Established in 2006 by Stanford professors, led by psychologist Laura Carstensen and neurologist Thomas Rando, the Stanford Center on Longevity is the only organization of its kind. We link top scholars with government, business and the media, and we take a comprehensive approach to longevity. Our mission goes far beyond research. Our ultimate goal is to transform the culture of aging.

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More people are living longer than ever before in human history, and the implications of an older America are coming to bear quickly. This brings challenges and opportunities. Either way, our society must be ready.

Preparations are overdue.

Aging is not just about older people. Aging is about the 35-year-old whose financial planning today can mean financial security at age 80. It’s about the 65-year-old who has to keep working, even though she would like to slow down, because pension programs that served her parents are insufficient and could be insolvent in the future. It’s about the third grader who spends too much time sitting and misses out on the physical exercise that is crucial for good health today and when he is grown. It’s about the 50-year-old with children in college and parents who live far away, who need help to live on their own.

There’s no single problem and no single solution. In fact, many people across society have not even been asking the right questions.

We created the Stanford Center on Longevity to formulate the right questions and identify the most important challenges, and also to bring together experts to find solutions and help our culture adapt. We study the nature and development of the entire human life span, using science and technology to improve human aging.

Research is our most potent tool.

The Center’s work on health care is one example of our approach. The issue is complex, multi-faceted and touches every American at every stage of life. Our Health Security Project brought together experts whose research and analysis foreshadowed some of the communications hurdles that nearly derailed health reform legislation. We are building on that project in 2010 as our nation’s attention turns – or should turn – to Medicare’s looming insolvency. As a special feature for this annual report, we asked Center faculty affiliates, including some of the nation’s best minds on health care financing and political science, for their perspectives on resolving Medicare’s finances. Throughout the year, we will be calling on them and many other Center affiliates to help our nation’s leaders make the best, most informed decisions.

But longevity issues and the Center’s work go beyond health care. We explore innovative ways to solve the problems of people over 50 and improve the well-being of people of all ages – from health care to housing, mobility to financial security.

At Stanford and in Silicon Valley, people have identified opportunities and created solutions that have changed the world. Likewise, helping society prepare for new, unprecedented challenges of aging and the great value older people contribute to society requires vision and uncommon approaches.

We can’t change the culture overnight, and we can’t do it alone. But we must act – thoughtfully and quickly.

Laura L. Carstensen, PhD
Founding Director, Stanford Center on Longevity
Fairleigh S. Dickinson Jr. Professor in Public Policy and Professor of Psychology
The Stanford Center on Longevity aims to transform the culture of human aging. The Center studies the nature and development of the entire human life span, looking for innovative ways to use science and technology to solve the problems of people over 50 and improve the well-being of people of all ages.

Transforming our culture means learning to appreciate the unique challenges of aging, as well as the great value older people contribute to a society. Adapting our health care system, entitlement programs, and personal behaviors and lifestyles will require that our best minds work together and act swiftly.

The Center launches research to use increased life expectancy to bring about profound advances in the quality of life from early childhood to old age. To inspire change of this scale, the Center engages the best minds in academia, business and government to target the most important challenges and solutions for older populations.
The Center works to make sure that research findings do not stay locked away in academia, but instead reach policymakers, business leaders, health care planners and others who can use them to improve our society.

Projects are designed to provide information to policymakers and business leaders, and bring them together with the research community. By fostering dialogue between these typically disconnected worlds, the Center finds workable solutions to urgent issues confronting America as our population ages.
RESEARCH DIVISIONS

Mind

The prospect of mental decline associated with aging threatens the well-being of individuals and families. Research by the Mind division on early detection of decline, behavioral and biological interventions, and decision aids is aimed at improving cognitive functioning across the life span. The division also offers state-of-the-art information about normal and abnormal aging, and provides statements from the world’s experts about potential remedies.

Mobility

The Mobility division encourages research that promotes lifelong mobility by preventing or reducing barriers to physical movement. The Center places special emphasis on the promotion, development and translation of Stanford expertise and technologies (such as devices, drugs, biologics and behavior) that encourage or restore physical movement.

Financial Security

Personal saving rates declined from the mid-1980s through 2008, even while life expectancy and number of years in retirement continued to increase. The Financial Security division supports research on products, technologies, fraud and financial education that will help people better plan, save for their futures and guard against financial fraud.
PROGRAMS

Politics, Scholars and the Public

The Politics, Scholars and the Public program aims to inform policy decisions that impact longevity with empirical findings and research-driven proposals. This program brings together political experts, scholars and voters in a search for sensible solutions to current societal challenges. The program’s first initiative focused on health care issues facing the United States.

Global Aging

The Global Aging program focuses on the economic and political implications of population aging around the world as people live longer and have fewer children. Large variations in the timing and pace of fertility declines and longevity gains create dramatic differences across countries. Understanding these developments and trends is critical for addressing them wisely. Through its research and conferences, the program stimulates public discourse on the challenges and opportunities associated with population aging.
FACULTY RESEARCH

CONFERENCES:

Early Detection of Osteoarthritis

Mechanical engineers, orthopaedic surgeons, radiologists, biologists and epidemiologists – each studying osteoarthritis through their respective disciplines – were convened by the Center to identify research questions that will lead to improved understanding and early detection of osteoarthritis. The goal of The Joint Health Workshop: Early Detection of Osteoarthritis was to understand joint degeneration from a systems perspective, recognizing that cartilage responds to the environment of the entire joint. The conference led to a grant proposal that aims to answer questions generated by this international group of experts.

The Center conducted the workshop in collaboration with the Stanford School of Engineering. Dr. Thomas Andriacchi was the lead faculty affiliate. (January 2009)

FACULTY SEED GRANTS

Through seed grants to Stanford faculty, the Center provides university research awards of up to $50,000 for a year. These research projects are selected from applications across Stanford that focus on solutions to improve life at all ages. The Center’s goal is that studies funded by these awards will lead to support from external sponsors or have tangible impacts in the private or public sector.

Awardees for 2008-2009:

Thomas Andriacchi, School of Engineering
Project: Developing and testing a device to reduce falling

Steven Artandi, School of Medicine
Project: Restoring fitness and extending life span in a mammalian model of aging

Jay Bhattacharya, School of Medicine
Dena Bravata, School of Medicine
Project: Longevity and health impact of gardening

Annual Report FY 2008-2009  longevity.stanford.edu
The vast majority of Americans hope to age in their own homes, a concept known as “aging in place.” Based on the conviction that livable, sustainable communities are best for successful aging in place, the Center on Longevity initiated the Communities in Place project to encourage immediate, widespread research and action.

Communities in Place seeks transformative change in the nation’s homes and neighborhoods. The project’s first activity was an initial survey of livable communities, identifying a number of demographic trends, researchers, projects, types of management, gaps in services, public and private sector leaders, sources of funding, and areas for further study.

**Helen Blau**, School of Medicine  
**Juan Santiago**, School of Engineering  
**Project**: Drug delivery micropump for rejuvenation of muscle stem cell function on old mice

**Kate Bundorf**, School of Medicine  
**Jay Bhattacharya**, School of Medicine  
**Rui Mata**, Department of Psychology  
**Michael Schoenbaum**, National Institute of Mental Health  
**Project**: Financial implications of health plan choices: the case of Medicare Part D prescription drug plans

**Chang-Zheng Chen**, School of Medicine  
**Project**: Role of miRNA's in T-cell aging and thymic involution

**Michael Grecius**, School of Medicine  
**Brian Wandell**, Department of Psychology  
**Robert Dougherty**, Department of Psychology  
**Project**: Cognitive effects of disrupted structural and functional connectivity in the aging brain
CONFERENCE:

Longevity Across the Life Span:

With much of the world’s population living longer, leading experts from across the globe joined with Stanford faculty to examine multiple perspectives on longevity during the third annual East-West Alliance Conference.

Session themes included genetic considerations, stem cells, social correlates of illness, implications for the medical workforce, and economic implications of long life. Participants discussed biological processes at the cellular and molecular level that offer the possibility of extending lives by slowing the aging process. One panel focused on genetic factors involved in longevity, while another explored approaches that focus on stem cells.

The Center on Longevity co-hosted the conference with the Stanford School of Medicine, a member of the East-West Alliance, a global network of 10 universities receiving support from the Li Ka Shing Foundation. The Alliance convenes a public conference each year at a member institution. (April 2009)
The Stanford Center on Longevity brings together scholars and researchers to prepare the globe for a rapidly aging population. During the recent Congressional debate on health care reform, we called on six of the Center’s faculty affiliates for their perspectives on the looming challenge presented by projections of Medicare insolvency by 2017.

These Stanford professors, who represent a range of disciplines including economics, medicine, political science and psychology, advised the Center’s Health Security Project, a 2009 research effort that explored new approaches for communicating complex policy issues. Their responses have been condensed and edited.

The affiliates consulted for these questions are:

**David Brady, MA, PhD**, Professor of Political Science

**Laura L. Carstensen, PhD**, Professor of Psychology and Director of the Center on Longevity

**Alan Garber, MD, PhD**, Professor of Medicine/Economics/Health and Research Policy, and Director of the Center for Health Policy/Center for Primary Care and Outcomes Research

**Daniel Kessler, JD, PhD**, Professor in Management/Law/Health Research and Policy

**Lee Ross, PhD**, Professor of Psychology

**John Shoven, PhD**, Professor of Economics and Director of the Stanford Institute for Economic Policy Research
Q: What lessons should lawmakers have learned from health reform that will be helpful in addressing Medicare?

David Brady: First of all, that it’s not easy to make reforms that affect large parts of the economy, that campaigning is different from governing and that expectations can be too high. When the Obama Administration came in, it was generally assumed we’d get health care reform. Why has it been so hard?

Because, A, the status quo on health care is that a lot of people are happy with their health care. So when you’re going to change anything that’s one-sixth of the American economy and there’s a status quo that’s reasonably satisfied, it’s hard to do. And, B, the most important lesson from Medicare is that legislators are worried in general about elections, which are two years off, not the future. So short-term electoral concerns dominate the legislatures’ ability to plan in the long run.

Laura Carstensen: How we frame the debate is crucial. We can’t talk just about looming financial problems, but instead must understand and convince voters that health policy will continue to be inextricably linked to how well we age as a nation. As we address the challenges of Medicare solvency, we must summon up the courage, ideals and creativity that have inspired us and driven positive change.

In revamping Medicare, policymakers should not just fix financing. Doing that is essential, of course, but our nation also needs to structure a new system that truly encourages long, healthy and productive lives.
Alan Garber: That it’s going to be very difficult to gain public support for painful changes unless the public has a full understanding of the risks of inaction, the consequences of inaction.

Lee Ross: The importance of framing, with an emphasis on what people stand to lose by not enacting legislation, rather than what they and others stand to gain by passing it. The very thing that was a disadvantage during the health care debate swings to become an advantage in Medicare. That is, people say: “I’m reasonably satisfied with the status quo. I know it isn’t serving some other people well, but right now, at least, things aren’t particularly bad for me.” Humans tend to be risk averse. That’s why they say, “Don’t let the federal government get their hands on my Medicare.” Therefore the burden of proof will be on anyone who threatens the status quo in any way, even someone who makes rational arguments.

John Shoven: Cost containment – cost control – is probably the number one issue. To me, there are two key matters. One is coverage, and the other is cost control. For the Medicare population, coverage is not much of an issue. So I think the predominant issue is how to bend the cost curve. Another important aspect is coordinated care. There are lots of stories – and my guess is they amount to reality – that people are being over treated in some cases, that no one is coordinating their care, they are on 20 different prescriptions, and nobody’s really checked all the interactions and so forth. So I think one problem with the current Medicare system is it doesn’t really foster coordinated care.

Current voters need to think about what kind of economy they’re leaving to today’s young adults and people even younger than that. Let’s take current college students or people 20 years old or so. What are we leaving them? We’re leaving them a mess.

- John Shoven
Q: Does the experience of health reform in 2009-2010 make it easier or harder to fix Medicare’s financing challenges? Why?

**Alan Garber:** Harder near term. Near term, the health reform experiences will be a deterrent because the politically unpopular aspects of the health reform plans have been incredibly difficult, so legislators will be reluctant to adopt reforms that key players, such as physicians and hospitals, don’t like. Secondly, the reform law includes provisions, such as an increase in the Medicare tax and features to lower Medicare payments in the future, that might have been used to improve the Medicare program’s fiscal status. But it can be argued that the resulting savings have been committed to pay for the costs of the reform law - mainly for coverage expansion. Any solution for Medicare’s financial problems will involve additional approaches, such as the payment reform provisions in the reform law. However, it is too early to say which approaches will be most effective, and whether provisions that reduce Medicare expenditures will be politically acceptable.

**John Shoven:** It probably makes it harder. It can’t be very encouraging that we couldn’t get any bipartisanship on health care reform, and it’s hard to see how we’re going to get it on Medicare reform. Medicare is not really on a budget now. Part A is. Part A is hospital insurance and has to live within the payroll tax that finances Part A. Part B is financed by general revenues and by participants’ monthly premiums. But that general revenue is like an open checkbook, and it would be better to have a dedicated tax source and only so much revenue to spend. The federal funding for Part D – the pharmaceutical drug benefit – comes out of general revenues, which, again, is an open checkbook.

One proposal that I have advocated with Vic Fuchs is that all health spending, including Medicare, be funded by a dedicated tax. The dedicated tax might be a value added tax. People would need to debate whether a valuable new benefit is worth a tax increase. This would cause more examination of how we can control costs.

**Lee Ross:** I presume harder. But note that with Medicare, the status quo bias and loss aversion help the Democrats rather than the GOP. The GOP can be on the opposing side with impunity. There aren’t many vulnerable Republicans and there aren’t many conservative Republicans in liberal states. It’s easier to alarm and motivate people to defend the status quo than it is to inspire them to change the status quo.
David Brady: Medicare is a very tough problem to fix. I don’t think anyone believes there is $400 billion of savings by virtue of saying they’re going to cut Medicare payments. Social Security is much easier to fix. George Shultz and John Shoven have a good book on this [Putting Our House in Order: A Guide to Social Security and Health Care Reform]. You simply extend the working age and index payments to wages as opposed to the Consumer Price Index, and that alone extends Social Security for 50 years.

This is not just a problem for the United States. It’s a problem for all democracies – the Japanese, the Italians, the Spanish, the Europeans, everybody – every democracy. If you were able to get a picture of the unfunded liabilities, which is health care payments to senior citizens and to state employees, as well as pensions, all of those things – not a single country has a fund to cover this.

Laura Carstensen: Probably harder, at least in the short term. But I hope that our leaders and the American people have learned some lessons that will be valuable as we consider the future of Medicare.

It’s tempting to think of Medicare and Social Security as stalwart programs that have existed forever. But in historical terms they’re practically freshly minted. To put it in perspective, the Rolling Stones recorded “Time is on My Side” the year before Lyndon Johnson signed Medicare into law in 1965. As a result, these institutions don’t have much experience adapting to complex demographic changes like the ballooning of life expectancy. As the baby boomer generation begins to retire, there will be a considerable strain on these systems and a number of important issues to work out.

“The heart of the story is that we simply cannot afford to continue Medicare in the form that we now know it.”

- Daniel Kessler
STRENGTHENING MEDICARE

RESEARCH PAPER:
Putting the Public’s Money Where its Mouth is

In a paper published by the journal *Health Affairs*, Stanford Center on Longevity faculty affiliates Daniel Kessler and David Brady described the results of a 2009 national survey that quantifies Americans’ willingness to pay to expand health insurance coverage. In the survey, supported by a seed grant from the Center, they asked respondents whether they would support a Medicaid expansion, a subsidy for low-income people or a subsidy for the chronically ill, if they had to pay more income taxes to cover the program’s costs. The results found a tension in public opinion: Survey respondents expressed a desire for reform but limited willingness to pay for it. (August 2009)

Q: Without asking you to predict what will happen, what is the likelihood that Congress will enact legislation before the November 2010 elections to fix Medicare?

John Shoven: Zero

David Brady: Zero.

Lee Ross: I don’t think that’s the right question. I would put it as a barriers question: What are the major impediments or barriers that would prevent Congress from enacting legislation? What stands in the way? It may be that people have not been made aware of the risk. It may be the debate has been carried on in too rational and high-flown a manner.

**Health Care Reemerging as Top-Tier Priority**

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<tr>
<th>Other than the economy, which of these should be the top three priorities for the new administration and Congress?</th>
<th>All voters</th>
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<tr>
<td>Jobs/employment</td>
<td>62%</td>
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<td><strong>Health care</strong></td>
<td>40%</td>
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<td>War in Iraq</td>
<td>29%</td>
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<td>Government spending</td>
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<td>Federal budget deficit</td>
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<td>Taxes</td>
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<td>Social Security</td>
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<td>Illegal immigration</td>
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<td>Homeland security</td>
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<td>Education</td>
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<td>The environment</td>
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<td>Social issues</td>
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Excerpt from the Center’s Health Security Project survey
What does this fight tell us? It tells us something about framing and something about politics. If you think of the status quo as a contest between the things that are forcing the president in this direction and forcing him in that direction, conceptually an incentive or a threat pushes harder. When you push harder, you get pushback and you get a lot of tension in the system – “do this or else,” “do this and I’ll give you this.”

**Laura Carstensen:** Very unlikely. Medicare is much harder to fix. Our Social Security obligations can be satisfied through relatively minor changes to the benefits schedule and by providing incentives for longer work force participation, and even that would be politically painful. But Medicare will require resolving some much larger problems inherent in our health care system itself. Just tweaking the tax code or benefits rules won’t solve the problem, and you can’t ask people to delay medical care the way you can ask them to delay full retirement.

**Alan Garber:** I would be very surprised if major legislation is passed. But minor changes could occur before November 2010 – for example, legislation that might enhance the abilities of the secretary of Health and Human Services to authorize pilot projects.

**Daniel Kessler:** Medicare’s “insolvency” is really about the Hospital Insurance – HI – Trust Fund running out of money. The HI fund covers only a part of Medicare spending, the inpatient hospital part, and is really only an accounting device used by the government. So its insolvency, although a harbinger of problems to come, is not the heart of the story. Rather, the heart of the story is that we simply cannot afford to continue Medicare in the form that we now know it. To respond to your question, there is absolutely no chance that Congress will “fix” Medicare by November 2010. To do so is not possible. All we can do is start to take steps that will begin to address the problem, and my guess is that Congress won’t even do that this year.

“It’s going to be very difficult to gain public support for painful changes unless the public has a full understanding of the risks of inaction, the consequences of inaction.”

- Alan Garber
Q: What kinds of messages and information should be conveyed to older Americans to help them understand the importance of taking action and to garner their support for proposals?

Laura Carstensen: We need to change the conversation. Medicare – like Social Security – has changed the quality of life for millions of older Americans. But today we are moving into an historically unprecedented era of long life. These institutions need adjustments, but because they are so valuable, the prospect of changing them makes Americans nervous.

In a nationwide survey the Center on Longevity conducted in the spring of 2009, we found that when the issues and tradeoffs are clearly articulated, the voting public understands them and raises legitimate concerns. That tells me that we need to talk seriously with older Americans about what’s at stake – both the existing problems and solutions to those problems – for individuals and for the system more broadly.

People over the age of 65 are the most mentally stable and optimistic adults. They resolve interpersonal problems more effectively and regulate their emotions better than any other age group. They can handle the truth, but that means we must provide straight talk, not generalities.

John Shoven: Current voters need to think about what kind of economy they’re leaving to today’s young adults and people even younger than that. Let’s take current college students or people 20 years old or so. What are we leaving them? We’re leaving them a mess, and we’re on a path where we’re going to spend 30 percent of our GDP on health care, we’re going to spend 15 percent or so on Medicare and Medicaid. By and large those costs, particularly the Medicare and Medicaid costs, are going to be borne by workers in supporting older people.
So I think the message is: We shouldn’t do this to our kids and grandkids. I actually believe that we could have a pretty good health care system if we said we’re not going to allow it to cost 30 percent of GDP, we’re only going to spend 20 percent of GDP. That’s what you would do if you were on a budget. Now, you’d give something up. In every other aspect of life, we do the best we can with the money we have available. That’s how we deal with our housing, that’s how we deal with our food, that’s how we deal with pretty important stuff. That’s not how we deal with health care – we say whatever you need, whatever it costs, we will provide it. I think that’s the reason for the runaway costs. There’s no budget.

David Brady: The main message is that you’re going to have to get by with less. But who’s willing to put that message out? When I listen to the Republicans’ criticism of the Democrats’ bill, it’s always, “Oh my god, you’re going to limit Medicare payments.” Well of course. The message is how to get people to be responsible for their own lives and responsible for managing health care. At this point, what do they have to manage? In general most of the costs are taken care of, and that works in the short run – we are at the end of the short run – because of a lot of younger people paying for older citizens. But the older folks are gaining in number relative to younger people, and the long term consequences are not good. I haven’t heard any politicians come through and say we’re going to have to get by with less.

Lee Ross: I think we often underestimate the importance of family, meaning you can motivate people to do things that aren’t in their self-interest if they recognize it’s in the self-interest of their kids. So Medicare reform should emphasize: “Your children are at risk. By not supporting this policy, you are taking the chance that your children will be uninsured. You know, you’re not going to be around forever. Your child might be one skiing accident away from having everything your family has accumulated disappear.” Also, we need to gain support of the boomers by connecting the issue to their concerns and financial self-interest. They have aging parents and there is the fear of huge non-covered medical costs that they personally will pay – if not directly, then indirectly.

“How do we ensure people are seriously thinking about the issue? How do we ensure they are getting the facts they need?”

- David Brady
STRENGTHENING MEDICARE

REPORT:

New Findings about Voter Attitudes on Health Care Reform

The Center facilitates dialogue between politics, academia and the public – worlds that don’t often interact or work together toward finding solutions. Health care, an issue that touches every American at every stage of life, was the focus of the Health Security Project: Building Sensible Health Care Solutions.

In early 2009 as Congress prepared to consider health reform, a Center survey showed older Americans to be particularly outspoken about proposed reforms and quite vocal in their concerns for Medicare (chart, p.14). The results, which revealed strong partisan divides and warned of a bias for the status quo and reluctance for reform, supplemented the national conversation with information and ideas that were fact-based, politically viable and publicly supported. The Center’s approach can serve as the basis for ongoing conversation, collaboration and consensus building by policymakers at all levels. (May 2009)

Q: How much confidence do you have that the right people will be heard as lawmakers consider changes to the Medicare program?

Daniel Kessler: There is considerable study about how to reform Medicare, much of it provided by the excellent and nonpartisan Medicare Payment Advisory Commission. MedPAC is an independent Congressional agency established by the Balanced Budget Act of 1997 to advise the U.S. Congress on issues affecting the Medicare program. The problem is not lack of technical expertise or ideas, but simply a failure of political will by both parties.

Laura Carstensen: Policymakers need to listen, but people who want the problem dealt with responsibly must speak up. We need to be honest with each other about what’s at stake. Both Medicare and Social Security are facing some serious financial troubles, Medicare much more so than Social Security. Whether it’s health care reform in general or Medicare more specifically, we have all heard the charged debates about solutions, just about every day, in our newspapers, in blogs, on television and discussions with friends and family – everywhere.

Inevitably these debates are framed in monetary terms. They focus on what our aging nation can afford and what it cannot afford. When the questions are about strained budgets, the answers mostly address reducing costs. Yet the ways we think about work and health should extend far beyond budgets. They should involve thoughtful considerations of how the economic tradeoffs associated with reforms would mesh with our national and personal values.
Alan Garber: I’m sure that many voices will be heard. The question is: Which recommendations will prevail? And this is a question of politics that people much closer to Washington could undoubtedly answer with more authority than I can.

John Shoven: Moderate confidence. We should have a commission similar to the commission we had for Social Security in 1983 which was chaired by Alan Greenspan. President Reagan and Tip O'Neill jointly crafted that commission that really saved Social Security in the 1980s. It may be needing saving again, but it has worked reasonably well for the last 25 years. It wouldn’t have without that commission.

It was a bipartisan effort. The recommendations of that commission were accepted without much modification. We need that again. We need it in health care. We need it in Social Security, but health care is the big dog.

David Brady: In the United States, everybody will be heard. But the process is often dominated by wing nuts and bloggers. I’ve thought the way the research can help is: framing and talking with focus groups of old people and young people. First of all, can you get a group of old people to sit down and understand what the issues are, especially relative to the generation that pays for their Medicare? Generally it strikes me when you talk to people, they understand it.

Psychology is great at determining how you can phrase things so people understand issues and economists understand trade-offs. I think that the most important part of the research is to focus on understanding the trade-offs. How do we ensure people are seriously thinking about the issue? How do we ensure they are getting the facts they need? If you ask me, the American public makes more sense than the politicians. The public is saying, we’re spending too much money, we personally are facing cutbacks in our lives. They understand the notion of cutback. They’ve got a certain financial reality out there, right? So it’s possible.
LEADERSHIP

Laura L. Carstensen, PhD
Director

Laura Carstensen is Professor of Psychology at Stanford, where she is also the Fairleigh S. Dickinson Jr. Professor in Public Policy. For more than 20 years her research has been supported by the National Institute on Aging, and in 2005 she was honored with a MERIT award. Carstensen is best known for socioemotional selectivity theory, a life-span theory of motivation. With her students and colleagues, she has published well over 125 articles on life-span development. In 2009, she authored *A Long Bright Future: An Action Plan for a Lifetime of Happiness, Health, and Financial Security.*

Dr. Carstensen’s most current research focuses on ways in which motivational changes influence cognitive processing. She is a fellow in a number of professional organizations, including the Association for Psychological Science, the American Psychological Association and the Gerontological Society of America. She serves on the Board of Science Advisors to the Max Planck Institute for Human Development in Germany and has chaired two studies for the National Academy of Sciences, resulting in *The Aging Mind* and *When I’m 64.* She is a member of the MacArthur Foundation’s Research Network on an Aging Society.

She has been selected as a Guggenheim Fellow and received the Richard Kalish Award for Innovative Research, the Distinguished Career Award from the Gerontological Society of America, and Stanford's Dean's Award for Distinguished Teaching. She received a BS from the University of Rochester and PhD in Clinical Psychology from West Virginia University.

Individuals listed in the People section served during all or part of the 2008-2009 academic year.
Dr. Rando’s research focuses on tissue-specific stem cells in aging and disease, and on pathogenetic mechanisms and gene therapy for muscular dystrophies. His research on aging has demonstrated that it is possible to identify biochemical stimuli that can induce stem cells in old tissues to repair injuries as effectively as in young tissues, and this work has broad implications for the fields of regenerative medicine and stem cell transplantation.

He is a member of several professional societies, including the American Neurological Association. He is a former Paul Beeson Physician Faculty Scholar in Aging awarded by the American Federation for Aging Research and a former Ellison Medical Foundation Senior Scholar in Aging. In 2005, he received an NIH Director’s Pioneer Award for his groundbreaking research in stem cell biology. He received a BA from Harvard College, MD from Harvard Medical School and PhD in Cell and Developmental Biology from Harvard University.
-leading the discussion (continued)

ADELE HAYUTIN

- Discussed “Demographic Perspectives on Social Inclusion” in a speech to the International Association of Geriatrics and Gerontology in Paris. (July 2009)

- Presented a demographic overview and moderated the plenary session on the Four Pillars of Economic Security at Reinventing Retirement Asia: Employment and Active Engagement Beyond 50, a conference co-hosted by the Council for the Third Age and AARP in Singapore. “The increase in life expectancy over the past century is a remarkable success story,” Dr. Hayutin said. “But that success story will be even better when we have policies, social infrastructure and long-term strategies that fit the new reality of our aging population.” (January 2009)

SENIOR STAFF

Martha Deevy, MBA
Consulting Assistant Professor & Senior Research Scholar

Martha Deevy focuses on the Center’s business strategy and key partnerships, and leads the Center’s financial security work. She has more than 20 years of management experience in Silicon Valley technology and financial services companies in senior executive positions at Apple, Charles Schwab and Intuit. She received a BA from the University of Illinois and MBA in finance and management information systems from the University of Minnesota.

Margaret Dyer-Chamberlain, MALD
Director, Programs and Operations & Senior Research Scholar

Margaret Dyer-Chamberlain develops research and educational programs, securing funding for Center programs, assisting in cultivation of donors, and overseeing staff and consultants. She is a former senior director of capital planning and space management at Stanford and associate provost at Dartmouth College. She received a BA from Smith College and Master of Arts in Law & Diplomacy from the Fletcher School of Law and Diplomacy at Tufts University.

Anne L. Friedlander, PhD
Director, Mobility Division & Senior Research Scholar

Anne Friedlander develops innovative strategies to enhance mobility and function throughout the lifespan and promotes collaborative efforts with industry. She is a consulting professor in the Stanford Program in Human Biology. She received a BA from Wesleyan University, MA and PhD in exercise physiology from the University of California, Berkeley, and conducted postdoctoral training in the Division of Endocrinology, Geriatrics and Metabolism at the Stanford School of Medicine.
Steve Goldband, PhD
Director, Private Sector Initiatives & Senior Research Scientist

Steve Goldband works to create new and innovative collaborations between Stanford researchers and industry. He has been a technology entrepreneur and worked in various management, marketing and engineering roles. He was a member of the psychology department faculty at the University of Western Ontario. He received a BA from Cornell University and PhD in psychology from the University at Buffalo.

Adele Hayutin, PhD
Director, Global Aging Program & Senior Research Scholar

Adele Hayutin focuses on economic and policy implications of global demographic change. During a 20-year career as a business economist, she has specialized in issues and trends affecting business investment strategy. She was chief economist of the Fremont Group (formerly Bechtel Investments), senior real estate analyst at Salomon Brothers and director of research at RREEF. She received a BA from Wellesley College, and MPP in public policy and PhD in economics from the University of California, Berkeley.

Jane Hickie, JD
Director, Politics, Scholars and the Public Program & Senior Research Scholar

Jane Hickie develops strategies to transform the culture around aging and leads the Center’s work to inform policy decisions that impact longevity. She formerly led the government relations practice at Public Strategies Inc., was a partner in the law firm of Verner, Lipfert, Bernhard, McPherson and Hand, and served as director of the Texas Office of State and Federal Relations and director of Appointments to Boards, Commissions and the Judiciary for the Office of the Governor. She received a BA from Mount Holyoke College and JD from the University of Texas.

BREAKING THE MOLD ON COLLABORATION

The Stanford Center on Longevity has a unique and targeted approach to launching innovative research programs. The Center identifies Stanford faculty and other world-class experts from a range of fields and across disciplines, and invites them to campus for a two-day meeting on a specific longevity issue. Key practitioners are included, as well as potential research funders and influential policy makers.

The agenda is clear and results-oriented. There are no prepared talks. Although a few charts are occasionally used, the Center’s belief is that freeing conferees of a battery of slides frees them from rote thinking as well. That way, participants can look at problems with fresh eyes. (continued p. 24)
Big issues are on the table early, as participants exchange research papers and links on a Center-hosted website constructed specifically for the conference. By the time the group convenes, the conversation is already underway. Around the conference table, guided discussions focus on key questions, consensus building and next steps.

The process does not end when participants go home. Rather, these conferences launch an array of activities designed to bring scientific and technological expertise to bear on society’s most pressing problems. Products that result from the conferences range from new interdisciplinary research agendas to briefings for Washington policy makers to funding for faculty research.

Chris Peacock
Director, Communications and Public Affairs

Chris Peacock is responsible for communicating with media, opinion leaders and policy makers about the Center’s efforts to improve the quality of life from childhood to old age. He has developed communications and marketing programs in the corporate, foundation and government worlds, including serving as a communications advisor to the secretaries of Treasury and Health & Human Services, the Henry J. Kaiser Family Foundation, Silicon Valley Community Foundation and Cisco Systems Inc. He received a BA from Washington & Lee University.

Ken Smith, MS
Director, Academic and Research Support & Senior Research Scholar

Ken Smith focuses on the identification and management of key research areas and opportunities for the Center, and works closely with faculty affiliates to determine where Stanford expertise can best be used to drive change. He has more than 20 years of management and engineering experience, including positions in the computing, aerospace and solar energy industries, including Intel Corp.’s network of university research labs. He received a BS from the University of Illinois and MS in engineering from the University of Washington.
SUPPORT STAFF

Susan Campbell
Assistant to the Deputy Director

Jill Chinen
Assistant to the Director

Miranda Dietz
Research Assistant

Hal Ersner-Hershfield
Financial Security Division

Jill Fattor
Research Assistant

Casey Lindberg
Mind Division

Lillian Mitchell
Research Assistant

David Pagano
Webmaster

Lauren Smith
Administrative Assistant

Sharon Vazquez
Administrative Assistant

CONFERENCES:

Demographic Change in Asia

Academic experts and leaders from business, government and the community met to generate hypotheses about the future of Asia based on critical economic, political and social uncertainties.

The Center and the Asia Health Policy Program at the Walter H. Shorenstein Asia-Pacific Research Center convened the conference, titled Aging Asia: Economic and Social Implications of Rapid Demographic Change in China, Japan and Korea. Participants explored the impact of rapid aging on economic growth, labor markets, social insurance financing, long-term care and health care, and synthesized their visions of the future by prioritizing driving forces and creating potential scenarios. (February 2009)
EXTERNAL ADVISORY COUNCIL

The External Advisory Council helps advise and guide the Center by providing informed external perspective on goals, priorities and programs, and by advocating on the Center’s behalf beyond the Stanford community. The Council first met in June 2009.

John W. Rowe - Council Chair
Professor, Columbia University Mailman School of Public Health

Jack Rowe is a professor in the Department of Health Policy and Management at the Columbia University Mailman School of Public Health. Previously, he served as chairman and CEO of Aetna Inc., one of the nation’s leading health care and related benefits organizations, from 2000-2006. He is former president and CEO of Mount Sinai NYU Health, one of the nation’s largest academic health care organizations; prior to the Mount Sinai-NYU Health merger, he was president of the Mount Sinai Hospital and the Mount Sinai School of Medicine in New York City. He was a professor of medicine and founding director of the Division on Aging at the Harvard Medical School, as well as Chief of Gerontology at Boston’s Beth Israel Hospital. Currently, he leads the MacArthur Foundation’s Initiative on An Aging Society and chairs the Institute of Medicine’s Committee on the Future Health Care Workforce for Older Americans. He was elected a member of the Institute of Medicine of the National Academy of Sciences and a Fellow of the American Academy of Arts and Sciences. He serves on the Board of Trustees of the Rockefeller Foundation and is a former member of the Medicare Payment Advisory Commission. He chairs the Board of Trustees at the University of Connecticut and the Marine Biological Laboratory in Woods Hole, MA. He received an MD from the University of Rochester School of Medicine and Dentistry and BS from Canisius College.

Katherine August-deWilde
President and Chief Operating Officer, First Republic Bank

Katherine August-deWilde has been an executive with First Republic Bank since 1985. First Republic, a private bank and wealth management company, is a wholly owned subsidiary of Merrill Lynch Bank and Trust. Prior to joining First Republic, August-deWilde spent six years at the PMI Group as senior vice president and chief financial officer. She is a former director of finance for Intel Corp. and consultant for McKinsey & Company. Her volunteer work at Stanford includes two terms on the Graduate School of Business Advisory Council, the GSB Women’s Initiative, GSB admissions interviewer, and campaign roles as a parents volunteer and member of the Leading Matters Steering Committee for San Francisco. She has served as a trustee at San Francisco’s Town School for Boys and on the board of the Carnegie Foundation for the Advancement of Teaching. She received an AB from Goucher College and MBA from Stanford.
Pat Christen  
*President and CEO, HopeLab*

At HopeLab, Pat Christen engages a multidisciplinary team developing products and practices that improve the lives of young people with chronic illness. Under her leadership, HopeLab launched the groundbreaking Re-Mission video game for cancer in 2006; research demonstrating the efficacy of Re-Mission in improving treatment adherence was published in the medical journal *Pediatrics* in 2008. She previously was president and executive director of the San Francisco AIDS Foundation, where she worked with counterparts nationally to craft the federal Ryan White C.A.R.E. Act, and served as president of the Pangaea Global AIDS Foundation. She has written, studied and lectured on social and health issues in the United States and abroad, and is a member of the Young Presidents’ Organization. She received a BA from Stanford.

Mark T. Gates, Jr.  
*Real Estate Developer*

Mark Gates is involved with office, retail and industrial properties on the San Francisco peninsula and in Southern California. He represented The Chronicle Publishing Co. in San Francisco from 1985-1992 as a real estate consultant and also was a consultant for Lowe Financial S.A., an investment company based in Geneva, Switzerland. He was a partner in Wilson and Gates, a real estate development and management company, and a founding partner of Dietsch, Gates, Morris and Merrell, a law firm specializing in airline and banking law. His board and stewardship activities have included the Children’s Health Council in Palo Alto, St. Luke’s Hospital Foundation in Idaho and the California State Board of Education. He received a BA from Dartmouth College and LLB from Stanford.
Donald Kennedy  
*President Emeritus, Stanford University*

In addition to serving as President Emeritus of Stanford, Donald Kennedy is Bing Professor of Environmental Science, Emeritus and, by courtesy, a senior fellow of the Center for Environmental Science and Policy. His present research program entails policy research on such trans-boundary environmental problems as major land-use changes, economically driven alterations in agricultural practice, global climate change and the development of regulatory policies. He has served on the Stanford University faculty since 1960 and was President of the University from 1980-1992. He was Commissioner of the U.S. Food and Drug Administration from 1977-79. Previously at Stanford, he was director of the Program in Human Biology and chair of the Department of Biology. He is a former editor-in-chief of *Science* – the journal of the American Association for the Advancement of Science. He is a member of the National Academy of Sciences, the American Academy of Arts and Sciences, and the American Philosophical Society. He served on the National Commission for Public Service and the Carnegie Commission on Science, Technology and Government, and as a founding director of the Health Effects Institute. He is a director of the Carnegie Endowment for International Peace and co-chair of the National Academies' Project on Science, Technology and Law. He received an AB and PhD in biology from Harvard University.

Scott W. Kerslake  
*President, prAna*

Scott W. Kerslake is president of prAna, a leading consumer brand in yoga, rock climbing and active outdoor living, and maintains ownership of Carrot Centers for Brain and Body Vitality, a progressive wellness organization focused on helping people over 50 age optimally. He is former president of Miraval Life in Balance. He founded and was chairman and CEO of Athleta Corp.; he created the Athleta brand, its strategic plan and internal cultural development. Prior to becoming an entrepreneur, Kerslake worked as an investment banker at Salomon Smith Barney and a management consultant with Sapient Corp. He played a significant role in starting Sapient's San Francisco office by helping to manage and grow its team, served as Sapient’s director of marketing and was instrumental in the company’s successful initial public offering. He received a BA from Boston College.
Irene Mecchi
Writer

Irene Mecchi is an American writer who has written for print, television, live-action film and theatre. Her feature film writing credits include Disney's The Lion King, The Hunchback of Notre Dame and Hercules. She is co-author of The Lion King, Broadway, directed by Julie Taymor. The show won six Tony Awards, including Best Musical. Mecchi adapted the Broadway musical, Annie, for ABC and is currently developing an animated film for Pixar that will be released in 2011, as well as a television adaptation of Broadway's classic musical, Peter Pan. She has a production company which is acquiring literary material written for young adults in order to produce a slate of films. Mecchi received a BA from the University of California, Berkeley and continued her studies at the American Conservatory Theatre in San Francisco.

Thomas E. Moore III
Director, Barclays Wealth

Thomas Moore is a director with Barclays Wealth, specializing in advising wealthy families, foundations and charitable organizations on investment and financial matters. He has more than 25 years of banking and investment experience. Prior to joining Barclays Wealth, he was a principal and seasoned investment and financial specialist with Bernstein Global Wealth Management, where he advised sophisticated client relationships in the United States, Europe, the United Kingdom and Asia. He is a former managing director of the New York Stock Exchange, where he was responsible for U.S. new business development and strategies, managing U.S.-listed company relationships, and was a member of the Eligibility Review Committee charged with reviewing the qualifications of companies and approving their listing on the NYSE. Earlier, he was a credit and lending officer with several New York-based money center banks, including The Bank of New York and Citibank. He is a competitive equestrian show jumper and is active in numerous educational, cultural and charitable organizations, including the Human Rights First Organization, the New York Academy of Art, and Student Sponsor Partnership. He received a BA from Stanford University.
George P. Shultz
Former U.S. Secretary of State

George Shultz has had a distinguished career in government, academia and business. He held four different cabinet posts, taught at three of United States’ greatest universities, and was president of a major engineering and construction company. He began his service to the nation as a Marine. Early in his career, he served as a senior staff economist on President Eisenhower’s Council of Economic Advisors. He taught at the Massachusetts Institute of Technology and the University of Chicago, where he was dean of the business school. He resumed public service under President Nixon as Secretary of Labor, Director of the Office of Management and Budget, and Secretary of the Treasury. He left government service in 1974 to become president and director of the Bechtel Group, Inc. He held two key positions in President Reagan’s administration: Chairman of the President’s Economic Policy Advisory Board and Secretary of State. His awards include the Medal of Freedom, the nation’s highest civilian honor, and the Seoul Peace Prize. He has been a Distinguished Fellow at the Hoover Institution at Stanford since 1989. He received a BA from Princeton University and PhD in industrial economics from MIT.

David A. Wise
Professor Emeritus, Harvard University Kennedy School of Government

David Wise is John F. Stambaugh Professor of Political Economy, Kennedy School of Government at Harvard University. His research includes analysis of youth employment, the economics of education and schooling decisions, and methodological econometric work. His work now focuses on issues related to population aging, and he directs a large project on the economics of aging and health care at the National Bureau of Economic Research. His books and papers include Social Security and Retirement Around the World, Frontiers in the Economics of Aging, Facing the Age Wave, Inquiries in the Economics of Aging, Social Security and Retirement Around the World: Micro-Estimation, The Transition to Personal Accounts and Increasing Retirement Wealth: Macro and Micro Evidence, Aging and Housing Equity: Another Look, Implications of Rising Personal Retirement Saving, The Taxation of Pensions: A Shelter Can Become a Trap, Utility Evaluation of Risk in Retirement Saving Accounts, and Analyses in the Economics of Aging. He has an MA in statistics and PhD in economics from the University of California, Berkeley.
FACULTY STEERING COMMITTEE

The Faculty Steering Committee provides guidance for the Center’s research agenda and helps identify and engage faculty from across Stanford whose research can help meet the challenges of an aging population.

Thomas Andriacchi, PhD - Professor of Mechanical Engineering and Orthopaedic Surgery
Tom Andriacchi’s research focuses on the biomechanics of human locomotion and its biomedical applications to artificial joints, sports injury, osteoarthritis and neuromuscular disorders.

William Damon, PhD - Professor of Education
Bill Damon, director of the Stanford Center on Adolescence, studies moral development through the life-span. He has begun a study on the development of purpose during adolescence and is conducting research on how young professionals can learn to do work that is both highly masterful and highly moral.

Alan M. Garber, MD, PhD - Professor of Medicine/Economics/Health and Research Policy
Alan Garber is director of the Center for Health Policy/Center for Primary Care and Outcomes Research. His research focuses on methods for improving health care delivery and financing, particularly for the elderly, in settings of limited resources.

Larry Kramer, JD - Dean, Stanford Law School/Professor of Law
Larry Kramer’s work is directed toward state-state and state-federal conflict of laws, federalism and its history, and the role of courts in society.

Iris F. Litt, MD - Professor Emerita of Pediatrics
Iris Litt is director of the Center for Advanced Study in the Behavioral Sciences. Her research focuses on health problems of adolescent women, in particular the interaction of psychosocial phenomena with biologic features of the second decade of life, including the effects of eating disorders.

Pam Matson, PhD - Dean, School of Earth Sciences/Professor of Environmental Studies
Pam Matson’s research focuses on biogeochemical cycling and land/water interactions in tropical forests and agricultural systems, and on sustainability science.

Margaret Neale, PhD - Professor of Organizations and Dispute Resolution
Maggie Neale studies negotiation and team performance; judgment and decision-making research from cognitive psychology to the field of negotiation; cognitive and social processes that produce departures from effective negotiating behavior.

John Shoven, PhD - Professor of Economics
John Shoven is director of the Stanford Institute for Economic Policy Research. His research focuses on tax policy, Social Security and savings patterns. Shoven works on private and public sector policies that can be changed for the better.
Nearly 130 Stanford faculty members from across the university are Center affiliates. Their research spans a remarkable gamut: from examining strategies for developing healthy nutritional habits and building assistive robots, to pursuing stem cell research offering insights into the healing process and improving health care delivery. Faculty affiliates come from diverse backgrounds and represent a cross-section of disciplines and viewpoints from across the Stanford community, and they are among our closest partners in helping change the culture of aging.
CONFERENCE:

Tips for Navigating the Marketplace of Memory Aids

Cognitive and brain experts convened by the Center urged consumer caution on memory fitness products. A statement released by the Center, on behalf of 30 of the world’s finest cognitive and brain scientists, provided public guidance on products claiming to improve mental fitness and the science behind them.

The statement resulted from the Expert Consensus on Brain Health summit in April 2008 sponsored by the Center and the Max Planck Institute for Human Development in Berlin. The goal was to develop a public statement regarding the science behind products claiming to defend against memory loss. The conference coincided with heightened public attention on the issue of mental health that resulted from a new HBO documentary series focusing on Alzheimer’s disease. (May 2009)
Many people are so convinced that old age is a time of misery, they simply deny any other outcome and don’t plan their own destiny. In *A Long Bright Future*, Center founding director Laura Carstensen seeks to shed myths and misconceptions. “You have the chance, starting now,” she writes, “to design for yourself an old age that is not only different, but better than that of any previous generation in human history.”

**BOOK:**

Thinking about Growing Old – in an Entirely New Way
Uncommon Approaches for Unprecedented Challenges

Lee Ross, PhD - Professor of Psychology
Kenneth Salisbury, PhD - Professor of Computer Science/Surgery
Richard Saller, PhD - Dean, School of Humanities and Sciences
Juan Santiago, PhD - Assistant Professor of Mechanical Engineering
Robert Sapolsky, PhD - Professor of Biological Sciences/Neurosciences
William F. Sharpe, PhD - Professor of Finance
Kathryn Shaw, PhD - Professor of Economics
Baba Shiv, PhD - Associate Professor of Marketing
John Shoven, PhD - Professor of Economics
Robert Lane Smith, MD - Professor of Orthopaedic Surgery/Mechanical Engineering
Samuel So, MD - Professor of General Surgery
Jeanne Tsai, PhD - Associate Professor of Psychology
Shripad Tuljapurkar, PhD - Professor of Population Studies and Biological Sciences
Anthony Wagner, PhD - Associate Professor Psychology
Michael Wald, JD - Professor of Law
Brian Wandell, PhD - Professor of Psychology/Electrical Engineering
Carol Winograd, PhD - Professor Emeritus of Medicine
Terry Winograd, PhD - Professor of Computer Science
Paul Wise, MD, PhD - Professor of Medicine
Tony Wyss-Coray, PhD - Associate Professor of Neurology/Neurological Sciences
Jerome Yesavage, MD - Professor of Psychiatry and Behavioral Sciences
Paul Yock, MD - Professor of Medicine
Jamie Zeitzer, PhD - Assistant Professor of Psychiatry and Behavioral Sciences
Stefanos Zenios, PhD - Professor of Operations, Information and Technology

ADDITIONAL ACADEMIC AFFILIATES

Wesley Alles, MD - Senior Research Scholar
Dena Bravata, MD - Stanford Health Policy Affiliate
Karen Eggleston, PhD - Center Fellow, Freeman Spogli Institute for International Studies
Leah Friedman, MD - Senior Research Scholar
Rita Ghata, PhD - Director, Aging Adult Services, Stanford University Medical Center
ON CAMPUS

EVENT:
The Physics of Motion

Streb vs. Gravity, a performance that included dancers, gymnasts and a focus on the physics of motion, was part of a collaboration between Stanford and New York-based choreographer Elizabeth Streb. Students in the undergraduate Longevity course were able to participate in a special conversation with Streb on mobility and aging, hosted by Center director Laura Carstensen. (January 2009)

UNDERGRADUATE COURSE ON LONGEVITY

Center on Longevity Director Laura Carstensen and Deputy Director Tom Rando co-teach the Longevity course at Stanford. In this course, more than 140 students learn about the personal and societal implications of people living longer. The course explores myths and misconceptions surrounding the aging process and provides students with an informed grasp of the conceptual issues, empirical findings and current controversies in the field.

The course has three central aims:

• Help students understand why, from a biological/biomedical perspective, the population is aging and what to expect in the coming decades. Will current trends continue? How long can future generations expect to live? How are lifestyles, families and work likely to change?

• Provide students with a more realistic vision of their own futures so they can make informed life choices and plans.

• Educate future generations of citizens, who will live out their lives in societies where older people outnumber children and who will have a central hand in shaping the consequences of these unprecedented changes.

The course’s multidisciplinary approach helps students understand new challenges to health care, financial markets, families, work and politics as they relate to aging and longevity. It includes lectures by Carstensen, a psychologist and life-span developmentalist, Rando, a neurologist and biogerontologist, and other faculty affiliates.
FIRST-YEAR SEMINAR ON LIFE-SPAN DEVELOPMENT

Most research on human development focuses on the early years in life, the years when children are forming strong attachments to caregivers, acquiring language and learning to navigate the world. Yet, people continue to change in systematic ways throughout life, and gains and losses are associated with every stage of life.

The Seminar on Life-Span Development addresses adult development from the perspective of life-span theory – a conceptual framework that views development as a series of adaptations to physical, societal and individual resources and constraints. Students learn about the profound demographic and medical changes that will shape their own futures, as well as the ways that individuals typically change socially, emotionally and cognitively as they move through adulthood.

Some of these changes are biologically based, while others are rooted in motivation. Still others reflect a complex interaction between biological and psychological processes. The objective of the course, first offered in Spring 2009, is to provide students with an understanding of the conceptual foundations of the life-span approach and familiarize them with empirical findings in the literature as well as current controversies in the field.

UNDERGRADUATE STUDENT PRACTICUM

The Center offers a variety of projects through its Student Practicum, which enables students to obtain hands-on experience.

The practicum is structured as an internship that involves the student in day-to-day work on Center projects. Assignments include completing literature searches, compiling articles and documents, writing summaries, and collecting and organizing data. Students work approximately nine hours per week during the 10-week quarter in the practicum and receive three credits.

EVENT:
An Evening with Anna Deveare Smith

The Center’s work considers ways in which cultures succeed and fail to support people in aging well. For An Evening with Anna Deveare Smith the acclaimed, provocative writer performed excerpts from her new work, Let Me Down Easy, which concerns “the fragility of bodies, the inevitability of death, and the ways in which we nevertheless find moments of transcendence despite those immovable facts.” (October 2008)
UNDERGRADUATE COURSE ON EXERCISE PHYSIOLOGY AND METABOLISM

To accompany her research on physiology, Anne Friedlander, director of the mobility division, teaches Applied Topics in Exercise Physiology and Metabolism each spring. The course covers scientific research on topics related to aging, exercise physiology and mobility. It includes an exercise physiology lab and field work experience.

POSTDOCTORAL FELLOWSHIPS

The challenges of aging are complex and interrelated. Research on longevity must therefore encompass many different fields of study and encourage cooperation among experts who may not have worked together in the past. Accelerating longevity research also depends on supporting up-and-coming scientists.

The Center funded three new postdoctoral fellowships in 2009. The Center judged these applications on overall scientific merit as well as clarity and persuasiveness. Training potential was judged on the opportunity for strong mentoring, overall training environment, and interdisciplinary nature and relevance to aging or longevity. Post-doctoral fellows brief Center staff about research, with presentations and a question-and-answer session each year.

Center Fellows are:

*Jerome Bonnet, PhD - Bioengineering
Project: Engineering a cell cycle counter to study replicative aging
Mentor: Andrew Endy, PhD - Assistant Professor of Bioengineering

*Christopher Bryan, PhD - Psychology
Project: Owing it to yourself: Exploring the effectiveness of duty-based arguments in motivating retirement saving
Mentor: Greg M. Walton, PhD - Assistant Professor of Psychology
Secondary Mentor: Dale T. Miller, PhD - Professor of Organizational Behavior

* Fellowship first funded in 2009
Alicia Chang, MD - Medicine and Health Research and Policy
Project: Addressing the challenge of global population aging: the effect of age on immune response to TB infection
Mentor: Julie Parsonnet, MD - Professor of Medicine
Secondary Mentor: Paul Utz, MD - Associate Professor of Medicine

*Tammy English, PhD - Psychology
Project: Impact of emotion and cognition on health-related decisions in everyday life
Mentor: Laura Carstensen, PhD - Professor of Psychology

David Furman, PhD - Microbiology and Immunology
Project: High throughput multiparameter analysis of human immune responses to influenza vaccination
Mentor: Mark Davis, PhD - Professor of Microbiology and Immunology

Adolfo Sanchez-Blanco, PhD - Developmental Biology
Project: A molecular odometer for aging
Mentor: Stuart Kim, PhD - Professor of Developmental Biology/Genetics/Chemical and Systems Biology
Secondary Mentor: Art Owen, PhD - Professor of Statistics

Marina Shkreli, PhD - Professor of Medicine
Project: Understanding cellular renewal and aging in kidney epithelium
Mentor: Steve Artandi, MD, PhD - Associate Professor of Medicine
Secondary Mentor: Glenn Chertow, MD, Professor of Medicine

Dario Riccardo Valenzano, PhD - Genetics
Project: Identifying genes regulating longevity
Mentor: Anne Brunet, PhD - Assistant Professor of Genetics
Secondary Mentor: Russ Fernald, PhD - Professor of Biology
WHAT WILL IT MEAN TO LIVE TWICE AS LONG AS YOUR ANCESTORS?

In less than one century, life expectancy increased by an average of 30 years in developed regions of the world. Quite suddenly, there are more people living longer in the world than ever before in human history. They account for an increasingly greater percentage of the world population. Improved longevity is, at once, among the most remarkable achievements in all of human history and one of our greatest challenges.

The mission of the Stanford Center on Longevity is to ensure that these added years serve as a gift, not a burden, to humanity.

Laura L. Carstensen, PhD
Founding Director, Stanford Center on Longevity
HOW TO SUPPORT THE CENTER

The remarkable speed with which the Stanford Center on Longevity was established reflects a generous gift from Stanford alumnus Richard Rainwater, who recognized one of the most urgent challenges of our time: adapting our society to a rapidly aging population. His gift enabled the Center to begin immediately with a core staff and with key program priorities in place. Additional significant supporters include the Stephen Bechtel Fund, which provided funds for the Health Security project.

Gifts help the Center embark on new research projects, develop educational programs, collaborate with faculty and disseminate research findings so they can be put into practice. To discuss opportunities for supporting the Center’s work, please contact:

Margaret Dyer-Chamberlain
Director of Programs & Operations

Email: mdyerc@stanford.edu
Phone: (650) 736-9085

Mailing Address:
Stanford Center on Longevity
Mail Code: 6053
Stanford, CA 94305

Gifts to the Stanford Center on Longevity are tax-deductible under applicable rules. The Center is part of Stanford University’s tax-exempt status as a Section 501 (c) (3) public charity.
By the time today’s children grow old, living to 100 will be commonplace.

To the extent that individuals arrive at old age *mentally sharp, physically fit* and *financially secure*, societies will thrive.

The Stanford Center on Longevity asks the **questions**, convenes the **experts** and conducts the **research** that will help all of us – **young and old alike** – prepare.