

A complex fluorescence micrograph of neurons. The image shows a dense network of branching processes in red, green, and blue. Several cell bodies are highlighted in bright pink or magenta. The background is dark, making the colorful structures stand out.

W. M. KECK FOUNDATION

2010 ANNUAL REPORT

CURRENTS

W. M. KECK FOUNDATION

2010 Annual Report



The currents in research and in our own Los Angeles community continue to change. Our goal is to help grantees innovate and create new solutions to benefit humanity.

Twelve years ago, on the eve of the new millennium, the W. M. Keck Foundation convened 17 of the nation's preeminent scientists for a series of roundtable discussions. The purpose of these discussions was to identify what we would come to call "Promising Directions". These were areas of inquiry like data management and analysis, genomics, nanotechnology and complexity; areas with themes such as collaboration and multi-disciplinary research; and encouraging bold ideas and "happy accidents," where the unexpected has important consequences. These findings were intended to shape the Foundation's grant-making priorities in the years ahead, and they did.

We believe that it is not enough to have a vision, however. It is important to measure, evaluate, and learn from your results; to look back in order to journey forward. And so in 2008 and 2009, we once again convened some of America's most distinguished thinkers to examine and evaluate grants made by the W. M. Keck Foundation over the past 15 years. As before, our goal was to ensure we were using the Foundation's resources wisely and in a manner most likely to result in high-impact grants with the potential for breakthrough advancements that benefit humanity.

The work was accomplished through blue-ribbon committees, each chaired by a highly-respected leader in his field. Harvey Fineberg, President of the Institute of Medicine, chaired the Medical Research committee; Ralph Cicerone, President of the National Academy of Sciences, chaired the Science and Engineering committee; and Jim Ukropina, Chairman of our Southern California committee, chaired the committees reviewing our Southern California grant program and our

Special Projects. The Foundation's recently revamped Undergraduate Education program will be evaluated separately.

At the direction of these committees, independent subject area experts were asked to interview grant recipients and review grant outcomes. These were measured by a host of factors, including the outcome of the project; the subsequent reputation of the program, its lead investigators and directors; the number of related publications and citations; the number of people served, benefitted or trained under the program; and additional funds secured to continue a program.

In total, our committees reviewed over 325 grants made between 1992 and 2008 across the Foundation's Medical Research, Science and Engineering and Southern California programs and Special Projects. The findings were gratifying, insofar as they found the Foundation's grant programs have had a positive impact on their fields of focus. More importantly, they were illuminating and provocative.

In addition to the usual metrics, the committees added a new measure: they spotlighted the idea of the "noble failure" – an idea that was right to pursue, but failed to hit its intended target – and found value in the "collateral benefits" of high-risk projects. These "benefits" were useful ideas or technologies that emerged from a project, regardless of the ultimate outcome. Across the science disciplines, the committees found that grants for the development of new technologies, instrumentation or methodologies often had significant and far-reaching impacts. They confirmed our belief that the development of cutting-edge technology is a good target for private philanthropy because it is difficult to fund through traditional sources. The committees similarly found that support for early career investigators can yield high-payoff results.

Based on these findings and the work of the subcommittee experts, each committee made its recommendations. Summarized here in a few short paragraphs, these recommendations will help establish our perspective and priorities for future grant-making.

- The Keck Foundation should continue to seek out interdisciplinary and/or high risk projects that lie beyond the scope of traditional funding programs.
- The Foundation should continue to fund development of pioneering instru-

Across the science disciplines the committees found that grants for the development of new technologies, instrumentation or methodologies often had significant and far-reaching impacts.

mentation, new technologies and novel methodologies. As we have noted in previous annual reports, new technology provides us with “new eyes” to see what before we could not. New instrumentation, coupled with compelling opportunities for its application in research projects, will continue to be an important area for funding.

- It is fair to consider potential collateral benefits when reviewing a risky project, as those benefits can mitigate the possibility of failure. A project may be worth trying, even if the ultimate outcome is not what was originally predicted or desired. The history of science has often been defined by the unexpected result.
- The Foundation should continue to support a wide range of institutions and organizations, including rising institutions that are pursuing innovative and transformative projects. Often smaller institutions have specific areas of excellence that can be nurtured and developed. In addition to seeking diversity in the types of organizations and institutions supported, the Foundation should seek diversity of individuals according to their career stages and research topics as well as gender and ethnicity.
- Institutional leadership and commitment are critical to the success of a project. This is as important, in our view, for grants at the \$100,000 level as it is for grants at the \$1 million level. Our staff will continue to work with administrators to determine the commitment and capabilities that help support grant applications.
- In our Southern California program evaluation, the committee reaffirmed its focus on arts and culture, civic and community services, early childhood and K-12 education and health care, particularly where the programs and organizations benefit children and youth. The program will continue funding capital projects, which when targeted and well planned, can help organizations achieve or maintain leadership within their field of activity. We will also fund program grants that are innovative and have potential to bring about meaningful change. Prospective grantees will benefit from the Foundation’s increased emphasis on defined goals to mark the progress and success of a given project.

We hope our brief summaries of these comprehensive and nuanced evaluations help our future grant applicants achieve success.

The Foundation and the scientific and Southern California communities we serve are indebted to our evaluation committee and subcommittee members for their hard work and insight. A list of the talented and dedicated people who helped review the programs is found on page 37 of this report.

In the following pages, we will highlight just a few of our recent grants that demonstrate these principles. As always, we are open to new ideas, following the currents of science and community service to fund projects that are valuable, impactful, need to be tried and in danger of not moving forward without Keck support.

Of course, the Foundation is only as strong as its endowment. After another tumultuous year in the financial markets, we are proud to have closed out 2010 with net assets of \$1.17 billion while approving 42 new grants totaling \$19.8 million and distributing \$49.6 million, including prior commitments and new awards.

Good grants and good investments are made possible by the direction of our extraordinary board. Our board members remain committed to using their knowledge and experience to lead the Foundation, and I remain thankful for their counsel. These evaluations would not have been successful without their time and wisdom, particularly Tom Everhart, Matt Day, Sr., Steve Ryan, Ed Stone, Jim Ukropina, and members of the Southern California program committee.

The currents in research and in our own Los Angeles community continue to change. Our goal is to stay ahead of the flow, helping our grantees to innovate and create new solutions that will continue to fulfill my grandfather's wishes that his Foundation would benefit humanity.

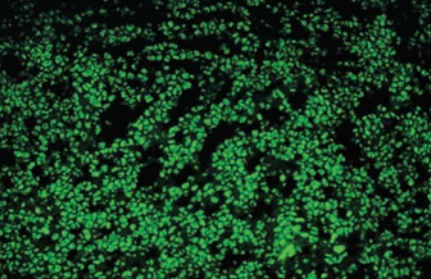
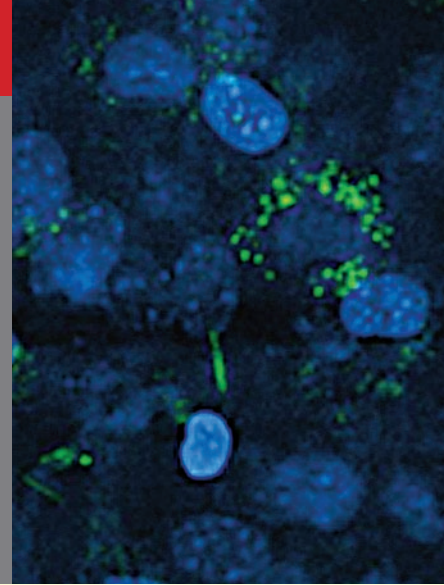
Sincerely,



ROBERT A. DAY
CHAIRMAN, PRESIDENT AND CHIEF EXECUTIVE OFFICER
W. M. KECK FOUNDATION

The Foundation and the scientific and Southern California communities we serve are indebted to our evaluation committee and subcommittee members for their hard work and insight.

Keck should continue to seek out interdisciplinary projects, as we increasingly find compelling projects are the result of a merging of disciplines, integrating engineering, physical and biomedical sciences.

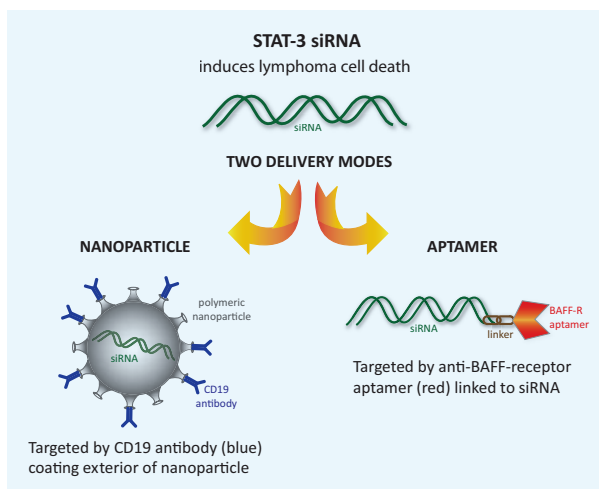


Seeking HOPE

(top right) High magnification of mouse immune cells shows green-labeled siRNA aptamer localized around nuclei, indicating cell uptake.

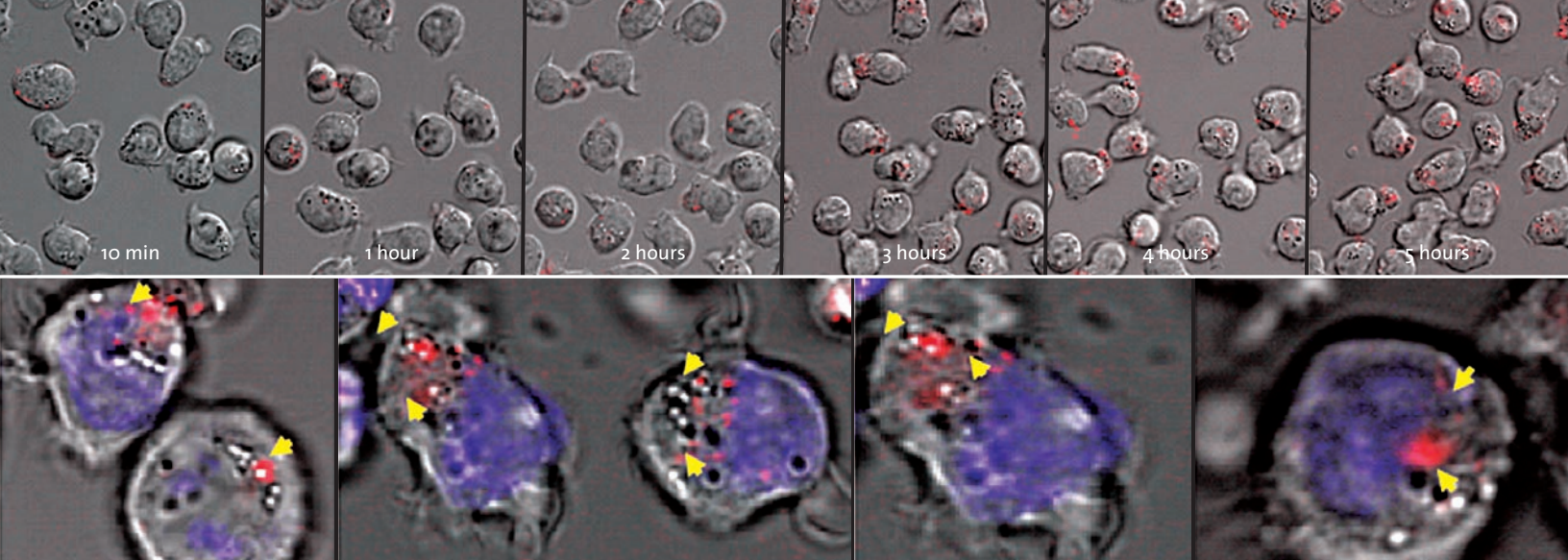
(above) Frozen large-B cell lymphoma section shows high level of activated STAT3 (labeled green).

(below) To shut down lymphoma tumor cells, STAT3 siRNA can be delivered using two methods that target tumor cells.



When a problem is as complex as cancer, investigators must approach the problem from different directions. A team with the right expertise and willingness to take risks can transform a problem into a solution through new ideas, technologies, and methodologies. In 2009, the W. M. Keck Foundation helped fund a team at the City of Hope, which in collaboration with investigators at the California Institute of Technology, has assembled an inclusive toolbox of nanoparticles, antibodies, small interfering RNAs (siRNA), and new imaging techniques to study cancer. This accomplished team consists of Stephen Forman, Hua Yu and Richard Jove, cancer biology; John Rossi, siRNA; David Colcher and Mark Davis, nanoparticles for siRNA delivery; and Scott Fraser, imaging.

City of Hope researchers are among the scientists worldwide seeking to identify the genes necessary to support cancer growth. One top contender is STAT3, a well-known gene which has the potential to cause or sustain cancer. Dr. Yu's and Dr. Jove's labs have shown that in one type of aggressive



(top) Dual function siRNA aptamer blocks lymphoma cell proliferation and delivers siRNA intracellularly (siRNA labeled red).

lymphoma, STAT3 signaling is required for proliferation and survival of the tumor cells and that it also modulates the tumor microenvironment. By doing so, it induces blood vessel growth to the tumor and suppresses the immune system's response to it.

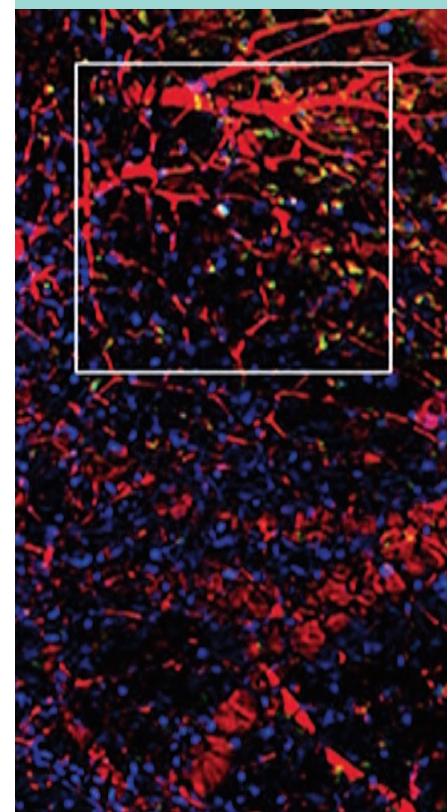
Dr. Yu has also shown that STAT3 doesn't act alone. Other genes must be activated or deactivated in order to interrupt the cancer cells sufficiently to cause cell death. Along with Drs. Forman and Jove, she recently reported that another gene called EDG1 inhibits STAT3, leading to tumor cell death in activated B cell lymphoma. These findings are expected to be important in understanding other cancers as well.

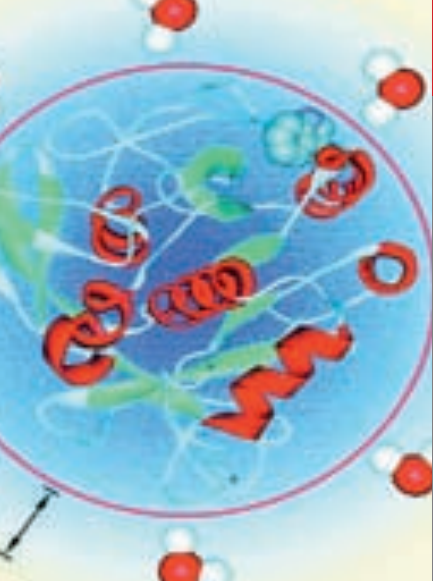
How do you hit both genes at once? Dr. Rossi has developed algorithms that predict dual-targeting siRNAs, which he has shown to be as efficient as single-stranded siRNAs, but with fewer off-target effects. He believes that these new siRNAs offer a promising approach to therapies based on gene silencing.

How do you deliver the siRNA to the right cells? In related work, Dr. Davis, with colleagues at Caltech, City of Hope and other institutions, recently completed a Phase I clinical trial using nanoparticles designed by Dr. Davis to deliver siRNA to melanoma cells in patients with intractable tumors. The study showed evidence that the nanoparticles accumulated preferentially in the tumor tissues, and reduced the amount of the detected tumor mRNA and protein. This demonstrated the potential of nanoparticle-targeted siRNA therapies.

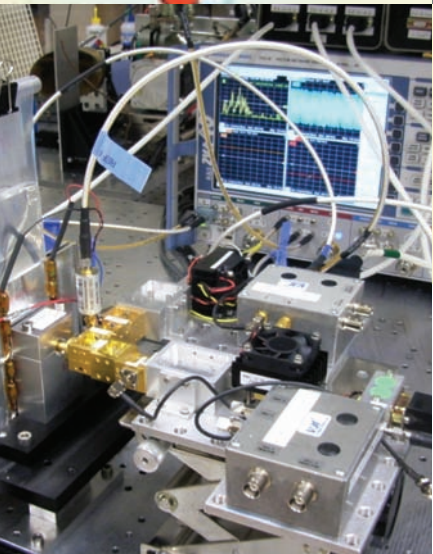
These synergistic lines of research are converging on a potential new treatment for activated B-cell lymphoma, and through this, promising new hope for those affected by this and related diseases.

(below) *In vivo* mouse lymph node (blood vessels stained red). Immune cells picked up green-labeled siRNA aptamers at the tumor site and quickly migrated to the lymph node to initiate immune response (box).





The Foundation will continue to fund development of pioneering instrumentation, providing us with “new eyes” to detect what has not been previously detected.



SEEING into the darkness

Structural changes of proteins are of enormous importance in all biological processes.

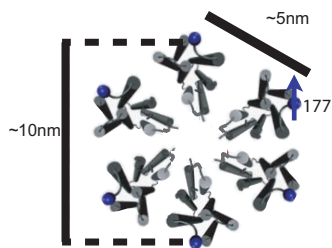
Unfortunately, our ability to measure these subtle changes is limited by many factors, including the complication that most proteins perform their acrobatics in aqueous solution. Water absorbs many wavelengths and at terahertz frequencies is almost “black” to sensors. Nonetheless, researchers led by Mark Sherwin, a physicist at the Institute for Terahertz Science and Technology at UCSB, are developing the complementary techniques of terahertz absorption spectroscopy and ultra-fast pulsed electron paramagnetic resonance spectroscopy to establish the technology needed to “film” the dynamics of biomolecules in solution.

At wavelengths of 30 micrometers to 1 millimeter, terahertz radiation is between microwave and infrared. The dynamics of many important biomolecules can be best studied in this region, but because liquid water absorbs terahertz radiation so strongly, terahertz spectroscopy is usually carried out on frozen or moist proteins rather than on proteins dissolved in water.

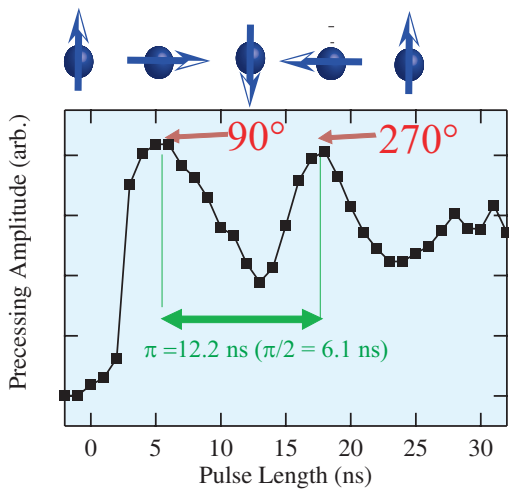
A new terahertz spectrometer that can detect transmitted signals smaller than one part per billion is allowing physicist

(top) 160 water molecules (red and white structures outside the cell membrane) immobilize each lysozyme molecule.

(second from top) The Vector Network Analyzer and combination VNA/VDI systems consists of two microwave bands: VNA covers 10MHz to 40GHz and VNA/VDI covers 70GHz to 200GHz.



(above) Assembly of six spin-labeled proteorhodopsin molecules.



Jim Allen and molecular biophysicist Kevin Plaxco to carry out pioneering studies that “look” at the collective motion of a protein that is fully dissolved in liquid water. These collective motions have been studied theoretically for three decades, but these are the first measurements of motions in solution. These experiments demonstrated that there is a hydration shell of approximately

165 water molecules around each protein, and the size of this hydration shell is independent of frequency, challenging current theory.

Complementary to terahertz spectroscopy, Dr. Sherwin and Songi Han, a physical chemist and biophysicist, are leading the development of ultrafast electron paramagnetic resonance (EPR) spectroscopy. EPR allows scientists to use the magnetism of a “spin label” to probe the movement of a particular location on a protein. The change in vibrations can indicate whether the location being probed is on the inside or outside of the protein. Two labels make it possible to determine how far apart they are. The new EPR spectrometer operates at 0.25 THz—25 times higher than a conventional EPR spectrometer—and is powered by UC Santa Barbara’s Free-Electron Laser. Its high frequency and high power extend the range of distances that can be measured to greater than 10 nm and the time resolution to below 50 ns—critical to probing protein structure, assembly and dynamics.

As with all good experiments, the new measurements will inform the existing theories, and the theory can in turn inform new experiments. As Dr. Sherwin put it, “We can expect a lot of new answers.”

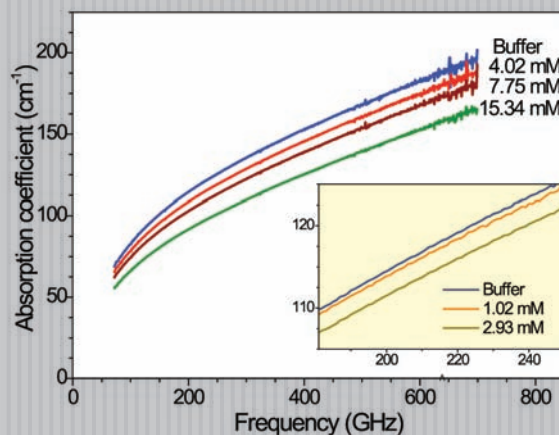
(left) Ultrafast electron spins reveals hidden attributes of enzymes.

THE NEW MEASUREMENTS WILL INFORM THE EXISTING THEORIES, AND THE THEORY CAN IN TURN INFORM NEW EXPERIMENTS.

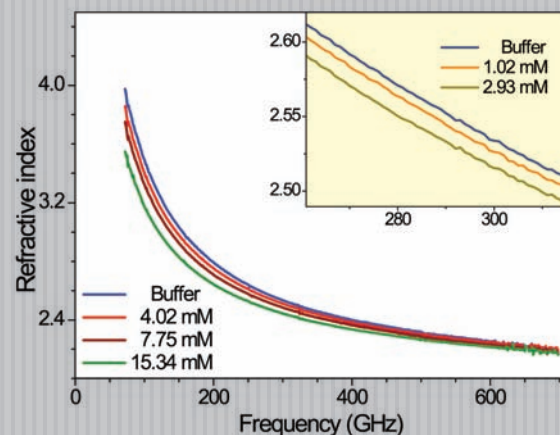
(below) Absorption and refraction of water with different concentrations of lysozyme up to the solubility limit.

Complex spectra of lysozyme solutions

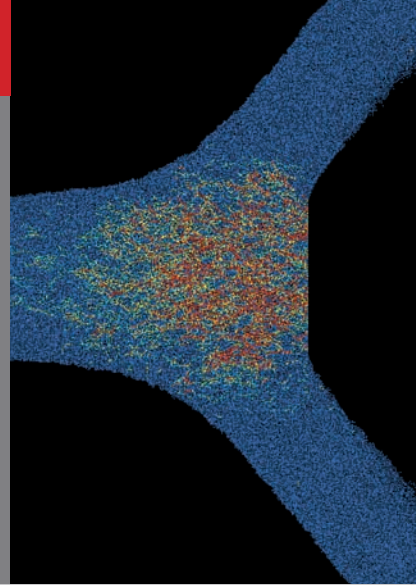
Absorption coefficient – α



Refractive index – n



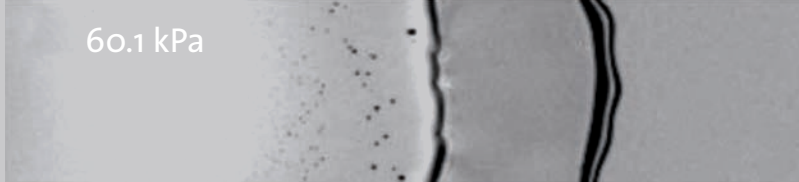
New technologies and methodologies, coupled with compelling opportunities for research, will continue to be an important area for funding.



101 kPa



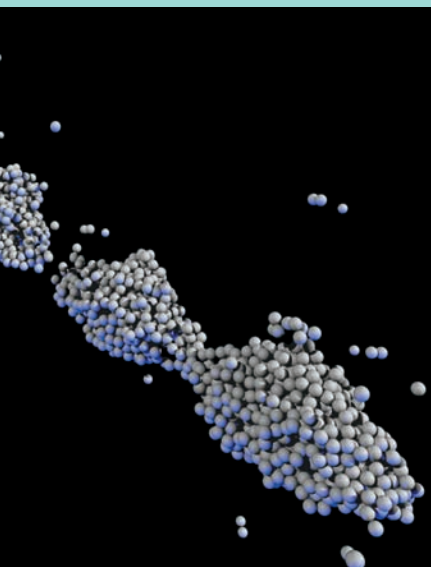
60.1 kPa



(*top right*) Theoretical simulation shows that frictionless granular impact is very similar to perfect fluid flow impact.

(*above*) Section of the rim of a drop as it impacts a glass slide as seen from below. Splashing occurs at atmospheric pressure (101 kPa) but at less than 1 atmosphere, splashing stops.

(*below*) Simulation of a freely falling granular stream developing undulations and clustering into droplets.

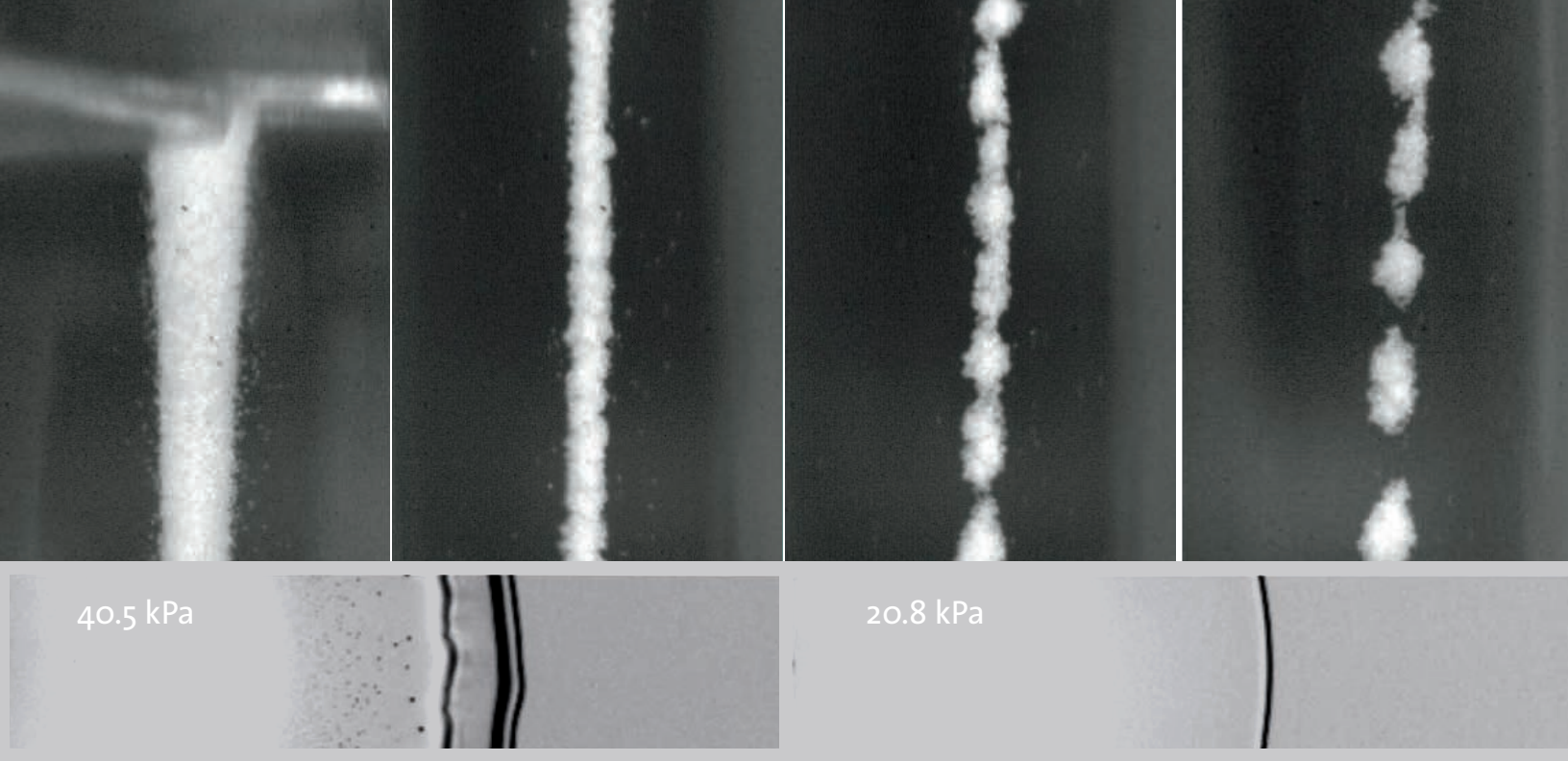


TIPPING points

A University of Chicago team led by Heinrich Jaeger coined the phrase “catastrophic deformation” to describe the behavior of

materials – fluids, grains, cells – when they are driven far from equilibrium and approach their breaking point. Beyond this singular point, the system no longer responds incrementally, but by a marked alteration in its properties, including breaking apart, becoming rigid or collapsing. The expectation was that the path toward this tipping point depended on initial conditions and that after it, the evolution of the system would be unpredictable. Jaeger’s team has found that the approach toward this fleeting, singular moment is often quite general, and further, the path taken encapsulates information about the system’s further evolution.

This collaboration of condensed matter physicists – Dr. Jaeger, Wendy Zhang, Sidney Nagel – and biophysicist Margaret Gardel brought different perspectives to investigating whether there is an overarching framework that explains catastrophic



(above) A stream of 100 micron glass particles breaks into droplets due to the effect of nano-Newton cohesive forces, producing surface tension several magnitudes smaller than found in liquids.

deformation in different physical and biological systems. Using an ultra-fast-imaging facility developed through a 2007 Keck Foundation grant, and combining experiments and modeling, they were able to pinpoint the varied mechanisms that affect the outcome in different classes of materials.

In just one example, scientists studying splashing and spreading in liquids previously have defined the tipping point, or boundary, that determines whether a drop will splash or spread in terms of quantities like the drop size, velocity, viscosity, surface tension, and surface roughness. Experiments by Dr. Nagel, together with theory by Dr. Zhang, have now demonstrated that the ambient gas pressure is also critical for this transition. As Dr. Jaeger notes, “Nature hides the interesting stuff in the singular moment – and it is hidden in time.”

Developing imaging technology to reveal these fleeting moments was challenging. Not only did they need cameras that image at up to 750,000 frames per second, but for some applications, like the rupture of gas bubbles submerged in liquid, they needed to synchronize two high-speed cameras set at 90° angles to each other in order to capture three-dimensional effects. Other cameras were set on a rail and allowed to drop with accelerations close to free fall to follow the individual players in a granular stream. Additionally, they developed a very fast confocal microscopy system to image the interior of cells.

Discoveries under this grant might lead to applications ranging from better spray coatings to more precise inkjet printing to transporting powders without clumping. Ultimately, understanding catastrophic deformations opens up new opportunities to predict and tailor the behavior of materials under extreme conditions. Singularities aren’t just for black holes any more.

We will continue to fund high risk projects that fall outside of traditional funding programs.

Replacing CELLS

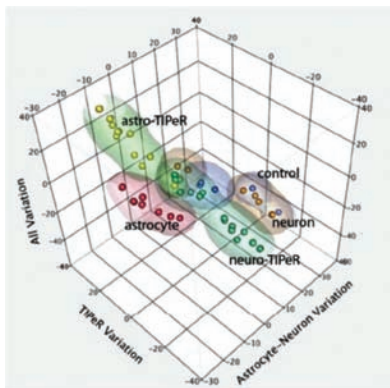
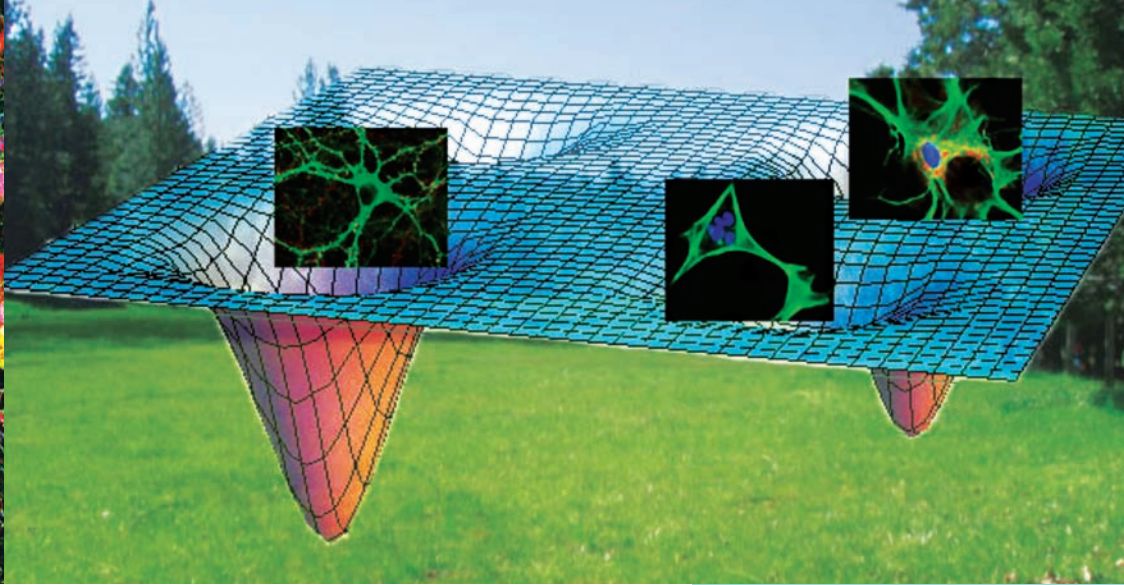
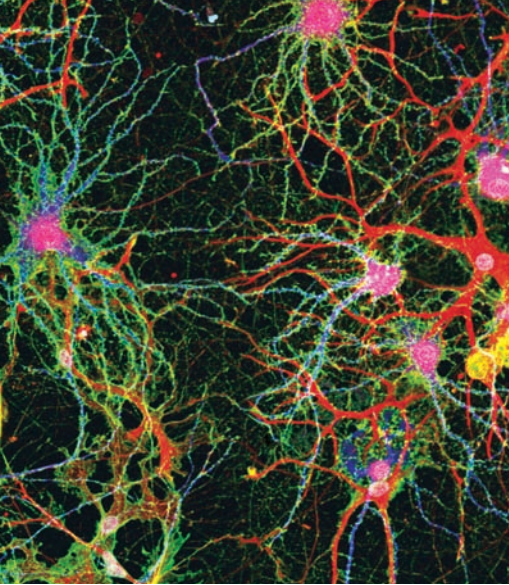
RNA translates the instructions of DNA by directing the synthesis of proteins in a cell. Researchers at the University of Pennsylvania have taken advantage of this system to bypass a cell's inherited genetic instructions and transform it into the phenotype of a different cell. In doing so, they have demonstrated that cellular phenotypes are more plastic than previously believed.

James Eberwine is a molecular biologist whose team of Junhyong Kim, Jai-Yoon Sul, Vijay Kumar, David Meaney and Ulo Langel has expertise ranging from stem cell biology to mathematics to bioengineering. With funding from the Keck Foundation, they have developed two technologies that allow *in vivo* analysis of the mRNA of a cell. One, called Blinker, is still under development. Blinker is a system based on fluorescence that makes it possible to read out the sequence of nucleotides on mRNA as it is transcribed and exits the nucleus. It is hoped that it will provide single cell detection of transcription in real time.

A second technology, TIPeR (Transcriptome Induced Phenotype Remodeling system) transfects host cells with the mRNAs of a desired cellular phenotype. TIPeR floods

(top) tCardiomyocytes generated from fibroblasts TIPeRed with cardiomyocyte mRNA

(second from top) Dendritic processes of a hippocampal pyramidal cell.



the host cell with the mRNA of the target cell, overwhelming the host cell's genetic regulation, thereby forcing it to make the proteins associated with the target cell. When mouse embryonic fibroblasts were transfected with the mRNA of heart cells (cardiomyocytes), the TIPeRed cardiomyocytes expressed proteins appropriate to cardiac muscle for over two weeks. Importantly, their daughter cells displayed the same phenotype.

Using this system, the team has created astrocytes from neurons, as well as cardiomyocytes from fibroblasts. These new cell phenotypes are entirely different from the original cell, implying that this technique could potentially make any cell phenotype out of any other cell. If true, then almost no cell can be considered terminally differentiated.

Dr. Eberwine describes TIPeR as the first functional genomics tool for single cells. By varying the ratios of the mRNAs, the team is able to observe the effects on cells one at a time, rather than in populations. TIPeR is in its first generation of automation, and the team continues to make improvements and use new approaches.

While this technique is not genetic engineering in the traditional sense, the changes do appear to be passed on to daughter cells. It could lead to the development of new therapies for diseases like Parkinson's, where a single cell type has lost its ability to make dopamine. Replacement cells, which will respond to their environment to sense when to produce dopamine, could ameliorate the effects of this disease. When cells can't be considered "terminally" differentiated, the therapeutic possibilities are endless.

(top left) Neurons stained with antibodies.

(top right) Cellular phenotypes can be thought of as energy minima. For cells to change phenotype, they must overcome one minima and be directed to another.

(left) 3D components analysis of gene expression profiles. Cells of a particular morphological and functional phenotype cluster together.

IT COULD LEAD TO THE DEVELOPMENT OF NEW THERAPIES FOR DISEASES LIKE PARKINSON'S.

We reaffirm our focus on arts and culture, civic and community services, early childhood and K-12 education, and health care, particularly where the programs and organizations benefit children and youth.



CHANGING LIVES through the arts



With trees, meandering walkways, and displayed artwork, Inner-City Arts is an oasis in the heart of Los Angeles' Skid Row district. But it is more than a structure. It is a safe haven, a sanctuary where students can explore their creativity and, by accessing their inner artist, move towards realizing their full potential. Inner-City Arts offers professional instruction in the arts, including visual art and ceramics, music, theater, dance and media arts, to children and youth from some of the most under-resourced schools and poorest neighborhoods in Los Angeles. For many, it is the only arts instruction they receive.

Classes and workshops are offered during the school day in partnership with the Los Angeles Unified School District, and also after school and on weekends. Students learn skills that further their academic pursuits and career interests, help them gain confidence, think critically, and improve their

(top and right above)
Students' ceramic work is permanently displayed at Inner-City Arts.

(second from top) Drama class at the Youth Institutes involves students in transformative new experiences.



language skills. By experiencing art and testing their own abilities through planning, making and completing projects first conceived in their minds, students who have come to believe they “can’t”, learn instead that they “can.”

The W. M. Keck Foundation’s first grant supported the addition of a second ceramics studio as part of a campus-wide expansion. A second grant is helping Inner-City Arts to realize its programmatic vision of engaging middle and high school students in the arts during out-of-school time through their Arts Institutes. Here youth can learn about dance, acting, animation, digital photography, graphic design, film production and standup comedy, to name a few, and present their work in performances and exhibitions. Those interested can delve more deeply into their chosen art form and develop a portfolio of work. For the Institutes’ first semester, Inner-City Arts faculty expected 40 students; 100 enrolled. This semester, they expected 100; 245 enrolled.

What is so special about the Institutes? High School senior Yeni Aravia cherishes her participation in the Performing Arts Institute. In drama, she says, “I learned more about myself,” which helped her to do better in her classes. This turned into a dream of going to college, which is now a reality. She will start her studies in environmental sciences at Humboldt State in the fall and will be the first in her family to attend college. She is in good company: 96% of Inner-City Arts teens enroll in college or post-secondary school.

At Inner-City Arts, it’s all about hope. In the words of CEO Cynthia Harnisch, they are “helping children regain the precious ability to dream and plan for their future.”



Led by ceramics teachers Luciano Pimienta and Carmen Argote, 2nd grade students from Frank Del Olmo Elementary School on their first day at Inner-City Arts immediately became engaged with their lessons.





In our Southern California program, we will fund program grants that are innovative and have potential to bring about meaningful change.



CONNECTER, convener, catalyst

(top) Process coach Larry Tash with Lead Teacher and Project-Based Learning Trainer Kim Dawson at the Los Angeles School of Global Studies, a small school at Manuel Contreras Learning Complex.

(second from top) Fatima, a 10th grade student, has been selected for a summer college access program at Harvard.

(below) School of Global Studies.



Transforming education in a school district as large as Los Angeles Unified often seems impossible, but UNITE-LA, an education and workforce development nonprofit affiliated with the Los Angeles Chamber of Commerce, believes positive change is possible. Recent studies have shown that of every 100 students who begin high school in the LAUSD, only 14 go on to receive a college degree. The loss of a viable future takes an immeasurable toll on these young people.

UNITE-LA is a “connector, convener and catalyst” for positive change in the LAUSD. As a convener, UNITE-LA helped create the L.A. Compact, a collaboration of 19 Los Angeles institutions, including higher education, the LA Chamber of Commerce, and LAUSD, with a goal that all students graduate from high school and are prepared for success in college and career. To help realize this goal, UNITE-LA champions the idea of small theme-based schools that provide rigorous, personalized teaching and learning linked to real-life examples and projects. Schools



need time, encouragement, assistance from community partners, and expert guidance to apply these principles.

A 2008 Keck Foundation grant enabled UNITE-LA to provide such guidance to two large high schools establishing and supporting small learning communities. Onsite process coaches served as connectors tasked with changing how administrators and teachers connect with each other, providing training and professional development, and connecting schools to local businesses and other resources. The goal was a school culture that embraces Linked Learning, which is a strategy for the transformation of high school education through curriculum changes and teaching styles, including project-based instruction.

The process coach experiment had mixed results. Small autonomous schools reported the most success implementing project-based learning and improving academic achievement. Partly on the strength of lessons learned through this project, downtown Los Angeles' Local District 4, with the support of UNITE-LA, is embracing linked learning concepts -- at least 40% of instruction will be project-based by 2014.

As a catalyst, UNITE-LA used Keck Foundation support to help launch the Los Angeles School Development Institute, which provides technical assistance to teacher/administrator teams bidding to operate schools as part of the Public School Choice initiative to turn around low-performing schools. 38 out of 42 of the Institute's teams won their bids. Next steps include supporting the teams to ensure high-quality implementation, for which LAUSD won a \$5 million Innovation in Education federal grant with UNITE-LA as one of the official partners.

Change, even against the odds, can happen: by working both within and outside the system, one organization with vision and leadership can make a difference.



(top) Team Teacher Nicole Solig works with 10th grade student team facilitators to monitor their groups' progress.

(second from top) 10th grade students in a joint English/Social Studies class work in groups to compose letters to the United Nations supporting peace efforts.

Keck will continue to support a wide range of institutions and organizations, including rising institutions that are pursuing innovative and transformative projects.



BRIDGING the boundaries



(top right) Seriah Antoun practices her performance for “Whittier College Month” at the GRAMMY Museum.

(above) Assistant Professor of Biology Erica Fradinger and Keck Undergraduate Fellow Genevieve Garcia collaborate on Genevieve’s study of the effect of organophosphate pesticides on the nervous system.

Whittier College, a four-year private liberal arts college located on 76 acres in the La Puente Hills, is a surprise expanse of greenery and palm trees between urban Los Angeles and Orange Counties. Founded by the Quakers in the late 19th century, it hews to its roots, emphasizing a global outlook and social responsibility for its students.

Reflecting the College’s commitment to interdisciplinary studies and integration of learning with local and global community experiences, Whittier has three Centers of Distinction, including the Center for Science, Health and Policy, and the Center for Collaboration with the Arts, both established with support from the Keck Foundation in 2009.

In keeping with their shared theme for 2011, “Transposing Borders”, the centers are designed to bridge the perceived boundaries separating the humanities, social sciences and natural sciences. Their interdisciplinary impact will be felt long-term through new courses developed with Foundation



(top) Rafael Chabrán, Professor of Modern Languages, and Mark Kozek, Assistant Professor of Mathematics, leading the *Numb3rs & Lett3rs* course.

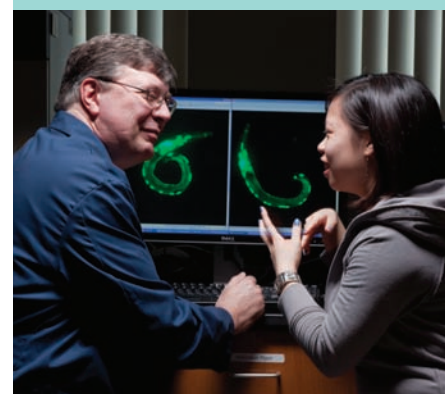
support. First to be launched: *Numb3rs & Lett3rs*, exploring mathematics in the context of modern literature and cinema. The centers also expand student access into the larger community, as well as bring those communities to the campus.

The Center for Collaboration with the Arts, directed by Jennifer Holmes, Associate Professor of Theatre & Communication Arts, with additional support from the Andrew W. Mellon Foundation, has been able to bring year-long Distinguishing Visiting Artists to campus, develop new courses, support student research and establish partnerships with over 20 of Greater Los Angeles' cultural institutions. For example, April 2011 was "Whittier College Month" at downtown's GRAMMY Museum, which opened its stage to student performances and discussions between artists, students, faculty and public school students.

Launched last spring, the Center for Science, Health and Policy is led by Dave Bourgaize, Professor of Molecular Genetics. The center seeks to help students make the connection between what they learn in basic science courses and current public policy debates on issues such as health care. The Center's faculty are focusing on developing new interdisciplinary courses, exposing students to speakers from the world stage, and creating opportunities for students to conduct research in their communities.

Key to the mission of both centers is the facilitation of hands-on experiential learning. To that end, the Foundation helped support several independent, interdisciplinary student summer research projects. Upcoming plans are just as ambitious: under next year's theme of "Fragmentation and Unification", there will be several symposia, including an undergraduate research symposium and new artists-in-residence. With the excitement and energy flowing through the centers, boundaries will continue to be transposed, and transformed, for Whittier's students.

(below) Dave Bourgaize discusses Keck Undergraduate Fellow Olivia Mac's work to track environmental toxins around Los Angeles through their effects on the nematode *C. elegans*.



Abstracts of these projects are available on our website,
WWW.WMKECK.ORG.



SCIENCE AND ENGINEERING RESEARCH

Arizona State University

Tempe, AZ

Diedre Meldrum

\$1,000,000

To develop a computed tomography scanner for 3D imaging of live cells.

Boston College

Chestnut Hill, MA

Michael Naughton

\$1,000,000

To develop an optical microscope based on coaxial waveguides for sub-diffraction limit imaging.

University of California, Los Angeles

Los Angeles, CA

David Eisenberg

\$900,000

To conduct nanoscale X-ray diffraction for resolving 3D atomic structures of biological materials.

University of California, Santa Barbara

Santa Barbara, CA

Summita Pennathur

\$1,000,000

To develop nanoelectrofluidic systems for nanoparticle sorting and analysis.

University of Texas at Austin

Austin, TX

Rodney Ruoff

\$1,000,000

To advance the production of large area graphene and ultrathin graphite films.

Yale University

New Haven, CT

Alanna Schepartz and Scott Miller

\$1,000,000

To develop artificial enzymes based on beta-peptide bundles.

UNDERGRADUATE EDUCATION

Benedictine College

Atchison, KS

Darrin Muggli

\$250,000

To support expansion of an engineering program utilizing both distance and on campus learning.

California State University Channel Islands

Camarillo, CA

Katherine Leonard

\$250,000

To support development of a four-year curriculum for interdisciplinary research and learning.

California State University, Chico

Chico, CA

Michael Briand

\$250,000

To expand a four-year curriculum based on public sphere pedagogy and civic engagement.

Dominican University of California

San Rafael, CA

Sibdas Ghosh

\$250,000

To acquire a confocal microscope for use in undergraduate research and curricular enhancement.

Pepperdine University

Malibu, CA

Lee Kats

\$250,000

To initiate freshman seminars based on undergraduate research across all disciplines.

San Diego State University

San Diego, CA

Stanley Maloy

\$50,000

For planning to develop a research-oriented training program based on global warming and the spread of infectious disease.

Santa Clara University

Santa Clara, CA

Amy Shachter

\$250,000

To support an advanced bioscience initiative with expanding partnerships in regional industry and education.

University of San Diego

San Diego, CA

Debbie Tahmassebi

\$250,000

To establish a center for integrating and coordinating undergraduate research across all disciplines.



UNDERGRADUATE EDUCATION

Willamette University

Salem, OR

Mark Stewart and Stasinios Stavrianeas
\$250,000

To support curriculum development for engaged and integrated learning across the sciences.

MEDICAL RESEARCH

Colorado State University

Fort Collins, CO

Randy Bartels

\$1,000,000

To build a multi-modal microscope incorporating ultra-sensitive Doppler Raman microscopy to quantify small molecules used in neuronal communication.

Fred Hutchinson Cancer Research Center

Seattle, WA

Harlan Robins

\$1,000,000

To profile an individual's past exposures to pathogens by sequencing antibody genes in B cells, a technique that could eventually lead to new diagnostic strategies.

University of California, Irvine

Irvine, CA

Enrico Gratton

\$1,000,000

Development of an in vivo nanoscale optical imager on a multi-modal microscopy platform for studying cell migration in 3D.

University of California, Los Angeles

Los Angeles, CA

Mayank Mehta

\$1,000,000

Towards an understanding of how a sense of space is realized in the mammalian brain by integrating neuronal recordings, computational modeling and imaging in a physics framework.

University of California, Riverside

Riverside, CA

Susan Wessler

\$1,000,000

To identify active transposable elements in the mosquito genome, which will provide new tools for studying and possibly limiting the ability of mosquitoes to serve as a vector for disease.

University of California, San Francisco

San Francisco, CA

Michael Fischbach

\$1,000,000

To use data mining and imaging mass spectrometry to quantify and map antibiotic interactions between bacteria in the human microbial gut community.

University of Oregon

Eugene, OR

William Cresko

\$1,000,000

To identify and track the genetic changes that lead to cancer using methodologies adapted from evolutionary biology.

University of Washington

Seattle, WA

Eberhard Fetz

\$1,000,000

To design a self-contained, implantable ECoG array that can stimulate novel brain connections, which could lead to neuroprostheses to restore function lost to disease or injury.

SOUTHERN CALIFORNIA Arts and Culture

Harmony Project

Los Angeles, CA

\$150,000

To expand an after-school and weekend music program serving inner-city elementary and middle school youth.

Inner-City Arts

Los Angeles, CA

\$150,000

To provide year-round after-school and Saturday workshops in a variety of art forms for middle school and high school students.

Noise Within

Glendale, CA

\$250,000

To establish the theater's first permanent home by constructing a new facility.



Civic and Community

Bet Tzedek

Los Angeles, CA

\$200,000

To assist families of severely disabled youth obtain limited conservatorships.

Corporation for Supportive Housing

Los Angeles, CA

\$250,000

To facilitate the creation of supportive housing for youth aging out of the foster care system.

Legal Aid Foundation of Los Angeles

Los Angeles, CA

\$250,000

To expand legal services in South Los Angeles by renovating a new building.

Los Angeles Regional Foodbank

Los Angeles, CA

\$100,000

To support an outreach initiative to increase participation in the food stamp program.

St. Anne's Maternity Home

Los Angeles, CA

\$150,000

To support the Transitional Housing Program for young mothers aging out of the foster care system.

Students Run L.A.

Tarzana, CA

\$100,000

To support a youth development program that culminates in running the Los Angeles Marathon.

TreePeople

Los Angeles, CA

\$150,000

To engage residents from under-resourced communities in reforesting their neighborhoods, parks and schools.

Union Station Homeless Services

Pasadena, CA

\$150,000

To provide short-term shelter and supportive services for homeless families and help them transition to stable housing.

Variety Boys & Girls Club

Los Angeles, CA

\$250,000

To expand programs by constructing a new facility.

YMCA of Metropolitan Los Angeles

Los Angeles, CA

\$250,000

To provide YMCA programs to Koreatown residents of all ages by constructing a new facility.

Health Care

COPE Health Solutions

Los Angeles, CA

\$180,000

To build the capacity of community clinics to effectively manage patients with cardiac conditions.

Precollegiate Education

City Year Los Angeles

Los Angeles, CA

\$200,000

To prevent at-risk middle school students from dropping out by providing in-school and after-school tutoring and enrichment programs.

KIPP LA Schools

Los Angeles, CA

\$250,000

To construct a new campus for a K-4th grade charter school in East Los Angeles.

MLA Partner Schools

Los Angeles, CA

\$245,000

To implement a teacher evaluation system to improve the academic achievement of LAUSD students.

Special Projects

KCET-Community Television of Southern California

Los Angeles, CA

\$500,000

To support KCET's transition to an individual public television station.

2010

FINANCIAL STATEMENTS

STATEMENTS OF FINANCIAL POSITION

December 31 (in thousands)	2010	2009
ASSETS		
Cash and cash equivalents	\$ 20,319	\$ 80,075
Receivable from brokers	19	1,851
Interest and dividends receivable	2,184	2,212
Prepaid federal excise taxes	1,342	1,918
Investments	1,142,742	981,993
Other assets	823	967
Total assets	\$ 1,167,429	\$ 1,069,016
LIABILITIES AND NET ASSETS		
Payable to brokers	\$ 17	\$ —
Accounts payable and accrued expenses	2,152	1,720
Grants payable, net (<i>Note 5</i>)	20,664	29,677
Deferred federal excise taxes payable	3,489	1,593
Total liabilities	26,322	32,990
Unrestricted net assets	1,141,107	1,036,026
Total liabilities and unrestricted net assets	\$ 1,167,429	\$ 1,069,016

See accompanying notes.

STATEMENTS OF ACTIVITIES

Year Ended December 31 (in thousands)	2010	2009
REVENUE		
Interest	\$ 10,171	\$ 10,383
Dividends	8,019	6,187
Other income	754	3,132
	18,944	19,702
Realized and unrealized gains and losses on investments:		
Net realized gains (losses)	44,125	(93,095)
Change in net unrealized gains	94,765	330,754
	\$ 138,890	\$ 237,659
Total revenues and net realized and unrealized gains and (losses) on investments	157,834	257,361
EXPENSES		
Grants	\$ 40,625	\$ 40,911
Management and general services	5,740	5,923
Investment management fees	3,901	3,509
Federal excise tax provision	2,472	1,713
Foreign tax withheld	15	14
Total expenses	\$ 52,753	\$ 52,070
Change in unrestricted net assets	105,081	205,291
Unrestricted net assets, beginning of year	1,036,026	830,735
Unrestricted net assets, end of year	\$ 1,141,107	\$ 1,036,026

See accompanying notes.

STATEMENTS OF CASH FLOWS

Year Ended December 31 (in thousands)	2010	2009
OPERATING ACTIVITIES		
Change in unrestricted net assets	\$ 105,081	\$ 205,291
Adjustments to reconcile change in unrestricted net assets to net cash used in operating activities:		
Depreciation and amortization	233	436
Accretion of bond discounts	(456)	(615)
Net realized (gains) and losses on investments	(44,125)	93,095
Change in net unrealized (gains) on investments	(94,765)	(330,754)
Changes in operating assets and liabilities:		
Receivable from brokers	1,832	1,941
Interest and dividends receivable	28	140
Other assets	(24)	(4)
Prepaid federal excise taxes	576	120
Payable to brokers	17	(3,074)
Accounts payable and accrued expenses	432	221
Deferred federal excise taxes payable	1,896	1,593
Grants payable	(9,013)	(4,972)
Net cash used in operating activities	(38,288)	(36,582)
INVESTING ACTIVITIES		
Purchase of investments	(388,254)	(321,572)
Proceeds on disposition of investments and return of capital	366,852	391,438
Acquisition of fixed assets	(66)	(4)
Net cash (used in) provided by investing activities	(21,468)	69,862
Net (decrease) increase in cash and cash equivalents	(59,756)	33,280
Cash and cash equivalents, beginning of year	80,075	46,795
Cash and cash equivalents, end of year	\$ 20,319	\$ 80,075
SUPPLEMENTAL DISCLOSURE		
Taxes paid during the year	—	—

See accompanying notes.

NOTES TO FINANCIAL STATEMENTS

December 31, 2010

1. ORGANIZATION

Formation and Goals of the Foundation

The W. M. Keck Foundation (the Foundation) was incorporated in the state of Delaware on January 20, 1959, as a not-for-profit charitable corporation. The Foundation's goals are principally to identify and support university and college research and education programs in the areas of science, engineering and medicine. In addition, the Foundation gives some consideration to promoting liberal arts education and, in Southern California only, to supporting community services, health care, precollegiate education, and the arts. Operations are funded by the Foundation's returns on its investment portfolio.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Contributions Received and Grant Payments Made

In accordance with accounting standards for not-for-profit entities, unconditional grant payments are recognized as an expense in the period in which they are approved. If these grants are to be paid over a period exceeding one year, they are recorded at the net present value of the future cash payments, using an applicable Treasury Bill rate. Grants, which are conditional upon a future and uncertain event, are expensed when these conditions are met or expected to be met in the subsequent year. A conditional promise to give is considered unconditional if the possibility that the condition will not be met is remote.

Cash and Cash Equivalents

Cash and cash equivalents are defined as liquid investments with remaining maturities of three months or less at time of purchase.

Investments

Investments in equity securities with readily determinable fair values and all investments in debt securities are measured at fair value in the statements of financial position. Purchases and sales of securities are recorded on the trade date. Dividend income is recorded based upon the ex-dividend date. Interest income is recorded as earned on an accrual basis. Realized gains and losses are recorded upon disposition of securities based on the specific identification method. The allocation of cost to a sale, where part of a holding is disposed of, assumes that the highest-priced items are sold first. Unrealized gains and losses are included in the statements of activities and represent the net change in fair value for investments held at the end of the year.

Investments in private equity funds, comingled funds and hedge funds are accounted for under the equity method. Their recorded value is based on net asset values reported by the fund managers, which approximate the estimated fair value of the underlying investment holdings. In the absence of market price quotations, the fair value of the investments is determined by the general partner. Investments for which exchange quotations are not readily available are valued at the latest bid price obtained from one or more dealers making a market for such securities or at estimated fair values as determined in good faith by the general partner. Investments for which exchange quotations are not readily available may include specific classes or series of an issuer's equity or debt securities. The methods and procedures to value these investments may include, but are not limited to: (1) performing comparisons with prices of comparable or similar securities, (2) obtaining valuation-related information from issuers, and/or (3) other analytical data relating to the investment and using other available indications of value. However, because of the inherent uncertainty of valuation, the estimated fair values for the aforementioned securities and interests may differ from the values that would have been used had a ready market for the investments existed, and the differences could be material.

Fixed Assets

Fixed assets are carried at cost, less accumulated depreciation and are included in other assets in the statements of financial position. Depreciation is computed on the straight-line method over the estimated useful life of each type of asset or the term of the related lease, whichever is shorter. The depreciable lives for leasehold improvements are ten years and the lives for furniture and equipment are five years.

Fair Value Measurement

The Foundation applies the principles of the accounting standard, *Fair Value Measurements and Disclosures*, for all financial assets and liabilities that are recognized or disclosed at fair value in the financial statements. This standard defines fair value, establishes a consistent framework for measuring fair value, and expands disclosure for each major asset and liability category measured at fair value on either a recurring or nonrecurring basis. The Standard clarifies that fair value is an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability. As a basis for considering such assumptions, the Foundation establishes a three-level fair value hierarchy, which prioritizes the inputs used in measuring fair value as follows:

Level 1 – Assets that have readily observable prices (quoted prices in active markets accessible at the measurement date for assets). The fair value hierarchy gives the highest priority to Level 1 inputs.

Level 2 – Assets that are based on quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-based valuation techniques for which all significant assumptions are observable in the market or can be corroborated by observable market data for substantially the full term of the assets or liabilities. Financial assets and liabilities in this category generally include asset-backed securities, corporate bonds and loans, municipal bonds, forward contracts, future contracts, interest and credit swap agreements, options and interest rate swaps.

NOTES TO FINANCIAL STATEMENTS

(cont.)

Level 3 – Assets whose fair value cannot be determined by using observable measures, and can only be calculated using estimates or risk-adjusted value ranges, when little or no market data is available. The inputs into the determination of fair value require management’s judgment or estimation of assumptions that market participants would use in pricing the assets or liabilities. The fair values are therefore determined using factors that involve considerable judgment and interpretations, including, but not limited to, private and public comparables, third-party appraisals, discounted cash flow models, and fund manager estimates. The fair value hierarchy gives lowest priority to Level 3 inputs.

Assets and liabilities measured at fair value are based on one or more of three valuation techniques noted in the tables below:

- (a) *Market approach.* Prices and other relevant information generated by market transactions involving identical or comparable assets or liabilities.
- (b) *Cost approach.* Amount that would be required to replace the service capacity of an asset (replacement cost).
- (c) *Income approach.* Techniques to convert future amounts to a single present amount based on market expectations (including present value techniques, option-pricing and excess earnings models).

The Foundation’s assets measured at fair value on a recurring basis at December 31, 2010, were as follows (in thousands):

	December 31, 2010			Valuation Technique (a, b, c)
	Level 1	Level 2	Level 3	
Assets:				
Common Stock	\$ 335,253	\$ –	\$ –	a
Corporate Bonds	–	74,585	–	a
Municipal Bonds	–	3,606	–	a
Government Bonds	5,906	1,290	–	a
Foreign Investments	28,510	9,517	–	a
Mortgage and asset-backed securities	–	39,954	–	a
Mutual Funds	166,910	–	–	a
Total	\$ 536,579	\$ 128,952	\$ –	

The Foundation's assets measured at fair value on a recurring basis at December 31, 2009, were as follows (in thousands):

	December 31, 2009			Valuation Technique (a, b, c)
	Level 1	Level 2	Level 3	
Assets:				
Common Stock	\$ 340,256	\$ —	\$ —	a
Corporate Bonds	—	79,877	—	a
Municipal Bonds	—	1,921	—	a
Government Bonds	4,555	1,522	—	a
Foreign Investments	18,291	8,164	—	a
Mortgage and asset-backed securities	—	43,094	—	a
Mutual Funds	78,647	—	—	a
Total	\$ 441,749	\$ 134,578	\$ —	

Subsequent Events

The Foundation has evaluated subsequent events through May 9, 2011, which is the date these financial statements were available to be issued.

New Accounting Standards

In January 2010, the Financial Accounting Standards Board (FASB) issued ASU 2010-06, *Improving Disclosures about Fair Value Measurements*, which amended ASC 820, *Fair Value Measurements and Disclosures*, to require new disclosures related to transfers in and out of Level 1 and Level 2 fair value measurements, including reasons for the transfers, and to require new disclosures related to activity in Level 3 fair value measurements. In addition, ASU 2010-06 clarifies existing disclosure requirements related to the level of disaggregation of classes of assets and liabilities, and provides further detail about inputs and valuation techniques used for fair value measurement. The Foundation adopted ASU 2010-06 effective January 1, 2010, and the adoption did not have a material impact on the Foundation's financial statements.

NOTES TO FINANCIAL STATEMENTS

(cont.)

3. INVESTMENTS

The cost and fair value of investments are as follows (in thousands):

	December 31, 2010		December 31, 2009	
	Cost	Fair Value	Cost	Fair Value
Common stock	\$ 238,521	\$ 335,253	\$ 266,597	\$ 340,256
Corporate bonds	69,539	74,585	75,892	79,877
Municipal bonds	3,481	3,606	2,003	1,921
Government bonds	7,156	7,196	6,081	6,077
Foreign investments	32,519	38,027	21,727	26,455
Mortgage and asset-backed securities	38,504	39,954	41,770	43,094
Mutual funds	165,974	166,910	94,237	78,647
Private equity funds*	80,670	67,687	78,666	68,628
Commingled funds*	174,677	196,983	175,378	164,690
Hedge funds*	157,293	212,541	140,000	172,348
	\$ 968,334	\$ 1,142,742	\$ 902,351	\$ 981,993

* Private equity funds, commingled funds and hedge funds are accounted for on the equity method; however, the carrying amounts approximate the fair value of these investments.

The change in net unrealized gains (losses) on investments is reflected in the statements of activities and is summarized as follows (in thousands):

Year Ended December 31	2010	2009
Net unrealized gains (losses), beginning of year	\$ 79,642	\$ (251,112)
Add net unrealized gains on investments for the year	94,765	330,754
Net unrealized gains, end of year	\$ 174,407	\$ 79,642

As of December 31, 2010, the Foundation has made total capital contributions (net of distributions/return of capital) of \$412,029,000 to five private equity, three commingled funds and four hedge funds. The Foundation has a total future capital commitment related to five private equity funds of \$57,879,000.

4. FEDERAL EXCISE TAX

The Foundation qualifies as a tax-exempt organization under Section 501(c)(3) of the Internal Revenue Code and, accordingly, is not subject to federal income taxes. However, the Foundation is classified under the Internal Revenue Code (IRC) as a private foundation and, as such, is subject to a federal excise tax.

During 2010, the Foundation accrued a 1% excise tax on net investment income. Private foundations are required to distribute annually, in qualifying charitable distributions, an amount equal to approximately 5% of the average fair market value of the Foundation's assets (the minimum distribution). If the Foundation

does not distribute the required minimum distribution, a one-year grace period is granted to distribute the undistributed income. If undistributed income is not distributed by the close of the following tax year, a minimum 30% penalty under IRC §4942(a) will apply. The Foundation's annual distributions were in excess of the required minimum for 2010 and 2009 to avoid the 30% penalty. Although the Foundation does have cumulative undistributed income at December 31, 2010, based on the Foundation's distribution history, the Foundation will be able to and intends to distribute the cumulative undistributed income from December 31, 2010, in 2011. Accordingly, the Foundation has not accrued a liability for the penalty on undistributed income.

The Foundation uses the liability method for accounting for excise taxes. The federal excise tax provision consists of the following (in thousands):

Year Ended December 31	2010	2009
Current	\$ 576	\$ 120
Deferred	1,896	1,593
	\$ 2,472	\$ 1,713

Deferred federal excise taxes have been recorded on the unrealized appreciation in fair value of investments at a tax rate of 2% in 2010 and in 2009.

5. GRANTS PAYABLE AND CONDITIONAL GRANT COMMITMENTS

Grants payable and conditional grant commitments as of December 31, 2010, are as follows (in thousands):

	Unconditional	Conditional
2011	\$ 17,740	\$ 1,075
2012–2015	2,972	22,392
2016 and thereafter	–	1,937
	20,712	\$ 25,404
Less present value discount	(48)	
	\$ 20,664	

Projected timetable and payment amounts shown above for conditional grants are estimated. Conditional grants will be recorded as an expense in the period when the conditions to the grant are met. These grants are conditioned upon other donors matching the amounts contributed by the Foundation, receipt of building permits and other regulations, and compliance with budget, timetable, and grant agreements' requirements.

Conditional grants outstanding as of December 31, 2010, consist of the following (in thousands):

NOTES TO FINANCIAL STATEMENTS

(cont.)

Grantee	Date of Original Commitment	Original Commitment	Amount Outstanding
National Academy of Sciences	2002	40,345	15,279
California Institute of Technology	2007	24,000	9,000
Other	Various	1,450	1,125
		\$ 65,795	\$ 25,404

6. LEASE COMMITMENTS

The Foundation leases its main office space. Annual base rent is \$435,000, which is payable through 2014. The Foundation may extend the term of its lease by five years after 2014. Rent expense is recognized on a straight-line basis over the lease term. As of December 31, 2010, the approximate future minimum scheduled lease obligation for the lease is as follows:

Year Ended December 31	
2011	435,000
2012	435,000
2013	435,000
2014	399,000
	\$ 1,704,000

Total rental expense for each of the years ended December 31, 2010 and 2009, was approximately \$413,500 and \$413,500, respectively. Deferred rent was approximately \$735,000 and \$756,000 at December 31, 2010 and 2009, respectively.

7. EMPLOYEE RETIREMENT PLAN

The Foundation maintains a qualified 401(k) Profit Sharing Plan (the Plan) for eligible employees. Employees can contribute a percentage of their pretax compensation subject to IRS limitations. The Foundation matches 200% of the employee's deferral, but not more than 6% of the employee's compensation in total. The Foundation's matching contributions to the Plan were approximately \$247,000 and \$210,000 for the years ended December 31, 2010 and 2009, respectively.

8. RELATED-PARTY TRANSACTIONS

A director and an officer of the Foundation are partners of a law firm that provided legal services to the Foundation. The Foundation incurred legal fees for services provided by the law firm totaling \$450,000 for the years ended December 31, 2010 and 2009.

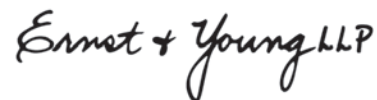
REPORT OF INDEPENDENT AUDITORS

The Board of Directors
W. M. Keck Foundation

We have audited the accompanying statements of financial position of W. M. Keck Foundation (the Foundation) as of December 31, 2010 and 2009, and the related statements of activities and cash flows for the years then ended. These financial statements are the responsibility of the management of W. M. Keck Foundation. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. We were not engaged to perform an audit of the Foundation's internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Foundation's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of W. M. Keck Foundation at December 31, 2010 and 2009, and the changes in its net assets and its cash flows for the years then ended in conformity with accounting principles generally accepted in the United States.

The logo for Ernst & Young LLP is written in a cursive, handwritten style. The letters are dark and the overall appearance is that of a signature.

May 9, 2010

2010

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Elias Zerhouni
Huda Zoghbi

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Titia de Lange

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David Lipman
David Valle

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Eve Marder*
Cori Bargmann
Tom Jessell

STRUCTURAL BIOLOGY

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Sriram Subramaniam
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CONSULTANT

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Peter Wolynes

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V. Ramanathan
Bess Ward

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Vicki Chandler*
Mimi Koehl
Elliot M. Meyerowitz
Lubert Stryer

*Moderator

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