The federal budgetary process has not been easy for aging. Last year funding was eliminated for geriatric education centers and fellowships for training new geriatricians and geriatric practitioners, and funding for the National Institute on Aging (NIA), an agency of the National Institutes of Health (NIH), was cut by $10 million. All of this is occurring as the first of the Baby Boomers turn 60 and as news stories focus on the growing number of older adults in the U.S., and around the world, and the accompanying social, medical, and economic issues.

In this climate of uncertain federal funding, several organizations focused on aging and advancing medical and health research stepped forward to create a coalition, the Friends of the NIA (FoNIA). FoNIA will serve as a bridge between the NIA and coalition member organizations, working collectively to promote and advocate for NIA programs and its training mission, raise public awareness of the NIA’s contributions and efforts, and address challenges in advancing aging research. Understanding the changes of aging and why they occur provides important clues for developing interventions that will identify risk factors, prevent and treat diseases, and improve the quality of life for Americans – older and younger.

Nearly 50 other organizations – including the Institute on Aging – have joined as Friends of the NIA. Communicating the importance of sustained funding for research in aging and aging-related diseases and for clinical trials for drug discovery and treatment efficacy is paramount. All of FoNIA’s member organizations conduct, fund, or advocate for scientific efforts to improve the health and quality of life for Americans as they grow older. These groups are also familiar with the growing number of families and caregivers caring for older adults with serious and often multiple illnesses, as well as the overall impact on the physical, mental, and fiscal health of the U.S. and its healthcare system.

The recent loss of Dr. Vince Cristofalo, pioneer in aging research and founding Director of the Center for the Study of Aging at Penn (now the IOA), encouraged us to reflect not only on Vince’s many contributions to aging and aging research but also on the tremendous progress that has been made in understanding aging and aging-related diseases.

To best honor Vince’s memory and commemorate his spirit and accomplishments, the IOA has created the Vincent J. Cristofalo, PhD, Memorial Lectureship Fund. The Cristofalo Memorial Lectureship will be an annual tribute, highlighted by a distinguished keynote speaker in

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Message from the Director

The recent loss of Dr. Vince Cristofalo, pioneer in aging research and founding Director of the Center for the Study of Aging at Penn (now the IOA), encouraged us to reflect not only on Vince’s many contributions to aging and aging research but also on the tremendous progress that has been made in understanding aging and aging-related diseases.

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Vincent J. Cristofalo, PhD, Professor Emeritus and founding Director of the Center for the Study of Aging (now the Institute on Aging) at the University of Pennsylvania, died May 8th at the age of 73.

While at Penn, Dr. Cristofalo had a distinguished career, including positions as Professor of Animal Biology in the School of Veterinary Medicine as well as Professorships in the Department of Physiology in the School of Medicine and in the School of Social Work (now Social Policy and Practice). In 1978, he founded the Center for the Study of Aging and served as its Director until 1990. He was also an active member of The Wistar Institute’s faculty from 1963 to 1990. He left Penn in 1990 to become part of the Allegheny University of the Health Sciences.

Over the course of his career there, Dr. Cristofalo was Professor of Pathology and Chief of Gerontology at Allegheny University of the Health Sciences, Vice Provost for Research at Medical College of Pennsylvania and Hahnemann University, and Director of the Allegheny Health, Education and Research Foundation Institute on Aging, among other research and administrative appointments. In 1999, Dr. Cristofalo became President of Lankenau Medical Research Center, as well as a Senior Vice President with Main Line Health. He retired in 2004 but remained active in biological mechanisms of aging and aging-related diseases research, serving as a Senior Investigator at Lankenau and continuing as Professor of Pathology, Anatomy, and Cell Biology at Jefferson Medical College.

An expert in cellular aging, Dr. Cristofalo co-authored over 230 peer-reviewed scientific papers and review articles and was editor of numerous scientific books and book series. He served as a past President of the American Federation for Aging Research and The Gerontological Society of America. His honors include awards from the American Aging Association, Samuel Roberts Noble Foundation, American Federation for Aging Research, National Institute on Aging, and The Gerontological Society of America.

Dr. Cristofalo is survived by his wife, Margaret; his daughters Margaret, Elizabeth, Jean Looney, Carolyn Muttreja, Catherine, and Helen; sisters, and grandchildren. In lieu of flowers, the family requests that donations please be sent to The Wistar Institute or the Institute on Aging. To honor his legacy, several former colleagues remember Dr. Cristofalo and his contributions to aging research and as a mentor here at Penn.

“By having the vision to launch IOA over 25 years ago, Vince Cristofalo has had a significant and enduring impact on all aspects of aging programs at Penn. Since he was highly supportive of the efforts of Virginia Lee and me to launch Penn programs on Alzheimer’s disease, Parkinson’s disease, motor neuron disease, frontotemporal dementias and other aging-related neurodegenerative diseases, as well as the Center for Neurodegenerative Disease Research, I am personally appreciative...
of his support and advice in these endeavors.” -- John Q. Trojanowski, MD, PhD, Director of the Institute on Aging and Co-Director, Center for Neurodegenerative Disease Research

“Dr. Cristofalo’s work in the cell biology of aging was the only aging-focused research work being conducted at the University of Pennsylvania when I arrived in 1980. Even as he continued to advance his own research, he strove from the earliest days of the (then) Center for the Study of Aging to encourage faculty from all Schools of the University to develop curricula and faculty around aging issues. That institutional leadership at Penn allowed younger faculty to be recruited, and to network with each other through his introduction and seminars. He was committed to the development of clinical programs for seniors and research into the clinical problems of older patients. The original Teaching Nursing Home grant awarded to the Center for the Study of Aging written under his leadership was the first interdisciplinary award in aging at Penn.

Vince’s extraordinary generosity with his time and encouragement at a time when professional commitment to research or practice in aging was unusual, allowed academic programs to develop and flourish at Penn. His integrity and intellectual rigor laid the foundations for respect and achievement from all who were fortunate enough to train with him.” -- Mary Ann Forciea, MD, Clinical Associate Professor of Medicine, Division of Geriatric Medicine, and Director of the Delaware Valley GEC

“Vince Cristofalo was a leader in gerontologic research, a pioneer in the field of cellular aging, a consummate mentor, and friend to all who had ideas about how to study aging and promote the health and well-being of older adults. I will remember him best as a mentor to all who had interests in gerontology, from high school students to faculty. He was passionate about the role that research should play in the advancement of gerontology and geriatrics, and he supported those who sought his advice in any way he could. He supported his trainees intellectually and financially, and encouraged them to pursue their interests; this he did even after they left his laboratory. I am fortunate to have trained with Vince, and am confident that his legacy will survive through the hundreds of students, post-docs, and faculty that have had the distinct privilege of knowing him.” -- Robert J. Pignolo, MD, PhD, Assistant Professor of Medicine, Division of Geriatric Medicine

“Vince Cristofalo was known internationally, nationally and at Penn as a pioneer in the field of aging. He was a great intellect, scientist and a wonderful mentor. He will be missed deeply, but his contributions to the aging and to Penn are immeasurable and live on. I feel privileged to have known and followed him at the IOA.” -- Risa Lavizzo-Mourey, MD, President and CEO, Robert Wood Johnson Foundation

Continued from cover

Message from the Director

gerontology. For more information on the fund and lectureship, please see page 9.

Only a few decades ago, aging was not a ‘hot topic’ in research. And yet, a month ago at the IOA’s 2006 Sylvan M. Cohen Annual Retreat with Poster Session on Aging, we had over 70 posters fill the Hall of Flags, highlighting basic science and clinical research in aging and aging-related diseases, as well as educational programs and services for older adults.

Our poster reviewers and I were most impressed by the range of research presented, the community support programs for older adults and their caregivers, and the brilliant promise of the next generation of researchers in the field of aging.

Our speakers, Dr. Richard Hodes, Director of the NIA, Dr. David Weiner, and Dr. Edward Lee, left us with a glimpse of where it all may lead next on the immunological level (see page 8). Video of the afternoon’s lectures is available on the IOA website.

Where is it all leading? Penn’s participation in the NIA’s Alzheimer’s Disease Neuroimaging Initiative (ADNI) is underway, working to validate and develop diagnostic testing for potential biomarkers of Alzheimer’s disease (see page 4).

Through funding from the Marian S. Ware Alzheimer Program, IOA Fellows are exploring new research tools and methods from potentially repurposing

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already FDA-approved drugs to treat Alzheimer’s to evaluating different nursing care approaches for care coordination for the cognitively impaired, to novel ways of redesigning studies and trials to increase volunteer participation.

The IOA is continuing to stimulate research collaboration on aging across campus. In March, 2007, the IOA and the Penn School of Veterinary Medicine will present “Exploring Human-Animal Intersections: Converging Lines of Evidence in Comparative Animal Models of Aging” (see page 6). I am most pleased to report that, in response to the IOA’s request for applications for the available 2007 pilot research grants, 25 proposals were received, representing faculty and researchers from the Schools of Medicine, Nursing, Dental Medicine, and Arts & Sciences. Special thanks again to the Bingham Trust for its generous support.

Progress in research relies in large part on continued federal leadership and funding of the NIH and its agencies. I urge you to contact your U.S. Senators and Representatives about the importance of preserving and expanding federally funded research in aging (see page 5). Please visit our website, www.med.upenn.edu/aging, for more on upcoming IOA activities. I hope to see you at one of our events this year.

Making Methodologies Community-Compatible:

The next step: How ADNI may change the way we can look at memory decline and Alzheimer’s disease

For every AD patient seen by a clinician and every brain dissected by a pathologist, the same question is repeated: how can we know sooner?

Recently, the NIH and the NIA launched ADNI – the 5-year Alzheimer’s Disease Neuroimaging Initiative. Over 50 sites across the U.S. and Canada are participating in this the most comprehensive effort to date to identify brain and other biological changes associated with memory decline and AD. Efforts are well underway to screen and recruit the study’s overall target of 800 people, ages 55 to 90, representing cognitively normal older adults, those with mild cognitive impairment (MCI), and those with AD. Participants will be followed at regular intervals over time for 3 years to build a focused, longitudinal look at AD. Known risk factors for AD, such as age, APO E e4 genotype, and plasma homocysteine concentration are all being documented in each study subject enrolled.

The hope, as expressed by the NIA’s Susan Molchan, MD, Program Director for the ADNI project, is to detect the brain and biological changes (through biomarkers) that occur before memory decline and other symptoms appear so as to allow the effectiveness of drugs to be evaluated at the earliest possible time and to bring treatments to patients much sooner. ADNI will culminate in a database of neuroimaging scans – MRI and PET – and biomarker results – cerebrospinal fluid (CSF), urine and plasma – from participants, which will be accessible by researchers and clinicians to help guide them in better diagnosing or ruling out AD.

The Penn Alzheimer’s Disease Center is leading ADNI’s Biomarker Core in this public-private partnership, funded by federal, corporate and nonprofit organizations. Working with Drs. John Trojanowski and Chris Clark, Dr. Leslie M. Shaw, Professor of Pathology and Laboratory Medicine, is directing Penn’s work to validate, in the samples of CSF, urine, and plasma taken from ADNI participants and sent to Penn for analysis and evaluation, the chemical and other biological substances which may act as ‘signals’ or biological markers of changes in cognitive function, as well as to develop diagnostic laboratory tests for the early diagnosis of AD by screening and measuring for identified, select biomarkers.

“One of my passions for this study,” Dr. Shaw explains, “is to provide reliable, serial biochemical biomarker data that, together with the highly detailed clinical histories, memory testing, and MRI and PET imaging results, can provide the basis for better and earlier diagnosis of AD and that would encourage and facilitate investigations of new candidate therapeutics.” Diagnosing and catching a patient’s AD just a little earlier could mean all the difference to Drs. Trojanowski and Virginia Lee and their team as they search for viable, effective drugs to delay onset, impede progression and even reverse AD damage. Clinically for Drs. Arnold, Clark, and Karlawish and their staff it would help in planning treatment,
(eventually) selecting the right prescription medication and dosage, and in preparing patients and their families for the disease’s progression.

In particular, Dr. Shaw and his team hope to achieve bioanalytical and clinical validation of candidate biochemical biomarkers such as β-amyloid, tau and phosphorylated tau in CSF, and F2 isoprostanes in CSF, urine and plasma for AD. ADNI is building on results of preclinical studies, studies using brain tissue from AD patients following their death, and a number of clinical investigations, mostly cross sectional in design, with much smaller numbers of subjects. None of the earlier clinical studies combined imaging and biochemical biomarkers studied at regular intervals over time in AD, MCI and control subjects. The biomarker data has a foundation based on study results from investigations in animal models of AD, studies involving detection of biomarkers in brain tissue and ventricular fluid of AD patients versus control patients, as well as clinical investigations.

According to Dr. Shaw, thus far, the biomarker data that have shown significant sensitivity and specificity for detection of AD and that have been reproduced in the largest number of investigations are the CSF concentrations of Tau, p-tau and β-amyloid. Tau and p-tau concentrations are elevated in CSF of AD patients probably reflecting the release of hyperphosphorylated tau present in tangles from damaged and dying neurons affected by the disease. β-amyloid concentrations in CSF are, other the other hand, decreased in AD patients probably reflecting the formation in certain regions of the brain of the characteristic, insoluble, extracellular plaques that are rich in the insoluble form of this peptide. Previous investigations focused on the possible appearance of biomarkers in plasma with very limited success, possibly due to limited entry of brain proteins and peptides of this size into the general circulation and the technical hurdles involved in detecting picogram amounts of these biomarkers in the presence of gram and milligram amounts of plasma proteins.

Of the fluids normally sampled for disease diagnosis, progression, or response to therapy, urine is the easiest to collect and least invasive. Dr. Shaw and his team believe they will be able to test urine for appropriate biomarkers for AD detection, particularly as some earlier studies had shown urinary isoprostane concentrations were elevated above the values obtained in individuals with normal-for-age cognitive function and correlated with the elevated concentration values obtained in CSF. Thus F2 isoprostanes, metabolites formed by peroxidative metabolism of arachidonic acid in cell membrane lipids which reflect oxidative stress and are elevated secondary to this process in the brains of AD patients and CSF, may be an important biomarker for early detection. “If this promising finding can be replicated in the ADNI study this would be very important because it would provide the most practical specimen type for routine clinical testing for AD,” says Dr. Shaw.

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What can we learn from each other? The impact of aging and aging-related diseases is felt by humans and animals, from the degenerative pain of osteoarthritis and the devastation of cancers to the issues accompanying obesity and increased longevity.

On March 8, 2007, the IOA will proudly partner with the Penn School of Veterinary Medicine to present a full-day symposium to discuss areas where current aging research using animal models at the Penn School of Medicine and the Penn School of Veterinary Medicine intersect, where future research may continue through joint investigative efforts, and what the implications are for the study of aging and aging-related diseases for animals and for humans. Mark your calendars and check the IOA website for a complete listing of speakers and times.

The University of Pittsburgh Medical Center, Thomas Jefferson University’s Center for Applied Research on Aging and Health (CARAH), and Penn’s Institute on Aging (IOA) have received a joint one-year grant from the Pennsylvania Department of Aging in development support of “Healthy Actions for Persons with Dementia and Their Families.”

Alzheimer’s disease and related disorders (ADRD) are a major public health concern nationally and in Pennsylvania. Almost 50% of those over 85 have some form of dementia; this age group is also the fastest growing segment of Pennsylvania’s population. Estimates place nearly 300,000 people with ADRD currently in Pennsylvania and nearly 500,000 in the tri-state area. In the absence of effective intervention and as the population continues to age, already significant costs will increase exponentially.

Despite research, resources are limited for persons with dementia and their families as evidence-based programs supporting families’ care efforts have not been integrated within existing aging services. With the grant, the partnership will begin to address the service gap and enhance the capacity of care managers to provide effective services to families and persons with ADRD by infusing practice with evidence-based interventions drawn from the REACH I and II programs conducted at Pitt, as well as from other randomized trials from CARAH and Penn. Prototype training manuals for care managers and caregiver education booklets will be developed. Additional funding to further develop the program will be sought to pilot test and eventually implement training across the state.

The Pennsylvania Department of Aging is also funding “Enhancing Pennsylvanians’ Awareness of Healthy Brain Aging.” The IOA will work with the Delaware Valley Chapter of the Alzheimer’s Association and the Penn Alzheimer’s Disease Center to increase awareness of brain health and promote healthy brain aging among caregivers for persons with ADRD and elderly persons at risk of developing cognitive impairment.

Using the collective expertise of the participating organizations, the project will work to transform both how Pennsylvanians view ‘brain health’ and how they approach caring for themselves and for persons with cognitive impairment. The stress of caring for those with cognitive impairment and the demands and stresses from work and family often lead to the institutionalization of those with cognitive impairment. Depression and chronic stress are risk factors for dementia. Since few, if any programs, exist to identify and assist these working caregivers and their relatives with cognitive impairment, the project will develop educational and Internet-based screening interventions with targeted education and information on available services for caregivers, as well as provide referrals to area agencies on aging for additional assistance. Materials to educate Pennsylvania’s divergent communities about how to keep the brain active, engaged and healthy will be produced.
The pace of scientific progress in aging is brisk; the NIH and NIA have been the supporting and guiding forces behind progress in basic, clinical, and translational research. The NIA’s status as the lead federal research agency for Alzheimer’s disease (AD) has led to the development and launching of such major research programs as the Alzheimer’s Disease Neuroimaging Initiative (ADNI) (see page 4). Through work at and work funded by the NIA, doctors can now diagnose AD in life with a high degree of certainty whereas only a few years ago autopsy was the only means of true diagnosis. Research in AD is only a part of the NIA’s work.

The NIA’s biomedical research efforts all hold great promise, examining genes susceptible to Parkinson’s, age-related bone loss and osteoporosis, genetic and environmental factors in racial and ethnic health differences, and bone marrow failure diseases. Data provided by the NIA’s behavioral and social science research programs, centers, and surveys informs Congress on the budgetary impact of population aging and effects on Social Security, Medicare and Medicaid and is cited and used by the Social Security Administration and the Center for Medicare and Medicaid Services in their reports and studies.

With action alerts from FoNIA members and encouragement from constituents, the U.S. Senate voted in March to restore funding for aging research by passing the Specter-Harkin Amendment, sponsored by Senators Arlen Specter (PA) and Tom Harkin (IA). One month later, Dan Perry (Chair, FoNIA), Executive Director of the Alliance for Aging Research, and Carol Schutz (Co-Chair, FoNIA), Executive Director of The Gerontological Society of America, testified before the U.S. Senate Committee on Appropriations’ Subcommittee on Labor, Health and Human Services, Education and Related Agencies. A full transcript is available online at www.agingresearch.org/press/FoNIATestimony.pdf.

In their testimony, Mr. Perry and Ms. Schutz cautioned that the reduction in funding limits the scope of research and scientific progress and may redirect new investigators, clinicians, and researchers to other areas of study, away from gerontology and geriatrics. With funding slated to be cut by $10 million, the NIA, in order to preserve funding for clinical trials already underway, will fund only 18% of all grant proposals submitted, down from 28.5% in 2003; yet, the NIA has determined that more than 50% of submitted applications are considered highly promising. For those receiving funding, requested budgets will be reduced by an average of 18% across the board. Studies have shown that by 2030 the U.S. will need up to 36,000 geriatricians, and that, given current training rates, demand will exceed supply by as much as 25,000.

To learn more about the Friends of the NIA, contact Michael Cangelosi at the Alliance for Aging Research at 202-293-2856 or via email at mcangelosi@agingresearch.org.
This year’s Institute on Aging Sylvan M. Cohen Annual Retreat with Poster Session on Aging drew over 200 people to Houston Hall. Named in honor of Sylvan M. Cohen, founding Chair of the Institute on Aging’s External Advisory Board, the 2006 retreat lectures focused on immunology and featured eminent immunologist, Richard J. Hodes, MD, Director of the National Institute on Aging (NIA) of the National Institutes of Health (NIH).

Dean Arthur Rubenstein, Penn School of Medicine, opened the afternoon by welcoming attendees and commending the breadth of research being done at Penn in aging and aging-related disease, as well as thanking Mrs. Alma Cohen for her continued, generous support of the event.

Serving as the Sylvan M. Cohen Visiting Scholar for the day, Dr. Hodes’s presentation, “In vivo regulation of telomerase activity and telomere length,” discussed evidence that aspects of human aging may be related to changes in telomeres, structures that protect the ends of chromosomes, and to changes in the activity of telomerase, an enzyme that helps to maintain telomere structure. He focused on how changes in telomeres and telomerase affect the immune system, the function of which is critical for protecting us from infection over the full span of our lives.

David B. Weiner, PhD, Associate Professor, Department of Pathology & Laboratory Medicine, discussed “Improving the potency of DNA vaccines.” Dr. Weiner reviewed progress on creating DNA-based vaccines and explained the challenges involved in development and delivery of such vaccines. He emphasized his lab’s current work with respect to HIV vaccines and its pioneering advancement of this DNA vaccine technology to clinical evaluation for HIV patients.

Edward Lee, MD, PhD, Resident in the Anatomic Pathology Division of the Department of Pathology & Laboratory Medicine, closed the program, presenting “Alzheimer’s disease immunotherapy: Targeting Aβ oligomers.” Dr. Lee’s research examined a specific subtype of Aβ to determine...
its therapeutic potential as passive immunization against Alzheimer’s disease in mice.

Following the lectures, guests moved to the Hall of Flags for the Poster Session on Aging. Over 70 posters were on display in basic science, clinical research, education and other programs, and research and community programs for older adults in the Greater Philadelphia region. Penn faculty, staff, students and researchers in aging were joined by community service groups and colleagues from area research institutes and universities. After careful review and discussion with poster presenters, poster reviewers gathered and nominated the following entrants for awards:

Basic Science:
First Prize: Regulation of Reproductive Diapause and Aging by Drosophila Gene couch potato, presented by Jayatri Das, School of Arts & Sciences, Department of Biology.
Second Prize: Role of Baker’s Yeast Sgs1p in Transcriptional Regulation, presented by Julia Lee, Department of Pathology & Laboratory Medicine.

Clinical Research:
First Prize: Who best to rate an Alzheimer’s disease patient’s quality of life: patient or caregiver? The case for a mixed perspective, presented by Jason Karlawish, Department of Medicine.
Second Prize: Comparative Diagnostic Yields in Two Oral Cancer Studies, presented by Roy S. Feldman, School of Dental Medicine.

Education and Other Programs:
First Prize: Knowledge and Attitudes of Medical Housestaff Before and After a Curriculum on the Effects and Implications of Pharmaceutical Advertising, presented by Vivian Argento, Department of Medicine, Division of Geriatric Medicine.
Second Prize: Positive Oral Health Promotion Models for Community-residing Older Adults, presented by Ann Slaughter, School of Dental Medicine.

Streaming video of the speaker presentations and the poster session and a listing of poster presenters can be found at www.med.upenn.edu/aging/retreat2006.shtml. You will need Real Player to view the video segments.
AWARDS AND HONORS

Support for Muscular Dystrophy Research: Dr. Sweeney

Dr. H. Lee Sweeney, William Maul Measey Professor and Chair of the Department of Physiology, will serve as the Director of the new Senator Paul D. Wellstone Muscular Dystrophy Cooperative Research Center, one of only six such centers in the U.S. Under Dr. Sweeney’s leadership, the Penn-based Center will focus on ways to increase muscle growth and examine compounds to inhibit enzymes involved in the degradation of muscle tissue, analyzing muscular dystrophy in animal models.

Lindback Award for Distinguished Teaching: Dr. Asch

Dr. David Asch, Robert D. Eilers Professor of Medicine and Health Care Management and Economics and Executive Director, Leonard Davis Institute of Health Economics, is a recipient of the Christian R. and Mary F. Lindback Foundation 2005-2006 Award for Distinguished Teaching. Holding a joint appointment in the School of Medicine and the Wharton School’s Department of Health Care Systems, Dr. Asch was lauded by students as a ‘phenomenal teacher’ and ‘an extraordinarily gifted and creative communicator, guide and mentor,’ whose commitment and skill as a mentor are ‘legendary.’

First Awardee of AHA’s Population Research Prize: Dr. Kumanyika

Dr. Shiriki Kumanyika, Professor of Biostatistics and Epidemiology, Associate Dean for Health Promotion and Disease Prevention, and Director of the Graduate Program in Public Health, has won the first Population Research Prize of the American Heart Association. Continued on page 11

FELLOWS IN THE SPOTLIGHT

A Conversation with Dr. Ann Slaughter

The IOA Fellows program brings together researchers, clinicians, and educators with varied interests and remarkable achievements in the field of aging. There are two levels of fellowship. IOA Fellows are University of Pennsylvania faculty, representing the 12 schools within the University. Associate Fellows represent Penn staff as well as colleagues from other U.S. institutions who have demonstrated a keen interest in aging-related research, education or services. The IOA is honored to include nationally-recognized members of Penn’s faculty, such as Ann Slaughter, DDS, MPH, in the Fellows Program.

Y. Ann Slaughter, DDS, MPH

Assistant Professor of Community Oral Health, Department of Preventive and Restorative Sciences Course Director, Geriatric Dentistry, School of Dental Medicine Adjunct Assistant Professor of Nursing, School of Nursing

Dr. Ann Slaughter enjoys defying the conventional image of a dentist – particularly one specializing in geriatric dentistry – and serving as an advocate for wider recognition of the importance of and improved coverage for oral health care in older adults.

After receiving her BA from Fisk University, Dr. Slaughter was awarded her DDS degree from Meharry Medical College School of Dentistry and completed general dentistry post-graduate training at the University of Rochester Eastman Dental Center. At the encouragement of Eastman’s Director, she pursued a fellowship in geriatric medicine at the University of Connecticut Travelers’ Center on Aging and obtained a Masters of Public Health degree in epidemiology from the University of Michigan.

In addition to her time in the clinic as a practicing geriatric dentist, Dr. Slaughter serves as Course Director for Geriatric Dentistry and lectures on Health Promotion and Practice Management for courses in Penn Dental’s Department of Preventive and Restorative Sciences. In the world of research, Dr. Slaughter’s focus is on addressing oral health disparities among African American older adult populations from a health promotion perspective – from prevention and treatment to access and care issues. She has developed an educational program, “Take Charge of Your Oral Health,” which is based on results from her pilot studies among African American seniors residing in West Philadelphia. The program has been implemented at senior centers in West and North Philadelphia and works to raise awareness both of oral signs and symptoms that require dental care and of oral health in the context of general health.

Dr. Slaughter has been named a health disparities scholar by the National Center on Minority Health and Health Disparities and was
the first dentist to receive a prestigious Brookdale Fellowship in Aging Award in 2002. She was also featured as ‘Miss September’ in the Aetna 2004 African American History Calendar, A Look at African Americans in Dentistry. Dr. Slaughter holds memberships in the American Public Health Association (APHA) and Special Care Dentistry (SCD). She is currently Chair of the Gerontology and Geriatrics Education section of the American Dental Education Association (ADEA). The IOA spoke with Dr. Slaughter about her work in geriatric dentistry.

**IOA: What led you to become an IOA Fellow?**

YAS: My mentor Dr. Lois Evans, a Fellow, encouraged me to join when I came to Penn; I have been a Fellow for five years. One of my particular interests in the IOA is the access to the network of experts in the field of aging for consultation and/or collaboration. My research has benefited greatly from senior faculty on campus who are outside the field of dentistry. Another special interest is the diverse lecture series and symposia sponsored by the IOA. I like the opportunity to hear some of the people who are icons in aging, along with the latest, cutting-edge aging research.

**IOA: Your research develops health promotion interventions to address oral health disparities among African American older adults. How did you come to focus on this area?**

YAS: During my MPH training, I explored health beliefs and attitudes that influenced oral health preventive behaviors comparing African American and white adults. I worked with a social psychologist/statistician, doing secondary analysis on his NIH-funded, population-based data set of adults residing in the Detroit tri-county area and gained insight as to suggestions for health promotion among African Americans. Dr. Evans encouraged me to begin establishing a research agenda and suggested I continue my work from my MPH training - specific to older African Americans in West Philadelphia. She arranged my first senior center contact in West Philadelphia, and I began to assess the clinical need and oral health attitudes of older African Americans. My research has progressed over the past five years, and the product is a community-based, educational intervention that has been evaluated to increase dental knowledge among older African Americans residing in the Philadelphia region. The educational program was recently made into a video presentation. Elders who attend a senior center in West Philadelphia performed in the video and made this project a community participatory experience.

**IOA: Are there differences in the oral health disparities experienced by African American older adults in the Philadelphia region compared to other cities (Nashville, Rochester, Hartford, and Ann Arbor) in which you have studied and trained?**

YAS: In dental school in Nashville, I did not have a knowledge base of oral health disparities, so I can’t make comparisons. However, most of my older patients were African American, were treated for a full range of dental services, and usually did not miss any dental appointments. These patients did not fit the profile of disparate, older African Americans in the general population who are characterized as not regularly seeking care.

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**Continued from page 10**

**AWARDS AND HONORS**

Dr. Kumanyika was honored for her outstanding contributions to the advancement of cardiovascular science while serving as head of an outstanding lab studying cardiovascular population research. She also received the 2005 Dr. Herbert W. Nickens Epidemiology Award from the Association of Black Cardiologists, Inc. The award is named after the late Dr. Herbert Nickens (Penn School of Medicine, Class of 73), former Director of the Office of Minority Health in the Department of Health and Human Services.

**Fletcher Fellow: Dr. Spencer**

Dr. Margaret Beale Spencer, Professor of Education and Psychology, was selected as a winner of the 2006 Alphonse Fletcher, Sr., Fellowship. The initiative created by Mr. Fletcher in 2004 commemorates the fiftieth anniversary of the Supreme Court’s landmark decision Brown v. Board of Education. Fellows receive a $50,000 stipend to fund work that contributes to improving race relations in American society and advances the broad social goals of Brown v. Board of Education. During her fellowship, Dr. Spencer will work on a project entitled, “Patterns of Resiliency and Resistance: Crafting Identities in a Post-Brown Era of Privilege and Risk.”

**Case of Terri Schiavo: Dr. Caplan**

Dr. Arthur L. Caplan, Emanuel & Robert Hart Professor of Bioethics; Chair, Department of Medical Ethics, and Director, Center for Bioethics, recently published The Case of Terri Schiavo, with co-editors James J. McCartney, PhD, an Associate of the Penn Center for Bioethics and Associate Professor of Philosophy at Villanova University, and Dominic A. Sisti, MBe, a Research Associate at the Penn Center for Bioethics.
The book offers an in-depth examination of the ethical dilemmas and controversy that such cases pose, using information, public statements, and documentation from many perspectives. Dr. Caplan is also receiving an honorary doctor of science degree from the University of Connecticut in recognition of his public service on national and international advisory boards and his extensive work in medical bioethics.

**Alzheimer’s Disease Task Force: Dr. Clark**

Dr. Chris Clark, Associate Director of Penn’s Alzheimer’s Disease Center, Director of the Memory Disorders Clinic, Associate Professor of Neurology, and Director of the Center of Excellence for Research on Neurodegenerative Diseases, has been selected to become a member of the national Alzheimer’s Association Early-Stage Professional Task Force. The task force will help develop recommendations to increase their participation in the leadership and services offered by the Association.

**Named Chair, Board of Directors: Dr. Weaver**

Dr. Terri E. Weaver, Associate Professor and Chair, Biobehavioral and Health Sciences Division, Penn School of Nursing, has been named Chair of the national Board of Directors of the American Lung Association.

**Promoting Self-Care: Dr. Bowles**

Dr. Kathryn Bowles, Associate Professor of Nursing, has been awarded NIH funding for her R01 proposal entitled “Promoting Self-Care Using Telehomecare: Impact on Outcomes.” The study will compare the effects of a

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**MEET THE BOARD**

The Institute on Aging External Advisory Board is comprised of dynamic and dedicated individuals from all walks of life who share a common goal - to improve the quality of life for older adults. Meeting several times a year, this body of informed, hands-on volunteer advisers is instrumental in forwarding the mission of the Institute on Aging. The Institute on Aging is honored to include Bruce A. Kehr, MD, among the External Advisory Board as its new Chair.

**Bruce A. Kehr, MD**

The position of Board Chair can be described in many ways: administrator, advisor, advocate, fundraiser, organizer – to name a few. In the case of the IOA External Advisory Board, the Chair serves both as a conduit and a spark, working with new and long-time board members to assist the IOA in executing its mission by lending collective expertise and advice as needed.

This March, Bruce A. Kehr, MD, became Chair of the IOA External Advisory Board at the invitation of Dr. John Trojanowski, Director of the IOA. A Penn alum (Class of ’71) and proud parent of two current Penn students, Dr. Kehr first joined the IOA External Advisory Board in July, 2005. His selection as Chair comes as a result of his experience in medicine, research, and business.

Dr. Kehr acknowledges his grandmother, Hilda B. Kehr, as the inspiration for his journey into research in medication adherence technologies. Mrs. Kehr was a vibrant, independent spirit, taking care of herself until she was almost 95. Hospitalized repeatedly in her later years for indeterminate reasons, it was discovered that she was confusing her medications. The family tried to ease the confusion by bringing in a caretaker, but the ‘help’ was perceived as an intrusion on Mrs. Kehr’s independence.

At that time, Dr. Kehr made a life commitment to develop technologies to improve medication adherence, thereby enabling older adults to age in place and retain more of their independence, for longer. Medication non-adherence is responsible for 22% of all nursing home placements and $100 billion per year in unnecessary hospitalization costs.

Combining medicine with his personal family experience, Dr. Kehr founded - and serves as Chairman of the Board of Directors and CEO of - InforMedix, Inc., so as to bring the technology he helped develop to improve medication adherence among older adults to market. He has written and lectured actively and is recognized as an expert in this field.

Dr. Kehr is not only a practicing physician (Georgetown, Class of ’75) and founder and President of Contemporary Psychiatric Services, a psychiatric group practice; he serves as a forensic consultant in neuropsychiatry and traumatic brain injury and has lectured on the neuropsychiatric aspects of traumatic brain injury. He is also an avid researcher, inventor,
and holder of fifteen issued patents and twelve pending patents in the U.S.,
Europe, Japan, Canada, Australia, Mexico, and South Korea.

While the biological process that is aging has not changed much, what
has changed, in Dr. Kehr’s opinion, are our perceptions and expectations
regarding our personal aging. We expect to live longer because it is now
possible, and we want a high quality of life with greater levels of mobility
and activity as we age than prior generations.

“The IOA not only researches the causes of and cures for debilitating
diseases of old age but also studies healthy aging processes,” stresses Dr.
Kehr. “This has led to initiatives here in the Philadelphia area, and around
the country, to increase the transfer of knowledge from the world of re-
search to the lay public regarding how one maintains a healthy mind and
body as one ages. With increasing focus on drug discovery, pharmaceuti-
cals are the most cost-effective treatments. There is, then, a pressing need
to discover novel agents to treat the ravages of neurodegenerative diseases
– and, too, to be able to separate fact from myth regarding anti-aging
mechanisms and therapies.”

Citing the uncertainty in federal funding and the challenges that result,
Dr. Kehr feels the IOA External Advisory Board needs to provide innova-
tive ways of promoting the IOA’s mission while pursuing new sources of
funding. For Dr. Kehr, this is an incredibly exciting period for the field
of aging research, given molecular-level understanding of cell biology in
health and disease and the expanding field of proteomics, “Where and how
we navigate these research opportunities is up to John and Virginia, and
our role as board members is to support their vision in every way we can.”

“Growing the IOA will require attracting new faculty who will assist
in pioneering new areas of aging research,” says Dr. Kehr. “As Chair,
my role is to catalyze these efforts with other board members. Our board
possesses a wealth of experience in philanthropy, medicine, healthcare,
management, and entrepreneurial spirit, along with strong community con-
nexions - all critical to the IOA’s continued success.”

Involvement with the IOA has enabled Dr. Kehr to expand his com-
mitment to the University and reconnect with some of his earlier roots in
geriatric medicine research. “I love Penn. The four years I spent here as
an undergraduate were the most intensely formative years of my life. Penn
provided me with unparalleled intellectual challenges and prepared us to
go out, explore life, and succeed. I was honored to be asked to serve as
Chair and to be able to deepen my commitment to a place that has given
me so much,” says Dr. Kehr. “I accepted the position because I believe in
and deeply respect the work of Drs. John Trojanowski and Virginia Lee
and their colleagues – and wanted to see if I could advance their cause
further as Chair.”

Dr. Kehr adds, “Best of all, as a father, being part of the IOA brings me
to campus frequently and allows me to have dinners with my daughters
here at Penn, thus providing an effective anti-aging treatment for a severe
case of empty nest syndrome.”

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AWARDS AND HONORS

Dr. David J. Casarett, Assistant Professor of Medicine in the Division of Geriatrics at Penn Medicine in the Division of Geriatrics at Penn Administration Medical Center and its Center for Health Equity Research and Promotion, is the recipient of the first-ever William A. Nelson Award for Excellence in Health Care Ethics, presented by the Veterans Health Administration’s (VHA) National Center for Ethics in Health Care (NCEHC). Named for William A. Nelson, PhD, former Chief of the Ethics Education Service in the NCEHC, the national award recognizes a VHA employee whose career exhibits the highest standards of excellence, dedication, and accomplishment in healthcare ethics and who demonstrates a long-term commitment to promoting ethical health care practice in the VHA. The award committee noted Dr. Casarett’s national leadership in healthcare ethics, his research and clinical practice, his focus on sensitive health interventions, quality care, nurse who demonstrates excellence in age-sensitive health interventions, quality care, and symptom management to older adult patients with cancer.

First Recipient of Nelson Award for Ethics: Dr. Casarett

Dr. Sarah H. Kagan, Associate Professor of Gerontology Nursing and Gerontology Clinical Nurse Specialist, has received the Oncology Nursing Society (ONS) Excellence in Care of the Older Adult with Cancer Award. The award recognizes Dr. Kagan as an oncology nurse who demonstrates excellence in age-sensitive health interventions, quality care, and symptom management to older adult patients with cancer.

Excellence in Care of the Older Adult with Cancer Award: Dr. Kagan

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on understanding and improving the way patients make health-care decisions at the end of life, and his advocacy of nationwide efforts to ensure all veterans have access to hospice care.

Dean’s Award for Undergraduate Scholarly Mentorship: Dr. Cuellar

Dr. Norma Cuellar, Assistant Professor in the Foundational Sciences and Health Systems Division at the School of Nursing, has received this year’s Dean’s Award for Undergraduate Scholarly Mentorship in the School of Nursing. Students recognized Dr. Cuellar for her passion about the subject of gerontology and her encouragement to explore the unique situations of the elderly and the relevant application of such to all nursing specialties. Dr. Cuellar recently published Conversations in Complementary and Alternative Medicine, a text that includes a series of 27 lectures with leaders in Complementary and Alternative Medicine.

R01 Funding: Dr. Cappola

Dr. Anne Cappola, Assistant Professor of Medicine and Epidemiology, received her first R01 from the NIH in support of “Hormonal Trajectories in Aging.” The study began this February and will last until January, 2010. She will be investigating the impact of changes of IGF-1 and DHEAS on health, function, and survival in old age in subjects enrolled in the Cardiovascular Health Study.

Eweson Lecturer: Dr. Practicò

Dr. Domenico Practicò, Research Associate Professor of Pharmacology, has been named as the Dorothy Dillon Eweson Lecturer for 2006. The

FELLOWS IN THE SPOTLIGHT

A Conversation with Dr. Ann Slaughter

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preventive dental services. While training in Rochester at various long term care facilities and at a large community hospital, I observed residents generally had poor oral health across racial and ethnic groups. These patients did fit the profile of the institutionalized elderly, being more vulnerable to oral diseases than the general older adult population. In Rochester, I also worked as a staff dentist at a local community-health center with a predominantly lower SES African American and Hispanic population. The oral health disparities in this population, high rates of untreated dental decay and periodontal disease, and a significant lack of knowledge regarding the etiology of oral diseases and their prevention, were consistent with my observations among West Philadelphia African Americans.

IOA: With the growing number of older adults in America, there is concern that not enough medical students are entering geriatrics as a specialty. What drew you to geriatric dentistry? Some hear ‘geriatric dentistry’ and think dentures.

YAS: I always liked being around old people. Growing up in Chattanooga, Tennessee, I enjoyed spending time with my grandmother and her friends. This interest grew during my general dentistry post-graduate training at Eastman Dental Center; the geriatrics program director there encouraged me to pursue a fellowship at UConn. Many people in the general public have this ageist perception, including older adults. The rates of total tooth loss have drastically declined over the past 20 years. The fact is people are retaining more natural teeth with increasing age, and this translates to older adults requiring more dental services to maintain teeth rather than replace them.

IOA: Do you consider yourself a clinician or a researcher?

YAS: I consider myself a public health dentist/researcher. Maintaining a good reputation in the community helps a lot to keep things going. I have been fortunate to have established a network of inner city senior centers in Philadelphia that participate in my research projects. These sites receive annual oral screening visits apart from my research activities; I don’t just go the centers when I need their participation for my research. The network is growing to include senior apartment buildings due to referrals from the seniors in the communities we serve.

IOA: Why are people sensitive and self-consciousness about teeth, smiles, and wearing dentures? Is this an American phenomenon or is this sensitivity present in other nations and cultures?

YAS: One’s teeth and smile influence self-esteem and social interaction with others. Even if a person goes to a dentist primarily for emergency care, they might think more about pulling a front tooth versus a back tooth. I think generally people of all cultures desire good aesthetics regarding their teeth and dentures. There is cultural and individual variation as to what defines ‘good aesthetics.’ For example, one person
may want a perfect ‘Hollywood’ denture, and another may prefer their denture teeth to be made to resemble how their natural teeth looked. From a cultural perspective, some consider gold front teeth a symbol of status.

**IOA: Much focus in oral health seems to be on children – fluoride, cavity prevention, and orthodontics. Why is dental health important, and is it still important as we age? How can we help our parents and grandparents ‘take charge’ of their oral health?**

**YAS: Plaque-related oral infections have been shown to adversely affect diabetes and heart conditions. These systemic diseases have a high incidence and prevalence among older adults. The prevalence of oral cancer increases with age, and having annual oral cancer screenings can save lives. Institutionalized elderly with compromised immune systems are more at risk to aspiration due to plaque-related oral infections. Regular preventive dental care and thorough plaque removal self-care help to maintain one’s overall general health. Of course, dental health is important to nutritional intake, and a compromised nutritional status adversely affects oral tissues. Many older adults take multiple medications that cause mouth dryness which increases the risk of dental decay. Oral diseases, just like systemic diseases, have multi-factorial influences that impact health and quality of life of older adults.

Dental health is important at all ages. We can all work towards dispelling ageist attitudes towards oral health - such as, tooth loss is a natural part of the aging process, or geriatric dentistry is just concerned with dentures. We can also write our senators to support legislation that expands the dental coverage included in Medicare and Medicaid.

**How ADNI may change the way we look at AD**

Intercenter validation studies, measuring the biochemical biomarkers in the CSF, urine, and plasma samples collected from each ADNI study participant, will lead to testing for these validated biomarkers within the ADNI biomarker core laboratory. In anticipation, Dr. Shaw and his team have been organizing the bioanalytical validation of several biomarkers across a group of expert academic, pharmaceutical and diagnostic company laboratories.

“For improved diagnostic accuracy and earlier detection, biomarker tests will, within the next couple of years, start to be incorporated into clinical practice. One of ADNI’s significant outcomes will be the validation studies noted above. For biochemical biomarker tests this should lead to implementation as clinical tests,” explains Dr. Shaw. “Investigations are ongoing, searching for the best biomarkers for earlier and better detection of other neurodegenerative diseases such as frontotemporal dementias, Parkinson’s, and multiple sclerosis. The search is on to find the best combination of biomarker tests for each of these disorders.”

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**AWARDS AND HONORS**

award is sponsored by the American Federation for Aging Research and is given each year to a scientist who made substantial contribution to the advances in aging research. He is recognized for his lecture entitled, “Aging, Oxidative Stress and Atherosclerosis.”

**New Research Investigator Award: Dr. Hirschman**

Dr. Karen Hirschman, Research Assistant Professor of Nursing in the School of Nursing, has received a New Research Investigator Award from the Alzheimer’s Association titled “Re-designing the Hospice Medicare Benefit for Persons with Advanced Dementia.” The study’s goal is to identify the palliative care needs of persons with advanced dementia and their family members and to determine what palliative care service can best meet those needs.

**From our Associate Fellows...**

**Complementary and Alternative Medicine for Older Adults: Dr. Mackenzie**

Dr. Elizabeth Mackenzie, Critical Writing Program Senior Fellow and Lecturer, History and Sociology of Science, served as co-editor for *Complementary and Alternative Medicine for Older Adults: Holistic Approaches to Healthy Aging*, an updated compendium of information on complementary and alternative therapies to improve the health and quality of life for older adults. The handbook covers dietary means, physical, mental, and spiritual methods of treatment, and various types of therapies.

**Excellence in Education: Dr. Cutler**

Neal E. Cutler, PhD, Boettner/Gregg Chair in Financial Gerontology at Widener University and IOA Associate Fellow, was named as the 2006 winner of the Cavanaugh Award for Excellence in Education and Training in Aging by.
the American Society on Aging (ASA) and presented “How to Teach Tomorrow’s Business Leaders about Tomorrow’s Aging” at the annual ASA meeting. Dr. Cutler was also recently appointed Coordinator of the new Aging and Business Education Initiative, supported by the AARP Office of Academic Affairs, was elected in 2006 as a member of the Board of Directors of the Association for Gerontology in Higher Education (AGHE), and was re-appointed as Co-Director of AGHE’s Task Force on Business and Aging.

From Our External Advisory Board...

Eastern Pennsylvania Geriatrics Society’s President’s Award

Willo Carey, IOA External Advisory Board Member and Executive Director of WHYY’s Wider Horizons Service, was awarded the Eastern Pennsylvania Geriatrics Society’s President’s Award. Ms. Carey was chosen for her major contributions to improving the lives of older residents of Philadelphia, primarily through her leadership of WHYY’s Wider Horizons Service. The President’s Award has only been given once in the last 15 years.

Penn ADC Funding Renewed...

Congratulations to the faculty and staff at the Penn Alzheimer’s Disease Center (ADC). The Penn ADC, in operation since 1981, was awarded renewed funding from the NIA for the next 5 years. Each of the 30+ ADC Centers must reapply for continued federal funding every 5 years while competing with universities and research institutes wishing to become an ADC Center.

ADC Centers were created by the NIA to translate research advances into improved diagnosis and care for Alzheimer’s disease (AD) patients while also focusing on finding a way to cure and possibly prevent AD. Support is also given to families and caregivers of those with AD.

Led by Dr. John Q. Trojanowski, with Penn School of Medicine faculty members Drs. Steve Arnold, Chris Clark, Sharon Xie, Mark Forman, and Jason Karlawish, the Penn ADC and its Memory Disorders Clinic conduct research and provide clinical services to diagnose and treat those with a range of cognitive impairments, supported by an extraordinary and dedicated staff.

For more information about the Penn ADC, participating in an ongoing study, or supporting the Penn ADC’s efforts, please go online to www.uphs.upenn.edu/ADC. The latest ADC Quarterly newsletter is also available online.

National Public Health Action Plan on Healthy Brain Issues...

The Healthy Aging program at the Centers for Disease Control and Prevention (CDC) launched an initiative to create a national public health action plan to address healthy brain issues. The initiative will identify public health opportunities and develop a needed roadmap of recommended public health strategies to address brain health. The CDC is collaborating with the Alzheimer’s Association, National Institutes of Health (NIH), and other national, state, and local partners to create the plan.

Dr. Kathy Jedrziewski will participate in the Prevention Research Work Group, which will make specific recommendations on prevention research strategies to achieve the outcomes of the public health action plan. Work will begin this summer, with a planned release date in 2007.