; Norman H. Volk, Chairman, The John A. Hartford Foundation; Douglas J. LaVigne, Senior



Norman Volk, Stephanie Lederman, Robert D. Terry, MD, Rev. Monsignor Charles J. Fahey, Diana Jacobs Kalman, George M. Martin, MD, Douglas J. LaVigne. Seated: Hinda Rosenthal and Joshua Lederberg, PhD

Vice President — Business Management, Siemens Medical Solutions USA; Hinda Rosenthal, President of the Richard and Hinda Rosenthal Foundation, and Rev. Monsignor Charles J. Fahey, founding AFAR Board Member and the Marie Ward Doty Professor of Aging Studies, Emeritus, Fordham University.

The event raised more than \$200,000 all going toward the support of the AFAR Research Grants program which funds early-career scientists studying the biology of aging and age-related diseases and disorders.

AFAR and The Rosalinde and Arthur Gilbert Foundation Fund Alzheimer's Disease Research

AFAR is pleased to announce a new collaboration with The Rosalinde and Arthur Gilbert Foundation (www.thegilbertfoundation.org) to support scientists conducting research in the neurosciences, particularly Alzheimer's disease (AD).

The Rosalinde and Arthur Gilbert Foundation/AFAR New Investigator Awards in Alzheimer's Disease will provide up to five \$60,000 grants to early-career investigators pursuing research and academic careers in the neurosciences.

It is estimated that AD currently affects up to 4.5 million Americans. Scientists predict that the prevalence of the disease will double for every five-year age group beyond age 65. These numbers become increasingly significant in the future because of dramatic life expectancies and subsequent rapid

growth in the older population. By 2050, more than 13 million Americans are forecasted to have AD if no preventive treatments become available.

"Research on the aging brain continues to hold such promise as scientists hone in on the changes that affect healthy brain function," said Stephanie Lederman, Executive Director of AFAR. "Scientists are pursuing numerous areas of investigation from the role of genetics and inflammation, to exercise and dietary factors to better determine why and how neurodegenerative decline occurs. More resources put toward research may one day allow clinicians to prevent or stall the onset of Alzheimer's disease," she added.

Through The Rosalinde and Arthur Gilbert Foundation/AFAR New

Investigator Awards in Alzheimer's Disease, The Foundation will make a meaningful contribution to the prevention and treatment of Alzheimer's disease by supporting the promising work of the newest generation of researchers.

The Rosalinde and Arthur Gilbert Foundation invests in programs in the areas of college access, healthcare and Israel. In addition, The Foundation funds arts education and culture in Los Angeles, Jewish programs in Los Angeles, and universities in California.

In the area of Alzheimer's disease, The Rosalinde and Arthur Gilbert Foundation focuses its grantmaking on the advancement of research by junior investigators in the United States and Israel and investments in Alzheimer's disease caregiver resources and support.

Beeson Scholars Gather at Annual Meeting

Beeson Scholars and leaders in geriatric medicine and aging attended the Eleventh Annual Meeting of the Paul B. Beeson Career Development Awards in Aging Research Program, held at the Sanibel Harbor Resort in Fort Meyers, Florida.

The meeting provides an opportunity for current and former Scholars to exchange ideas and information with their academic mentors and colleagues, and to update the scientific community on the current status of geriatric medicine.



Richard Hodes, MD

Richard Hodes, MD, Director of the National Institute on Aging, gave the keynote address on “Future Directions in Biomedical/Behavioral Research: Perspectives from the NIH.”

Since 1995, 115 physician-scientists representing 39 of the nation’s leading academic institutions have been selected as Beeson Scholars. These Scholars have made significant contributions to research in aging and have served as mentors to countless others coming up through the ranks. Many have assumed top leadership positions in the field.

For more information on the Beeson Program, please visit www.beeson.org.



Christopher Callahan, MD, 1996 Beeson Scholar, with Arleen Brown, MD, PhD, 2005 Beeson Scholar.

AFAR Welcomes New Board Members

Five new members joined the AFAR Board: John M. Bonk; Helen K. Edelberg, MD, MPH; Roger McCarter, PhD; John B. Rhodes and Joyce Yaeger.

Mr. Bonk is First Vice President and Director of Business Development for P.G.B. Trust and Investments (a division of Peapack-Gladstone Bank).

Dr. Edelberg is a Director, Regulatory Development Oncology, Anti-Infectives, and Bone, Corporate Regulatory Affairs at Sanofi-Aventis.

Dr. McCarter is Professor of Biobehavioral Health at the Center for Developmental and Health Genetics at Penn State University.

Mr. Rhodes was a Vice President in the Pharmaceutical Practice at Booz-Allen Hamilton.

Ms. Yaeger is a Senior Vice President and Healthcare Practice Director for M Booth & Associates.

Death of Paul Beeson



AFAR celebrates the life and mourns the passing of Paul Beeson, MD, who died August 14 at the age of 97.

Dr. Beeson was a visionary in the field of aging research and geriatric medicine. As a consummate researcher, clinician and teacher, he recognized early on the need for a greater focus on the study of aging integrated with the training of more physicians specializing in geriatrics.

His pivotal 1978 Institute of Medicine Study on “Aging and Medical Education,” set a new course in academic medicine, integrating medical, academic and scientific training of junior investigators who have become leaders in geriatric medicine and clinical care.

Dr. Beeson’s influence on the field of aging research was recognized long before his death through the creation of the Paul B. Beeson Career Development Awards in Aging Research Program which has supported some of the brightest scientific minds in the field of aging.

Created to address the dearth of physicians and other clinically trained individuals specializing in geriatrics, the Beeson program has nurtured leaders who will go on to train the next generation of leaders. This may be Dr. Beeson’s most enduring legacy.

AFAR Grantees

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the environment, that will allow us to better understand how and why many diseases of aging occur and progress. The ultimate payoff would be to intervene and prevent these diseases from occurring altogether," he added.

Grants Recipients

2006 AFAR Research Grant Awardees

Scott Gordon, PhD, Assistant Professor, East Carolina State University: *"Targeted Rescue of Protein Translation and Synthesis in Aged Skeletal Muscle"*

James Harper, PhD, Research Investigator, University of Michigan: *"Modulation of Stress Resistance and Aging in Mice"*

Christopher Janus, PhD, Assistant Professor, Mayo Clinic Jacksonville: *"Memory Recovery as a Function of Aging and Tau Transgene Suppression"*

D. Leanne Jones, PhD, Assistant Professor, The Salk Institute for Biological Studies: *"Identification of Factors Regulating Aging of the Stem Cell Niche"*

Matt Kaeberlein, PhD, Assistant Professor, University of Washington: *"Molecular Genetics of Life Span Extension by Dietary Restriction in C. elegans"*

Elizabeth Kensinger, PhD, Assistant Professor, Boston College: *"How Aging Affects Memory for Emotional Events: Behavioral and Neuroimaging Investigations"*

Genevieve Neal-Perry, MD, PhD, Assistant Professor, Albert Einstein College of Medicine: *"Hypothalamic Dysfunction: A Neuroendocrine Basis for Reproductive Aging"*

To read about these select recipients, please visit:

www.afar.org/Spring%202006%20AFAR%20Review.html#0

AFAR has awarded more than 2,200 grants totaling nearly \$93 million since it was founded in 1981. To find out more about AFAR-supported grant programs, please visit www.afar.org/grants.html

AFAR wishes to thank the Ellison Medical Foundation as well as underwriters of the AFAR Research Grant Program: AFAR Board of Directors, The Bedminster Fund, The Clarence and Ann Dillon Dunwalke Trust, Eisai, Inc, The Glenn Foundation for Medical Research, the Partners of Goldman Sachs & Company, F.M. Kirby Foundation, Inc., Diane Nixon, Pfizer Inc, The Richard and Hinda Rosenthal Foundation, Joseph L.K. Snyder Trust, The Starr Foundation and the Irving S. Wright Endowment.

Paul Schmidt, PhD, Assistant Professor, University of Pennsylvania: *"Couch Potato Aging in Drosophila"*

Tao Wei, MD, PhD, Assistant Professor, University of Texas at San Antonio: *"Caloric Restriction Represses DNA Damage to Replication Forks and Chromosomal Rearrangements"*

Ragunatha Yammani, PhD, Instructor, Wake Forest University: *"Aging and S100A4 in Cartilage"*

2006 AFAR Ohio Affiliate Research Grants Awardee

Jonathan Godbout, PhD, Assistant Professor, The Ohio State University: *"Aging, Cytokines and Depressive Behavior"*

2006 AFAR Southeast Affiliate Research Grants Awardees

Kretton Mavromatis MD, Assistant Professor, Emory University: *"Effects of Age on Endothelial Progenitor Cell Mobilization in Humans"*

Zhiqiang Qu, PhD, MD, Assistant Professor, Emory University: *"A Study on the Mechanisms of the Best Vitelliform Macular Dystrophy"*

2006 Julie Martin Mid-Career Awards in Aging Research

Ann Hill, PhD, Associate Professor, Oregon Health & Science University: *"Cytomegalovirus Infection and Immunosenescence"*

Peter Klein, MD, PhD, Associate Professor, University of Pennsylvania: *"Role of GSK-3 in the Pathogenesis and Treatment of Alzheimer's Disease"*

2006 Ellison/AFAR Senior Postdoctoral Research Grant Awardees

Markus Kummer, PhD, Postgraduate Researcher, University of California, San Diego: *"Endocytosis Pathways of APP"*

Greg Mayeur, PhD, Assistant Project Scientist, University of California, Davis: *"Understanding Age Related Onset of Fragile X Associated Tremor/Ataxia Syndrome"*

Robert Rissman, PhD, Research Associate, The Salk Institute for Biological Studies: *"CRF Receptors and Stress-Induced Tau Phosphorylation"*

2006 Merck-AFAR Clinical Geriatric Pharmacology New Investigator Award

Indrani Sinha-Hikim, PhD, Assistant Professor, Charles R. Drew University: *"Muscle Cell Apoptosis in Aging and its Mitigation by Testosterone Therapy"*

New Publications

AFAR has produced several new publications. Please contact Veronica Smith at info@afar.org or 212-703-9977, to order copies. These publications may also be found on the AFAR web site at www.afar.org/pub.html

- **25th Anniversary Grantee Directory** — listing all grant recipients and grant programs in AFAR's 25-year history.
- **Advancing Great Minds Annual Report** — celebrating advances in the neurosciences.
- **Paul B. Beeson Career Development Awards in Aging Research 2006 Report** — highlighting the work of the 2004 Beeson Scholars.

- **The Science of Aging Gracefully: Scientists and the Public Talk About Aging Research** — released in conjunction with the White House Conference on Aging.



New AFAR President

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She follows the successful tenure of Mark Beers, MD, formerly Editor-in-Chief of the Merck Manuals who helped AFAR enhance the image of the study of aging, encouraging more scientists to pursue research in this area.

Dr. Wetle was recently awarded a Docteur Honoris Causa by the University of Geneva and is a past President of the Gerontological Society of America.

AFAR Mourns the Death of Vincent Cristofalo

AFAR mourns the passing of esteemed and Founding Board Member and past President Vincent Cristofalo, PhD, who passed away in May.



Dr. Cristofalo was an internationally known leader in aging research. A cell biologist, he was a pioneer in the study of cell aging, becoming one of the first researchers to document the dynamics and regulation of cell replication in the aging process.

His work helped us gain a greater understanding of the genetic, molecular and environmental mechanisms that influence the life of cells.

Dr. Cristofalo, was a former President of the Lankenau Institute for Medical Research and was Founding Director of the Institute of Aging at the University of Pennsylvania. He also was the Founding Director of the Institute of Aging at the Medical College of Pennsylvania. At the time of his death, he was a Senior Investigator at Lankenau and a Professor of Pathology, Anatomy, and Cell Biology at Jefferson Medical College.

We are grateful for his longstanding commitment to aging research, leadership and dedication to AFAR.

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