



EARTH & ENVIRONMENTAL SCIENCES Top of the World

ARCTIC EXPLORATION: Undergraduate majors in geological sciences found their classroom in the High Arctic this summer, when they accompanied geophysics professor John Tarduno on an expedition funded by the National Science Foundation. The purpose of the expedition was to examine an episode of extreme Arctic warmth about 90 million years ago—as evidenced by a spectacular assemblage of vertebrate fossils, including turtles and champosaurs, extinct crocodile-like reptiles—and to test whether the period was related to an episode of volcanic carbon dioxide emission. Here, students Alayna Callanan '14 of Boxford, Mass. (left), Jenna Kaempfer '15 of Fort Collins, Colo., and Robert McKinley '13 of Rockport, Maine, examine aerial photos as part of a geological mapping exercise. PHOTO BY JOHN TARDUNO





FRINGE FESTIVAL

High-Flying Debut

AERIAL DANCE: For five days in September, Rochester's performing and visual arts scene took on a new facet, with the launch of the first First Niagara Rochester Fringe Festival. With almost 200 performances—including an excerpt of "Bound(less)," a large-scale, vertical dance performance by the group Bandaloop—the festival drew an audience of more than 33,000. Theater producer Erica Fee '98 returned from London to lead the effort to create a fringe festival in Rochester, and the University sponsored and supported about 30 shows. **PHOTO BY ADAM FENSTER**





STUDENT LIFE

Star Struck

KOREA BOUND: Brian Shin '15 of Temecula, Calif., is spending part of this fall in Korea, where he's competing on *KPop Star*, an *American Idol*-style reality television competition. Chosen from a pool of nearly 400 people during auditions in New York City, the international relations and Asian studies major charmed producers with acoustic guitar renditions of Coldplay's "Viva La Vida" and Psy's "Gangnam Style." After Shin passed the first round of auditions in New York, producers from the show traveled to the University to capture a slice of Shin's life on campus. Contestants on *KPop Star* sing or dance, hoping to land a coveted contract with one of Korea's three largest record labels. **PHOTO BY ADAM FENSTER**



The "hostage" situation in the Senate was particularly tense because the Democrats needed both Nelson's and Lieberman's votes to get the 60 required to prevent a Republican filibuster.



Courtesy of the Cornell University Library.



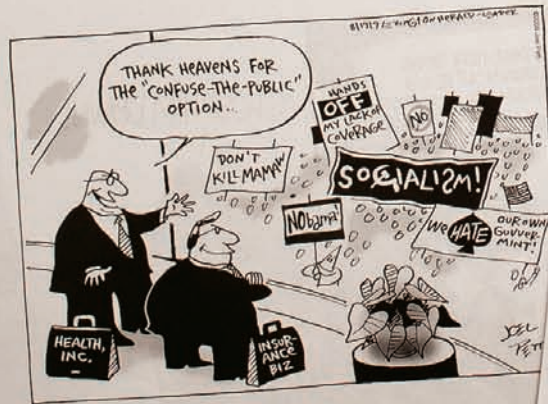
The Senate Finance Committee approved a bipartisan bill which the Senate passed by more than a three-quarters majority. It was widely suspected that the Senate was bowing to the pressure of health industry...



MMA also pushed in the direction of the privatization of Medicare by giving private insurance companies a large role in the administration of the new drug benefit.



Clinton zig-zagged politically trying to solve specific problems and answer criticisms. While the proponents of reform battled over principles and priorities, to take advantage of the disarray among the Democrats and moderate Republicans. Democrats did not unite and wholeheartedly embrace the plan, while conservatives, libertarians, and vested interests actively opposed it. As the battles proceeded, health reform seemed increasingly unlikely to emerge from its amphibian state.

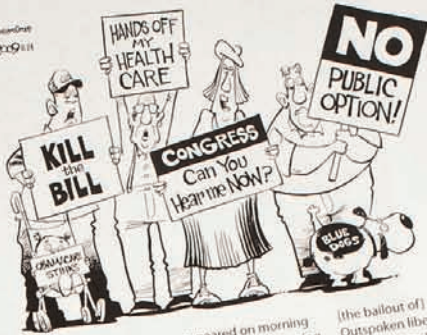


HISTORY OF MEDICINE Healthy—and Humorous—Debate

PAGE TURNER: Featuring more than 200 examples of editorial cartoons, a new history offers an entertaining review of 100 years of often rancorous wrangling over health care reform. "Unlike the pain involved in our political struggle, cartoons deliver their uncomfortable truths with such irreverent wit and visual imagination that you can't help but chuckle," says Theodore Brown, a historian of medicine, public health, and health policy at Rochester. He is one of four authors of *The Quest for Health Care Reform: A Satirical History*, published in October by the American Public Health Association.

PHOTO BY ADAM FENSTER

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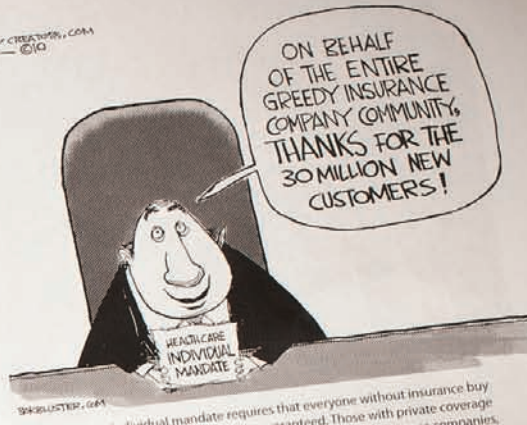


When that collapsed too, liberals everywhere were outraged, and former Vermont Governor Howard Dean, Chair of the Democratic National Committee from 2005 to 2009,

appeared on morning television shows urging Democrats to "kill the bill." He claimed that the legislation in its gutted form was "a bigger bailout for the insurance industry than

(the bailout of) AIG." Outspoken liberal TV commentator Keith Olberman was among the many on the left who also urged the Senate to start over

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While the individual mandate requires that everyone without insurance buy health care guaranteed. Those with private coverage of insurance companies.



No simple consensus developed about the specifics of reform, and the proliferation of proposals led to confusion, suspicion, and, ultimately, stalemate.

During the 1992 presidential election campaign, candidate Bill Clinton began with a "play-or-pay" proposal by which employers either provided health insurance for their employees ("play") or paid into a fund that would provide public insurance for the other...



the managed competition proposal first... by Stanford economic...

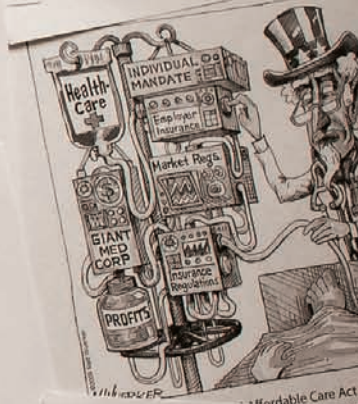


Courtesy of BACM Research.

led by the Cold War. All this was turned against Truman, who was portrayed by his opponents as



...came in the spring

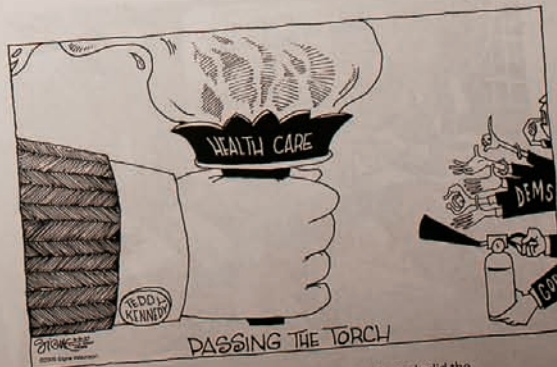


...ordable Care Act



Obama's announcement that he would nominate former Senator and Majority Leader Tom Daschle, a long-time supporter of the consensus approach, to be Secretary of Health and Human Services signaled the nature of the anticipated reform legislation.

Although the President's reference to health reform in his inaugural Address was vague in the extreme ("[We will] wield technology's wonders to raise health care's quality and lower its costs..."), it was apparent to Washington health industry insiders that his administration was preparing to launch a major, centrist initiative in health reform.



Senator Kennedy had died of cancer on August 25, 2009. Not only did the Democrats and the nation lose one of health reform's biggest advocates, but Kennedy would have been the desperately needed 60th vote in the Senate for health reform. Many believe that had he been healthy and survived, a bill with more bipartisan support may have been possible. However, others believe that the bill had become far too partisan for broad





BRAIN AND COGNITIVE SCIENCES

Anticipation . . . Is Keeping Me Waiting

Taking a new look at a famous study, Rochester researchers suggest that a reliable environment is at least as important as self-control when it comes to delaying gratification.

By Susan Hagen

IN THE LATE 1960S, PSYCHOLOGIST WALTER Mischel and other researchers at Stanford famously showed that individual differences among preschool-age children in the ability to delay gratification correlated strongly with success in later life. Longer wait times as a child were linked years later to higher SAT scores, less substance abuse, and parental reports of better social skills.

Because of the surprising correlation, the landmark “marshmallow studies”—children were presented with the choice of eating one marshmallow immediately or holding out for two later—have been cited as evidence that qualities such as self-control or emotional intelligence may be more important to navigating life successfully than more traditional measures of intelligence, such as IQ.

▲ **SO TEMPTING:** Four-year-old Evelyn Rose of Brighton, N.Y., reenacts an experiment in a new Rochester study indicating that children’s ability to delay gratification is influenced as much by their environment as it is by their innate ability to wait. The finding significantly revises conclusions of a landmark study from the 1960s.

Now a new Rochester study indicates that being able to delay gratification is influenced as much by the environment as by innate ability. Children who experienced reliable interactions immediately before the marshmallow task waited on average four times longer—12 versus 3 minutes—than youngsters in similar but unreliable situations.

“Our results definitely temper the popular perception that marshmallow-like tasks are very powerful diagnostics for self-control capacity,” says Celeste Kidd, a doctoral candidate in brain and cognitive sciences and lead author of the study published online in the journal *Cognition*.

“Being able to delay gratification—in this case to wait 15 difficult minutes to earn a second marshmallow—not only reflects a child’s capacity for self-control, it also reflects their belief about the practicality of waiting,” says Kidd. “Delaying gratification is only the rational choice if the child believes a second marshmallow is likely to be delivered after a reasonably short delay.”

The findings provide an important reminder about the complexity of human behavior, adds coauthor Richard Aslin, the William R. Kenan Professor of Brain and Cognitive Sciences. “This study is an example of both nature and nurture playing

a role,” he says. “We know that to some extent, temperament is clearly inherited because infants differ in their behaviors from birth. But this experiment provides robust evidence that young children’s actions are also based on rational decisions about their environment.”

In his original experiment, Mischel set out to understand why some people can postpone gratification while others give in. As he continued to track the children in the 1980s, he found that the preschoolers who waited to earn a second treat seemed to be more socially competent and to achieve more scholastically, with average SAT scores more than 200 points higher. “Based on these findings,” Kidd and Aslin write in their paper, “the marshmallow task was argued to be a powerful diagnostic tool for predicting personal well-being and later life achievement”—a yardstick by which to measure self-control as an enduring and inherent personal trait.

For the new study, the Rochester team wanted to explore more closely whether the social environment of preschoolers influences why some are able to resist the marshmallow while others succumb to licking, nibbling, and eventually swallowing the sugary treat. The researchers assigned



28 three- to five-year-olds to two contrasting environments: unreliable and reliable. The study results were so strong that a larger sample group wasn't required to ensure statistical accuracy. In both groups the children were given a "create-your-own-cup" kit and asked to decorate a blank paper that would be inserted into a cup.

In the unreliable condition, the children were provided a container of used crayons and told that if they could wait, the researcher would return shortly with a bigger and better set of new art supplies for their project. After two-and-a-half minutes, the researcher returned, apologizing that there were no other art supplies after all.

Next a quarter-inch sticker was placed on the table, and the children were told that if they could wait, the researcher would return with a large selection of better stickers to use. After the same wait, the researcher again returned empty handed.

The reliable group experienced the same set up, but the researcher returned with the promised materials: first with a rotating tray full of art supplies and the next time

with five to seven large stickers.

The marshmallow task followed, with the explanation that the child could have "one marshmallow right now. Or—if you can wait for me to get more marshmallows from the other room—you can have two marshmallows to eat instead." The researcher removed the art supplies and placed a single marshmallow in a small dessert dish directly in front of the child.

Kids danced in their seats, sang, and took pretend naps. Several took a bite from the bottom of the marshmallow then placed it back in the dessert cup so it looked untouched.

"We had one little boy who grabbed the marshmallow immediately, and we thought he was going to eat it," recalls Kidd. But he sat on it. "Instead of covering his eyes, he covered the marshmallow."

Children who experienced unreliable interactions with an experimenter waited for a mean time of three minutes and two seconds on the marshmallow task, while youngsters who experienced reliable interactions held out for 12 minutes and 2

seconds. Only one of the 14 children in the unreliable group waited the full 15 minutes, compared to nine children in the reliable condition.


"I was astounded that the effect was so large," says Aslin. "I thought that we might get a difference of maybe a minute or so. You don't see effects like this very often."

In prior research, children's wait time averaged between 5.71 and 6.08 minutes, the authors report. By comparison, manipulating the environment doubled wait times in the reliable condition and halved the time in the unreliable scenario.

The robust environmental effect provides strong evidence that the wait times reflect the children's rational decision making about the probability of reward, the authors conclude. The results are consistent with other research showing that children are sensitive to uncertainty in future rewards.

So does that mean that if little ones gobble up dessert without waiting, parents should worry that they have failed to be role models of reliability?

"Children do monitor the behavior of parents and adults, but it's unlikely that they're keeping detailed records of every single action," says Aslin. "It's the overall sense of a parent's reliability or unreliability that's going to get through, not every single action."

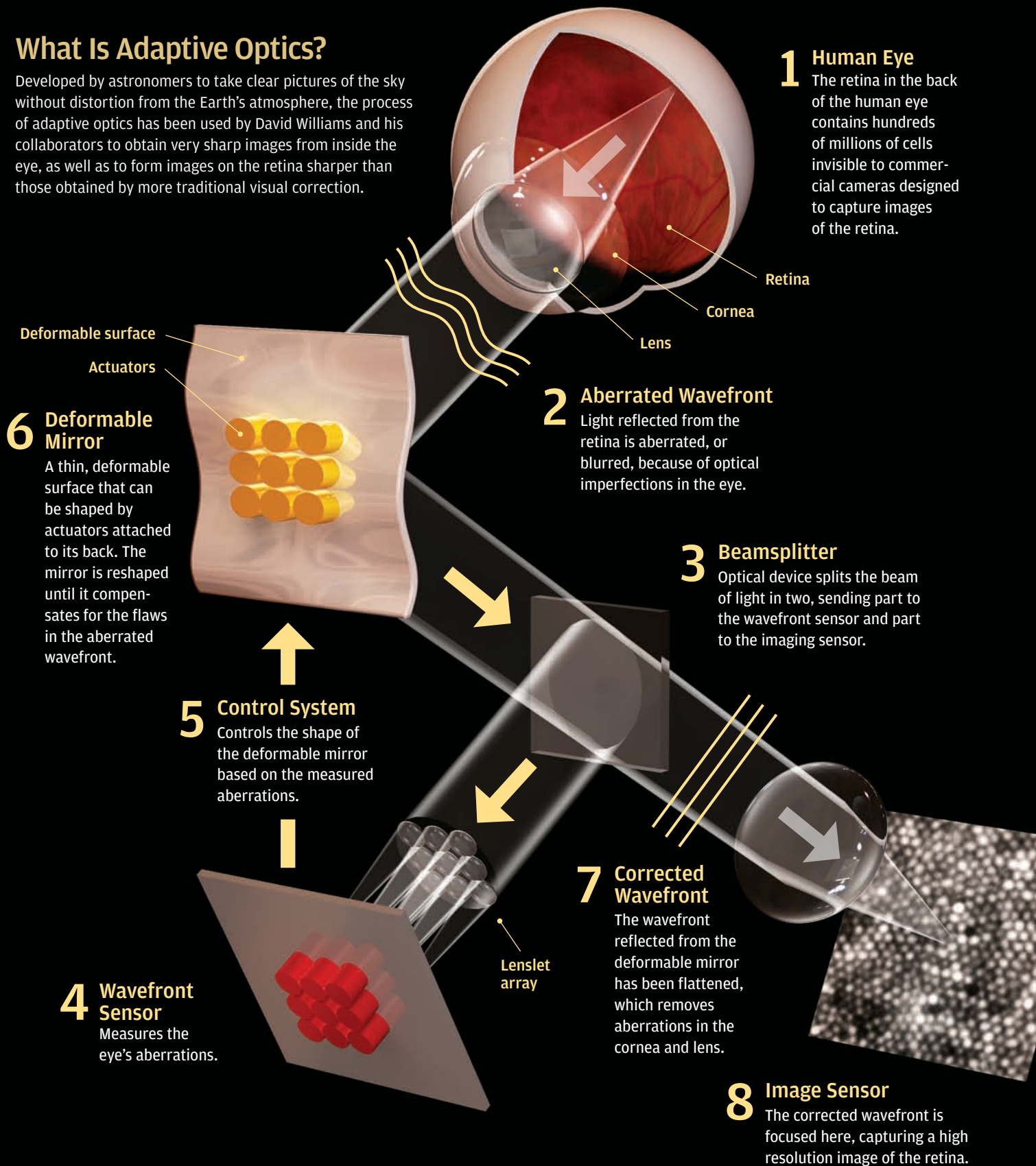
Adds Kidd: "Don't do the marshmallow test on your kitchen table and conclude something about your child. It especially would not work with a parent, because your child has all sorts of strong expectations about what a person who loves them very much is likely to do." 

"Being able to delay gratification—in this case to wait 15 difficult minutes to earn a second marshmallow—not only reflects a child's capacity for self-control, it also reflects their belief about the practicality of waiting."

—Celeste Kidd, doctoral candidate in brain and cognitive sciences

What Is Adaptive Optics?

Developed by astronomers to take clear pictures of the sky without distortion from the Earth's atmosphere, the process of adaptive optics has been used by David Williams and his collaborators to obtain very sharp images from inside the eye, as well as to form images on the retina sharper than those obtained by more traditional visual correction.



Sharpest Pictures Ever of the Retina

The images below show the advantage that adaptive optics retinal imaging offers over standard commercial cameras for imaging the retina.

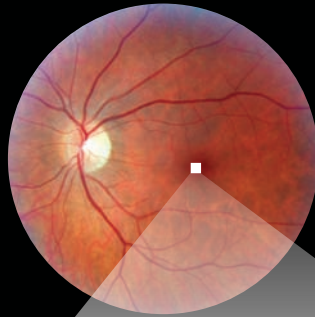
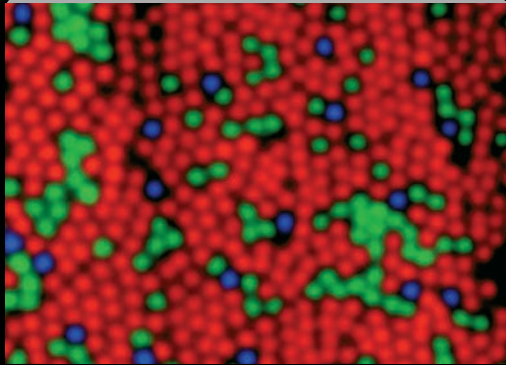
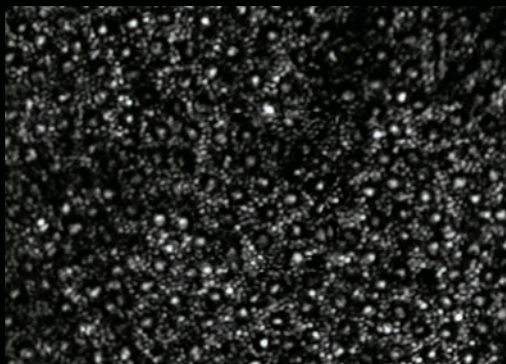


Image of a human retina taken with a standard commercial camera.



Retinal image taken with adaptive optics—the first ever of its kind—showing the three kinds of cones responsible for color vision. Each cone is five microns in diameter, about 1/20th the diameter of a human hair.



The clearest image ever taken of rod photoreceptors in the living human eye. The rods, each just two microns in size, are the smaller spots in the image.

VISION SCIENCE

Stars in Your Eyes

One of the world's leading experts on human vision, **David Williams**—the William G. Allyn Professor of Medical Optics—has pioneered new technologies that are improving eyesight for people who are legally blind and those with 20/20 vision alike. And he's done it by applying methods of astronomers to the terrain of the eye.

In September, Williams received the António Champalimaud Vision Award in Lisbon, Portugal, in recognition of his work on adaptive optics. In awarding the prize, the jury said that Williams and his research group have “set the stage for current approaches to vision correction and have opened up new possibilities for imaging retinal structures in the living eye.”

With a prize of 1 million euros, the award recognizes contributions to vision research and is the largest in vision science and ophthalmology. Williams receives half the prize, which will support his future research; he shares the award with developers of optical coherence tomography, another method of imaging the retina that has improved the diagnosis and clinical management of retinal disease.

Williams says that “this technology makes it possible for us to image the retina with unsurpassed resolution and moves us further down the path to the understanding of retinal disease.”

Adaptive optics was first developed by astronomers so that telescopes could see more clearly through the Earth's atmosphere. The technologies that Williams and his group developed apply these techniques to the eye, making it possible to image individual retinal cells—down to individual photoreceptors in the living human retina—by looking through the pupil. The group

developed techniques that not only can modify the light leaving the eye to obtain better pictures of the retina but also can modify the light going into the eye to achieve better vision. The methods that Williams's team developed are used throughout the world in Lasik procedures today.

Williams, whose primary appointment is in the Institute of Optics, is dean for research in Arts, Sciences & Engineering. He joined the faculty in 1981 and is also director of the Center for Visual Science, a research



David Williams

program bringing together 30 faculty members from five departments to understand how we see and the disorders that compromise sight.

While Williams has led the way, he notes that the effort was by no means his alone. He calls the discoveries in adaptive optics that the Champalimaud Award honors the “work of many graduate students, postdoctoral fellows, and colleagues over two decades.

“It is great for our whole community that the achievements and potential of adaptive optics for vision are showcased with this award.”

—Leonor Sierra

Geneticists Verify Cholesterol-Cancer Link

Could cholesterol-lowering drugs be part of the future battle against cancer? Rochester scientists are adding new genetic evidence to a long-debated medical question. In a new study, **Hartmut (Hucky) Land**, the Robert and Dorothy Markin Professor and chair of the Department of Biomedical Genetics, and coauthor **Bradley Smith**, a postdoctoral fellow in Land's lab, found that defective

cholesterol exportation from cells appears to be a key component in a variety of cancers.

Published in the online journal *Cell Reports*, the data support several recent population-based studies that suggest people who take cholesterol-lowering drugs may have a reduced risk of cancer and, conversely, that people with the highest levels of cholesterol seem to have an elevated risk of

cancer. The cancer-cholesterol question has been debated since the early 20th century. But until now, genetic evidence directly linking cholesterol and malignancy has been lacking, says Land, who is scientific director of the Wilmot Cancer Center. Millions of Americans take cholesterol-lowering drugs or statins, as prescribed by physicians. Clinical trials also are evaluating statins as a tool

against cancer, and some previous studies suggest that when used in combination with chemotherapy, statins might make chemotherapy more effective by sensitizing certain cancer cells to chemotherapy-induced cell death. Land, however, urges caution and further study. "The link between cholesterol and cancer is clear," he says, "but it's premature to say that statins are the answer." —Leslie Orr



TO THE RESCUE: Bacteria have consumed more than 200,000 tons of oil and gas in the Gulf of Mexico from the Deepwater Horizon spill.

Bacterial Clean-Up Crew Attacks Oil Spill

Naturally occurring bacteria in the Gulf of Mexico consumed and removed at least 200,000 tons of oil and natural gas that spewed into the gulf following the disastrous 2010 Deepwater Horizon explosion and oil spill.

That's according to a study by Rochester scientist **John Kessler**, associate professor

in the Department of Earth and Environmental Sciences, and a researcher at Texas A&M University. The pair analyzed an extensive data set to determine not only how much oil and gas was eaten by bacteria, but also how the characteristics of the feast changed with time.

Published in *Environmental*

Science and Technology, the results include the first measurements of how the rate at which the bacteria ate the oil and gas changed as the disaster progressed, information that's fundamental to understanding the spill and predicting the behavior of future spills.

"A significant amount of the oil

and gas that was released was retained within the ocean water more than one-half mile below the sea surface. It appears that the hydrocarbon-eating bacteria did a good job of removing the majority of the material that was retained in these layers," says Kessler, coauthor of the study.

—Leonor Sierra

Protein Helps DNA Repair in Aging Cells

Scientists have long wondered why cells lose their ability to repair themselves as they age. Now research by Rochester scientists has uncovered two intriguing clues. DNA strands in human cells routinely break and repair themselves, but as cells age, the repair system becomes less

efficient, and flaws in the process lead to a decline in functionality and an increase in the incidence of tumors. To find out whether the process could be slowed or even reversed, biologists **Andrei Seluanov, Vera Gorbunova**, and colleagues found that the decline coincided with a global reduction

in the levels of proteins involved in the repair process. The group tried to reverse the age-related decline by restoring the proteins to their original levels and found that only one protein, called SIRT6, proved effective. The work has been published in the *Proceedings of the National*

Academy of Sciences. The team plans to study factors regulating SIRT6. Seluanov says that multiple groups are trying to develop drugs that activate the protein, and he hopes the research will lead to therapies that help extend lifespans and treat cancer.

—Peter Iglinski

A Brain-Cleansing Discovery

A previously unrecognized system that drains waste from the brain has been discovered by neuroscientists at the Medical Center. The highly organized system acts like a series of pipes that piggyback on the brain's blood vessels, sort of a shadow plumbing system that seems to serve much the same function in the brain as the lymph system does in the rest of the body—to drain away waste products.

“Waste clearance is of central importance to every organ, and there have been long-standing questions about how the brain gets rid of its waste,” says **Maiken Nedergaard**, the Frank P. Smith Professor of Neurosurgery and senior author of the research, which was published online in *Science Translational Medicine*. “This work shows that the brain is cleansing itself in a more organized way and on a much larger

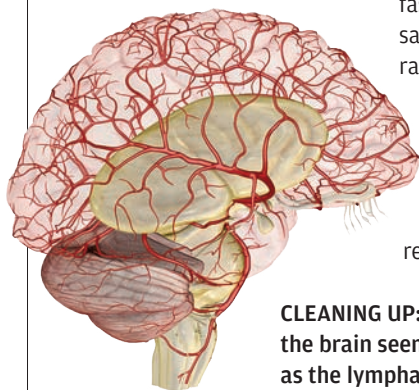
scale than has been realized previously.

“We’re hopeful that these findings have implications for many conditions that involve the brain, such as traumatic brain injury, Alzheimer’s disease, stroke, and Parkinson’s disease,” she adds. Nedergaard’s team has dubbed the new system “the glymphatic system,” since it acts much like the lymphatic system but is managed by brain cells known as glial cells.

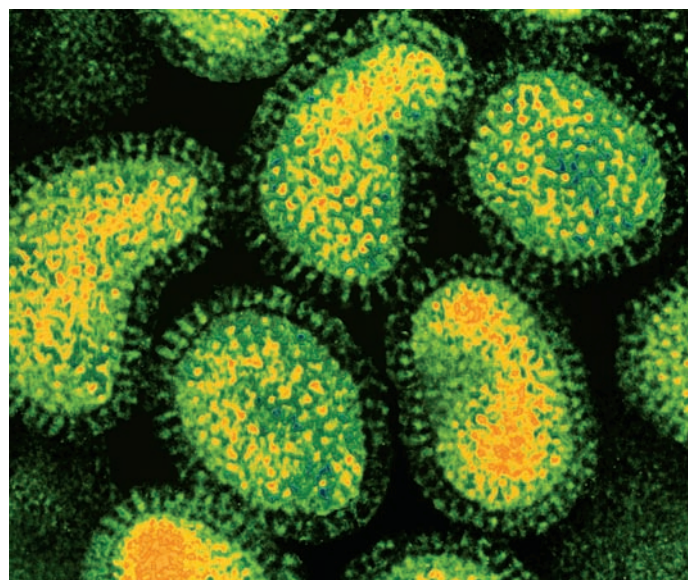
Scientists have known that cerebrospinal fluid plays an important role in cleansing brain tissue, carrying away waste products and carrying nutrients to brain tissue through a process known as diffusion. The newly discovered system circulates the fluid to every corner of the brain much more efficiently.

“It’s as if the brain has two garbage haulers—a slow one that we’ve known about, and a fast one that we’ve just met,” says Nedergaard. “Given the high rate of metabolism in the brain, and its exquisite sensitivity, it’s not surprising that its mechanisms to rid itself of waste are more specialized and extensive than previously realized.”

—Tom Rickey



CLEANING UP: A newly recognized system in the brain seems to drain waste away much as the lymphatic system does for the body.



ARRESTING: Researchers have found a location in a gene of the flu virus that could be a “switch” to turn off its ability to spread.

Is There an ‘Off Switch’ for the Flu?

Rochester scientists have helped identify a location in a gene of the influenza A virus that could be used as a “switch” to disrupt the replication of the virus. If a way can be found to manipulate the switch in an organism, the researchers say it could have important implications for stopping the spread of the flu. Conducted by **Douglas Turner**, professor of chemistry, and colleagues **Walter Moss, Lumbini Dela-Moss**, and **Salvatore Priore** at Rochester, and chemists Ryszard Kierzek and Elzbieta Kierzek at the Polish Academy of Sciences in Poznan, the work singled out

messenger RNA, which is key to the production of two proteins the virus needs to propagate. To produce the second protein, the messenger RNA has to undergo the process of splicing, in which two remote sites of the long molecule join together, while the intervening segment is discarded.

“We look at one of the splicing sites as a potential switch,” says Turner. “If we can inactivate the switch to prevent the two sites from coming together, we can stop the virus from spreading.”

The research was published in the journal *PLoS ONE*.

—Peter Iglinski

A Hundred Years and Counting

The Memorial Art Gallery celebrates its centennial.

IN OCTOBER 2013, THE MEMORIAL ART GALLERY will mark the centenary of its founding. And the gallery is celebrating with yearlong festivities, culminating in the opening of its new Centennial Sculpture Park next October. The permanent collection of 12,000 works spans 50 centuries of world art. The gallery's director, Grant Holcomb, and curators have chosen the "MAG Top 100"—a hundred works of special note. Here is a sampling. To see the full list, visit <http://magart.rochester.edu/PRT2070>.

1914

Memory

William Ordway Partridge

Emily Sibley Watson, founder of the gallery, selected sculptor William Ordway Partridge to create a memorial for her son, James George Averell, who died in 1904 of typhoid fever. The figure of a robed woman cradling a funeral urn is sculpted from Carrara marble; a portrait relief of Averell is located on the base.



ca. 1885

Stained Glass Window

Tiffany Studios

This window was created by Louis Comfort Tiffany for the Corn Hill home of Rochester tycoon William Kimball, owner of the Kimball Tobacco Factory. The house was demolished in the mid 20th century, when Interstate 490 was built; Harold Rand '34 rescued the window.

1984

Dr. Caligari

Wendell Castle

This sculpture, made from curly cherry veneer, ebony, and gold-plated brass, was inspired by *The Cabinet of Dr. Caligari*, a silent horror film from 1920. Based in Rochester, Wendell Castle is a leading figure in American craft and art furniture. He has been commissioned to create a monumental cast-iron sculpture as an anchor installation of the new Centennial Sculpture Park.



1948 Summer Street Scene in Harlem

Jacob Lawrence
In the late 1930s and 1940s, Jacob Lawrence's art focused on African-American history, including the Great Migration of African Americans from the South to the North. Lawrence himself moved to Harlem at the age of 13, in 1930, and this lively, modernist painting—tempera on gesso panel—shows among its figures boys riding a scooter and crowding around a shaved ice cart.



1900-1905 Sullivan Street

Everett Shinn
This oil-on-canvas scene of a poor, immigrant neighborhood in Greenwich Village, with Washington Square Park's trees just visible at the end of the street, is a good example of Everett Shinn's depiction of the bleaker sides of urban life.



ca. 1852 Peeling Onions

Lilly Martin Spencer
When Lilly Martin Spencer could not find patrons for her depictions of allegorical and literary subjects, she turned to an area more accepted for a woman artist: domestic scenes. In this oil-on-canvas painting, she shows a cook wiping away tears with the back of her hand—simultaneously showing female labor and playing off sentimental images of women.



ON THE JOB: Kathy Rideout, the new dean of the School of Nursing, checks on Maiya Colon, her patient in Strong Memorial Hospital's neonatal intensive care unit, along with parents Maria and Wil Colon.

New Dean for School of Nursing

Kathy Rideout '95W (EdD), '03 (FLW) has become the new dean for the School of Nursing. Rideout, a pediatric nurse practitioner at Golisano Children's Hospital at Strong, has served as an associate professor of clinical nursing and in administrative roles at the school over the last 26 years. Previously, she was the school's senior associate dean for academic affairs.

As dean, Rideout will continue to work part time as a pediatric ostomy nurse practitioner, a position that she maintained while serving as interim dean from September 2011 until her permanent appointment. "Kathy cherishes her role of working with children and families," said Medical Center CEO Bradford Berk '81 (MD/PhD) at the August announcement of Rideout's ap-

pointment. "It's intrinsic to who she is and further demonstrates the patient-centered focus she brings to preparing the nurses of tomorrow.

"It's rare to find an administrator who works so hard to remain at the bedside as she does, and in doing so, she truly embodies the School's unification model of practice, education, and research."

Catherine Cerulli Leads Susan B. Anthony Center

Catherine Cerulli, an academic and legal leader with more than two decades of commitment to battling domestic violence and victimization, is the new director of the Susan B. Anthony Center for Women's Leadership. She succeeds Nora Bredes, who led the center from 1999 to 2011, when she died of complications from breast cancer.

Cerulli joined the University in

2002 as an assistant professor in the Department of Psychiatry. Most recently, she served as the director of the University's Laboratory of Interpersonal Violence and Victimization and had joint appointments as director of research at the Women, Children, and Social Justice Clinic, which she cofounded in 1992 at SUNY Buffalo's School of Law.



LEADER: Catherine Cerulli will lead the Anthony Center.

Admissions Adopts Test Flexible Policy

This fall, the Admissions Office became "test flexible," allowing applicants to the undergraduate College of Arts, Sciences & Engineering to submit national or international test results other than the SAT or ACT along with their secondary school records of courses and grades.

Adoption of the policy comes after an eight-year pilot phase. Since 2004, Admissions has incorporated many kinds of test score submissions into the application review process, but had always required students to submit an SAT or ACT score before applications were deemed complete. Under the new policy, applicants for admission will be eligible for review after sending one of several examination options and no longer must include SAT or ACT scores.

Wilmot Cancer Center Expands

In July, Wilmot Cancer Center expanded, opening a 100,000-square-foot, four-floor extension. Begun in late 2010, the additional floors allow for the relocation of two inpatient units from Strong Memorial Hospital to the center: the Samuel E. Durand Blood and Marrow Transplant unit and the adult hematology/oncology unit. With the additions, the Wilmot Cancer Center has become a comprehensive cancer hospital, offering a full continuum of inpatient and outpatient care. The two inpatient floors, designed in response to patient feedback, feature many patient- and family-centered amenities, including pull-out beds for family, laundry facilities, and an exercise room.

New Director of Religious and Spiritual Life Appointed

The Rev. C. Denise Yarbrough—a scholar, educator, and leader in the Episcopal Church and greater Rochester religious community—has been appointed as the new director of religious and spiritual life. Yarbrough will support the University's many faith communities housed at the Interfaith Chapel. She will also create programming that addresses the spiritual and religious needs of students, faculty, and staff.

For the past eight years, Yarbrough has served as the canon for interfaith and ecumenical relations of the Episcopal Diocese of Rochester. In that role, she serves as chair or member of several committees focused on advancing multifaith relationships and dialogue. At the University, she will support the work of the campus ministries and chaplains and create opportunities for interfaith work and conversations.

With more than a decade of teaching experience, she will also hold a position in the Department of Religion and Classics.



BRIDGES: C. Denise Yarbrough fosters interfaith connections.



Riding a Path to Market?

FUNDING OPPORTUNITY: A student-designed device that allows people with limited use of their hands to control a recumbent three-wheeled cycle (above) may soon be commercially available, thanks to an innovative funding mechanism. The project, developed by a team of biomedical engineering students, is the second to be identified by Innovocracy, a crowdfunding platform established to give boosts to small-scale, academically developed projects that can benefit society. Created last year, Innovocracy has also funded a project by Daniel Mruzek, associate professor of pediatrics, and Stephen McAleavey, associate professor of biomedical engineering, who developed a toilet-training device to help children with autism who are not always able to alert caregivers when they need to use the bathroom.

Rochester Joins Global Scholarship Program

The Davis United World College Scholarship Program has welcomed Rochester as a new partner. The largest international undergraduate scholarship program in the world, the program has increased global diversity on campuses in the

United States by awarding more than \$70 million to more than 4,000 disadvantaged students from United World College high schools since 2000. The high schools are in places such as Bosnia and Herzegovina, India, China, Norway, and Swaziland.

A Keeper of University History

Melissa Mead has been named the John M. and Barbara Keil University Archivist and Rochester Collections Librarian. Mead, who has worked in the Department of Rare Books, Special Collections, and Preservation for 16 years, succeeds Nancy Martin, who is retiring after serving as archivist since 2000.

Most recently, Mead—who earned her master's of library science degree from Columbia University—served as digital and visual resources librarian.

During that time, she was responsible for creating, preserving, and making accessible digitized materials from the archives and from other department holdings.

A large part of her job has been collaborative. In addition to working with faculty, staff, and students, she provides assistance to scholars and researchers in search of primary sources.

She has collaborated on exhibits on University and Rochester history, including several for the University's sesquicentennial celebration in 2000. She received the University's Meliora Award in 2010.



RARE FINDS: Melissa Mead is the new University archivist.



MEDICAL CENTER

Work Begins on Golisano Children's Hospital

By Heather Hare

GOLISANO CHILDREN'S HOSPITAL IS WELL known in upstate and western New York as a place of healing.

Now planners for a new, \$145 million building for the hospital are turning to the region itself for inspiration, drawing on the area's art, décor, and architectural and environmental features to create an interior designed to help heal and soothe children and their families.

Ground was broken in September for the building, which will include eight floors and approximately 245,000 square feet of space dedicated to children and their families. The hospital is named for B. Thomas Golisano, the founder and chairman of Paychex Inc. He pledged \$20 million to jump-start fundraising for the new building.

The campaign for a new children's hospital, the largest single capital project in the University's history, is part of the Medical Center's \$650 million campaign, which is a key component of the University's \$1.2 billion initiative, *The Meliora Challenge*.


Each floor of the new hospital is designed with a different theme—including



HEALING ARTS: Plans for a new Golisano Children's Hospital (shown here in architectural renderings) include graphical elements, art, and other features that are designed to help create a soothing and engaging environment for children and their families.

waterways, meadows, gardens, and parks—intended to provide creative opportunities to engage children of all ages. For example, children may be able to push buttons to make bubbles rise through tubes in the wall, evoking images of lakes. In patient rooms, glass frosted with leaves may cast shadows on the floor, creating an imaginary park path.

"We want very ill children to feel soothed,

but we want children who aren't as sick to be as engaged as possible, exploring interactive wall art and kicking leaf shadows down the path of their unit," says Elizabeth Lattimore, chief administrative officer for the hospital. "We have been careful to make the design appealing to young children while also making it interesting to teenagers and caregivers so our older patients and their families know this is their hospital, too." 

HIGHLIGHTS

Four Teams Earn Top Rankings

A TOTAL OF FOUR YELLOWJACKET TEAMS were ranked among the best in the country this fall, including the first-ever Top 20 ranking of the Rochester field hockey team. Also earning national rankings were men's soccer and the men's and women's cross country teams.

Men's cross country: With four runners placing among the top eight individuals, the Yellowjackets captured the New York State Collegiate Track Conference title in late October, Rochester's first state title since 2008, its 12th since 1987, and its 14th overall. John Bernstein '14 and Adam Pacheck '15 earned first team All-New York State honors for the Yellowjackets, who were ranked 22nd nationally going into states.

Football: Heading into November, the Yellowjackets were looking to finish strong with Liberty League matchups against Worcester Polytechnic Institute and Hobart College. Rochester opened the season with a win against Thiel College. In the second week, Rochester lost to St. John Fisher College in the final Courage Bowl when the Cardinals rallied in the fourth quarter for a 20-16 win. For a homecoming performance that included seven tackles and a fumble recovery, linebacker Thomas Marone '16 earned "Rookie of the Week" honors from the Liberty League.

Golf: The team qualified for next spring's Liberty League match play championships with a third-place showing at this fall's Liberty League championships. Nick Palladino '14 took second place with a minus-1 score of 70 on day two, tying the lowest score of the tournament. He earned first team All-Liberty League honors while Dom Schumacher '16 and G. W. VanderZwaag '16 were named to the second team.

Men's soccer: Riding a seven-game unbeaten streak in October, a stretch that included a win and two ties against Top 10 teams, the Yellowjackets returned to the national rankings as the season was coming to a close. Jack Thesing '15 was named UAA Soccer Offensive Player of the Week for his performance in Rochester's wins against then fifth-ranked Carnegie Mellon and against Emory, both on the road.

Men's tennis: The Yellowjackets finished the fall portion of their schedule with a 9-0 victory over St. John Fisher, getting straight set wins from all six singles players



HONOREES

Alumni Yellowjackets Inducted into Hall of Fame

INDUCTEES: Joining the Athletics Hall of Fame during Meliora Weekend this fall were (front row) Matthew Jackson '91 (lacrosse), Julianna Myers Bourne '94 (swimming), Lisa Allen Weld '96 (soccer), Brian Miga '71 (football), Michael Fedorshyn '49, '60W (MA) (basketball); (back row) Dennis Braniecki '91 (football), Todd Barth '84 (swimming), Eric Lutz '83 (track and cross country), Gisli Hjalmtysson '87 (soccer), Todd Przybycien [accepting for Edward Przybycien '58, '62W (MA)], and Isaac Collins '94 (football).

and winning all three doubles matches. Matthew Levine '16 was a two-time UAA Athlete of the Week.

Women's cross country: Lauren Norton '13 became Rochester's first individual women's cross country champion in 25 years as she led nearly the entire way at the New York State Collegiate Track Conference women's cross country championships in late October. The last Yellowjacket woman to take the title was Josefa Benzoni '88, '92W (MAT) in 1987. The Yellowjackets were ranked 31st nationally in late October.

Field hockey: Rochester set a record for the most wins in a season with 14, with one regular season game left in late October, earning a spot in the Liberty League playoffs. Ranked as high as 18th in the nation, the Yellowjackets have been paced by Shelby Hall '13 with 17 goals through late October and Michele Relin '16 with 15. Hall, who scored three goals against Ithaca and had an assist in the team's homecoming win against Morrisville State, was named league Player of the Week.

Women's soccer: Going into the last week of the season, the Yellowjackets were 3-10-1 overall. Grace Van der Ven '14 led the team with 21 shots on goal, followed by Christine Keck '13 with 20.

Women's tennis: Julia Weaver '16 and Janice Zhao '14 earned singles wins at the Bowdoin Invitational in October, a three-day event featuring a round robin format with four strong women's teams from across the northeast. Joining Rochester were Bowdoin, Wellesley, and Bates. Frances Tseng '13 reached the semifinals of the ITA Northeast regionals.

Volleyball: The Yellowjackets improved to 18-9 with a strong showing at senior day. The 3-1 win over Nazareth College was the last match before Rochester headed to the UAA championships at Emory University in early November. In their final home matchup, seniors Kelly Mulrey finished with a match-high 23 kills while Alma Guevara added seven. Lauren Bujnicki had 24 digs. Meghan Neff had three kills and two block assists and Claire Donohue had four kills. **R**