



FROM SCIENCE INTO MEDICINE: **TRANSLATION IN ACTION**

2014 Annual Report



american federation
for aging research

IN MEMORIAM

AFAR dedicates this report to two longtime supporters:

Clarence E. Pearson and **Kathryn D. Wriston.**

We are grateful for their years of dedication to the field.

FROM SCIENCE INTO MEDICINE: TRANSLATION IN ACTION

Research in the biology of aging has come into its own. More than 30 years ago, Dr. Irving S. Wright foresaw a time when 10,000 baby boomers would turn 65 every day. This realization prompted him to found AFAR in order to create a pipeline of scientists committed to studying the underlying biological process of aging.

Today, decades of knowledge—accumulated through laboratory research and expert vetting—is on its way to translation in humans. Translational research applies findings from basic science to enhance human health and well-being.

Simultaneously, along with the quickening pace of translational research in the lab, headlines have been perpetuating “anti-aging” hype. We’ve heard promises like this before; hawking the promise of immortality is the world’s second-oldest profession. Time passes, and everyone ages. But throughout history, we have known that how old you are can affect how healthy you are.

So let’s be clear.

Researchers are discovering ways to maintain strength, energy, mental sharpness, and engagement through lifestyle changes. Scientists are also working to prevent or, at very least, delay the onset of chronic diseases of aging: cancer, heart disease, diabetes and Alzheimer’s. The focus of this research is maximizing healthspan—the time people can live independently and free of disability. We have before us a unique interdisciplinary opportunity to understand how biological mechanisms of aging underlie disease and disability.

The optimism surrounding our ability to extend healthspan is predicated upon hard-won scientific evidence. We have reached a point where therapies that target the underlying biological processes of aging are within reach.

In this new research landscape, AFAR’s leadership, expertise, and experience are in greater demand than ever. Our grant programs cultivate the best ideas in this research, and attract individuals committed to providing high-quality medical care to our aging population.

In this report, AFAR profiles a few of the scientists we have supported whose work is poised for translation from science into medicine.



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In scientific parlance, senescence is another word for aging. Scientists use this word to describe cells that once had the capacity to actively divide but, owing to the stresses of time, no longer do. In the aging body, senescent cells accumulate—in arthritic joints, in arteries where plaques build up, and in other places associated with chronic diseases such as cancer, diabetes, and Alzheimer’s. These senescent cells don’t sit quietly. They actively secrete substances that exacerbate these conditions.

Might culling these senescent cells from the body—leaving healthy cells and tissues untouched—alleviate chronic diseases and extend healthspan? That’s the focus of research led by AFAR board member James L. Kirkland, M.D., Ph.D., professor of Medicine and Physiology at the Mayo Clinic in Rochester, Minnesota.

Initially, Dr. Kirkland and others at Mayo studied strains of mice genetically engineered to age prematurely. These mice also harbored a suicide gene in their senescent cells that could be activated by a specific substance. Giving these genetically-engineered mice this substance caused their senescent cells to be killed, leading to delayed onset of cataracts, muscle loss, and other age-related conditions. Furthermore, eliminating senescent cells in old mice inhibited the progression of these disorders. More recently, Dr. Kirkland and his colleagues have discovered that two different drugs, given in a single dose, improved heart and vascular function in the genetically engineered mice. In another strain of aging mice, the same drugs alleviated osteoporosis and neurological problems.

“These drugs [called senolytics] appear to have multiple effects, many of which we didn’t suspect,” says Dr. Kirkland. The research suggests that “it may eventually become feasible to delay, prevent, alleviate, or even reverse multiple chronic diseases and disabilities as a group, instead of one at a time.”

As a geriatrician and bench scientist, Dr. Kirkland knows firsthand the impact this could have on people’s lives. “I often see elderly individuals who have 10 or 15 different problems, and who are on 20 different drugs.” Although “it’s very hard to predict how long it will take to translate these kinds of interventions into treatments for people,” the next steps will involve further studies to understand the fundamental underlying mechanisms through which these senolytic drugs are clearing senescent cells.

Ultimately, Dr. Kirkland’s research may lead to drugs with fewer side effects and the capacity to eliminate senescent cells in specific parts of the body or in particular cell types; it’s further possible that these drugs could be tailored to individual patients. “My BIG award has helped me further this research at a time when other funding has become more and more limited. I am grateful to AFAR and the Glenn Foundation for Medical Research for their support.”

JAMES KIRKLAND, M.D., Ph.D.

2012 Glenn /AFAR Breakthroughs
in Gerontology (BIG) Award

TRANSLATION IN ACTION



Can new drugs
slow the effects
of aging by
targeting
toxic cells?



“We need a revolution in our ability to treat dementia and to provide resilience to the brain in both aging and neurological disease,” says Dena Dubal, M.D., Ph.D., assistant professor of Neurology, and David A. Coulter Endowed Chair in Aging and Neurodegenerative Disease at the University of California, San Francisco. Dr. Dubal’s research on *klotho*—a gene and a protein in mice and in humans—is building a new bridge from understanding the biological processes that underlie aging to designing therapies that boost brain function.

When Dr. Dubal started her research, *klotho* was largely linked to lifespan. Laboratory animals genetically engineered to produce increased levels of the *klotho* protein lived longer than those with naturally occurring levels. In people, a genetic variant that increases *klotho* is associated with protection against heart and kidney disease. Dr. Dubal and her colleagues wondered if *klotho* might also prevent cognitive decline by slowing age-related processes.

After analyzing samples from more than 700 older adults, the team found that one in five had the proactive *klotho* gene variant. These people performed better on a wide variety of cognitive tests. Surprisingly, however, human subjects with the *klotho* gene variant were not protected against cognitive decline with age. Rather, “the difference was that they started at a higher baseline.” Studies in mice suggested a possible mechanism: more *klotho* strengthened the connections between neurons that make learning possible, not just in old age but throughout life. The results of the team’s research appeared in the journal *Cell Reports* in 2014 and in the *Annals of Clinical and Translational Neurology* in 2015.

More recently, Dr. Dubal and her colleagues studied mice engineered to have both high levels of *klotho* protein and the symptoms of Alzheimer’s disease. As in other mouse-models of Alzheimer’s, the brains of these animals were filled with plaques and Alzheimer-related toxicity; however, elevated *klotho* seemed to counteract a decline in their learning and memory abilities. These findings were published in the *Journal of Neuroscience* this year.

“There is strong biological evidence that *klotho* could be a treatment for age-related brain diseases” by providing a way to increase brain resilience rather than treating diseases themselves. The next steps are investigating ways to boost *klotho* levels or activity and to identify molecules that mimic its effect.

As a practicing neurologist as well as a bench scientist, Dr. Dubal doesn’t have to look far for further inspiration. “Seeing patients continues to fuel my passion to find impactful discoveries for age-related brain diseases, and I am grateful to AFAR’s support earlier in my career to help me best serve my patients while advancing this research.”

DENA DUBAL, M.D., Ph.D.

1998 Glenn /AFAR Scholarship

2009 Paul Beeson Career Development Award
in Aging Research

TRANSLATION IN ACTION



Could a
treatment
that slows
aging prevent
Alzheimer's?



Along with gray hair and wrinkled skin, weakness and frailty have long been considered inevitable consequences of old age. In fact, “most of us will lose about 30 percent of our muscle mass over the course of our lifetime,” says Nathan LeBrasseur, Ph.D., associate professor of Physical Medicine and Rehabilitation at the Mayo Clinic in Rochester, Minnesota.

For some, age-related muscle loss—known as sarcopenia—leads to difficulty walking, lifting objects, and, ultimately, living independently. For others, diseases like advanced cancer further aggravate the problem of muscle wasting, a condition called cachexia.

At both the bench and the bedside, Dr. LeBrasseur is laying the groundwork for therapies that can restore muscle mass and, in so doing, extend healthspan. “AFAR’s support early in my career helped me gain the skills to do translational research—moving back and forth between the laboratory and the clinic.”

Dr. LeBrasseur’s investigations focus on myostatin, a protein naturally synthesized and secreted by skeletal muscle. One focus of this research is gaining a better understanding of myostatin’s role in muscle and other tissues. Another is developing accurate ways to measure myostatin concentrations in blood, and then comparing the levels in people who are young, old, or have disease-related muscle loss.

The goal is to translate this knowledge into therapies. Myostatin’s normal function, in part, is to restrain muscle growth. “So the idea is if we can disrupt myostatin in the body through a drug, we can have a powerful effect on muscle health.” These studies in mice have shown that neutralizing myostatin increases both muscle mass and strength in middle-aged and older animals.

One potential use of such a therapy might be to bolster resiliency in people who are frail before they undergo surgery or other medical procedures. Symptoms of frailty, including low muscle mass and poor endurance, increase the likelihood of a host of post-operative complications. By boosting overall strength, a muscle-building therapy could potentially result in shorter hospital stays and lower risk of hospital readmission for these older patients.

An important step toward translating this research into useful therapies is clinical trials; trials that inhibit myostatin function are currently being tested for safety. Such therapies that rejuvenate muscle, Dr. LeBrasseur hopes, “have real potential to prevent disability and improve health and well-being.”

NATHAN LeBRASSEUR, M.S., Ph.D.

2002 Glenn /AFAR Scholarship for Research
in the Biology of Aging

TRANSLATION IN ACTION



Could a drug
that builds
muscle prevent
disability in
old age?



Reisa Sperling, M.D., M.M.Sc., believes that Alzheimer's disease is preventable. Turning that belief into a reality means detecting plaques of amyloid protein in the brain—which can begin forming as long as 10 to 20 years earlier than any sign of forgetfulness—and clearing them before they can affect a person's memory. Dr. Sperling's research illustrates the interplay between the laboratory and the clinic in solving these problems and bringing forth new therapies.

As director of the Center for Alzheimer Research and Treatment at Brigham and Women's Hospital, and professor of Neurology at Harvard Medical School, Dr. Sperling has been tackling the challenge of plaque detection for over a decade: significantly, she developed scanning techniques that can image amyloid plaques in living people and assess changes in how the brain is functioning.

This imaging work has led to important insights. "It was the first thing that convinced me that changes related to Alzheimer's disease were occurring more than a decade before the disease, and that if you wanted to save neurons, you had to start treating the disease even earlier. Support from AFAR allowed me to launch that imaging research, and it came at a critical point when I was just becoming an independent investigator."

Now, Dr. Sperling is leading the first clinical trial to test a therapy for clearing plaques in people without Alzheimer's symptoms, only the earliest brain changes. This Anti-Amyloid Treatment in Asymptomatic Alzheimer's (A4) study began recruiting participants in 2014. Some test patients will receive an investigational antibody treatment designed to clear amyloid and potentially avert Alzheimer's; others will take a placebo. Throughout the trial, positron emission tomography (PET) will be used to image amyloid, and functional MRI will monitor networks of neurons. Sperling's team was the first to make the link between amyloid buildup on PET and neuronal network disruption on fMRI.

Although the A4 trial is just gearing up, Dr. Sperling is already looking ahead. Another clinical trial in the planning stages will test a potential therapy to decrease amyloid production.

In the meantime, Dr. Sperling and her colleagues continue to advance imaging technology that can translate into studies of novel therapies. A new technique may help differentiate the brain changes that occur with Alzheimer's from those due to the normal processes of aging: this method involves PET scans that image tau, a second protein that becomes abnormal in Alzheimer's and kills neurons. "Amyloid is probably not a ubiquitous aging problem. But tau is part of aging—nearly everybody over the age of 70 has it. We don't know if some tau is part of 'normal' aging or whether it is setting the stage for Alzheimer's."

REISA SPERLING, M.D., M.M.Sc.

2003 Paul Beeson Career Development Award
in Aging Research

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With early
detection,
could
Alzheimer's
be stopped?



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**THE ROSALINDE AND ARTHUR
GILBERT FOUNDATION**

In 2014, the support of two of AFAR’s longtime collaborators helped advance translational research while maintaining core support and collaborations for research in the basic biology of aging and age-related diseases.



“Our mission is to impact health, not just build up knowledge,” says Mark R. Collins, president and director of the Glenn Foundation for Medical Research. “Basic research is at the core of our programs, but we want to apply the understanding gained through research to human health.”

The Glenn/AFAR Postdoctoral Fellowship Program for Translational Research on Aging was launched in 2014. Up to 10 awards will be given in 2015 to postdoctoral fellows whose research will have translational potential for clinically relevant strategies that address human aging and healthspan. “In order to build and maintain a strong cohort of researchers working on aging, it is essential to attract top talent at this career stage to the field.”

Similarly, The Rosalinde and Arthur Gilbert Foundation, which has funded the New Investigator Awards in Alzheimer’s disease in a partnership with AFAR since 2007, awarded a grant to AFAR in 2014 to convene a diverse group of experts—policymakers and representatives from the foundation world, as well as researchers who have experience in both the lab and the clinic—to explore issues in translational research.

In part, this upcoming meeting is an effort to connect the worlds of medical research and patient care. Notes Martin H. Blank, Jr., Director and C.O.O.: “Moving basic research on the biology of aging into the clinic—for example, to test new drugs or interventions, or to introduce new screening methods—involves doctors, nurses, and other medical professionals. For it to succeed, all parties need to be included in the process.”



Notably, an important segment of this meeting’s audience will be trustees and advisors to other small foundations. “This is a wonderful way for The Rosalinde and Arthur Gilbert Foundation to leverage its resources, and reach out to an audience of other small foundations and help them learn how their resources can move translational research forward.”

By working with other foundations and introducing new partners to aging research, AFAR consistently seeks innovative ways to advance the field. Such collaborations are critical to that process.

**THE GLENN FOUNDATION
FOR MEDICAL RESEARCH**

**THE ROSALINDE AND ARTHUR
GILBERT FOUNDATION**

TRANSLATION IN ACTION



How can
philanthropy
help advance
translational
research?

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“For our Biology of Aging Grant Programs portfolio, AFAR receives almost 300 letters of intent and draws from a roster of hundreds of leading scientists nationwide to review our grant applications. In 2014, we streamlined several of our review processes while maintaining fairness and rigor.

“Our reviewers for the grant programs—selected for both their special expertise and their broad knowledge of the aging field—screen these letters of intent. Applicants whose projects best align with the goals of AFAR’s grants are then invited to submit more detailed applications for review by a committee of experts. All committee members read and rank all applications before convening to decide on the awards.

“AFAR’s careful vetting process is highly regarded in the field. Notably, many of the review committee members are past AFAR grantees; thus, our commitment to paving the way for scientists and clinicians to progress in their careers comes full circle.

“We are grateful for their time and dedication to this process.”

**PROGRAM ADVISORY COMMITTEE FOR THE
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- Nathan LeBrasseur, Ph.D.
The Mayo Clinic, Rochester
- Jonathan Wanagat, M.D., Ph.D.
University of California, Los Angeles

“When you apply for an AFAR grant, you know that your work will be evaluated and critiqued by the best aging experts, so the satisfaction that your scientific views are appreciated by the leaders in our field is the biggest encouragement that a young scientist can get.”



Subhash D. Katewa, Ph.D.
Buck Institute for
Research on Aging
2014 AFAR Research Grant
for Junior Faculty Awardee

2014 BIOLOGY OF AGING GRANTS

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NEW INVESTIGATOR AWARDS IN ALZHEIMER'S DISEASE

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"AFAR has been instrumental in launching my research career in aging. Receiving AFAR research awards early in my career allowed me to make a successful transition to full-time research on the biology of aging, which I am continuing thanks to my recent Breakthroughs in Gerontology (BIG) award."



Stephen L. Helfand, M.D.
Brown University

1992 & 1995 AFAR Research Grant for Junior Faculty Awardee

2014 Glenn /AFAR Breakthroughs in Gerontology Award Recipient

“Great diversity is a hallmark of AFAR’s Biology of Aging grants program. AFAR supports a wide range of approaches to investigating the fundamental biological processes of how and why we age. While maintaining a core investment in basic biomedical research, these grants also help advance translational projects that are making basic discoveries relevant to the practice of medicine.

“AFAR is a leader in supporting young scientific talent at all levels—from graduate and medical students to postdoctoral fellows and assistant professors. With a shortfall in funding at the national level, AFAR’s mission to support young scientists is more important than ever. But just as critical is the assistance that AFAR gives to researchers that allows them to continue to focus on aging as they advance in their careers, with grant programs tailored to mid-career and senior scientists.

“By paving a career track, populating the field, and cultivating leaders, AFAR’s Biology of Aging grants help create a career pipeline that is essential to advancing better medicine for age-related diseases.”

**JULIE MARTIN MID-CAREER
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Sanford-Burnham Medical Research Institute

Satchidananda Panda, Ph.D.
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Salk Institute

**GLENN /AFAR BREAKTHROUGHS
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**GLENN/AFAR POSTDOCTORAL FELLOWSHIP
PROGRAM FOR TRANSLATIONAL RESEARCH
ON AGING**

Andrew Arrant, Ph.D.
Postdoctoral Trainee,
University of Alabama at Birmingham

**“Funding from AFAR has given me
the ability to pursue a timely question
in aging biology that might have
otherwise been put on hold.”**



Christin Burd, Ph.D.
Ohio State University
2014 AFAR Research Grant
for Junior Faculty Awardee

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2014 PHYSICIAN TRAINING PROGRAMS

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AFAR Medical Officer

Professor of Medicine, Greer Professor of Geriatric Medicine, and Director, Division of Geriatrics and Palliative Medicine – Alpert Medical School of Brown University; Professor of Health Services Policy and Practice, and Director, Center for Gerontology and Health Care Research – Brown University School of Public Health



BEESON CAREER DEVELOPMENT AWARDS IN AGING RESEARCH

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Assistant Professor of Medicine (Cardiology),
Yale University School of Medicine

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University of California, San Francisco

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Instructor,
Yale University

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Assistant Professor of Psychiatry,
University of Michigan, Ann Arbor

John Newman, M.D., Ph.D.
Research Fellow,
University of California, San Francisco

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“My [MSTAR] experience will push me to become a better physician. This opportunity will become one of the building blocks of my career.”



Sruti Brahmandam
Northeast Ohio
Medical University
2014 MSTAR Scholar

For the complete list of the 138 scholars who participated in the Medical Student Training in Aging Research (MSTAR) program in 2014, please visit www.afar.org/research/grantees.

"Each day, 10,000 people in the United States turn 65 years old, yet there are fewer than 7,500 certified geriatricians nationwide, and surprisingly, only a handful of medical schools offer mandatory courses or rotations in geriatrics. AFAR's Physician Training programs help student and faculty researchers become sensitive leaders in the field who can best meet the growing health care needs of this ever-growing population.

"Since 1994, the Medical Student Training in Aging Research (MSTAR) program has provided a mentored research, didactic, and clinical experience for medical students to learn about the care of older adults. The Paul B. Beeson Career Development Awards support clinically trained individuals as leaders in their institutions and in the field. The Beeson program, which also is recognized as one of the most prestigious and competitive in the field, celebrated its 20th year in 2014. AFAR also oversees the John A. Hartford Foundation Centers of Excellence (CoE) in Geriatric Medicine and Training program, investing in the recruitment and retention of fellows and junior faculty in geriatric medicine and geriatric psychiatry.

"AFAR proudly presents the 2014 recipients of these physician training programs and applauds their work on the front lines of translating research on aging into day-to-day improvements in health care."

To date, AFAR
has given more
than \$150 million
to over 3,000
investigators
through our
grant programs.



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The Lowell F. Johnson Foundation
The Marion Esser Kaufmann Foundation
F. M. Kirby Foundation
The Jan M. & Eugenia Krol Charitable Foundation
The Lucius N. Littauer Foundation



“MetLife Foundation recognizes AFAR’s deep connections in the field and the strong management they provide for our annual Awards for Medical Research in Alzheimer’s Disease and the Medical Student Training in Aging Research (MSTAR) program. Our partnership with AFAR has been instrumental in attracting the caliber of talent we recognize and honor.”

**– Dennis White, president and C.E.O.
MetLife Foundation**

AFAR is deeply grateful to our donors for their generous support. Their continued contributions enable us to fulfill our mission and strengthen our programs.

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The Ambrose Monell Foundation
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PepsiCo
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The Charles & Mildred Schnurmacher Foundation
The Sharonsteel Foundation
Wallerstein Foundation for Geriatric Life Improvement
Weill Cornell Medical College

INDIVIDUALS

Anonymous
Roger W. Ackerman
Robert Adler
Evin Adolph
Stephen Alpert
Deirdre Anderson
Marilou Arends
Eleanor H. Ascher
Ann Beck
Joan Beck
Flora K. Bloom
Ilene Boorman
Douglas E. Brash
Louis and Susan Bricklin
Joseph and Joan Briller
Robert L. Cahill
Rebecca Campomanes
Raymond Carlson
William E. Chatlos
Annette Choolfaian
Nathalie and William Comfort
Ingrid and John Connolly
James Connor
Jonathan Cooper
Mischelle Copeland
Martin Corso
Margaret F. Cristofalo
William R. Cunnick
Cara David
Debbie J. Diehl
Doris Dobrin
Linda Dokas
Melissa Dosil
Lyudmila Dukhovnaya
Clifford Eberhardt
Dwight Edwards
Laura Elmufdi
Gerald P. and Lydia Esmer

“In terms of charitable giving, I favor programs that embody leveraged approaches for advancing society. AFAR’s research grants address one of the greatest global challenges—healthspan in aging—and offer enormous potential.”

– Peter Kimmelman, AFAR Board Member

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Caryn Goldberg
Phyllis Goldberg
Karen A. Goraleski
David W. Gore
Melissa Green on behalf of the Scotland Elementary Staff
Alan Halpern
Regina Hearn
Sondra Hogan
Jan and Mimi Housinger
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Katherine Kline
V. Wensley Koch
Keith Kofoed
Michael and Atsumi Kolba
Nancy A. Leamond
Judith S. Leonard and Edwin Deane

"HEALTH & WEALTH" REGIONAL DINNER

On November 12th, AFAR held our Regional Awards Dinner at the Lotos Club in New York City. More than ninety guests attended, helping to raise nearly \$130,000 in support of our mission to advance healthy aging through biomedical research. Themed "Health & Wealth," the event honored leaders from the financial and philanthropic sectors for their dedication to aging research. The evening kicked off with a roundtable discussion featuring financial, scientific, and policy experts, moderated by AFAR board member and executive director of the Global Coalition on Aging, Michael W. Hodin, Ph.D.



Andy Sieg, managing director and head of Global Wealth & Retirement Solutions at Bank of America Merrill Lynch was presented the Chairman's Award of Distinction by Senator Bob Kerrey.

Sidney Lerner
Scott M. Lesowitz
Marc Levine
Lewis Lipsitz
Betty L. Long
Phyllis Lusskin
Martha Maas
John R. Mach
Robert Mathewson
Carlyn McCaffrey
Skye McDougall
James and Meg McLaughlin
Audrey McNiff
Hector Medora
Karole Mendelsohn
Richard and Ronay Menschel
Helen Mitchell
Ann Mittelmann
Sandra Moody Levin
Richard Morgan
Russell and Helen Morgan
Jeffrey L. Neuman
Richard K. Noback
Adrian and Nancy O'Leary
Elizabeth Palmer and Thomas Rally
Christopher T. Pell
Richard I. Pine
Andrea Plevan

William Podd
Jordan S. Press
Daniel Promislow
Nancy Purifoy
Evelynn U. Putnam
Kathy Rabbers
Lorrie Rankin
Michael Rantz
Lorraine Reich
Rebecca Resinski
Susan L. Resnik
Lynette Reyna
Jean Evans Rich
Jo Anne Robbins and David K. Falk
Patrick Robbins
Edward R. Roberts
Theresa Roeder
Leonard Rokaw
Matthew J. Ruple
Earl A. Samson
Kathleen A. Schmalz
Marvin Schmeiser
Dennis and Andrea Schmidt
M. Roy and Thelmla Schwarz
John L. Seidler
Ashley Severy
Samuel Seymour
Miles Shea

David A. Sinclair
Susan Sinclair
Patricia Sirhan
Frank Skerbetz
Ethell Smith
Frank Spokane
Peter D. and Joan F. Stogis
Barbara A. Taylor
Dara Tesse
Ernest Thomas
Michael Thomas
Dette & Thomas Thompson
Rebecca Tsurumi
George M. Van Cleave
Ann Visgilio
Norman Volk
Lois Wagh
Jeremy D. Walston
Anne Weber
J. Fred Weintz, Jr.
Toby Wertheim
Rosalinde Westling
Margaret L. Wolff
Binglong Yang
M. Helen Yates
Barbara A. Yener
Janet Zemlin
Joan Zuckerman



"As a trustee of the John A. Hartford Foundation—one of AFAR's partners in improving the healthcare of seniors in America—I am pleased that the MSTAR program helps doctors-in-training discover the unique needs of older patients."

**– Lile Gibbons, Trustee
The John A. Hartford Foundation**



On September 9th, AFAR celebrated the 20th anniversary of the MSTAR program with a special reception at the home of Norman Volk, chairman of the John A. Hartford Foundation, and his wife, Alicia Volk. The intimate event honored one of our key supporters, Kathryn D. Wriston, the Hartford Foundation's retiring president (above).



Corinne Reider, retiring executive director and treasurer of the John A. Hartford Foundation, received the Honorary Leadership Award from Marie Bernard of the National Institute on Aging.



AFAR treasurer Ann Connolly, executive committee member Fox Wetle, chair emerita Diana Kalman, and medical officer Richard Besdine enjoyed the festivities.



MSTAR (Medical Student Training in Aging Research) program students joined supporters at the dinner.



Board member S. Jay Olshansky shared insights on the socioeconomic impact of aging research.

"LIVE LONGER, LIVE WELL" IN LONDON

On October 27th, AFAR co-hosted a special event at the House of Lords in London with the British Society for Research on Ageing and the Glenn Foundation for Medical Research. The event engaged politicians and scientists and premiered the "Live Longer, Live Well" video, designed by acclaimed data journalist David McCandless and sponsored by the Glenn Foundation in collaboration with AFAR, with guidance from Richard Faragher, Ph.D., professor of Biogerontology at the University of Brighton, UK, as well as Research America.



Helen Griffith of the British Society for Research on Ageing with AFAR executive director Stephanie Lederman.



AFAR board members Jim Kirkland and Mark Collins with Richard Faragher of the British Society for Research on Ageing.



Baroness Gould of Potternewton greeted guests.



SUMMARIZED FINANCIAL INFORMATION

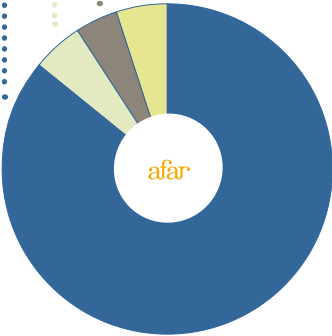
Year Ended December 31, 2014

86% research grants
and scholarships

5% meetings and
public education

4% management
and general

5% fundraising



AFAR is proud to maintain high fiscal standards internally, and we require the same of our grantee institutions.

SUMMARIZED OPERATING RESULTS

OPERATING REVENUE

Contributions	10,392,413	97%
Investment Income, Net	3,408	—
Endowment Earnings	276,073	3%
Other	19,483	—
Total Operating Revenue	10,691,377	100%

EXPENSES

Research Grants and Scholarships	8,971,001	
Meetings and Public Education	555,763	
Total Program Expense	9,526,764	91%
Management and General	449,023	
Fundraising	461,391	
Total Supporting Expense	910,414	9%
Total Operating Expense	10,437,178	100%
Total Operating Income	254,199	2%

SUMMARIZED BALANCE SHEET

Assets

Cash	6,030,510	21%
Contributions Receivable	12,633,276	43%
Investments	9,187,155	32%
Other	1,300,253	4%
Total Assets	29,151,194	100%

Liabilities and Net Assets

Research Grants and Scholarships Payable	2,816,627	10%
Other	48,870	0%
Total Liabilities	2,865,497	10%
Net Assets		
Unrestricted	4,549,654	16%
Temporarily Restricted*	17,855,797	61%
Permanently Restricted Endowment	3,880,246	13%
Total Net Assets	26,285,697	90%
Total Liabilities and Net Assets	29,151,194	100%

* Funding pledged in support of future programming

The above summarized financial information is derived from the organization's audited financial statements, which are available upon request.

SUPPORT AFAR | ADVANCE HEALTHY AGING

The American Federation for Aging Research (AFAR) has long led the field of biomedical research on aging. For over 30 years, we have offered a broad range of grants aimed at indentifying, funding, and mentoring talented scientists dedicated to understanding the biology of aging.

Our distinguished research committees are comprised of the nation's leading experts, who conduct peer reviews and build consensus to ensure that the highest quality candidates are selected for funding. AFAR builds the intellectual resources—the pipeline of scientists and medical professionals—who will tackle the challenges of an aging population that is living longer and is expected to increase almost fourfold by 2050.

Through AFAR's leadership, the field of aging has reached a turning point. Exciting new scientific discoveries have the potential to transform our understanding of the processes of aging in order to help us all live healthier, longer.

By helping AFAR build the pipeline of research, our individual supporters and donors from the foundation, corporate, and government sectors actively help sponsor our programs and advocate on our behalf. But we still need your help to facilitate further advancements in scientific innovation, provide more physicians with the combination of medical, academic, and scientific training needed to serve an aging population, and increase public education on healthy aging. Please join us by becoming an AFAR donor. We offer a range of giving options for your consideration:

- Make a gift to our **annual campaign**, the central vehicle through which our core AFAR research grant program and our operations are funded. Our administrative and overhead costs are kept to a minimum, ensuring that 91% of your donation goes directly to programs. Gifts may be made annually or through our monthly and quarterly gifts program.
- Make a gift to underwrite or endow a **named research grant**. Naming opportunities in support of AFAR research grants, new investigator, or disease-specific grants are available at multiple levels of giving.
- Make a gift to **sponsor scientific conferences or public educational programs**. Naming opportunities in support of AFAR informational activities are available at several levels of giving.
- Make a **planned gift** or bequest.
- Make a **memorial or a tribute gift** to honor a loved one or mark a special occasion.
- Make a gift through your **employer's matching gift program**, which leverages additional funds.
- Make a **gift of stock** or other tangible property.

For additional information, please contact Stephanie Lederman at stephanie@afar.org.



For sound fiscal management and commitment to accountability and transparency, AFAR's accomplishments and low administrative expenses have secured the highest rating from Charity Navigator, an independent evaluator of the nation's charities.



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The American Federation for Aging Research (AFAR) is a national non-profit organization whose mission is to support and advance healthy aging through biomedical research. Learn more about our programs at afar.org and get expert advice on living a healthier, longer life at our online resource, InfoAging.org.

AFAR focuses our activities on four major initiatives:

- **Identifying and funding a broad range of cutting-edge research most likely to increase knowledge about healthy aging.**
- **Attracting more physicians to specialize in geriatric medicine to meet the demands of an aging population with expert health care.**
- **Creating opportunities for scientists and clinicians to share knowledge and exchange ideas to drive innovation in aging research.**
- **Providing information to the public on new medical findings that can help people live longer lives, less susceptible to disease and disability.**



Special thanks to all of the featured experts for their time and care in contributing to this report.

AFAR 2014 Annual Report Creative Team:

John Chaich, M.F.A., Designer

Elizabeth Hanson, Ph.D., Copywriter

Barbara Bigelow, Copyeditor

Photography courtesy of featured experts, as well as Lori Schroth (p 8), Duncan Soar Photography (p 21, bottom), and Studio 7 NYC Photography (p 1, pp. 20–21).



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