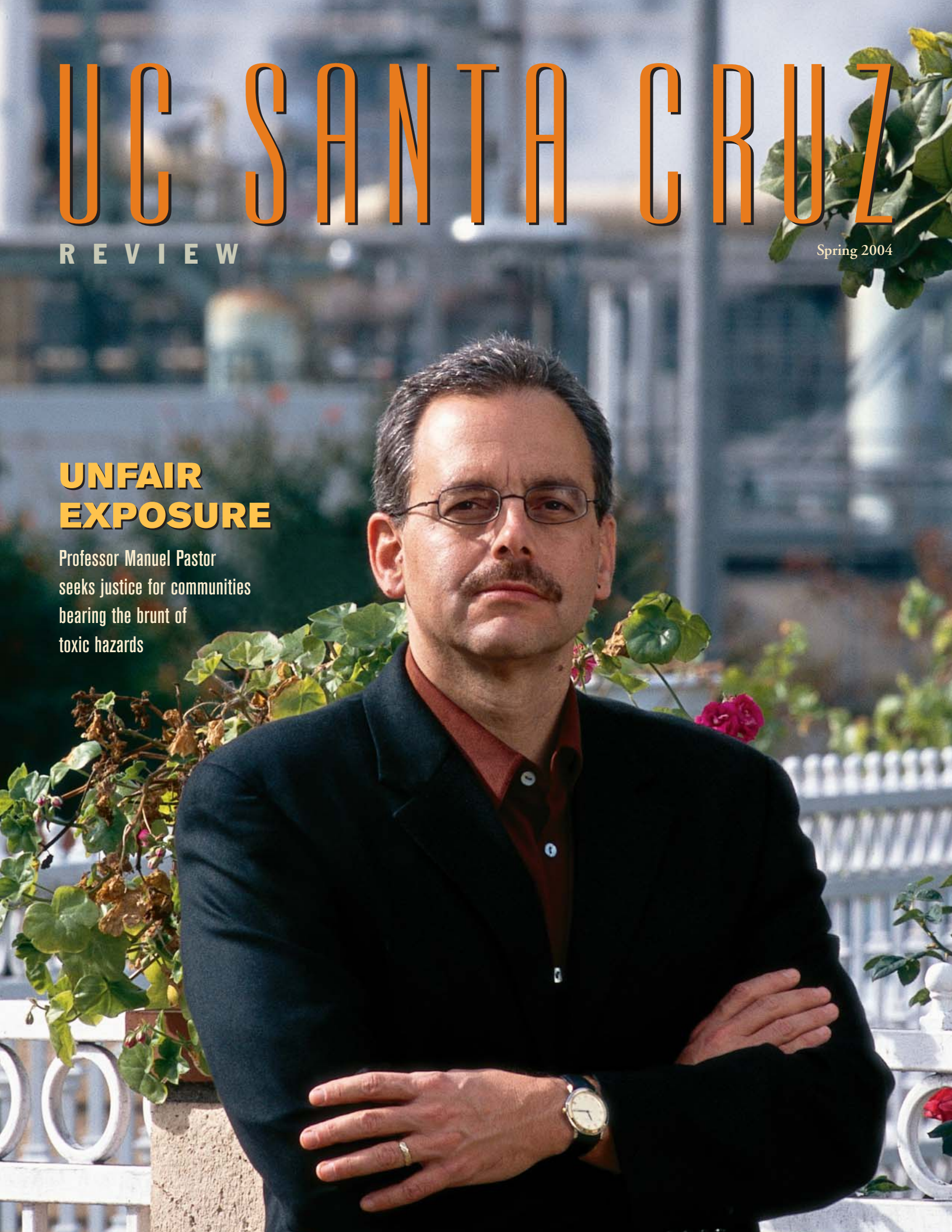
UC SANTA CRUZ

REVIEW

Spring 2004



UNFAIR EXPOSURE

Professor Manuel Pastor seeks justice for communities bearing the brunt of toxic hazards

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From the Chancellor

By M.R.C. Greenwood

The recent visit of UC President Robert C. Dynes provided an excellent opportunity to showcase our campus's distinctions. I was very proud to introduce our new president to representative faculty, staff, students, alumni, research partners, and community friends and to join him in applauding their remarkable achievements.

This issue of our magazine also presents examples of the many ways that UC Santa Cruz faculty, students, and alumni are making a positive difference across the disciplines, from advancing social justice and increasing appreciation for cultural differences to working toward cures for cancer and inventing implantable devices to overcome blindness.

In fact, the innovation and intensity of the campus are driving progress in many fields, and in a number of prestigious studies, UC Santa Cruz shines. For example, our campus is ranked first in the nation for research impact in both the space sciences and the social sciences. We have been named the second most influential research institution in the world in the physical sciences. And, among more than 60 elite universities, UC Santa Cruz ranked 15th for the percentage of bachelor's degree recipients in all disciplines who completed doctoral degrees.

UC Santa Cruz is making exceptional progress toward our goals—but we face serious fiscal challenges.

R. R. JONES

A strong University of California will continue to advantage all Californians through advances in health care and agriculture, progress in education, expressions of cultural richness, and other benefits that Californians enjoy from UC's research, teaching, and service.

Although the University of California expects to participate in addressing the state's fiscal emergency, the proposed budget cuts would jeopardize the world-class quality and access that characterize our university. The innovations that UC researchers create and the contributions made by our highly educated and trained graduates affect every one of us. A strong University of California will continue to advantage all Californians through advances in health care and agriculture, progress in education, expressions of cultural richness, and other benefits that Californians enjoy from UC's research, teaching, and service.

Today, more than ever, UC Santa Cruz needs the continued support of our alumni, parents, and friends. Your advocacy on behalf of the university will help us share more widely the facts of UC's contributions to our society.

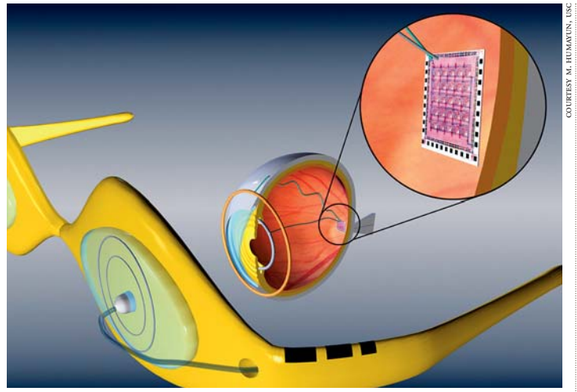
And your support in the form of gifts is also vitally important. As student fees increase and state support declines, your donations are more critical than ever. Your contributions to UC Santa Cruz create undergraduate scholarships and graduate fellowships for deserving students, make possible important research activities like those chronicled in these pages, and help build the classrooms, labs, and other facilities in which our students prepare for their futures.

I thank you most heartily for your past assistance, and invite you to continue your generous support of our students and faculty.

M.R.C. Greenwood
Chancellor

If you are interested in legislative advocacy efforts, please contact our Government and Community Relations Office; to learn about private gift support, please contact our Development Office. Both offices can be reached by calling (800) 933-SLUG (7584).

Campus Update



COURTESY M. HOANG, UCSC

The retinal prosthesis, which professor of electrical engineering Wentai Liu has been working on for over a decade, involves an internal unit that is implanted in the eye and a pair of high-tech glasses that transmit images to the implant.

UCSC engineers' work will aid development of implantable prosthetics

Implantable microelectronic devices for overcoming blindness, paralysis, and stroke damage are the focus of a new center in which UCSC engineers are collaborating with scientists at the University of Southern California (USC) and California Institute of Technology.

The National Science Foundation (NSF) is providing $17 million over five years to fund the USC-based Center for Biomimetic MicroElectronic Systems (BMES).

Biomimetics refers to the use of technology to mimic biological systems. BMES researchers are developing prosthetic devices to restore abilities that have been lost due to injury or disease.

The center will focus on three "testbed" projects: a cortical prosthesis for implanting in the brain to restore cognitive functions lost due to stroke or other causes; a neuromuscular prosthesis to restore movement to a paralyzed limb; and a retinal prosthesis to provide artificial vision to people who have lost their sight due to diseases affecting the retina, such as retinitis pigmentosa and macular degeneration.

TIM STEPHENS

Liu directs UCSC's participation in the new center.

All three of these projects share common technological challenges, said Wentai Liu, a professor of electrical engineering and director of the center's activities at UCSC. "The basic problems involve power and data management, miniaturization of the microelectronic systems, and the interface technology that allows the microelectronics to interact with living tissue."

Heinlein's literary estate given to UCSC

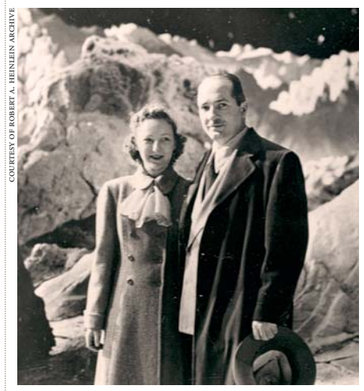
The UCSC archive of renowned science fiction writer Robert Heinlein has received a $300,000 gift of materials and money from the estate of Heinlein's late widow, Virginia Heinlein.

The donation was accompanied by a grant to establish at UCSC the position of a Heinlein Scholar, who will work to organize, document, and promote the scholarly use of the archive, housed in the University Library's Special Collections since 1968.

Often referred to as one of the grandmasters of science fiction along with such colleagues as Isaac Asimov and Arthur C. Clarke, Heinlein produced more than 50 novels and collections of short stories over his long career.

The Robert Heinlein Archive at UCSC contains a priceless collection of the author's original manuscripts, correspondence, and personal effects. The latest acquisition includes all of his honors and tributes including his four Hugo awards, plus artwork and other memorabilia, as well as his extensive working and personal libraries.

William H. Patterson Jr., founder of a nonprofit educational organization that is dedicated to promoting Heinlein's social legacy, has been selected as the campus's Heinlein Scholar for 2003–04.



COURTESY OF ROBERT A. HEINLEIN ARCHIVE

Robert and Virginia Heinlein are pictured on the set of Destination Moon, *in 1949; the film was based on his novel* Rocketship Galileo.

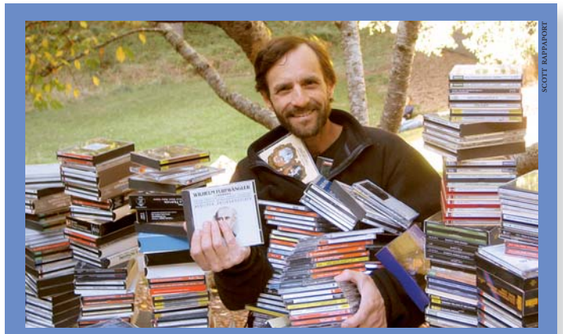
UCSC launches bold NASA collaboration

UCSC will manage a national research program valued at more than $330 million under an agreement between UC and NASA that was announced in September.

The 10-year contract, a first-of-its-kind for NASA, will establish a University Affiliated Research Center (UARC) at the NASA Ames Research Center in Moffett Field.

"This is a singular opportunity to advance important and potentially world-changing research," said Chancellor M.R.C. Greenwood. "The UARC moves NASA and university collaborations in a whole new direction," added G. Scott Hubbard, director of the Ames Research Center.

The initial focus of UARC activities is likely to be in the areas of information technology and computer science, nanotechnology, and aerospace operations. Additional areas of interest include astrobiology, biotechnology, and fundamental space biology.



SCOTT RUTHERFORD

Music librarian Paul Machlis surrounds himself with just a few of the 2,700 classical CDs donated to UCSC from the personal collection of the late Jesse C. Rabinowitz, a professor emeritus of molecular and cell biology at UC Berkeley. When fully cataloged, the Rabinowitz collection will increase the UCSC library's classical CD collection by almost 50 percent, raising it to a very high standard for a campus of UCSC's size. Rabinowitz, an enthusiastic cellist and avid patron of the arts. was a knowledgeable collector, buying deeply in genres ranging from early to contemporary music.

Alaska field course gets rave reviews

From gazing in awe at a mother grizzly bear frolicking with her cubs to meeting with Native tribal advocates and business leaders, students in last summer's Alaska field course shared three weeks of unforgettable experiences.

"I've tried to explain the experience to family members. It was amazing," said Arwen Edsall, an environmental studies major at UC Santa Cruz who participated in the course after graduating in June. "Spending time with other students who are interested in Alaska's environmental issues, and really getting to know them in the place we're talking about, was incredible."

For the second consecutive year, the class offered students from around the country an immersion course in the natural history and public policy challenges facing the Last Frontier. The course combines travel, lectures, field research, and reflection. Five UCSC students were among the 16 students from nine universities who participated in 2003.

JOHN ANDERSON

Students in the Alaska field course gathered data on the distribution and abundance of plants in the subarctic alpine tundra of Denali National Park.

"Alaska is a great case study because it's a microcosm of development in the West," said Dennis Kelso, an assistant professor of environmental studies at UCSC and one of the course's instructors.

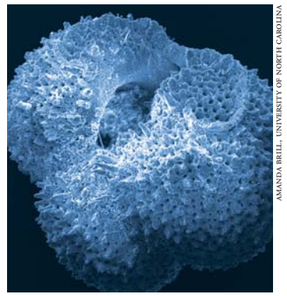
New evidence of global warming supports greenhouse gas models

Scientists have filled in a key piece of the global climate picture for a period 55 million years ago that is considered one of the most abrupt and extreme episodes of global warming in Earth's history.

The new results, from an analysis of sediment cores from the ocean floor, are consistent with theoretical predictions of how Earth's climate would respond to rising concentrations of greenhouse gases in the atmosphere.

Led by James Zachos, professor of Earth sciences at UCSC, the study was published in *Science* magazine's online site in October.

The temperature estimates were derived from chemical analyses of the shells of microscopic plankton preserved in the seafloor sediments. The sediments were deposited on the seafloor during a period known as the Paleocene-Eocene Thermal Maximum, when a massive release of heat-trapping greenhouse gases is thought to have triggered a runaway process of global warming.



AMANDA BRILL, UNIVERSITY OF NORTH CAROLINA

The chemical composition of the shells of microscopic plankton, above, holds clues to sea surface temperatures 55 million years ago.

Climate theory predicts that the increase in greenhouse gases would have caused temperatures to rise all over the planet.

Zachos and a team of researchers at UCSC and several other institutions have now obtained the first reliable estimates of the change in tropical sea surface temperatures during this period. The findings fit well with the predictions of computer simulations based on current climate theory.

Chemers named to UCSC's No. 2 post

Martin M. Chemers, dean of social sciences at UCSC since 1995, has been named interim campus provost and executive vice chancellor of UCSC. The appointment, made by Chancellor M.R.C. Greenwood, took effect in December.

A professor of psychology, Chemers brings to the campus's No. 2 post an exceptional scholarly record and extensive administrative experience. He is widely regarded among social psychologists as the foremost scholar on cross-cultural and social psychological aspects of leadership.

UCSC PHOTO SERVICES

Martin M. Chemers

Chemers replaced John B. Simpson, who was named president of the University at Buffalo, SUNY. Michael M. Hutchison, an economist at UCSC, has been named interim dean of social sciences.

New program sends humanities students into local schools

Literature graduate student Veronica Kirk-Clausen was a little nervous when she stepped into Martha Dyer's eighth-grade class at Mission Hill Junior High in Santa Cruz last spring.

"I'm used to teaching undergraduate sections and writing classes with students ages 18 to 21," Kirk-Clausen recalled. "I didn't know what to expect or how to anticipate their reactions, but they surprised me by being very interested, excited, and asking sophisticated questions."

Kirk-Clausen's junior high visit was part of the Graduate Student Speaker's Bureau, a new program launched by UCSC's Humanities Division. It offers free classroom presentations on humanities subjects to high school, junior high, and middle school classrooms in Santa Cruz and Monterey Counties. Graduate students are selected to participate on the basis of their particular areas of expertise, as well as their ability to communicate with younger students.


SCOTT RAPPAPORT

Veronica Kirk-Clausen

The program was proposed and designed by Christopher Connery, associate professor of literature at UCSC.

"We have great reserves of talent here in the division and wanted to do more to share that with our community," Connery said.

Connery added that one of the goals of the program is to introduce middle and high school students to the idea of graduate school and research in the humanities. It is also intended to give graduate students experience in sharing their knowledge with diverse, nonacademic audiences, as well as to strengthen ties between UCSC graduate programs and area teachers.

The presentations cover a wide range of topics: English, language arts, history, literature, linguistics, philosophy, and cultural studies.

Film professor wins 'Academy' award

Shelley Stamp, associate professor of film and digital media at UCSC, has been named one of two 2003 Academy Film Scholars by the Academy of Motion Picture Arts and Sciences—the same folks who bring us the Academy Awards.

Stamp is receiving $25,000 from the academy to complete a book about silent film director, screenwriter, and actress Lois Weber.

The Film Scholars Program was created in 1999 "to stimulate and support the creation of new, innovative and significant works of film scholarship about cultural, educational, historical, theoretical, or scientific aspects of theatrical motion pictures."

"I was stunned when I heard the news; I never imagined I would win," said Stamp. "But I'm so grateful that the academy is recognizing research on early women filmmakers."

A director of the silent-film era, Weber became the first and only woman granted membership in the Motion Picture Directors Association, a precursor to the Directors Guild of America. Despite achieving widespread fame during the early 1900s, Weber has been mostly neglected by film historians.


COURTESY QUIGLEY ARCHIVE, GEORGETOWN UNIVERSITY


SCOTT RAPPAPORT

Shelley Stamp, left, will complete a book about silent-film director Lois Weber.

"Her reputation has not survived as well as those of other prominent silent film directors such as D. W. Griffith and Cecil B. DeMille," Stamp noted. "But in the 1910s, Weber would have been included along with them in any mention of the industry's top directors. Until very recently, her filmmaking legacy was largely lost."

Moore Foundation awards $17.5 million for Thirty-Meter Telescope

The Gordon and Betty Moore Foundation has awarded $17.5 million to the University of California for collaboration with the California Institute of Technology on a project intended to build the world's most powerful telescope.

Coupled with an award by the foundation to Caltech for the same amount, a total of $35 million is now available for the two institutions to collaborate on the Thirty-Meter Telescope (TMT) project. The project's first step is the formulation of detailed telescope design plans.

A 30-meter-diameter optical and infrared telescope, complete with adaptive optics, would result in images more than 12 times sharper than those of the Hubble Space Telescope. The TMT will have nine times the light-gathering ability of one of the 10-meter Keck Telescopes, which are currently the largest in the world. With such a telescope, astrophysicists will be able to study the earliest galaxies and the details of their formation as well as pinpoint the processes that lead to young planetary systems around nearby stars.

"We are very pleased that the Gordon and Betty Moore Foundation has recognized the strengths of the University of California and Caltech to carry out such an important project," said UC President Robert C. Dynes. "The giant telescope will help our astronomy faculty stay at the very forefront of that dynamic field of science."

"The University of California and Caltech will work in close and constant collaboration to achieve the goals of the design effort," said Joseph Miller, director of UC Observatories/Lick Observatory, which is headquartered at UCSC.

Alumni Association names award winners

A California assemblyman, an anthropologist, and a housing staff member have been named winners of the UCSC Alumni Association's highest honors for 2003–04.

In ceremonies that took place on campus in February, John Laird received the Alumni Achievement Award; Diane Gifford-Gonzalez, the Distinguished Teaching Award; and Carol Douglas-Hammer, the Outstanding Staff Award.


GREG PIO

John Laird


JUN UENO SUNSERI

Diane Gifford-Gonzalez


UCSC PHOTO SERVICES

Carol Douglas-Hammer

Laird was elected in 2002 to represent the state's 27th assembly district. Prior to representing a district that includes parts of Santa Cruz, Monterey, and Santa Clara Counties, Laird served two terms on the Santa Cruz City Council, where he was elected to two one-year terms as mayor. He also served as a Cabrillo College trustee for eight years. He graduated from UCSC's Stevenson College in 1972 with a degree in politics.

Distinguished Teaching Award winner Diane Gifford-Gonzalez is an anthropological archaeologist who reaches out to students at every level, teaching large introductory courses as well as upper-division topical and theory courses. She also sponsors several independent studies each quarter and collaborates with students on paper and poster presentations at national meetings. Her research centers on the interrelationship of people and animals. Her work has tracked the movement of different animals as they were introduced into environments along with the people who herded or tended them.

In her more than 20 years at UCSC, Outstanding Staff Award winner Carol Douglas-Hammer has gained a reputation across campus as an effective, results-oriented professional. As assistant director for Student Housing Services, she has been particularly effective in directing the creation of informational materials for prospective and current students and their families.

The Alumni Council, the association's governing body, selected the winners based on nominations from students, faculty, alumni, and staff.

UCSC gains from two generations of giving

Eugene Walsh knows the value of higher education. Forced to cut short his studies at UCLA to support his parents during the Great Depression, Walsh returned to the classroom decades later, graduating from UCLA's executive program in 1964, and receiving an M.B.A. from Pepperdine in 1972.

Now, Walsh's son and daughter-in-law are doing their part to ensure that future students won't have to abandon college. UCSC economics professor Carl Walsh and his wife, Judy, have established the Walsh Family Scholarship Endowment for social sciences majors in honor of Eugene and Bessie Walsh.

In recognition of the gift, the conference room in Social Sciences 1 has been renamed the Eugene and Bessie Walsh Conference Room. A plaque inside the room will describe the careers and philanthropy of the Walshes.

"This is a lasting way of honoring my parents," said Carl Walsh. "They set a good example of doing things they thought would make the world a better place."

Judy Walsh is a member of the pioneer class of Crown College, earning a bachelor's degree in history in 1971. In 1990 she received a master's degree in applied economics. Judy is now the development officer for UCSC's New Teacher Center, and has worked for UCSC in other capacities.

"We feel especially happy and grateful that this wonderful gift is from one of our most renowned faculty members and one of our staff members who is also a UCSC alumna," said then–social sciences dean Martin M. Chemers.

"Both Carl and Judy Walsh have been contributing to the success of UC Santa Cruz in their respective capacities for many years," he said. "Their establishment of this scholarship endowment, and their naming of this conference room in honor of Carl Walsh's parents, is a heartening and very generous expression of support for the campus's educational endeavors."

In the conference room named in honor of Eugene and Bessie Walsh are, from left, Carl Walsh; Judy Walsh; Glenn Walsh, also a son of Eugene and Bessie Walsh; and Chancellor M.R.C. Greenwood.


HEIDI RENTERIA

Wireless access points going up on campus

Forget tripping over cords or fumbling with wires when you use your laptop around campus: UCSC is going wireless. Following trial runs at two UCSC buildings last summer, 130 wireless access points are now in place throughout campus, mainly in common areas such as dining halls, lounges, and libraries. Some residence halls also have wireless service.


R. R. JONES

Areas with wireless access points are being marked with signs. The new service, called CruzNet, is expected to be established throughout campus by June.

Enrollment, fees, aid would be affected by budget proposal

California governor Schwarzenegger's 2004–05 state budget, proposed in January, would reduce fall '04 freshman enrollment throughout the UC system, increase the student-faculty ratio and student fees, and reduce financial aid. The budget also proposes deeper cuts for outreach, research, and administration.

In all, the UC system would sustain $372 million in cuts if the governor's budget were to be adopted.

"The governor is making difficult choices, and asking many parts of state government to sacrifice," said UC President Robert C. Dynes. "That is understandable. But these cuts, coming on top of previous budget cuts, would have a very serious impact on the university and its tradition of providing a top-quality, accessible, affordable education for Californians.

Three faculty awarded Presidential Chairs

Three faculty members at UCSC—history professor Edmund Burke III, literature professor Helene Moglen, and psychology professor Barbara Rogoff—have been appointed to UC Presidential Chairs.

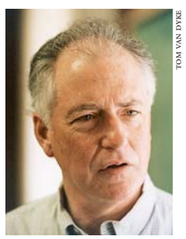
Chancellor M.R.C. Greenwood made the appointments, which extend through June 2006. Annual support for each chair is $45,000 and will fund proposals made by the appointees prior to their selection. "These three scholars help distinguish our campus, and it is an honor to recognize them," she said.

Presidential Chairs exist on each UC campus through an endowment established in 1981 by the UC Regents.

Professor Burke's proposal to establish a World History Center at UCSC will not only benefit the History Department, but will strengthen the campus's reputation for excellence in research and world history.

Professor Moglen, a well-known literary critic and feminist theorist, proposed using the resources awarded to the chair to support programming for UCSC's new Institute for Advanced Feminist Research.

Professor Rogoff proposed assembling an interdisciplinary, intergenerational set of scholars to study how social interaction is organized in support of learning in communities where schooling has not been prevalent. Particular emphasis is on indigenous communities in North and Central America.


TOM VAN DYKE


COURTESY SHEILA NAMIR


COURTESY BARBARA ROGOFF

From left: Edmund Burke, Helene Moglen, and Barbara Rogoff

President's 'inaugural tour' comes to UCSC

UC president Robert C. Dynes got off to a fast start during his first visit to UCSC on January 27, as members of the campus community joined him on a morning jog before a full day of meetings with faculty, staff, and students. The visit was part of the "inaugural tour" of UC campuses the new president is conducting in lieu of a formal swearing-in ceremony.


COURTESY UC OFFICE OF THE PRESIDENT

Dynes began his meeting with Chancellor Greenwood and other UCSC officials a day earlier at NASA Ames Research Center. There, he was briefed on the University Affiliated Research Center program (see pg. 2) and learned of UCSC activities in genome research, teacher preparation, and other areas.

"I'm very impressed with the strengths in research and the quality of academic programs," he said during his visit.

Humanities teaching award presented at Merrill's 35th

History professor Gail Hershatter was presented with the 2003 John Dizikes Teaching Award in Humanities at a reception in November celebrating the 35th anniversary of Merrill College.

Presented by the Humanities Division to honor outstanding teaching, the award was named in honor of one of UCSC's founding faculty members.

"I am grateful to be named in the teaching tradition of John Dizikes, whom I admire and respect," Hershatter noted.

Dizikes, a professor emeritus of American studies, began his tenure at UCSC in 1965. The humanities teaching award comes with an unusual provision. In addition to being honored with a check for $3,000, the winner is entitled to select an undergraduate student to receive a $3,000 scholarship.


SCOTT RAPPAPORT

Gail Hershatter, John Dizikes (center), and Joshua Townsend

Hershatter chose Joshua Townsend, a student in her Chinese history courses. He particularly impressed her after she assigned him the role of Emperor of China in a historical simulation that recreated the Quing dynasty.

For more news about UC Santa Cruz's people and programs, see UCSC's weekly online newspaper:

▶ *currents.ucsc.edu*

Ocean scientist fills Ida Benson Lynn Chair

Professor of ocean sciences Kenneth Bruland has spent more than 25 years studying the chemistry of the ocean and the ways in which trace amounts of certain elements influence marine ecosystems.

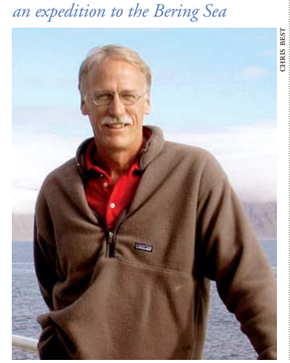
Bruland was a pioneer in the development of the demanding techniques needed to measure trace elements in seawater. His appointment in November to the Ida Benson Lynn Endowed Chair in Ocean Health recognizes Bruland's contributions in this area and provides support for his ongoing research.

The Ida Benson Lynn Endowed Chair in Ocean Health was established in 1998. Bruland's five-year appointment to the chair includes $15,000 per year to support his teaching, public service, and research, and $40,000 to support graduate student fellowships.

Bruland said he has several ideas for using the funds that come with the endowed chair. "I am especially excited about the idea of being able to use this endowment to help recruit and support outstanding graduate students," he said.

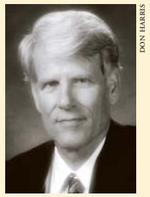
Bruland also said he would use some of the funds from the endowment to make his research accessible to a wider audience.

Bruland, on a research vessel during an expedition to the Bering Sea


CHRIS BEST

In Memoriam

Mark Christensen, second chancellor of UC Santa Cruz, and a distinguished professor at UC Berkeley for almost four decades, died in October at his home in Carmel. He was 73. Christensen served as chancellor at UCSC from July 1974 through January 1976. Prior to his appointment as chancellor, Christensen had served as vice chancellor at Berkeley, the principal aide to then–Chancellor Albert Bowker.


DON HARRIS

After serving as chancellor at UCSC, Christensen returned to UC Berkeley as a professor of geology and geophysics. He retired in 1994 as a professor emeritus of energy and resources.

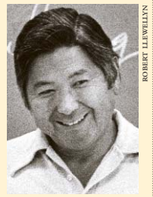
Ronald Ruby, professor emeritus of physics at UCSC, died in Santa Cruz in November. He was 70 years old. Ruby came to UCSC in 1965, one of the first faculty members hired by the newly established Cowell College. He conducted research in biophysics, focusing on the physics of photosynthesis. He was also known for his innovative and zestful approach to teaching.


CAROL FOOTE

Ruby's involvement in campus activities ranged from participation in long-range planning efforts to coaching the rugby team. He served as chair of the Physics Department, chair of the Academic Senate, and associate dean of natural sciences. Ruby retired from UCSC in 1991.

An annual award will be established in Ruby's name for excellence in teaching the natural sciences at UCSC. Donations can be sent to: UC Santa Cruz Foundation–Ruby Award, University Relations, Attn: Gift Administration, Carriage House, UCSC, 1156 High Street, Santa Cruz, CA 95064.

John Kitsuse, a second-generation Japanese American who was imprisoned in an internment camp during World War II and became a leading scholar in sociology, died in November at his Santa Cruz home after suffering a stroke the day before. He was 80.

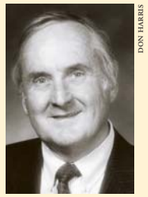

NATHANIEL LEHRER

Kitsuse, a professor emeritus of sociology at UCSC, was one of the premier theorists in the field of social problems and deviant behavior. He had a wide range of academic interests, including education, sexuality, and crime, but was primarily known for developing the theory of social construction, which explored how social problems come to be understood as such.

Kitsuse, who joined the UCSC faculty in 1974 and retired in 1991, served as president of the Society for the Study of Social Problems from 1978 to 1979. He was chair of UCSC's Sociology Department from 1985 to 1988 and for two quarters in 1980.

The family requests that donations in Kitsuse's memory be directed to the UCSC Sociology Department. Donations can be sent to: UC Santa Cruz Foundation–Kitsuse Memorial, Attn: John Leopold, Social Sciences 1, 1156 High Street, Santa Cruz, CA 95064.

Thomas Rees, a UCSC Foundation trustee since 1998 and former member of the Friends of Long Marine Laboratory board, died in December. He was 78.


DON HARRIS

Rees, an attorney who retired to Santa Cruz County in the 1980s, served in the California Assembly and Senate as well as the U.S. House of Representatives.

Memorial donations may be made to the Friends of Long Marine Lab or Hospice of Santa Cruz County.

William Chavez, a UCSC alumnus and trustee of the UCSC Foundation, died in January at the age of 49.

A politics graduate of Merrill College, Chavez was a distinguished leader in Sacramento—as chief of staff to a state senator, director of the senate's Democratic Caucus, and an education lobbyist.

A scholarship fund benefiting UCSC students has been established in Chavez's name. Donations may be sent to: William A. Chavez Memorial Scholarship Fund, at Merchants National Bank, 1015 7th Street, Sacramento, CA 95814.


NEIL MICHIELI/ZIMMERMAN

JIM MACKENZIE

TRICIA ROSE

BREAKING *the silence*

By Scott Rappaport

In a *New York Times* commentary last year, UC Santa Cruz American studies professor Tricia Rose offered up a set of stunning statistics—while black women make up less than 15 percent of the female population in the United States, they represented 64 percent of all new AIDS cases among women in 2001. Simply put, a black woman in this country is 20 times more likely to develop AIDS than a white woman.

Why are AIDS/HIV levels rising at such an alarming rate among African American women? And why do so many black women who know ►

about safe-sex practices decline to adopt them, putting their own lives at risk?

While there is no single answer to these questions, a widely praised new book by Rose offers a window into the intimate lives of everyday black women—and in the process, may provide at least a partial explanation for these catastrophic infection rates. In *Longing to Tell: Black Women Talk About Sexuality and Intimacy,* Rose begins to break down a culture of silence that she says has prevented many African American women from speaking openly about sex, love, and relationships.

Described as a "pioneering collection" by Henry Louis Gates Jr., chair of Afro-American studies at Harvard University, and a "landmark book in black letters and scholarship" by renowned author Michael Eric Dyson, *Longing To Tell* presents 19 in-depth testimonies about sexuality and intimacy, told by black women who span a wide range of ages, educational levels, and socioeconomic backgrounds.

Although the sexual lives of black women have been powerfully portrayed in fictional works such as Alice Walker's *The Color Purple,* Rose's book records the genuine experiences of ordinary African American women. "It's the first oral history of black women's sexuality ever in print," says Rose, the new chair of UC Santa Cruz's American Studies Department. "There are snippets of black women's tales here and there in other books, but no sustained oral narratives like Studs Terkel's work that chronicles the lives of ordinary Americans."

Rose takes issue with the widespread popular belief in this country—fueled in part by media images of assertive, sexy, and outspoken black hip-hop and film stars—that African American women are more comfortable than whites in discussing and understanding their sexuality. She contends that in actuality, the opposite is true. Rose says that many of these women fear that discussing intimate topics will only reinforce racial stereotypes about their sexuality.

In *Longing to Tell,* Rose argues that the long history of distorted stereotypes in our culture—dating back to times of slavery—still affects today's public policies and may be indirectly related to issues such as the AIDS epidemic among black women. As she writes in the book's afterword:

> All of these myths—although frequently perceived as outmoded and no longer resonant—remain embedded in our everyday lives and continue to influence legal, medical, and public policies. Until about thirty to forty years ago, it was a commonly held belief in legal courts that black women were too sexually loose to be raped. This made charges for raping a black women virtually impossible to prosecute successfully. As late as 1971, a judge admonished the jurors not to apply ordinary presumptions of chastity to black women.

Rose says that while some black women such as rappers Lil' Kim and Foxy Brown have decided to cash in on the profitability of these distorted sexual stereotypes—exploiting and reinforcing negative images of black women's sexuality as excessive, illicit, and exotic—the majority of black women have retreated into silence.

As 22-year-old Veronica puts it in one of the book's interviews: "At times I question being open about sex. I question whether people compute that and use words like 'promiscuous' that I think are linked to this idea that black women are jungle things—that we are sexual people, the way we dance, the way we move."

This culture of silence also extends to a similar reluctance to talk about safe-sex practices and may affect the ability of a black woman to convince a partner to use a condom to help prevent HIV infections. Rose notes that in order to understand why a black woman will or will not choose to practice safe sex at a certain moment, it is necessary to reveal the hidden layers of behavior in many sexual relationships.

"Some men interpret behaviors such as using a condom, or following a woman's sexual demands as a threat to masculine prowess," says Rose. "Similarly, they perceive women who are sexually informed and who set the terms for a sexual relationship as less desirable or less feminine. These hidden calculations are given added force in a popular culture where black women—especially young black women in music and film—are ritualistically portrayed as highly sexually available and valuable because of it."

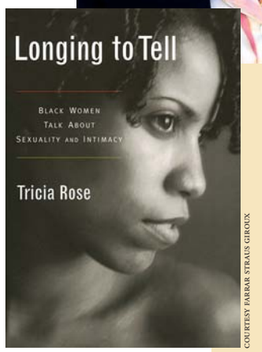
Rose hopes that her new book will inspire dialogue about issues relating to sex and intimacy—and help break this pattern of silence. She says that presenting honest sexual testimonies of black women is an important first step in dispelling prevailing cultural stereotypes by portraying the sheer diversity of their experience. But Rose also points out the dire need for many more discussions that go deeper into the black community, and far beyond recent celebrity, male-dominated efforts in the mass media to address the health crisis.

"We have to stop saying, 'oh, what did Colin Powell say? What did Spike Lee say? What did Jesse Jackson say? What did Puff Daddy say'?" Rose insists. "That's not really going to solve this health crisis. We need to have more complicated, less flashy, conversations among ordinary women."

Rose argues that a better alternative to the recent advertising campaign in major U.S. cities—featuring basketball star Magic Johnson as the face of AIDS prevention—would be an outreach effort led by major institutions in the black community such as churches, public schools, and black AM talk radio. But if this kind of public outreach is the only approach taken to fight the AIDS epidemic, she believes that it too will fail.

JIM MACKENZIE

"This is a war that must be fought on many battlefields at once," says Rose. "Lobbying for health resources, funding, and awareness campaigns must go on full-throttle. However, awareness campaigns must be accompanied by a real commitment to explore the legacies of sexual stigma associated with African Americans, the silences they have produced, and the deep-seated dynamics that shape contemporary sexual behaviors."



COURTESY FARRAR STRAUS GIROUX

Midway through *Longing to Tell,* 35-year-old Rhonda poignantly sums up the toll that AIDS has taken in the black community: "I work at the juvenile court, and daily I see sisters dying from the silence, and it's painful," she says. "So my belief is that the more of us talk about it, the better." ❖

LONGING TO TELL is a natural extension of Tricia Rose's high-profile efforts to spotlight and confront many of our country's political and racial divisions. An outspoken and often-quoted resource on contemporary black culture, she is also the author of *Black Noise: Rap Music and Black Culture in Contemporary America,* which received the American Book Award from the Before Columbus Foundation and was named one of the Top 25 books of 1994 by the *Village Voice.*

Featured frequently on National Public Radio and numerous other radio outlets throughout the country, Rose also pens articles and essays about American culture, politics, women's issues, and black popular music for magazines and newspapers, including the *New York Times, Village Voice, Time, Essence, ArtForum, Bookforum,* and *Boston Book Review.* She has lectured at such venues as Harvard, Yale, Wesleyan, the Whitney Museum of American Art, UCLA, and Princeton.

"I see one of my roles as challenging or affirming key concepts and values we have in the world—such as democracy and social justice—and helping us to see the ways in which we are not living up to these ideals," Rose says. "I think it's critical to create a framework to interpret the world that we live in, instead of allowing corporate and media interests to have the last word."

Born in Harlem and raised in the Bronx, Rose earned her bachelor's degree in sociology from Yale and a Ph.D. in American civilization from Brown University. She came to UC Santa Cruz in 2002 via New York University, drawn to this campus by "its reputation for very serious scholarship, as well as its progressive, political commitment." She also felt that Santa Cruz would offer her something that living in the heart of New York City could not—the space to sit back, observe, and think.

"Constant engagement and distraction is a hallmark of contemporary life," Rose observed. "But you know, your best ideas don't come when you're racing down the street. They come when you're not doing things directly—when you're just sorting laundry or looking at something. During those quiet times, your thoughts settle down and ideas galvanize. Santa Cruz allows for those moments far more frequently than any other place that I've ever been."

The driving force that links all of her work—from hip-hop scholarship to urban politics to African American sexuality—is Rose's rapt attention to the contexts in which we live, the stories we tell, and how they shape us as people.

"When the forces that shape us are revealed—both productive and destructive—then we are better able to fashion informed choices and develop strategies that open possibilities," Rose says. "Hopefully then, we'll be better able to fight for the creation of more just and diverse environments and institutions." —Scott Rappaport

JIM MACKENZIE

The Geneticist & the Biochemist

How a friendly rivalry illustrates the two cornerstones of biomedical research

By Tim Stephens

THE BILLIONS UPON billions of cells that make up a human being all descend from a single cell, the fertilized egg. Cells are the basic building blocks of life, and even cells from different organisms share common features and a common evolutionary origin. In fact, the genes involved in basic cellular functions have remained largely the same over billions of years of evolution. That's why scientists trying to understand how human cells work study such unlikely creatures as flies, worms, and yeast—"model organisms" that yield valuable insights into human biology and diseases.

Researchers in UCSC's Department of Molecular, Cell, and Developmental Biology (MCD biology) use model organisms to study, among other things, the molecular roots of cancer. Geneticist William Sullivan (above) and biochemist Douglas Kellogg (at right), for example, both study the regulatory mechanisms whose failure turns normal cells into cancer cells.

But the two UCSC scientists approach biomedical research from different angles, and over the years they have maintained a friendly rivalry over whose approach is more fruitful. As a geneticist, Sullivan is particularly interested in the genes that are responsible for regulating cell growth and division. The genes carry instructions for making specific protein molecules, and Kellogg, the biochemist, focuses on those proteins and how they carry out their regulatory functions in the cell.

The two researchers began debating the relative merits of genetics and biochemistry years ago, when Sullivan was a postdoctoral fellow and Kellogg was a graduate student working in the same laboratory at UC San Francisco. Their sparring lives on in a tongue-in-cheek parable Sullivan published in the 1990s, which Kellogg countered with his own version. The stories have been widely reprinted and posted on numerous academic web sites (see *review.ucsc.edu/spring04/bio-debate.html*). Sullivan has even been asked to autograph students' copies of his essay when visiting other universities.

The popularity of the stories is partly due to their humor, but they are also useful teaching tools for explaining these two fundamental approaches to basic research in biology.

"Maybe I should do more of that—it only took me an hour to write that, and it takes me two years to produce a scientific paper," Sullivan quips.

The fictional protagonists of both stories are a retired geneticist and a retired biochemist, who live on a hill overlooking an auto factory. Having spent their lives in pursuit of higher learning, the two characters are wholly unfamiliar with how cars work. So they set about studying them in their accustomed ways.

The biochemist gets himself a car and immediately starts taking it apart and studying its component parts. The geneticist, meanwhile, strolls down the hill and ties the hands of one of the workers headed into the factory. While the biochemist gets covered in grease and oil, the geneticist watches the cars rolling off the assembly line and observes that they are all missing a certain part (the steering wheel) and fail to make the first turn in the road.

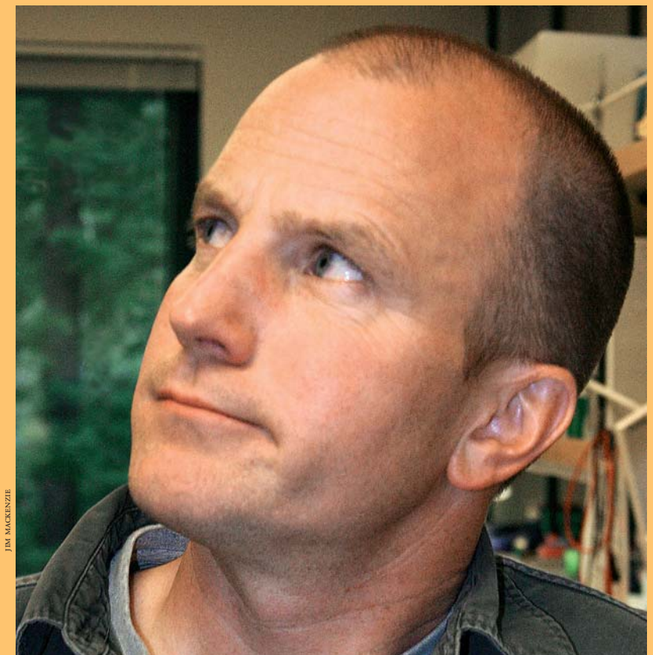
The analogy in the parable isn't perfect, but you can think of the factory workers as genes and the car parts they are responsible for as proteins and other cellular components. Geneticists knock out genes and study what goes awry in the resulting mutants. Biochemists isolate proteins and other molecules from cells and study their structures and interactions.

"I think one reason the stories struck a chord with people is that—in those days, at least—geneticists had the reputation of being armchair scientists and kind of arrogant, while the biochemists did all the nitty-gritty work," Sullivan says. "What I like about genetics, though, is that the experiments can sound ridiculous, yet they'll lead to the discovery of a major disease gene."

Kellogg acknowledges the power of genetics, but says biochemistry gets closer to the action. "Genetics gives you great tools for identifying a gene involved in a certain pathway," he says. "But genetics doesn't tell you what the gene does, so you also need the biochemistry to figure out what the protein produced by that gene actually does."

Not surprisingly, the two versions of the parable reflect the prejudices of their respective authors. In Sullivan's story, the geneticist's approach is successful while the biochemist flounders—an outcome that is reversed in Kellogg's version.

Today, a decade after their parables were first published, both Kellogg and Sullivan actually find themselves using a combination of genetics and biochemistry in their research. Instead of competing, the two fields have become the complementary cornerstones of modern biomedical research. And new laboratory techniques, based on advances in both fields, are



JIM MACKENZIE

Health-related research at UC Santa Cruz

UCSC's Department of Molecular, Cell, and Developmental Biology is entirely devoted to health-related research. "Most people don't think of this campus as doing research on human health, but you don't need a medical school to do health-related research," says John Tamkun, professor and chair of MCD biology. "Faculty in this department are doing work that applies to a variety of health concerns, including cancer, neurological diseases, antibiotics, and HIV."

In addition to MCD biology, many other departments at UCSC are also involved in health-related research:

Chemistry and biochemistry: Chemistry faculty are engaged in a wide range of health-related research projects, including targeted drug design, screening of natural products for potential drugs, and development of a novel blood-glucose monitor for diabetics.

Computer science: The field of bioinformatics arose from the need for advanced computational techniques to analyze vast amounts of biological data. Internationally known for its work on the Human Genome Project, UCSC's bioinformatics group is engaged in a variety of collaborations with researchers in MCD biology and other departments.

Environmental toxicology: Research in this department includes investigations of the health effects of toxic metals such as lead and manganese, as well as studies of environmental influences on infectious diseases such as cholera.

Social sciences: UCSC faculty in several departments in the social sciences are engaged in an array of health policy–related research projects, including pathbreaking work in environmental justice (see story, pg. 18), medical anthropology, the AIDS epidemic, race and gender aspects of health, and health care in prisons. Research in psychology includes studies of depression in adolescence and investigations of memory, perception, and other cognitive functions.

More information about biomedical research at UCSC is available online at *biomedical.ucsc.edu*.

—Tim Stephens

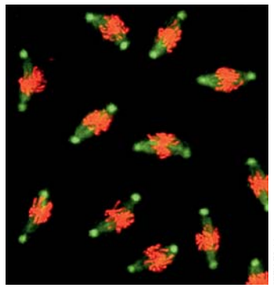
giving scientists an increasingly complex and detailed view of the molecular interactions that make cells tick.

All cells pass through a well-defined series of steps, known as the cell cycle, as they grow to a certain size, copy their chromosomes, and divide into two new cells. Sullivan studies the regulation of the cell cycle in the fruit fly, a mainstay of genetics research for more than 100 years. Kellogg investigates the cell cycle using another classic model organism, yeast.

Both Kellogg and Sullivan have identified gene mutations that disrupt normal cell growth and division. They are particularly interested in "checkpoints" in the cell cycle—points where the cell, in effect, makes an assessment and decides whether to proceed to the next part of the cycle. Disruption of the checkpoint mechanisms is one of the hallmarks of cancer cells.

Kellogg's biochemical investigations in yeast cells are helping to sort out the interactions between different proteins involved in checkpoint mechanisms. He compares their dynamic interactions to a constantly running engine that is highly responsive to signals coming in from other parts of the cell.

"It's really a remarkable system, and we're just scratching the surface," Kellogg says. "We have these little stick-figure diagrams for something that is far more sophisticated and complex than a car engine."



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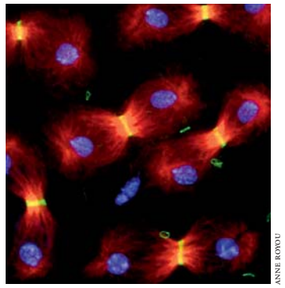

ANNIE ROYOU

Combining genetics and biochemistry, Sullivan studies the effects of mutations on the cell cycle using staining techniques that tag different molecules involved in cell division with fluorescent labels. In the dividing wasp cells on the left, DNA is red and the protein tubulin is green. In the dividing fruit fly cells on the right, DNA is blue, tubulin is red, and the protein myosin is green (to see the Sullivan lab's movies of cells dividing, go to *www.biology.ucsc.edu/people/sullivan/images.html).*

Tremendous progress has been made over the past ten years in understanding how the cell cycle is controlled. Cell-cycle checkpoints have become a major focus of efforts to develop new cancer drugs. Nevertheless, the clinical payoff so far has been disappointing, according to Sullivan.

"We have learned so much about what drives the cell cycle, and amazingly it has had almost no impact on what doctors currently do to treat cancer patients," he says.

So Sullivan has joined the growing effort to translate advances in molecular biology into the arena of cancer therapy. His lab has developed a system for evaluating the effectiveness of cancer drugs against cells that have specific mutations in known cancer genes.

Traditionally, the drugs selected to treat a particular type of cancer have been chosen on the basis of the tissue in which the cancer originated. So studies are done to find the drugs that most effectively kill, say, lung cancer cells. But lung cancer can result from defects in many different genes that control the cell cycle.

"One person's lung cancer cells are not the same as another person's," Sullivan says. "Doctors would like to be able to define each individual's cancer genetically and then say: These are the drugs that will be effective against cancer cells with these particular genetic mutations."

In general, basic research in biology does not lead directly to new medical treatments. Rather, it provides the fundamental knowledge that enables medical researchers to understand and combat diseases.

"The work we do to understand how a gene or protein works in a model organism can be used by people in the clinical setting to accelerate their understanding of human diseases," says John Tamkun, professor and chair of UCSC's Department of MCD Biology.

Tamkun, for example, studies genes and proteins that control which other genes in a cell are turned on. Some of the genes studied in his laboratory have turned out to be mutated in certain human cancers.

Other members of the department are investigating the genes and proteins that control the growth of nerve cells and the formation of connections between neurons in the developing nervous system. Their work has implications for understanding neurological disorders and treating injuries to nerves.

Harry Noller, Sinsheimer Professor of Molecular Biology, has earned international acclaim for his groundbreaking work on the structure of ribosomes, the protein factories of all cells. The ribosome is a complex molecular machine one millionth of an inch in diameter. Inside every cell, tens of thousands of ribosomes take orders from genes and turn out fresh proteins with amazing speed and precision.

Noller's findings have practical significance because many antibiotics work by binding to and disrupting bacterial ribosomes. Understanding how the ribosome works will help pharmaceutical companies develop new and more effective antibiotics.

The identification and characterization of potential "drug targets" is an increasingly important outcome of research in molecular biology. Molecules that play important roles in the cell are of great interest to pharmaceutical companies, because a drug that blocks or enhances the target molecule's activity is likely to have therapeutic value.

Just about everything scientists do to unravel the molecular mechanisms of cellular processes is of potential value to the pharmaceutical industry, says Manuel Ares, a professor of MCD biology.

Ares, Noller, and others in the Department of MCD Biology are contributing to a great flood of new information and insights that is making this area of biology one of the most dynamic disciplines in science. The field, in fact, is changing so fast that introductory textbooks in cell biology become outdated within a year or two of their publication.

"The area of biology that our department covers evolves so rapidly that even our undergraduate curriculum is being revised constantly," Tamkun says. "For students, that really highlights the value of being at a research university where the faculty are actively engaged in these areas."

One factor behind the increasing pace of discovery in biology is the use of new "high-throughput" technologies. For example, DNA microarrays (or "gene chips") are enabling scientists to monitor the activity of thousands of genes at once, rather than studying one gene at a time.

"You can look at 10,000 or 15,000 genes in a single experiment, and it's saving years of work," Tamkun says.

Ares has established a microarray facility at UCSC and is developing special microarrays for detecting differences in the way cells interpret the information in their genes. His research is revealing a whole new level of complexity in gene regulation.

In 2002, Ares was named a Howard Hughes Medical Institute Professor, giving him a $1 million grant to establish a special teaching laboratory for undergraduate students. In this new lab, Ares is teaching students about molecular biology by getting them directly involved in state-of-the-art research. One of the projects they are tackling addresses a major global health issue: malaria.

"Students come to college wanting to do something that will help the world. It's easy for them to see how they can help people by becoming a doctor, but it's a lot harder to make the connection between doing research in a lab and helping the world," Ares says. "When they see the tremendous effort and technical skill and accomplishments of the people doing biomedical research, I think they start to see the value of that." ❖

New health sciences major has unique requirements

In fall 2003, UCSC began offering a new health sciences major designed for students interested in medical careers. The program is unique in the UC system, requiring students to become proficient in Spanish and to do an internship in a community health care setting, in addition to taking the usual science courses required for admission to medical school.

"While many of the courses students will take for this major existed before, linking them together into a coherent major will make it clear to potential students that they can participate in this valuable program when they come to UCSC, and will make it easier for students already at UCSC to plan their studies to prepare for a career in the health sciences," says David Kliger, dean of physical and biological sciences at UCSC.

The new major's community service requirement essentially formalizes what has become an informal requirement for admission to many medical schools, says John Tamkun, professor and chair of molecular, cell, and developmental (MCD) biology.

In the past, premed students at UCSC have had to seek out such opportunities on their own. Now, the campus has hired an internship coordinator for the health sciences program who will identify good opportunities for students to work with health care professionals in the local community. Students will also be able to receive academic credit for the internships.

The Spanish language requirement was inspired by conversations with various health care professionals, says Lindsay Hinck, an assistant professor of MCD biology who worked with Tamkun, assistant dean of physical and biological sciences Charlotte Moreno, and others to design the new major. Hinck says many doctors emphasized the importance of language skills in their medical practices.

UCSC's health sciences major requires four quarters of Spanish, plus a new course in medical Spanish designed to teach not only medical terminology but also relevant cultural considerations.

Tamkun says the health sciences major complements the health-related research programs at UCSC. The new major also marks the first step in a broad health sciences initiative at UCSC that will eventually include an array of programs for students interested in different aspects of human health and health care issues. —Tim Stephens

TOM VAN DYKE

Fair-trade coffee: Is it working?

SIMON BLIFOLD

Chris Bacon, right, on a fair-trade coffee farm in Nicaragua

Spotlight on Students

Chris Bacon
Environmental Studies Ph.D. program

For Chris Bacon, coffee is more than a beverage. It's his passion, the subject of his doctoral research, and, he hopes, the avenue to a healthier, more stable life for thousands of Nicaraguans who grow coffee for a living.

A doctoral candidate in environmental studies at UC Santa Cruz, Bacon is working with small-scale coffee farmers to document the impact of the fair-trade movement on the people and landscapes of northern Nicaragua.

The fair-trade movement, which began more than 50 years ago in Europe, guarantees farmers a fair price for their products, based on labor, land, and other production costs. The goal is to improve the lives of farmers and their families and to help the environment by encouraging farmers to adopt Earth-friendly growing practices.

Awareness of fair-trade coffee has grown dramatically since the late 1990s, when a worldwide glut of coffee beans sent wholesale prices plunging to their lowest levels in more than a century. Growers have been struggling to break even ever since.

Fair-trade advocates have stepped in to help, encouraging consumers to buy fair-trade coffee because it offers farmers a higher rate of return—about 90 cents per pound, compared to about 40 cents per pound for coffee beans sold on the conventional market. Eager to know if the fair-trade movement is making a difference, Bacon is focusing on childhood educational opportunities as a measure of economic well-being and on farm landscapes to gauge the sustainability of bean production.

His preliminary results are encouraging: The children of farmers who grow fair-trade organic coffee appear more likely to go to school than children of conventional coffee producers, and there appears to be greater shade-tree and orchid diversity on certified organic farms than conventional ones.

By examining both social and ecological impacts, Bacon is at the forefront of agroecology, an interdisciplinary field that combines ecology, socioeconomics, and culture. Stellar UCSC faculty in environmental studies and Latin American and Latino studies, as well as two key research facilities—the Center for Agroecology & Sustainable Food Systems and the 25-acre Farm—drew him to the Ph.D. program. "I turned down Yale and a pretty good fellowship to come to UCSC," he said.

Bacon became interested in sustainability in 1995 while working for the World Resources Institute, a global environmental think tank in Washington, D.C. "I learned so many statistics about deforestation, hunger, and poverty, but they didn't have faces and names behind them," says Bacon. "I wanted firsthand experience. I wanted to be useful."

So Bacon joined the Peace Corps and served in Nicaragua, where he promoted community environmental projects and became fluent in Spanish. The devastation of Hurricane Mitch in 1998 shifted his focus to agriculture as he helped villagers plant small vegetable gardens to sustain themselves. Then came coffee.

"I was biking 20 kilometers into the hills to help plant vegetables, and I met small-scale farmers who were producing really good coffee in the shade of native forests," recalls Bacon. "I started to think about the linkages between farmers and consumers. I knew there had to be a way to help producers, and there is. It's called 'fair trade.'"

Despite increasing demand, fair-trade coffee still makes up less than 1 percent of sales in the U.S., and Bacon paints a David and Goliath scenario as he describes the players in the international coffee market. Worldwide, the vast majority of coffee beans are grown by farmers on parcels of less than 5 hectares, or about 12 acres. By contrast, coffee roasting is dominated by corporations like Philip Morris and Nestle, which control 24 percent and 25 percent, respectively, of the market. Bacon's research is driven by questions of whether it is possible for small-scale growers to succeed given the structure of the conventional commodities system and the corporate concentration of coffee roasters.

"The fair-trade movement is about building new relationships between consumers and family farmers," says Bacon. "It's about paying a fair price so farmers can support their families, build schools, protect biodiversity, and be active participants in their communities. This research is looking at whether we're meeting those goals."

—Jennifer McNulty

Java Justice

ALEXANDRA BERNINI

Free-trade coffee organizers Tony LoPresti (left) and Suzanne Langridge (right), with Alma Sifuentes, director of residential and dining services

Wake up and smell the fair-trade coffee in UCSC dining halls.

That's the message from students and staff who have worked together to introduce flavorful, high-quality, ecologically friendly coffee on campus. Although it costs more than conventional coffee, certified fair-trade coffee eliminates the "middle man" and ensures that more profit goes into the pockets of farmers.

"The students talked with us and began educating me about how the coffee industry works," says Alma Sifuentes, director of residential and dining services at UCSC, who made the decision to introduce fair-trade coffee on campus after hearing the concerns of students. "Students in our own agroecology program are doing research about coffee, and they described where the money goes and how it is distributed, and how the campus could really aid the environment and social justice by making this change. It's very exciting."

Serving fair-trade coffee in campus dining halls and at campus-operated coffee carts is also a good business decision that builds on UCSC's commitment to sustainability, says Sifuentes, a UCSC alumna who graduated in 1986 with a degree in economics.

"I'm looking to build alliances with our internal departments and the mission of the university," says Sifuentes. "If we can connect undergraduate, graduate, and faculty research with the business of running the university, that's putting theory into practice."

The goal of the fair-trade coffee movement is to provide economic stability for small-scale farmers and to encourage sustainable growing techniques that replenish the Earth.

At UCSC, several faculty members, including Stephen Gliessman of environmental studies, are researching the economic, social, and political aspects of coffee production.

Graduate student Suzanne Langridge and Tony LoPresti, who graduated in June with a bachelor's in Latin American and Latino studies, spearheaded the student-led effort to educate the campus community about fair-trade coffee. As members of Comercio Justo (Spanish for "fair trade"), Langridge and LoPresti organized workshops, photo exhibits, and presentations about globalization and coffee, and the impacts of the coffee crisis on peasant farmers.

As consumers, they explained, students can have a direct role in improving the lives of farmers by buying fair-trade coffee. "Students learn so much about the negative impacts of globalization, and this gives them a way to take action," says LoPresti. "It's about taking a small step toward equity on a global scale."

"The fair-trade movement is about reworking producer-consumer relationships," says Langridge, noting that fair-trade bananas, chocolate, and textiles are also available. "Coffee is the ideal commodity for students on campus to support, because they drink so much of it."

UCSC is one of more than 200 college and university campuses around the United States that are conducting fair-trade coffee campaigns. As the West Coast representative for United Students for Fair Trade (USFT), UCSC's Comercio Justo hosted the group's first-ever national conference with other student organizers in Santa Cruz this winter.

—Jennifer McNulty

UNFAIR EXPOSURE:

Seeking justice for neighborhoods bearing the brunt of toxic hazards

BEN BALAGOT

Manuel Pastor (center), research colleague Jim Sadd (left), and community activist Carlos Porras, in a Los Angeles neighborhood dominated by industrial development

By Jennifer McNulty

Manuel Pastor remembers the day he proudly told his aunt he'd received a large research grant for his work in the burgeoning field of environmental justice.

"That's wonderful, Manuelito. I'm so proud of you," she said. "But what is environmental justice?"

Pastor explained that environmental hazards tend to be concentrated in poor neighborhoods and communities of color, and the pattern seems to reflect political power more than pure market dynamics.

Looking him directly in the eye, Pastor's aunt didn't miss a beat: "But, Manuelito, everyone knows that."

Throughout much of Los Angeles, poor and working-class neighborhoods are bisected by freeways carrying exhaust-spewing vehicles across town. The relentlessly urban landscape is a tangle of wide boulevards lined with a mix of small manufacturing plants, auto body shops, dry cleaners, and nondescript warehouses, broken up by aging bungalows and apartment houses, fast food joints, and modest storefronts. Every so often, an asphalt playground surrounded by chain-link fencing reveals the presence of a school.

This is where most of the city's African American, Latino, and Asian residents live, work, and play. It is also a hotbed of California's environmental justice movement. A decade ago, saying their neighborhoods appeared to be bearing the brunt of the city's dirtiest industries, residents took their concerns about air and water quality to city officials, community groups, and the media.

Unlike Pastor's aunt, business and civic leaders, as well as some academic researchers, rejected the "commonsense" notion that environmental hazards were concentrated in low-income and minority neighborhoods. They demanded proof. So mothers and fathers joined forces with schoolteachers, retirees, and others in their communities to investigate. The documents they compiled confirmed their fears: Neighborhoods like South Central and Huntington Park were far more polluted than Malibu and Beverly Hills.

But, like dancers doing the tango, industry and corporate attorneys pushed back, raising the chicken-and-egg question of which came first, the minorities or the toxins? Perhaps, they suggested, minorities and the poor chose these neighborhoods *after* they were already home to hazardous materials because they offered cheaper housing. Longtime residents who had watched the steady influx of these facilities into their neighborhoods were dumbfounded and called the assertion a racist "argument of scoundrels." They also knew they couldn't ignore it. Rallying their resources, they sought assistance from fledgling environmental justice organizations and enlisted the help of experts with the skills to conduct the detailed chronological analyses they would need.

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A self-described nerd, Pastor devours data the way others consume French fries. The founding director of UC Santa Cruz's Center for Justice, Tolerance, and Community, Pastor was drawn to the environmental justice movement out of a sense of fairness. For him, the enduring message of the environmental movement was the fundamental recognition that everyone has an equal right to a clean environment. Society has not kept that promise to many of the residents of Los Angeles, says Pastor, also a professor of Latin American and Latino studies.

"It's part and parcel, albeit the most toxic part, of a system in which opportunities and costs are distributed unequally," says Pastor. "People should have an equal shot at a clean environment."

In addition to righting a wrong, pushing for equity in the distribution of toxics will ultimately reduce the risk for everyone. "If you can dump toxics in someone else's backyard, it lessens your incentive to reduce the toxic stream," explains Pastor. "If everyone shares the burden equally, we'll have less of the bad stuff to deal with."

For the past seven years, Pastor and his research partner James Sadd, chairman of the Environmental Science and Studies Program at Occidental College in Los Angeles, have worked with Communities for a Better Environment (CBE) to pursue environmental equity for the residents of Los Angeles. By working at a regional level where industries are concentrated, rather than a national level, they have succeeded where others have failed.

They bring sophisticated skills to the endeavor, but they try not to talk about their methodologies in public because they don't want people to fall asleep. These are guys who pore over Census Bureau data and live to conduct multivariable studies. They scoff at the inadequacies of established practices, such as using zip codes to glean demographic data. "Zip codes have a lot to do with how you deliver mail, but they don't tell you much about socioeconomics," says Pastor, noting that East Palo Alto—a poor, largely African American community with high crime and unemployment rates—shares the same zip code as tony Palo Alto.

When it's time to present their findings publicly, Pastor makes the research sound easy, using lay language and color-coded maps. "People know there's something wrong. They know it's unfair. And they love being able to see it visually," says Pastor. "It resonates with them."

BEN BALAGOT

Pastor, Sadd, and Porras hear from a concerned Angeleno.

Even the harshest opponents of the environmental justice movement now concede there's a problem in Los Angeles. Thanks in large part to a high-tech research effort by Pastor, Sadd, and a UCSC undergraduate, they acknowledge that it is not simply a question of minorities "moving in" or choosing polluted areas (see story, pg. 22). In the process, Pastor and Sadd have set the standard for research on environmental inequity. The team's most recent challenge is one that flummoxed advocates of environmental justice for years. How do you quantify the potential consequences of greater exposure to toxics on the health, well-being, and productivity of people, or what economists blandly call "human capital"?

Pastor was drawn to the environmental justice movement out of a sense of fairness. For him, the enduring message of the environmental movement was the fundamental recognition that everyone has an equal right to a clean environment. Society has not kept that promise to many of the residents of Los Angeles, he says.

Pastor and Sadd took on the task by focusing their attention on the academic achievement of schoolchildren in Los Angeles Unified School District. They were joined in their trailblazing effort by Rachel Morello-Frosch, an assistant professor in the School of Medicine at Brown University who specializes in how race and class affect the distribution of health risks associated with air pollution. Morello-Frosch joined the team while working as a postdoctoral scholar at UCSC under sociology professor Andrew Szasz in 1998–99. Pastor's group found that estimated respiratory risk from local pollution had a significant effect on school scores, even after they controlled for socioeconomic and demographic differences that generally explain much of the variation in student performance, including the percentage of students on free-lunch programs, teacher quality, and the percentage of English learners.

Indeed, the team estimates that differences in air-related respiratory risk could account for up to 10 percent of the disparity in academic performance between black and white children in Los Angeles Unified School District. Using sophisticated models, the researchers revealed another measure of the impact of environmental inequity: If the school district could wave a magic wand and move the schools in the most-polluted areas to the least-polluted sites in the district, the schools would see an immediate 10 percent boost in scores—enough to receive financial bonuses for improvement under the state's school accountability program.

"It sure looks like dirty air is holding back the academic performance of students in the most polluted neighborhoods, and that reduces their resources. Inequity builds on inequity," says Pastor, noting that Los Angeles Unified is slated to build more than 80 new schools during the next five years. "We hope the district will continue to assess the environmental hazards of potential sites when it decides where to build new schools."

The academic performance study sets a new standard in environmental justice research, and it gives organizers valuable ammunition for their policy work.

"Before we began working with Manuel, Jim, and Rachel, we lacked the sophisticated tools that were needed to document these problems," says Carlos Porras, executive director of Communities for a Better Environment. "Now, when we take this work to agencies and policy makers, it stands alone in its credibility."

Pastor is happy to perform research that is valued in both the academic and activist arenas. "The thing communities need now is good research to back up their organizing," says Pastor. "That's one of the things the university can bring to bear, and it's why I always tell students to master the latest technology and be conversant with datasets. Sometimes people who believe in social change don't spend enough time at the computer, crunching the numbers."

Establishing the correlation between air pollution and respiratory ailments isn't the same as resolving the still-unanswered question of whether air pollution *causes* asthma, emphasizes Pastor. Without evidence of a causal relationship—which would require formidably expensive epidemiological studies to investigate—policy makers have a choice, says Pastor: They can do nothing, or they can act on what's called the "precautionary principle" and assume that disproportionate exposure produces disproportionate risk.

"It's like a 12-step program," says Pastor. "We know that Los Angeles has disproportionate exposures, and the first step is to admit that we have a problem. Then we look at resources, the significance of the inequity, and we go from there."

In California, officials and policy makers have begun responding to pressure from groups like CBE. In a first-of-its-kind action, the South Coast Air Quality Management District recently reversed itself and reduced the number of permissible cancers associated with emissions from existing manufacturing plants from 100 per million to 25 per million. The Los Angeles International Airport expansion plan was also revised to incorporate the Pastor team's early analysis of the project's environmental justice impacts, and the state recently ordered the multimillion dollar cleanup of Suva Elementary School, where highly toxic hexavalent chromium emitted by a neighboring chrome-plating plant was linked to several deaths and numerous illnesses among students and teachers at the school.

"That is one of the most tragic stories in the work we've been doing in southeast L.A., because several children died and a number of adults were diagnosed with brain cancer before the site was cleaned up," said CBE's Porras, who helped fight for the cleanup.

Nevertheless, California leads the nation in efforts to redress environmental

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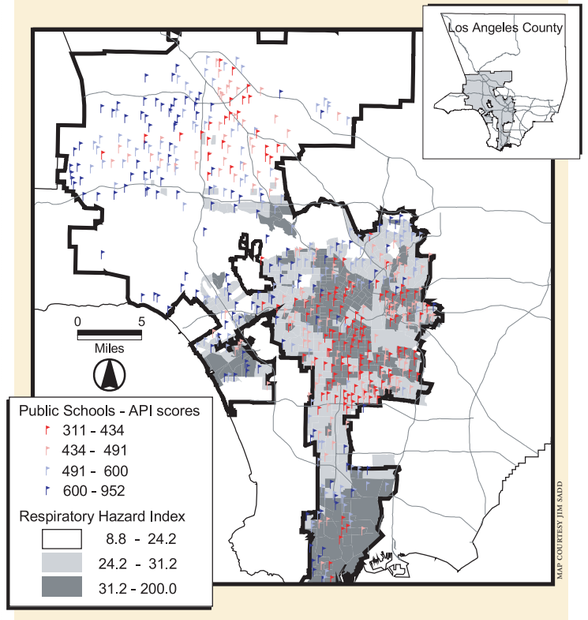


MAP COURTESY JIM SADD

School Scores and Respiratory Risk in the Los Angeles Unified School District

Undergrad finds neighborhoods undergoing ethnic transition are most vulnerable

As an undergraduate at UC Santa Cruz, John Hipp (economics and sociology '99) helped Manuel Pastor crack the chicken-and-egg question that dogged the early days of the environmental justice movement in Los Angeles: Which came first, the city's most polluted neighborhoods or minority residents? The issue arose when critics, trying to deflect the charge that dirty industries concentrate their facilities in minority areas, suggested that minorities might have chosen to move into neighborhoods that were already heavily industrialized because they offer more affordable housing.


COURTESY JOHN HIPP

John Hipp

Tackling the question pushed Pastor's research team to new levels, requiring members to wade through mountains of government records, file numerous requests for records under the Freedom of Information Act, and reconcile it all against three decades of Census Bureau maps. Their efforts paid off when they were able to demonstrate that disparities in exposure to toxic-producing facilities had worsened over time and that new facilities were more likely to be sited in minority neighborhoods than in white areas.

Wondering what makes neighborhoods vulnerable to the siting of new facilities, Hipp probed further and uncovered what the team now calls "ethnic churning." Neighborhoods undergoing rapid ethnic and racial transition—shifting from predominantly African American to largely Latino, for example—lack the tight community networks that typically organize to oppose proposed toxic facilities.

"It turns out that political power matters far more than income," said Hipp, who coauthored a paper about ethnic churning and hazard location that appeared in the *Journal of Urban Affairs.*

"UCSC was just an incredible experience for me," says Hipp, now a doctoral candidate in sociology at the University of North Carolina at Chapel Hill. "There were tons of opportunities to work with people like Manuel. I learned an incredible amount from him. When I got to graduate school, I was far better prepared than most of the other students."

—Jennifer McNulty

inequity, and lawmakers in Sacramento are heeding the call for change. The California Air Resources Board was the first state agency in the country to adopt environmental justice policies, and legislation sponsored by Senator Martha Escutia (D-Norwalk) in 2000 required the state to incorporate environmental justice principles into its policies. Those recommendations were sent to Winston Hickox, secretary of the California Environmental Protection Agency in October, one week before the recall election that ousted Governor Gray Davis from office. "Before the election, momentum was building and agencies were responding to these problems," says Porras. "Now, that's all been threatened."

Land-use decisions are in the hands of local officials, though, and environmental activists are pressing for rules that will require city council members and boards of supervisors to consider the cumulative impacts of multiple facilities when they make development decisions. Current law allows each polluting facility to be measured and regulated separately.

Pastor's work has found support from The California Endowment and the California Wellness Foundation.

"Environmental justice is a common-ground issue," says Pastor, who grew up in the La Puente suburb directly east of L.A. "Latino voters are a major constituency, and a lot of Latino legislators in Sacramento grew up in southern California, so they know the issues."

An engaging public speaker, Pastor presents his findings to neighborhood groups, policy makers, and fellow academics, and he regularly writes opinion pieces for the *Los Angeles Times.* But the alliance with CBE allows Pastor to concentrate on the "nerdy stuff" he loves. He digs up the facts, and CBE takes them to the streets. "People—not science—drive change," he insists. "No policy has ever changed because of research alone. Ultimately, what moves an issue is a mobilized community. What really makes a difference is when people are out there fighting."

And the fight, he believes, is bigger than environmental justice. Childhood exposure to environmental hazards at school is part of a much bigger picture of inequality in U.S. society.

"These kids face disproportionate risks walking to school because of crime in their neighborhood, because of poverty, lower teacher quality, and hunger," says Pastor. "How do you weigh the different risks? Is environmental justice the most important thing for society to be working on? I don't know. For me, this movement is an attempt to say, at a fundamental level, there is inequity, and let's use environmental justice as an entry point to raise questions about the inequality all around us." ❖

For more information about the Center for Justice, Tolerance, and Community, visit *cjtc.ucsc.edu*.

Alumni Notes

Cowell College

'74 Gayle WILCOX is the assistant chief of the Volunteer Fire Department and an emergency medical technician with the volunteer ambulance service in Port Orford, Oregon.

'76 The April 2003 issue of *The Sun* magazine carried a profile of **Timothy CONWAY** and his work on engaged spirituality; Conway teaches at Santa Barbara City College and is the author of *Women of Power and Grace: Nine Astonishing, Inspiring Luminaries of Our Time* (Wake Up Press, 2000) and the upcoming book "Healing Our World: Urgent Solutions for Pressing Problems."

'77 James McCLINTOCK has been named University Professor in Polar and Marine Biology at the University of Alabama, Birmingham; he is an authority on marine chemical ecology and echinoderm biology.

'84 Coast Guard Reserve Lieutenant Commander **Michael BEE** won the 2003 Admiral Frederick C. Billard Intelligence Award, which recognizes the individual whose performance had the greatest impact on the Coast Guard in various areas related to intelligence or national security. In May 2003, **Steven KATZMAN** was appointed U.S. Trustee by the U.S. Department of Justice, a top job enforcing the nation's bankruptcy laws for the southern district of California and the districts of Hawaii, Guam, and the Northern Mariana Islands; he lives with his wife and three children in San Diego.

'85 Mark TEAGUE has illustrated more than 40 children's books, the latest of which he created with writer Jane Yolen. Titled *How Do Dinosaurs Get Well Soon?* (Blue Sky Press, 2003), the book is a sequel to the popular *How Do Dinosaurs Say Good Night?*, and it has the same friendly dinosaurs who misbehaved at bedtime acting up in the doctor's office.

'92 May CHE received her law degree in May 2003 from Fordham University School of Law; she is now an assistant district attorney with the Bronx District Attorney's Office.

'96 Marvin (DIMACULANGAN) Schober, who works for the city of Los Angeles as a management analyst, won a nationwide contest to write Metallica's acceptance speech for the 31st annual American Music Awards (were they to win, which they didn't); his prize included red carpet treatment at the November 2003 event, which he attended with his first UCSC dorm mate, **Damien VEN DER BERG**.

'99 Christopher CHRISTIANSON is still paying off his student loans and painting houses—work that he could have done without a college education. "Let's just hope all's well that ends well," he writes.

Stevenson College

'69 Jennifer LAUGHEAD Robinson left bookkeeping for teaching in 2002 and has moved to the Nevada desert with her husband, Kim, to live off the grid and be energy self-sufficient.

'70 After teaching at St. Cloud State University for nine years, **Michael FISKE** is now chair of the Department of Mathematical Sciences at Shawnee State University in Portsmouth, Ohio, succeeding **Chris O'CONNOR** (Stevenson '84), who served as interim chair for two years. "Who else has two UCSC graduates on its mathematics faculty?" asks Fiske.

'71 In July 2003, then-California-governor Gray Davis appointed **Maggie BARR** to an 18-month position on the board of directors of the 14th District Agricultural Association (Santa Cruz County Fair); Barr works as a paralegal and manager at the office of Santa Cruz attorney Ian McPhail.

'74 Walter BOYES has been a consultant for a number of years and is now editor-in-chief and publisher of *Control* magazine *(www.controlmag.com)*; he has published six books, sold one science fiction short story, and has a wife, two daughters, four dogs, and two cats. In addition, he volunteers as president of the CorgiAid Foundation and as a board member of *Readassist.org*.

'77 Mitch HALPERN writes that his daughter says he's a great dad, and his wife says he's a great husband; he reports that he is still a good tennis player and loves visiting UCSC.

'82 Starting as a news reporter/writer for wire and radio, **Kimberly HUGHES** spent three years at KBLX Radio and then 16 years doing national promotion for RCA and LOUD/Sony; she is now crossover editor at *Hits* magazine. **Julie SPIEGLER** works for Helium, a consulting firm on the San Mateo coast that has built a sophisticated database system for the San Francisco 49ers' defensive squad; the system manages scouting reports, tracks opponents' tendencies, and helps produce a weekly playbook.

'83 Sarah CREWE and her husband, Patrick Connor, adopted twin girls, born in May 2003.

'86 David HARROWER is living in Phoenix, working for an engineering company, and teaching computer and information science courses at a local junior college; he's been married for five years.

'87 Vince TROFIMOFF is a lecturer at California State University, San Marcos, where he teaches a wide variety of psychology courses; in his free time he still occasionally rocks out with **Steve BOGUSIEWICZ** (Stevenson '89).

'92 Amy EVERITT recently moved back to the Bay Area after a 10-year adventure in Vietnam, Washington, D.C., and grad school at UCSD; currently she is the political director at EdVoice and a Democratic political consultant. **Marcia WALL** is doing stand-up comedy in the French Quarter of New Orleans; friends may reach her at *wallmarcia@hotmail.com.*

'94 Darren LEVINE was ordained as a rabbi by Hebrew Union College–Jewish Institute of Religion in May 2003 and got married one month later. Prior to entering rabbinical school, Levine had been a member of the U.S. men's volleyball team that won the bronze medal at the 1997 Maccabiah Games in Israel; he has also worked with Ethiopian immigrants in Jerusalem and served in the Israeli army.

'02 After graduation, **Helen KILGALLEN** spent four months in India putting her newly acquired Hindi skills to use; now she's back in the Central Valley, applying for the German master's program at California State University, Long Beach, and preparing herself for immersion in southern California culture. **Andrew STANBRIDGE** is spending a year in Chiang Mai, Thailand, as a Fulbright scholar, pursuing his photography career.

We'd like to hear from you

- **Use the card in the middle of the magazine to send us your class note**
- **or send e-mail to *dewey@ucsc.edu***
- **or submit a note via the web at *alumni.ucsc.edu* (go to Class Notes)**

Crown College

'72 Marilyn GREEN is in her 17th year working on state and federal projects for Moorpark Unified School District; her older son, Alex, is a junior at UCSC, living at Oakes College, and her younger son, Nathaniel, is a freshman at Stanford.

'73 Charles LAWSON has been working on Middle East issues in the State Department, and for the last 10 years he has focused on water and environmental issues in the peace process.

'77 Aaron BERNSTEIN is a senior writer for *Business Week* magazine, coauthor of the book *In the Company of Owners: The Truth about Stock Options (And Why Every Employee Should Have Them)* (Basic Books, 2003), and author of *Grounded: Frank Lorenzo and the Destruction of Eastern Airlines* (Simon & Schuster, 1990). **Maximiliano CUEVAS** is living in Salinas and working as the CEO of Clinica de Salud del Valle de Salinas, which provides health care services to families in the Salinas Valley.

More Alumni Notes on page 26 ▶

Alumni News

Alumni Association Councilors, 2003–04

Cowell
Adilah Barnes '72, *Vice President for External Affairs*
Gregory Canillas '90
Karen Rhodes '77
Allison Tom '93

Stevenson
David Brick '69
Amy Everitt '92
Sandor Nagyszalanczy '77, *Vice President for Administration*
Joan Fitting Scott '69, *Vice President for Internal Affairs*

Crown
LizAnne Jensen '78
Stacey Vreeken '83

Merrill
Ken Doctor '71, *President*
Patrick R. Ford '93
Dominador Siababa '75, *Executive Vice President*

Porter
John Gutierrez '73
Rob Sawyer '72, *Vice President for Finance*
Denzil Verardo '70

Kresge
Richard C. Hall '92
Sharif Traylor '85

Oakes
Eric D. Thomas '84, *Past President*
Filomena Trindade '85
Patrick Walker '84

College Eight
Susan Brutschy '80
Aaron Cole '91

Ex Officio
Carolyn Christopherson, *Executive Director*
Alison Galloway, *Chair, Academic Senate*
M.R.C. Greenwood, *Chancellor*
Mateo Reyes, *Chair, Student Union Assembly*
Emily Moberg Robinson, *President, Graduate Student Association*

Banana Slug Spring Fair 2004 on April 17

PHOTOS: SIMMEL THALER

From lectures to reunions, last year's Banana Spring Fair offered 35 events that attracted 1,600 alumni attendees and friends. Left: After delivering the BSSF Distinguished Faculty Lecture, anthropology professor Adrienne Zihlman *shares a laugh with* John Leopold *(Merrill '88), UCSC's social sciences development director. Right:* Adilah Barnes *(Cowell '72), left, enjoys the company of* Joyce Justus, *special assistant to the chancellor, at the Black Escargot reception for African American alumni and friends.*

Celebrate spring with a visit to your alma mater during Banana Slug Spring Fair on Saturday, April 17. This year, BSSF offers lectures, receptions, reunions, and panel discussions exclusively for alumni and friends. Highlights are listed below.

Go to **alumni.ucsc.edu** for up-to-the-minute event details, to see who is coming, and to RSVP, or contact the Alumni Association at (800) 933-SLUG.

▶ **All-Alumni Reunion Luncheon.** Reconnect with old friends at BSSF's largest event. Classes of '69, '74, '79, '84, '89, '94, and '99 will receive special recognition. Memorabilia will be displayed—bring your photos to share.

▶ **The multimedia BSSF Distinguished Faculty Lecture** will be presented by renowned astronomy professor Sandra Faber, who has been involved with two of the major optical astronomy ventures of recent years: the Hubble Space Telescope and the W. M. Keck Observatory in Hawaii.

▶ **College Provosts' Receptions.** Colleges will hold afternoon receptions for alumni, faculty, and staff.

▶ **Alumni Panel Discussion.** Thirty years ago, UCSC shaped them; now they're shaping the world. The panel will feature distinguished grads from the Class of '74 making connections between their education at UCSC and their work today.

▶ **The Gay, Lesbian, Bi, Trans, Intersex (GLBTI) Resource Center** will hold a reception/book signing for *Out in the Redwoods*, documenting UCSC's GLBT history; a Slug Social at Club Dakota downtown; and an on-campus Sunday brunch.

▶ **30-Year Reunion of the Class of '74** includes a wine-and-hors d'oeuvres reception, dinner, and a multimedia presentation about UCSC in the '70s. Send your vintage photos (scanned) to Lynn Zachreson at *lynnz@ucsc.edu* and see them on screen.

▶ **35-Year Reunion of the Class of '69.** Events begin Friday evening with a downtown happy hour, and continue on Saturday with a wine-and-cheese reception and off-campus no-host dinner. On Sunday, "Stewarding College Traditions," a brunch with early-era faculty—including founding Oakes College provost J. Herman Blake—concludes the weekend.

▶ **Other Events**

- The Departments of American Studies, Film and Digital Media, History, Literature, Philosophy, and Women's Studies; the Language Program; and the Jack Baskin School of Engineering will each hold receptions for their alumni, faculty, and guests.
- Chicano and Latino alumni, faculty, and guests will gather at the Oakes Provost's House.
- A tea at the Women's Center will welcome alumni, past Women's Center directors, and former staff.
- On Sunday, Hillel will hold a free brunch at its headquarters just below campus to celebrate "A Jewish Renaissance at UC Santa Cruz."

UCSC PHOTO SERVICES

Kathryn Sullivan *(Cowell '73),* Kenneth Feingold *(Cowell '71) (center), and* Ken Doctor *(Merrill '71) at last fall's Scholarships Benefit Dinner*

Alumni give back, support scholarships

"In these difficult economic times, scholarships provide access that can literally make a life-changing difference for UCSC students and their families," said Ken Doctor (Merrill '71).

Doctor, a vice president at Knight Ridder Digital and the current president of the UCSC Alumni Association Council, was among the 310 guests who attended the October 2003 Scholarships Benefit Dinner fundraiser for undergraduate scholarships and graduate fellowships. Proceeds from the dinner and associated activities raised more than $500,000.

Kathryn Sullivan (Cowell '73), who in 1984 was the first American woman to walk in space, was the dinner's master of ceremonies. In one of the evening's more dramatic moments, she pledged $25,000 over a five-year period for a scholarship endowment.

"I'm very proud so many alumni are supporting educational excellence, so today's students can benefit as we did," said Los Angeles attorney Kenneth Feingold (Cowell '71). "We believe strongly in the university's power to make a difference." Feingold attended the dinner as president of the UC Santa Cruz Foundation; he is the first campus graduate to hold that post.

Alumni support for scholarships was evident throughout the event. Over half of the 31 table sponsors at the dinner were alumni. All 23 elected members of the Alumni Association Council made contributions in support of the event. Dinner guests enjoyed fine wines generously donated by alumni vintners and friends.

At the dinner, UC President Emeritus Richard C. Atkinson was presented with the first UCSC Foundation Medal in recognition of his leadership. The medal was designed and created by sculptor Sean Monaghan (Kresge '83).

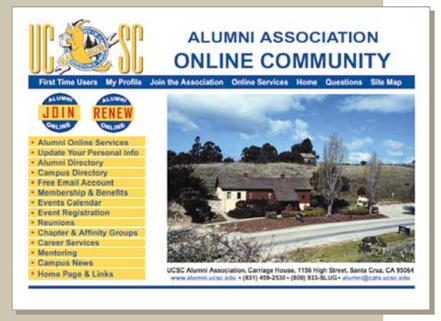
Among the speakers was Aurotaranti Maiolini, a senior anthropology student. Maiolini is the recipient of two alumni-funded awards. "I am living proof that education has the power to transform lives," she said. "As the first in my family who will graduate from college, I am grateful every day for the opportunity and for the financial assistance from people like you that have made it possible."

All alumni are invited to make a donation toward scholarships, fellowships, and other campus programs of their choice. Donations may be made online at *giveto.ucsc.edu* or by contacting Jennifer Wood, director of development for the Annual Fund and Colleges, at (800) 933-SLUG.

Free career advice that works

Looking for a job or a new career? Alumni mentors—more than 400 of them—can help.

Sherry Xu (Graduate Studies '03) recently connected with mentor and Wells Fargo Bank financial analyst Aaron Cole (College Eight '91), whose résumé advice helped her get a job in the Bay Area financial industry. "I like to help people, and I might need this help myself some day," Cole said. "You never know." UCSC alumni mentors are friendly, knowledgeable, and searchable by city, career field, and other factors. Most mentoring takes place via e-mail, and it's free for all UCSC graduates to use. Check the career services area of the Alumni Association's web site, *alumni.ucsc.edu.*



DOREEN SCHACK

Comedian and TV star Howie Mandel; *Alumni Association Los Angeles chapter president* Roz Helfand *(Porter '97) (center); Mandel's daughter,* Jackelyn *(right), an incoming UCSC student; and 250 other guests enjoyed the Los Angeles sun at a welcome celebration for new UCSC students, held in September. Alumni Association events like this one offer alumni the chance to interact meaningfully with students. Programs of all kinds are held across the nation throughout the year. For more information, check the events calendar at* **alumni.ucsc.edu**.

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Jerry RUIZ was recently honored by the Mexican American Bar Foundation with its 2003 Professional Achievement Award.
'78 John PETERSON, a physician specializing in pediatric psychiatry and an assistant professor of psychiatry in the Department of Medicine at the University of Colorado Health Sciences Center, was named to the list of "Top Doctors 2003" in the metropolitan Denver area by *5280: Denver's Mile-High Magazine*.
'84 After many years and the assistance of medical science, **Chris CANDELL** and his wife are expecting their first child.
'85 Margaret SHIFFRAR, a professor of psychology at Rutgers University, has been awarded nearly $1 million from the National Eye Institute—part of the National Institutes of Health—to support her research on human visual perception.
'91 Carolyn SCHNEIDER Lewis and her husband, Dan Lewis, live in Roseville, Calif., with their two daughters, Deborah (2) and Rachel Ann (born in May 2003).
'94 Neil LASLETT works for Creative Associates International and is in Iraq setting up a secondary school system.
'96 Jeremy MARLEY graduated with a master's degree in environmental education from the University of New Mexico in December 2003; he is an environmental education resource specialist for the Bosque School in Albuquerque.
'00 Rachel BOPP writes that "UCSC taught me to be an extremely well rounded individual and made me see things I would normally overlook."

Merrill College

'74 Anita HEMPHILL McCormick won the 2003 Distinguished Lecturer Award at UCLA for outstanding contributions to the university as a lecturer in the Writing Programs.
'79 Ellen FITZPATRICK, an associate professor of economics and finance in the School of Business and Economics at Plattsburgh State University of New York, has received a Fulbright scholarship to study agricultural economics in Turkey for the 2003–04 academic year. **Roberto NAJERA**, a deputy public defender for Contra Costa County and a Harvard Law School graduate, successfully argued a statute-of-limitations case before the U.S. Supreme Court in spring 2003.
'90 Luis GUEVARA still lives in Austin, Texas, and he is now an academic adviser with the Center for Mexican American Studies and a recruitment assistant with the Graduate School at the University of Texas. **Walter LEVISON** is a consulting arborist, registered with the American Society of Consulting Arborists; he works out of Millbrae, Calif. **Lia Scott PRICE** lectured at UCSC in fall 2002 as part of the Kresge College class *The Writing Life*, a seminar that was part of the Distinguished Alumni Series; Price has written three novels: two supernatural thrillers and a "dark" romance. **Joe ROZA** recently defended his doctoral dissertation in history at the University of Washington; he lives in Seattle.
'91 After working as a corporate lawyer in Beijing, **Andrea GOODMAN** has taken a position as a junior officer in the political section of the U.S. Foreign Service of the State Department—the fulfillment of a long-standing dream begun when she studied Chinese at UCSC. In spring 2003 **Jaxon (Daniel FITCH) Ravens** undertook a 14-week bicycle journey across the U.S. following the Lewis and Clark trail from Washington, D.C., to Astoria, Ore.; the trip coincided with the bicentennial of the original journey taken by Meriwether Lewis and William Clark between 1803 and 1806.
'93 Elizabeth (Bets) BRAIT has been working on two master's degrees, one in social work and another in law and social policy, at Bryn Mawr Graduate School of Social Work and Social Research and will graduate in 2004.
'97 Rebecca PFAEFFLE Lee has been teaching preschool in San Francisco for five years; she got married in August 2003, with her college housemate, **Veronica DIAZ** (Merrill '97), in attendance.
'02 Sarah COOPER is currently attending law school and planning her August 2004 wedding. **Tammy DO** is back in Sacramento and was planning to start a combined master's and teacher credential program at UC Davis in fall 2003; friends can reach her at *odymmat@yahoo.com*.

Porter College

'84 Karen KARAVATOS has recently become "of counsel" to Robinson, Calcagnie & Robinson in Newport Beach, Calif.; her practice focuses on representation of plaintiffs in litigation against tobacco companies.
'85 Dana La RUE recently returned from Normandie, France, where she painted murals in a 17th-century chateau; she is now teaching art in an elementary school in Mountain View, Calif.
'89 Jay FIENBERG is living in San Francisco with Anastasia Fuller and their cat, Nikita; he is working on an album of his music and developing an open source software project called the iCite net (*http://icite.net*).
'92 John "Victor" VEYSEY manages the Bike Hut at San Francisco's Pier 40, where his staff and volunteers repair and rent bikes while training young people from impoverished neighborhoods in bike mechanics; he was profiled in a September 2003 article in the *San Francisco Chronicle*.
'93 After graduating from UC's Hastings College of the Law, **Eric JOHNSON** has settled in San Francisco and is a staff attorney for the Ninth Circuit U.S. Court of Appeals, where he specializes in criminal law.
'95 Emily HAOZOUS completed her master's degree in nursing from Yale University in May 2003 and received a scholarship from the Oncology Nursing Society to attend the society's annual congress that same month. After living in Montana for a while, **Christeta HUMPHRY** is back in the Monterey Bay Area working in Pajaro with a partially finished teaching credential; she would love to hear from fellow classmates at *ps981@yahoo.com*.
'01 Ryan NOONAN entered the U.S. Air Force Officer Training School in February 2002 and was commissioned as a 2nd lieutenant in May 2002; in August 2003, he graduated first in his class from specialized undergraduate pilot training and is now a pilot assigned to the F-16C *Falcon* at Luke Air Force Base in Arizona. After taking a year off to take a job as a social worker at a nonprofit in Capitola, **Mary PLATE** is in law school in San Diego; friends may e-mail her at *mkplate@yahoo.com*. **Devora Elyse ROGERS** was a Fulbright Fellow in 2002–03, teaching English as a foreign language in Germany.

Kresge College

'83 Alaine PERRY is living in the Washington, D.C., area and working as a policy analyst; she would love to hear from old friends at *alainep2@aol.com*.
'85 Liz JANAPOL owns Ari's Organics in Encinitas, Calif., a produce stand carrying vegetables, fruits, and fresh herbs from a variety of certified organic sources.
'86 John NORRIS is doing conceptual art, ceramics, and participating in open source; visit his web site at *john-norris.net*.
'88 Benyamin Bergmann LICHTENSTEIN has been appointed assistant professor of entrepreneurship in the Department of Entrepreneurship and Emerging Enterprises at the Martin J. Whitman School of Management at Syracuse.
'89 Ben BERTRAM is an assistant professor in the Department of English at the University of Southern Maine; his first book, *The Time Is Out of Joint: Skepticism in Shakespeare's England*, is forthcoming from the University of Delaware Press. **Bonnie HASSON** was one of 50 child care teachers nationwide honored in 2003 by the TYLENOL & Terri Lynne Lokoff Child Care Foundation for their commitment and dedication to young children; each winner received a $500 cash award and a $500 grant to implement a classroom project.
'90 Stephanie ASCH Alber lives with her husband and children in Florida and teaches English as a second language at Miami Dade Community College. In late 2003, **Lydia ARIAUDO GRAGG**'s second play, *Strangers in Hoboken*, was produced by the City University of New York Theatre Department; she lives in New York.
'92 Kelly KOERNER received her J.D. from the University of La Verne in 2003; she is now working at the law offices of DaCorsi & Placencio in Woodland Hills, Calif.
'93 Joanna GOLDBERG is living in Oakland and working in San Francisco as director of human resources for the Tenderloin Neighborhood Development Corporation.
'96 Monica Ruth WHALEN recently returned from a visit with Peace Corps friends in Kenya; she is teaching English, social studies, and geography at Franklin High School in Los Angeles.

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'Virus detective' takes on SARS

Joseph DeRisi (B.S., biochemistry and molecular biology, Crown College, '92) uses his technology to identify the virus.

When you study viruses for a living, the stakes are often high. But the life-and-death nature of his work was never more clear to "virus detective" Joe DeRisi than when an unknown respiratory illness began infecting thousands of people in more than two dozen countries a year ago.

Scientists around the world were desperately trying to find out what was causing the illness—dubbed Severe Acute Respiratory Syndrome, or SARS—so they could screen and contain the epidemic.

DeRisi, an assistant professor of biochemistry and biophysics at UC San Francisco, thought his lab could play a crucial role. DeRisi and his postdoctoral researcher, David Wang, had been working for two years on a DNA chip, or microarray, designed to detect a wide range of known viruses and unknown members of existing viral families. DeRisi and Wang had also developed software and database applications to interpret the reactions that occur on the chip, establishing the critical relationship of new viruses to known ones.

As part of the Global Response Team formed to battle SARS, DeRisi asked the Centers for Disease Control in Atlanta to send him SARS virus samples. Within just 24 hours, his lab determined that the culprit was a previously unknown coronavirus—part of the family of viruses that usually causes mild disease with coldlike symptons. The finding came simultaneously with the CDC's own identification, providing valuable confirmation and moving scientists one step closer to controlling the outbreak.

"We were also able to sequence part of the virus," recalls DeRisi. "We forwarded that sequence to the CDC, which assisted in their efforts to sequence the whole genome."

Looking back, DeRisi says the pressure was intense—and inescapable—at a time when images of pedestrians in the Far East wearing surgical masks flashed regularly on TV. Nearly 800 people died from SARS. "There is a life-and-death aspect to this that adds to the whole high-tension, high-pressure environment," he said. "But it was one of the most exciting things I've ever been involved in."

DeRisi, two postdoctoral researchers, and one graduate student barely left the lab for three days during the SARS effort.

"We'd been working for two years on developing the technology to diagnose and identify a new respiratory pathogen, and then suddenly a global emergency happens and we're able to instantly apply this technology," DeRisi says. "It was very gratifying."

DeRisi's DNA chip has several advantages, including speed. "What used to take weeks now takes hours," he says. Another key advantage is that the chip can detect hundreds of different viruses. "Almost all other techniques in this field require you to know what you're looking for," DeRisi notes.

"When we made this array of viruses we decided that we had to have all viruses represented, including plant viruses, insect viruses, etc., not just human viruses," says DeRisi. As it turned out, DeRisi's lab found that SARS had genetic similarities to three coronaviruses that infect birds, cows, and people, but was not identical to any of those viruses. (Hong Kong researchers later found that the virus was nearly identical to a coronavirus affecting wild animals in one Chinese province.)

"It validated our technology as a method for rapid identification of a novel pathogen," DeRisi says. "We foresee that this can be a frontline defense against emerging diseases. We're not waiting for the next SARS."

While SARS appears contained for now, DeRisi's work on the virus drew international media coverage and his phone hasn't stopped ringing. In addition to talking to journalists, DeRisi also generously shares his research with other scientists and students.

Nowhere is this approach more important than in his research on malaria, which is caused by a single-celled organism known as a protozoan rather than a virus. A scourge of the Third World that kills millions annually, malaria has long been a focus of DeRisi's efforts, earning him the J. P. Morgan Chase Health Award in 2001 from the Tech Museum in San Jose for "Technology Benefiting Humanity."

DeRisi wrote about his research results on malaria last fall in a new online biology journal published by the Public Library of Science and freely available around the world. His research reveals genetic activity during a critical phase of the parasite's life cycle, indicating a potential vulnerability that could one day be exploited to treat the disease.

"If you're going to publish research that's important to the Third World, you'd better make it accessible to them," DeRisi says, noting that he has long favored publishing his results in journals that support free and open access, and posting information online.

"Malaria is a disease the First World does not suffer from, and therefore pays very little attention to," says DeRisi. "There's no money really to be made in malaria; therefore you do not see large pharmaceutical interests taking malaria very seriously," he notes. "The people who die from malaria don't carry credit cards."

DeRisi's efforts to disseminate knowledge go well beyond publishing. In an effort to make microarray technology more affordable—and less dominated by industry—he drew scientists from around the country to a short course on microarrays, held at UCSC and arranged through the multicampus California Institute for Quantitative Biomedical Research.

To DeRisi, it just makes scientific sense to share his results widely. "The idea is to enable as many people as possible to do this kind of science. We're trying to accelerate the rate of scientific discovery as fast as possible."

—Louise Gilmore Donahue

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'98 After traveling between Eastern Europe and California for the past five years, **Erica FALT** has settled down in New York City and is a law student at Columbia University; she plans to marry her Macedonian sweetheart in September 2004.
Janda WETHERINGTON is working on a documentary film on artists in Cuba, Jamaica, and Haiti.
'99 Claire HOFFMAN is in New York working on a master's degree at the Columbia School of Journalism; in summer 2003 she had a story published in the *New York Times* and subsequently was awarded an internship with the paper.
'01 Philip COFFIN is the director of education at the New York Restoration Project, a Manhattan nonprofit founded by Bette Midler that serves 1,200 second to eighth graders with outdoor science, gardening, biking, and boating programs; Philip lives in Harlem and is still playing drums in an R&B group.

Oakes College

'84 Rob HIGH is a distinguished engineer and the chief architect for the WebSphere Application Server product family at IBM in Austin, Texas; he has worked for IBM since 1981.
'92 Sharon ANOLIK was married in August 2003 and is an adjunct professor at Golden Gate University School of Law; she is also associate general counsel and chief privacy officer for Ask Jeeves.
'95 John GARCIA has earned his full professional teaching credential in social studies and was planning to begin a master's program in education in fall 2003; friends can drop him a line at *jgarci11@aol.com.*
'98 Karessa HOLDEN married Chris Silvers in Malibu in October with all of her UCSC freshman roommates in attendance; Karessa is a fifth-grade teacher, and Chris is a photographer.
'02 Angela THIBODEAUX has formed an association for students at UCSC who want to experience traveling and studying in Africa before committing to an Education Abroad Program; called Ambassadors to Africa, the nonprofit association takes motivated students to Africa by fundraising.
'03 Alexis RAMOS, a Navy ensign, received his commission as a naval officer after completing Officer Candidate School at Naval Aviation Schools Command in Pensacola, Florida.

College Eight

'78 Paul HANDLEMAN is working in Washington, D.C. ("yes, the belly of the beast"), as a lawyer for the IRS; although he never thought he'd leave the Golden State, he and his partner, Peter, are comfortable on the East Coast and plan to stay there.
'81 Brenda VENDOUZIS Thompson and her husband, **James THOMPSON** (College Eight '80), have returned to the Monterey Bay Area after eight years overseas; Brenda is an information technology analyst at California State University, Monterey Bay, and James is teaching biology at Monterey Peninsula College.
'82 Marguerite SPRAGUE has published a book about life in the former Gold Rush boomtown of Bodie, California, titled *Bodie's Gold: Tall Tales and True History from a California Mining Town* (University of Nevada Press, 2003).
'83 Jennifer NOONE is an independent wildlife biologist, living in a small community in the Tehachapi Mountains of Kern County, Calif.; classmates may contact her at *thunder_rider@antelecom.net.*
'84 Steven TERRINI earned a Ph.D. in psychology from the University of Nevada, Reno, and is now working as a forensic psychologist for the California Department of Corrections.
'85 After more than a decade in Washington, D.C., where he worked for Defenders of Wildlife and the Chesapeake Bay Foundation, **Bob FERRIS** has returned to California and is the new executive director of the Community Environmental Council in Santa Barbara, the largest nonprofit environmental organization on the South Coast, with diverse programs in pollution prevention, watershed protection, and environmental education.
'87 Jon GUICE is raising venture capital for Point Power Systems, the first company bringing on-site wind power to the mainstream; he is married with kids and lives in the Bay Area; friends and interested investors may contact him at *jon@abrivo.com.*
'91 Elyssa ELDRIDGE and her husband live in Oakland, where she is staying home to care for their three-and-a-half-year-old daughter and baby son, born in September 2003.
'97 Paul FANNING is mortgage sales manager for ING DIRECT in Los Angeles.
'99 Kelly REICH is finishing a master's program at California State University, Fullerton, with plans to graduate in May 2004.
'00 Shelly MORGAN has moved to Chugiak, Alaska, where she is office administrator, executive assistant, and trustee-relations manager at the Nature Conservancy; she works with UCSC alum **Rob BOSWORTH** (College Eight '74).
'02 U.S. Army journalist **Peter LIU** has been serving with the coalition forces in Iraq since March 2003; his job is to educate the public about the positive role the U.S. military is playing and the things they do daily to help the Iraqi people.

Graduate Studies

'79 Alexander GONZALEZ (Ph.D., psychology) became president of California State University, Sacramento, in July 2003; prior to that, he served as president of California State University, San Marcos. **Judith TOTMAN Parrish** (Ph.D., Earth sciences) was appointed dean of the College of Science at the University of Idaho in June 2003; before she took this job she was associate dean of the College of Science at the University of Arizona, Tucson.
'82 UC Berkeley astronomer **Geoff MARCY** (Ph.D., astronomy) was profiled in the April 2003 issue of *California Monthly*, the Berkeley alumni magazine; Marcy and his team are among the world's foremost hunters of planets outside our solar system. **Joe PALCA** (Ph.D., psychology), science correspondent for National Public Radio (NPR), received a National Academies Communication Award for excellence in communicating science, engineering, and medicine to the general public; in October 2003, he interviewed his UCSC thesis adviser, professor emeritus of biology Ralph Berger, for an NPR story marking the 50th anniversary of the discovery of REM sleep.
'84 Candace FALK (Ph.D., history of consciousness) is the founder and director of the Emma Goldman Papers project at UC Berkeley. In January 2003, the *New York Times* brought worldwide attention to Falk with a story about how UC Berkeley was threatening to censor the project's fundraising letter for including antiwar quotes from Goldman at a time when the Bush administration was preparing for war.
'89 Vincent DiGIROLAMO (M.A., history) is an assistant professor in the History Department at Baruch College, City University of New York.
'91 Will ROSCOE (Ph.D., history of consciousness), an adjunct research faculty member of the Institute of Transpersonal Psychology in Palo Alto, won a $2,000 Monette/Horwitz Trust Scholars Award in 2003. The awards recognize activism, research, and scholarship in combating homophobia.
'96 David SONNENFELD (Ph.D., sociology) has been granted tenure and promoted to associate professor in the Department of Community and Rural Sociology at Washington State University.

In Memoriam

Joshua CRAWFORD (Crown '97), who was working in the wine industry and pursuing his music, died August 31, 2003; he was 31.
Robert KNOWLES (Cowell '83), an award-winning news anchor and investigative reporter at WBTV in Charlotte, North Carolina, died on May 13, 2003; he was 42. Knowles was a student commencement speaker at his Cowell College graduation.
David LESLIE (M.S., geology '81), an outdoorsman and avid sports fan who worked as a long-range land use planner for Deschutes County, Oregon, and was a founding member of the Deschutes Basin Land Trust, died May 26, 2003, of melanoma; he was 50.
Hiroyuki MORI (Crown '89), who was finishing graduate work at Caltech and worked as a researcher at UC San Francisco Medical Center, died of leukemia in July 2000; he was 36.
Felicia MURPHY (Merrill '84), who received her Ph.D. in biochemistry in 1992 from the University of Colorado at Boulder, died at home on May 30, 2003, after an eight-year fight with cancer.
Robert STRAND (Crown '70), a 30-year UCSC employee who worked as a computer programmer at McHenry Library for most of his career and retired in 1998, died on January 5, 2004; he was 55 years old.

Only two nesting pairs of peregrine falcons remained in California in 1975. So, we were thinking a campus-sponsored nursery could help rescue them from the brink of extinction. Through the years, we've raised and released 950 chicks using centuries-old falconry methods to preserve their predatory instincts. Now they're off the endangered species list—a living testament to the environmental awareness and activism that continue to distinguish the UCSC community.

We'd like to bring our alumni back, too–back to campus for Banana Slug Spring Fair on April 17 (see page 24). Reminisce with your classmates. Reconnect with your professors. Rediscover UCSC. Because life is always more interesting at the edge.

UC Santa Cruz. Thinking at the edge.

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