“Postdoctoral scholars are unsung heroes of our remarkable biomedical research accomplishments. They are at a stage when they are commendably trained and are enthusiastically pursuing research objectives.”

Dr. Paul Boyer, UCLA Professor in Chemistry and Biochemistry and Nobel Prize winner in chemistry

In this issue

3 ■ Unsung Heroes of Research
   Postdoctoral scholars honored at first annual awards ceremony and reception

4 ■ Distinguished Researchers
   Recipients of the first annual postdoctoral awards recognized for their contributions

6 ■ The “Postdoctoral Fellow”

7 ■ Graduate Student Profiles

10 ■ Fellowship/scholarship Tax Info for Graduate Students

11 ■ Career Pathways: A Unique Conference for Doctoral Students & Postdoctoral Fellows

12 ■ Graduate Student Accomplishments

Back Cover
   Entering Graduate Students Welcomed at Chancellor’s Address
Dear Graduate Student,

This issue of the Graduate Quarterly departs somewhat from our usual editorial content in its focus on postdoctoral scholars. I would like to take this opportunity to share with you some of the reasons why we believe this information would be of interest to many graduate students, and relevant to graduate education in general.

Each year at UCLA, there are approximately 1,000 registered postdocs on campus. Most are recent doctoral recipients from other universities who stay at UCLA from two to five years working with designated faculty on research projects of common interest. They come from all over the world and many are international scholars who may have received their doctoral degree either in the U.S. or in another country. Postdocs are represented in nearly all disciplines although the majority are in the laboratory sciences, with the largest numbers involved in biomedical research.

Our placement data reveals that many recent UCLA PhDs go directly to a postdoctoral training position. For example, of the 2,204 PhDs awarded from Winter 1994 to Spring 1997, 456 (21%) had accepted a postdoctoral training position within a year of receiving their degree. The numbers of UCLA students pursuing postdoctoral training varies widely by discipline (e.g., 63% in the academic health sciences; 49% in the physical sciences; 46% in the life sciences; 7% in public policy and social research; 6% in engineering; 5% in the social sciences; 3% in the humanities, etc.).

Postdoctoral scholars often play an important role in graduate education. They work closely with graduate students on research projects, assist faculty in training their graduate students, and many function as significant mentors and role models for their graduate student colleagues.

Issues relating to the postdoctoral training position are also an important consideration in evaluating the PhD job market. There is some concern, for example, that time spent in postdoctoral training status has increased in recent years and that this reflects diminished employment opportunities both in academe and the private sector. Surveys of postdocs themselves, however, suggest that the overwhelming majority are in the position by choice, not because other employment was unavailable. A related concern is that since postdocs are in a rather anomalous category (not faculty, not students, not staff) that they may not receive appropriate services, benefits and recognition from the universities with which they are temporarily affiliated. The materials included in this issue of the Graduate Quarterly reflect UCLA’s efforts to begin addressing some of these concerns.

Sincerely,

Claudia Mitchell-Kernan
Vice Chancellor Academic Affairs
Dean, Graduate Division

quote for thought

Among all the interactions between faculty members and their advanced students, one kind of conflict is particularly pervasive and troublesome. It involves the very stuff of scholarship itself: data, ideas, experiments, theories. The questions that lie at its heart also lie near the heart of scholarly enhancement and prestige: Who thought of it? Who did the work? Who should get the credit?

In thirteen years as the court of last resort for academic grievance appeals at a research university, I encountered more difficult, passionately contested complaints in this area than in any other.


Graduate Quarterly

Dean’s Office
Claudia Mitchell-Kernan
Vice Chancellor Academic Affairs
Dean, Graduate Division

Jim Turner, Assistant Vice Chancellor
Robin Fisher, Associate Dean
Shirley Hune, Associate Dean
Graduate Programs

Kathleen Komar, Associate Dean
Matthew Miller, Assistant Dean

Academic Support and Information Services
Bryant Ng, Director
Graduate Affirmative Affairs
Information Services
Special Fellowships

Computer Services
Pamela Martin, Director

Graduate Admissions / Student & Academic Affairs
Daniel J. Bennett, Director

Graduate Student Support
Lynn Roych, Director

Graduate Division Website
http://www.gdnet.ucla.edu

Graduate Quarterly

Susan Young, Editor
Jacqueline Tasch, Profiles Writer
Daniel J. Bennett, News Writer
Kelly Maglia, Design

The Graduate Quarterly is published Fall, Winter and Spring Quarters by the UCLA Graduate Division. We welcome suggestions and comments, which may be printed selectively in future issues.

Please send correspondence to:
Graduate Quarterly
UCLA Graduate Division
1252 Murphy Hall
Box 951419
Los Angeles, CA 90095-1419
E-mail: syoung@gdnet.ucla.edu
Phone: (310) 206-7386

© Regents of the University of California
Unsung Heroes of Research

UCLA postdoctoral fellows honored at first annual awards ceremony and reception

"Postdoctoral scholars are unsung heroes of our remarkable biomedical research accomplishments. They are at a stage when they are commendably trained and are enthusiastically pursuing research objectives."

Dr. Paul Boyer, UCLA Professor in Chemistry & Biochemistry and Nobel Prize winner in chemistry

In recognition of these "unsung heroes," on November 5, 1998 Chancellor Albert Carnesale and Vice Chancellor and Dean Claudia Mitchell-Kernan hosted the first annual reception and awards ceremony for UCLA postdoctoral fellows. The event, held in the California Room of the Faculty Center, included the conferral of the newly-established Chancellor’s Award for Postdoctoral Research to five distinguished recipients. In addition to Vice Chancellor Mitchell-Kernan, other event co-sponsors were Brian Copenhaver, Provost of the College of Letters and Science, Wyatt Hume, Executive Vice Chancellor, Gerald Levey, Provost of Medical Sciences and Dean of the School of Medicine, C. Kumar Patel, Vice Chancellor for Research Programs and A.R. Frank Wazan, Dean, School of Engineering and Applied Science.

The 1998 award recipients honored at the ceremony were Shannon Daley, Psychology; Beth Dreyfuss, Chemistry and Biochemistry; Lian Li, Chemical Engineering; Francisco Raimo, Chemistry and Biochemistry; and Zhi-Ming Shao, Pathology and Laboratory Medicine.

Each of the Chancellor’s awards is accompanied by a $3,000 cash prize. A selection committee composed of faculty and academic administrators reviewed the qualifications of 30 candidates nominated by faculty. The committee evaluated such factors as creativity, productivity and impact on the field of research.

In his remarks, Chancellor Carnesale indicated his pleasure and pride in bringing together postdoctoral fellows, faculty mentors and administrative leaders of the academic programs “to honor the important achievements and contributions of UCLA’s ‘postdocs.'” The Chancellor emphasized the vital role of postdoctoral fellows in UCLA’s missions of teaching, research and public service and the need to make sure their accomplishments are recognized by the broad campus community.

Vice Chancellor Mitchell-Kernan said the reception and awards ceremony is “a campus-wide expression of appreciation to a group of colleagues who often toil beyond the immediate field of vision of the broader community but whose work continues to be instrumental in maintaining UCLA’s stature as a premier research university.”

Following remarks by several of the other event co-sponsors, including Executive Vice Chancellor Hume, who noted that he first came to UCLA as a ‘postdoc,’ Chancellor Carnesale introduced Dr. Paul Boyer, Professor in the Department of Chemistry and Biochemistry and winner of the Nobel Prize in chemistry. Dr. Boyer contributed $75,000 of his Nobel Prize money to UCLA, to endow a Postdoctoral Recognition Fund to annually recognize excellence in research in biochemistry and/or molecular biology. In addition, other portions of the prize money were donated to the Universities of Wisconsin and Minnesota. Dr. Boyer hopes these awards “will stimulate other ways of providing professional and financial recognition for our postdoctoral scholars.”

Following the conferral of awards, participants and guests enjoyed refreshments, and entertainment provided by the UCLA String Quartet.

By Daniel J. Bennett
Photo by Todd Cheney, ASUCLA Photography
Distinguished Scholars

Recipient of the first annual Chancellor’s Award for Postdoctoral Research recognized for their contributions

Shannon E. Daley
Psychology

Shannon Daley has been involved in an ongoing in-depth study of 155 women, following them from age 18 into young adulthood to see how depression and other psychopathology interacts with stress in their lives. Introduced to this research as a UCLA graduate student in psychology, she has had a substantial impact on its direction as a postdoctoral fellow. Dr. Daley has “established herself as someone so capable and clear-thinking about complex issues that I often call upon her ideas to help me resolve theoretical or statistical questions,” says her sponsor, Dr. Constance Hammen.

It was Dr. Daley who decided to look not only at depression but also at personality disorders, which are permanent features of the personality that may cause difficulties in relationships. An example is called borderline disorder. People with this personality type experience intense and rapid mood swings, leaving friends and family struggling to react appropriately.

Dr. Daley found that there was a strong relationship between personality disorders, depression, and life stressors. For example, young women who demonstrated these psychological problems at age 18 had a 40% chance of reporting an abusive relationship over the next few years. They also experienced an inordinate number of unwanted pregnancies.

Although Dr. Daley’s work does not involve clinical treatment, her findings may inspire others to look at providing treatment for depression and personality disorders early in adolescence. Most women are 15 to 19 years old when they first report serious depressive symptoms.

Dr. Hammen also remarked on Dr. Daley’s mentoring of graduate students. “It is clear that the junior students greatly admire and appreciate her level of professionalism and approachability.” To Dr. Daley, all this is just returning an old favor. “When I was a graduate student, there was a postdoc on the project who really helped me with the nitty-gritty, nuts and bolts stuff you don’t want to bother your adviser about,” Dr. Daley says. “I think the postdoc provides a nice bridge there.”

Dr. Daley urges graduate students to find a subject that they are really interested in, to motivate them through the detail work that is involved in most research. She also recommends being strategic. “Most postdoctoral fellowships last for a few years at most,” she says. “You need to think about what you can get out of it in that time.”

One of the offbeat accomplishments of her postdoctoral years is that she and her husband learned swing dancing. “You have to have a life,” she says. “If you don’t replenish yourself, you won’t be productive.”

Enjoying both research and teaching, Dr. Daley is now looking for an academic position.

Beth Welty Dreyfuss
Chemistry and Biochemistry

Beth Dreyfuss has been looking at how cells make protein, particularly the final process, when cells bring proteins and co-factors together for synthesis. The proteins that interest her are involved in breakdown foods and in photosynthesis, using and creating energy. Although she’s studying plants, the proteins are common in other life forms, and so her research could have wider implications. “Once you understand a general cellular process, you can often make a lot of implications about how it might be going on in another organism” she says.

Always interested in plant biology, Dr. Dreyfuss was drawn to UCLA for her PhD work by a group of researchers which had a grant to study plant molecular biology. Although she stayed at UCLA as a postdoctoral fellow, she is well-traveled, attending international and regional meetings in her subject area. “Once you know people – personally have met them – it’s certainly a lot easier to establish a collaboration or just to pick their brains. It makes the scientific community smaller, once you get out there and meet people.”

Among her travels was a three-month stay in Geneva with Jean-David Rochaix, a leading researcher and pioneer in the field of plant molecular biology. She returned to UCLA with a repertoire of new techniques for Sabeeha Merchant’s laboratory. “Thanks to her, they are not only routine but they are rather an indispensable tool for many of the projects in the group,” Dr. Merchant says.

The group includes graduate students. Although there are elements of mentoring involved, Dr. Dreyfuss sees graduate students mostly as coworkers. “You’re sort of in between the principal investigator or the professor and the graduate students,” she says. “You’re peers with both sets.”

The negative part of being a postdoctoral fellow is the “finite amount of time” you have to produce results, Dr. Dreyfuss says. On the other hand, you have the “wonderful luxury” of being able to focus completely on research, without the distractions of teaching or taking classes, handling administrative duties, and writing grant proposals.

Still, Dr. Dreyfuss wants to teach: “She has the ability to present concepts clearly,” Dr. Merchant says, “and she is patient with students in the classroom and in the laboratory environment.” Dr. Dreyfuss is interested in teaching at an undergraduate institution like her alma mater, Kenyon College.

An experienced ocean swimmer, Dr. Dreyfuss used to swim regularly. Although she swam through her pregnancy, her child’s infancy, and now toddlerhood, have kept her somewhat land-bound.

Lian Li
Chemical Engineering

Lian Li is working on research that may eventually advance the fabrication technologies for materials called compound semiconductors, which are used to make a range of indispensable items, from cell phone transistors to traffic lights.

Using a method called metalorganic chemical vapor deposition (MOCVD), Dr. Li and others are learning how to improve and make new materials out of two or more elements from group III (Al, Ga, and In) and group V (N, P, and As). Such materials might make cellular phones work longer and weigh less. A traffic light using a compound of gallium nitrides could glow for 100 years, instead of a few thousand hours. In addition to saving maintenance costs, this new technology could also save energy.

After receiving his PhD in physics from Arizona State University, Dr. Li was a postdoctoral fellow at Tohoku University in Sendai, Japan, when he saw an advertisement that Dr. Hicks had placed in a journal. Besides finding the projects interesting, Dr.

Graduate Quarterly, Winter 1999
Li thought he was just the right person to meet Dr. Hicks's needs.

First of all, Dr. Hicks was looking for someone to provide his laboratory with a capability for in situ scanning tunneling microscopy of materials grown by MOCVD. Within several months of his arrival in 1996, Dr. Li "was generating beautiful images of the atomic features on GaAs(001) surfaces," says Dr. Hicks, adding that his group is so far the only one in the country to achieve success with this project.

Dr. Hicks was also looking for someone to provide leadership to the graduate students working in his laboratory. Dr. Li's "many ideas and exceptional achievements have drawn my graduate students into collaborating with him," Dr. Hicks says. "These students are learning a great deal from Lian. . . . As a result of his mentoring, the students' productivity has exceeded my expectations, and I am enjoying all the scientific discoveries that the group is making."

From Dr. Li's point of view, his relationship with Dr. Hicks has been among the positive elements of being at UCLA. "I have a lot of freedom to do research," he says. "I can tell him I have this idea in my mind and I want to develop this project. Most of the time, he's supportive."

Dr. Li also enjoys helping students "develop research projects and review their progress," offering them the benefit of his experience and the knowledge base he has acquired. "We enjoy working together," he says, "and I benefit too because my professional goal is to become a professor. Closely supervising students is an important part of the job. I am enjoying doing that."

Francisco Raymo
Chemistry and Biochemistry

Francisco Raymo has influenced the future course of chemistry while still in his twenties – and while working as a postdoctoral fellow at UCLA – making profound contributions in both experimental and theoretical understanding of the nature of the mechanical bond.

At the end of 1996, Dr. Raymo spent a month working with K. N. Houk, a world leader in computation chemistry. A particular class of interlocked molecules (called rotaxanes) are made up of a macrocyclic component encircling a dumbbell-shaped component. Using computational methods, Dr. Raymo modeled how these molecules are assembled and disassembled. Besides the theoretical contributions to research of his finding, his approach is likely to become a teaching exercise for courses in computational chemistry. Later, he developed computational strategies for understanding other mechanically interlocked molecules (called catenanes), in which macrocyclic components are linked to each other.

In 1997, he returned to UCLA as part of the research cohort accompanying J. Fraser Stoddart, formerly of the University of Birmingham in the UK. Working with Dr. Houk, Dr. Raymo is continuing his study of the structural and electronic properties of catenanes and rotaxanes. He is interested in two topics involving these molecules in modern chemical science: Is it possible to construct molecule-size chains of mechanically linked components? Is it possible to design and construct moleculesize machines that can be controlled from the outside? Dr. Raymo’s experiments have provided a positive answer to the first question, and he is making progress on accomplishing the second. “These discoveries will have a tremendous impact on the technology of the next century,” says Dr. Stoddart. "I can only speculate that if he maintains and sustains the present quality and quantity of his scientific output in the years to come, then in 20 years (or even less), colleagues will be nominating him for the Nobel Prize in Chemistry.”

Dr. Raymo has already made his mark on the international chemistry scene. His extraordinary performance as a PhD student at the University of Birmingham led to his selection by the European Commission as a Marie Curie Fellowship Success Story. He and his work are well-known to leading chemical scientists around the world. He has 62 publications, many of them in high-profile journals.

Delighted with his experience at UCLA, Dr. Raymo has no immediate plans to leave. “For numerous reasons, UCLA is the best academic institution among those where I have worked so far,” he says. Dr. Raymo also remarks on the opportunities “to work with several very talented graduate students. Most of the results I have achieved at UCLA arise from fruitful and stimulating collaborations with these students.”

Zhi-Ming Shao
Pathology and Laboratory Medicine

Zhi-Ming Shao became interested in breast cancer when he was a resident in surgical oncology at Shanghai Medical University’s Cancer Hospital. Among the journal articles he read were some that reported work in the pathology laboratory of Sanford H. Barsky at the UCLA School of Medicine. Dr. Shao contacted Dr. Barsky, and their contacts resulted in a postdoctoral fellowship for Dr. Shao, which began in 1997.

The researchers in Dr. Barsky’s laboratory are interested in breast cancer metastasis: how the cancerous cells spread through the body. Dr. Shao helped to advance the laboratory’s work in research on the myoepithelial cell. When cancer begins, a layer of myoepithelial cells lies between cancerous cells and normal cells. This layer is breached as breast cancer progresses. When researchers know how that happens, they may be able to prevent it.

Continued on next page
Dr. Shao also came to UCLA with a research interest of his own. It has often been observed that Asian women experience much less breast cancer (and death from breast cancer) than women in the United States and other Western countries. Because Asian women also eat more soy products – Chinese women eat 20 to 50 times as much soy as American women – a connection has been hypothesized. Dr. Shao decided to examine this relationship.

He found that genistein, a natural phytoestrogen found in soy, tends to suppress breast cancer, both in laboratory experiments and in women, and he has begun to describe the multiple ways in which this happens. His work was published in the November 1998 issue of Cancer Research, a journal that has considerable influence in the field. For now, Dr. Shao’s work will have a significant effect on drug treatments designed to prevent breast cancer. In the future, he hopes his research will help to treat women who have already been diagnosed.

“It is unusual for a mentor to encourage you to work on your own project,” Dr. Shao said, “but Dr. Barsky did.” Perhaps because of this model, Dr. Shao has gone out of his way to be helpful to other researchers in the laboratory, his mentor says. “Dr. Shao has worked unselfishly in assisting my other graduate and postdoctoral students in their research efforts,” Dr. Barsky says, “even assisting other graduate students on papers he was not directly involved in as a coauthor.”

The collegial relationships are part of what Dr. Shao describes as a “very good research environment” at UCLA. His work on genistein was a major collaborative effort between the Shanghai Medical University and UCLA and “will lay the groundwork for future collaborative studies between our respective institutions,” Dr. Barsky says.

Dr. Shao is married to Qiao-Ling Li, a medical doctor who is conducting research in the microbiology of thyroid disease at the Cedars-Sinai Medical Center.

Profiles by Jacqueline Tasch
Photo by Todd Cheney
ASUCLA Photography

The “Postdoctoral Fellow”

The majority of postdoctoral fellows (“postdocs”), both at UCLA and at other major research universities in the United States, are science and engineering doctoral recipients who perform research and receive additional training under the mentoring of a senior faculty investigator. Some postdocs are paid from training grants and individual traineeships while the majority are funded from faculty research grants. In many biomedical and other fields, a period of postdoctoral training (also called a “postdoc”) is all but required in order to secure a tenure-track faculty position.

In the humanities and social sciences, the term “postdoctoral fellow” often describes a different academic experience. For nonscientists, a postdoctoral fellowship, such as those offered by the Mellon or the Woodrow Wilson Foundations or UCLA’s Institute of American Cultures, provides recent doctoral recipients with the opportunity to pursue independent research while receiving stipend support and remaining closely affiliated with a host department or institution’s community of scholars.

For More Information on Postdoc Appointments

• For more information about postdoctoral fellows at UCLA, visit the Graduate Division website at www.gdnet.ucla.edu

• The UCLA Office of the President offers the President’s Postdoctoral Fellowship to UC doctoral recipients: www.ucop.edu/acadadv/fgsaa/f-contents.html

• The Graduate and Postdoctoral Extramural Support (GRAPES) database, maintained by the Graduate Division, features numerous opportunities for postdoctoral fellowships in a variety of disciplines: www.gdnet.ucla.edu/grpinst.htm

• Science’s Next Wave, an online service of the American Association for the Advancement of Science (AAAS), has listings of positions and a wealth of up-to-date information about graduate and postdoctoral training in the sciences: www.nextwave.org

By Matthew Miller

* The Association of American Universities, an organization representing America’s major research universities, has published a report on the status of postdoctoral training in the United States. It provides specific recommendations for improving postdoctoral training, many of which are already in place at UCLA: www.tulane.edu/~aaau/PostdocEducationReport.html
Paul Apodaca
Folklore and Mythology

Paul Apodaca was a young boy when he was first introduced to the Cahuilla Indians of Southern California. His father, a Navajo Indian, often took Paul on long rides into the deserts east and south of their Orange County home, giving his son numerous opportunities to meet the people who were part of his cultural ancestry.

In January, Paul filed his dissertation on the Bird Songs of the Cahuilla Indians. Although they are called Bird Songs, they are not songs about birds or songs that imitate bird vocalizations. The name comes from Cahuilla mythology: A according to their migration myth, the Cahuilla traveled around the world before settling into their homelands in what is now Palm Springs and the neighboring areas. As they traveled, they took note of the birds they saw and heard. Thus, the journeys were recorded in three Bird Song cycles, or groups of songs. Two of these cycles have been lost to time but Paul has had a large part in assuring that the last cycle will never disappear.

“UCAL has given me all of the academic resources to make the story of the Cahuilla Bird Songs something that would be important and credible for everybody,” Paul says. “It’s master’s and doctoral work also provided “the final skills I have needed to be able to continue on this interesting path that the gods created for me from the time I was small.”

As Paul suggests, a colorful thread, now more than four decades long, connects his childhood experience with the most recent of his many achievements. The journey began in the mid-1950s, when the Apodaca family moved from Los Angeles to Orange County. His father made a habit of seeing that his son got to know “the people and places that were important to our collective histories,” Paul says.

As he moved among the various historical cultural institutions in Southern California, he kept running into academic researchers tracking the same information he was seeking. Often drafted as an intermediary between the academics and the native people, Paul began to absorb the academic viewpoint, learn the professional vocabulary, and become familiar with the literature academics read. Eventually, the academics saw that Paul could “actually articulate these things in ways that are both culturally accurate and academically credible.”

He began getting invitations to lecture or make presentations at various cultural institutions in Southern California: the Southwest Museum, the Los Angeles Natural History Museum, the Bowers Museum–and UCLA, where he spoke to classes in the American Indian Studies program. The Smithsonian Institution brought him to Washington to learn techniques of musicological research. The California Arts Council funded his designation as an artist in residence at the Bowers.

In 1980 the Bowers Museum offered Paul full-time employment, and he accepted. “I thought if you could achieve something credible within an institution, you had a chance of influencing a larger segment of society,” he says. Among the many exhibits and presentations he was involved in during those years was an exhibit about Cahuilla music, which “turned out to be the first written accounting of this musical style,” he says, an achievement he found both exciting and depressing.

Having known the region’s Indian communities from childhood, he was “disappointed to see their music and other forms of culture being completely neglected by the outside world, and suffering because of that.”

Then, in one terrible winter in the mid-1990s, the three principal singers of the Cahuilla tribe became ill. Had they died, the entire musical tradition would have been lost. “I decided that it was time for me to write up what I knew,” Paul says. Helped by Paul and funded by grants from the California Arts Council and the Native California Network, members of the tribe recorded the songs and began to train new singers.

A bout that time, Judy Mitoma of UCLA’s Department of World Arts and Culture invited Paul to teach. There were some discussions of what he was working on, and everyone agreed it was a classic program of graduate research. Paul wrote an ethnography of the Cahuilla singers and their style for his master’s in arts degree, awarded through the American Indian Studies program. His PhD work has been done in the Folklore and Mythology program, with adviser Michael Owen Jones. A dedicated student, he was named Outstanding Graduate Student of the Year for 1995 by the UCLA Alumni Association.

“Along the way,” Paul says, “I evolved out of museums.” In 1984 Chapman University offered him a full-time position with flexible hours to accommodate his studies at UCLA. “The academic frame is my next evolution,” he says. He will also continue extracurricular activities. Over the years, Paul has been a consultant or board member for dozens of local, state, and national organizations. His work has brought him a wealth of honors, most notably the Smithsonian Institution’s Minority Museum Professional’s Award and a share in the Academy Award won by the documentary film, “Broken Rainbow,” for which Paul wrote the music.

Among his blessings he also counts his daughter, Vanessa, 26, a computer specialist at Filenet in Costa Mesa, and a son, Noah, 24, a student adviser at UCIrvine. Like his father before him, Paul did his best to share the richness of their cultures with his children. But times have changed. When he was growing up in the 1950s, people born in the 19th century were still available to talk about the old times. On the negative side, people of ethnic minorities were often routinely barred from public establishments, and ethnic minorities were marginalized.

“I’m glad my kids didn’t have that experience,” Paul says, even if they also missed out on some rich encounters. They have been able to “establish valuable lives within the contemporary world,” he says, while at the same time celebrating their cultural inheritance–along with people of many ethnicities. “When I was a kid, these were very quiet celebrations.”

The opening of institutional doors to people of many backgrounds had much to do with this change, Paul believes. Without multicultural studies, “people like me and the people I have studied would become invisible in the world,” he says, even though “we are an important part of human history. That’s one reason UCLA has stood by me for so long. They see that same value.”

UCAL also understands that multicultural studies benefit everyone. An upcoming project for Paul involves talking to one of the Cahuilla singers about folk medicine in the tribe. This knowledge will be added to the extensive folk medicine archives at UCLA, recently computerized with a grant from Dr. Jones obtained from the National Institutes of Health.

“I’m really looking forward to Paul’s doing that study,” Dr. Jones says. “He does fantastic work.”
Michael Frishkopf

**Ethnomusicology**

When Michael Frishkopf set out for Egypt in 1992, he had a one-year Fulbright fellowship in hand and a rather loosely formed idea of what his PhD research would look like.

As a doctoral student in ethnomusicology at UCLA, Michael cast a wide net into the pool of departmental resources. In class, he studied Arabic music and aesthetics, and conducted a psychological experiment examining some of the perceptual factors in musical experience. Outside of class, he played Indian, Arabic, Japanese, and African music, Javanese and Balinese gamelan (an ensemble of bronze gongs), and experimental music with an improvisational group.

As the time for fieldwork drew nearer, he found himself more and more attracted to Egypt, especially music of the Sufis, mystics of Islam. At the same time, he became curious about the relationship between the aesthetic experience, the mystical experience, and the creative act. Michael surmised that “the aesthetic experience somehow focuses the mind in a way similar to what mystics are supposed to do.” Of course, a pure mystical experience would at some point leave the sensory behind, but nevertheless, he saw a connection. “What was interesting to me was the role of emotion in religious practice, and the role of music in creating that emotion,” Michael says.

With this conceptual framework, and using Sufism as an ethnographic case, Michael began a rather serpentine progress toward his dissertation under the guidance of his graduate adviser, Dr. Jihad Racy. Recently, he returned to UCLA with the dissertation in hand, a study that compares three Egyptian Sufi groups by examining the differences in the language performance which is central to each.
Laura Martin
Organic Biology, Ecology and Evolution

While deciding on a field of graduate studies, Laura Martin, then a biology major at Duke University, came across a description of William Hamner’s work at UCLA. An ornithologist by training, Dr. Hamner soon learned he was allergic to feathers. So for the past 18 years, Dr. Hamner and his wife, Peggy, have been “bird watching” underwater, studying a range of free-swimming animals, moving up the food chain from plankton to jellyfish to pelagic fish, mammals, and sea birds.

Laura came to Los Angeles for a meeting, and Dr. Hamner liked what he saw. Not only was Laura bright and hard-working, she was an athlete: a runner and a swimmer on the Duke swim team. To Hamner, a biology professor and director of the UCLA Marine Science Center, this suggested a couple of positive things.

“Her sports were focused on individual performance, and science is also an individual activity. I thought that attribute was interesting,” he recalls. He also thought that her fitness and strength were well-suited to fieldwork in difficult terrains. Working together in Palau, they have to “hike over the top of a jungle ridge with all their gear” in order to reach the marine lakes where they work, Dr. Hamner explained. “She makes two trips while I make one.”

An archipelago in the western Pacific, Palau has 70 marine lakes, porous limestone caverns filled with sea water not quite as salty as the ocean, where various creatures have become isolated from the rest of the animal kingdom. This isolation is what attracts many researchers.

Over the course of her graduate studies, Laura has spent more than two years on Palau, much of it at a lake with a large population of moon jellyfish. Moon jellyfish are found in coastal bays around the world, where they are rarely welcomed. Since jellyfish eat both the plankton eaten by fish larva and the larva themselves, they are often blamed for depleted fish populations. “People are interested in them because of that, and because they are an annoyance in a lot of places,” Laura says, clogging fish nets and causing trouble in busy ports.

Laura set out to determine how much of this bad reputation — particularly for their supposedly huge appetites — was deserved. It was often noted that where a lot of jellyfish were found, there were few plankton, and vice versa. People assumed that this was because the jellyfish were eating all the plankton. Laura saw another possible explanation: When lots of jellyfish are around, the plankton have the good sense to hide out.

In fact, her studies show that — at least in one of Palau’s marine lakes — plankton migrate up and down over the course of the day, staying out of harm’s way. “This appears to be a way to coexist with jellyfish,” Laura says, and certainly plankton who can do this would be more likely to survive — along with their genes — than other plankton.

Thirty years ago, scientists would have laughed at her suggestion that plankton could do anything with motivation. It was her mentor, Hamner, who first hypothesized that plankton have a rich behavioral repertoire, in the process opening up a new field of oceanographic research: on-scene observation of oceanic animals in natural settings.

Laura has also found complex behavior among the jellyfish, even though they have no brain. Jellyfish migrate, and they seem to prefer some foods to others. Jellyfish eat by filtering water with their tentacles and sending the catch upward into their stomach. Laura says she has “actually seen them exclude certain prey in favor of others. This observation was made in the laboratory, putting tiny jellyfish under a microscope and watching them eat and digest food.

But most of her work has been done at the lake in Palau, where Laura has built what she calls mesocosms — containers about a meter and a half in diameter and 20 meters high or long. In a container, the researcher can control the number of jellyfish and the amount of prey and get an idea of how much jellyfish eat. But jellyfish being “a notoriously uncooperative animal,” Laura has found that only smaller jellyfish are comfortable enough in the enclosure to make for a sound experiment. She’ll compare her lab findings with her Palau research for an overall impression of the jellyfish. Meanwhile, her creation of this controlled environment in the middle of the wild has made its own contribution, Dr. Hamner, her adviser, says, providing a middle ground between the authentic observation of natural habitats and the scientific control of the laboratory.

Back in Los Angeles on a dissertation year fellowship, Laura may follow her PhD in biology with some work in women’s studies. “Women’s impressions of the world have carried over into their interpretation of primate behavior,” Laura says. “When women came into the field, they said that’s not what’s happening.” Looking at the marine sciences, Laura would like to explore whether gender has affected “the kinds of questions we ask and our ability to evaluate scientific problems.”

Her studies at UCLA have also provided opportunities to try out other careers. In Palau, early in her fieldwork, she became a movie star. Laura and her work were featured in the IMAX film, “The Living Sea”. That appearance brought her fan mail from younger women hoping to follow in her footsteps. One of them, Mariah Stark, spent several weeks on Palau with Laura, working under her supervision.

And UCLA’s summer school program for high school teachers gave her experiences and information that she used in drafting a curriculum teachers can use in their classrooms to teach units organized around marine science. In doing so, she closes a circle — a 7th grade science teacher had a lot to do with her decision to pursue studies in biology.

When Laura was in college she considered high school teaching as a career. However, the attraction of the marine lakes in Palau remains strong. During her work there, she became the professional and personal partner of Michael Dawson, a UCLA graduate student in evolutionary biology. They hope to find support to continue their studies of these marine lakes and others like them around the world.

“Neither of us could work there without the other person,” Laura says. “It’s a pretty tough place to work. You need help.”

Profiles by Jacqueline Tasch
Photos of Frischkopf and Martin by Susan Young
Scholarship/fellowship Income Tax Info for Graduate Students

U.S. and California State Tax Residents

Generally, the portion of your scholarship/fellowship income in excess of fee or tuition payments is taxable and you are responsible for reporting it on your tax return. UCLA does not withhold federal taxes or report any scholarship/fellowship income received by U.S. tax residents to the IRS, nor does it withhold state taxes or report scholarship/fellowship income received by California State tax residents to the California Franchise Tax Board (FTB). Because taxes are not withheld on taxable scholarship/fellowship income, some individuals receiving this type of income may be required to file quarterly estimated taxes with the IRS and/or the California FTB.

For more information on scholarship/fellowship income, please refer to the following forms and publications available on the IRS and California FTB websites:

**IRS Forms & Publications**
- www.irs.ustreas.gov/prod/forms_pubs/
- Form 1040-ES – Estimated Tax for Individuals
- Publication 520 – Scholarships & Fellowships
- Publication 505 – Tax Withholding & Estimated Tax

**California FTB Forms, Instructions & Publications**
- www.ftb.ca.gov/forms/index.htm
- Form 540-ES – Estimated Tax for Individuals

U.S. and California State Tax Nonresidents

The portion of your scholarship/fellowship income in excess of fee or tuition payments is generally taxable. However, some residents of countries which have tax treaties with the U.S. may be exempt from paying federal taxes on their scholarship/fellowship income.

U.S. tax nonresidents who received any scholarship/fellowship income will receive the IRS Form 1042-S, which reports the amount of scholarship/fellowship income. California tax nonresidents who had California state taxes withheld on their scholarship/fellowship income will receive the California FTB Form 592-B, which reports the amount of scholarship/fellowship income and the California state taxes withheld.

For more information on scholarship/fellowship income and filing as a nonresident, please refer to the following forms and publications available on the IRS and California FTB websites:

**IRS Forms & Publications**
- Form 1040-NR – U.S. Nonresident Alien Income Tax Return
- Publication 519 - U.S. Tax Guide for Aliens
- Publication 520 – Scholarships & Fellowships
- Publication 911 – U.S. Tax Treaties

**California FTB Forms, Instructions & Publications**
- www.ftb.ca.gov/forms/index.htm
- Form 540NR - 1998 California Nonresident or Part-Year Resident Income Tax Return

**Tax Relief Act of 1997**

The passage of the Tax Relief Act of 1997 introduced a number of tax benefits for individuals who are saving for or paying higher education costs for themselves and/or members of their families or who are repaying student loans. The following is a listing of some tax benefits to graduate students which have become available as a result of the passage of this act, and some of the criteria which determine eligibility to take advantage of these benefits. For more detailed information regarding these and other benefits and how to claim them on your tax return, please consult the IRS Publication 970 - “Tax Benefits for Higher Education” - available on the IRS website at www.irs.ustreas.gov/prod/forms_pubs/.

The Lifetime Learning Credit

- For expenses paid after June 30, 1998 for academic periods beginning after that date, you may be able to claim a lifetime learning credit of up to $1,000 for the total qualified tuition and related expenses paid. However, this amount may be reduced based on your modified adjusted gross income.
- If another taxpayer claims you as a dependent, you may not take this credit. However, the taxpayer that is claiming you as a dependent may be eligible to take the credit.
- There is no limit on the number of years which this credit can be claimed.
- The lifetime learning credit is phased out (gradually reduced) if your modified adjusted gross income is between $40,000 and $50,000 ($80,000 and $100,000 in the case of a joint return). However, this amount may be reduced based on your modified adjusted gross income.
- The lifetime learning credit is phased out (gradually reduced) if your modified adjusted gross income is above $50,000 ($100,000 in the case of a joint return) or if your filing status is “married filing separate return.”
- UCLA will issue a Form 1098-T which reports the amount of qualified tuition you paid during the eligible period.
- Use the IRS Form 8863 (available at the website specified above) to calculate the appropriate lifetime learning credit you may take.
- If another taxpayer claims you as a dependent, you may not take this credit. However, the taxpayer that is claiming you as a dependent may be eligible to take the credit.

Student Loans

- You may be able to deduct interest you pay on a qualified student loan. This applies to loan interest payments due and paid after December 31, 1997. This applies even if you took the loan out before 1998.
- You may be able to deduct interest paid during the first 60 months that interest payments are required, regardless of when you took out the loan.
- This deduction is an adjustment to income, so you can claim it even if you do not itemize deductions.
- Your deduction for 1998 cannot exceed $1,000. This limit will increase in subsequent tax years.
- You may not claim this deduction if your modified adjusted gross income is more than $55,000 ($75,000 in the case of a joint return).
- Your lender should issue a Form 1098-E to report the amount of interest paid on your qualified student loan.
- If your filing status is “married filing separate return,” or if another taxpayer claims you as a dependent you may not take this deduction.
- Forgiveness of a student loan in return for certain community service may be tax free.

NOTE: With respect to your individual tax situation, this summary information should not replace the advice of a tax professional and/or the IRS.

By Tom Deutsch
**Career Pathways: A Unique Conference for Doctoral Students and Postdoctoral Fellows**

UCLA’s first-ever symposium for doctoral students and postdoctoral fellows to explore their career options outside of the academy will take place on **Saturday, April 10, 1999** from 10 a.m. to 4 p.m. at Covel Commons. The conference is intended for all UCLA doctoral students and postdoctoral fellows; the scientist as well as the humanist, the artist, and the social scientist.

The Graduate Division’s ongoing study of doctoral career outcomes one year after graduation reveals that roughly 25% of our doctoral graduates — more in many fields — seek careers outside of the academy. This conference was designed in recognition of this and broader trends in academic employment.

Entitled Career Pathways: A Unique Conference for Doctoral Students and Postdoctoral Fellows, the career conference will join doctoral students and postdocs together with successful UCLA doctoral alumni who have established widely ranging careers outside of the professorate in a wide range of fields. Through a series of panels and keynote speakers featuring doctoral alumni, industry professionals, and career planning experts, students and postdocs will get tips on seeking employment inside and outside of academia and will learn about career options for doctoral recipients in a variety of industries and sectors.

The Career Pathways conference will be co-sponsored by the UCLA Career Center, the Alumni Association, and the Graduate Division. Following the Career Pathways conference, an assortment of workshops will continue to be offered to doctoral students by the experienced career planning experts of the Career Center. For more information on the conference, please refer to the UCLA Career Center’s website at [www.saonet.ucla.edu/career](http://www.saonet.ucla.edu/career).

### Campbell Student Book Collection Competition

Students are invited to enter the 1999 Robert B. and Blanche Campbell Student Book Collection Competition, which recognizes students who have assembled and organized book collections. A total of $1,600 in prizes will be available in six categories: undergraduate collection, first and second place; graduate collection, first and second place; children’s book collection; and honorable mention. The deadline for entries is **Wednesday, April 7**, at 5 p.m.; entry forms are available at the reference desks in the Arts, Biomedical, College, SEL/Engineering & Mathematical Science, and Young Research libraries. The awards ceremony will take place on Wednesday, April 21, at 3 p.m. in the Young Research Library Department of Special Collections. For further information, visit the competition website at [www.library.ucla.edu/committees/campbell/index.htm](http://www.library.ucla.edu/committees/campbell/index.htm).

### CSW Graduate Student Awards

The deadline for fellowships offered by the UCLA Center for the Study of Women is **May 3, 1999**. For more information on the Jean Stone Dissertation Research Fellowship, the Paula Stone Dissertation Research Fellowship, the Constance Coiner Graduate Fellowship, the Mary Wollstonecraft Dissertation Award, and the George Eliot Dissertation Award, please refer to the CSW web site at [www.csw.ucla.edu/csw/ webfro~1.htm](http://www.csw.ucla.edu/csw/ webfro~1.htm). Please submit all applications and nominations to: UCLA Center for the Study of Women, 288 Kinsey Hall, Los Angeles, CA 90095-1504. Questions should be directed to Dawn Waring, Assistant to the Director, at 310-206-5898.

CSW also offers travel grants for UCLA students doing research on women and/or gender. These grants are for travel expenses related to research or presentation of a paper at a professional conference. Applications are available in the CSW office. Deadline for the spring travel awards is **April 23, 1999**.
Continued from page 13

INDO-EUROPEAN STUDIES


ISLAMIC STUDIES


LATIN AMERICAN STUDIES


LIBRARY & INFORMATION SCIENCE


Karen F. Gracy: Received the Daniel Creedon and James Garibaldi Scholarship Award, California Highway Patrol Foundation, Fall 1998 (departmental).


LINGUISTICS


MANAGEMENT


NEUROBIOLOGY


ORGANISMAL BIOLOGY, ECOLOGY, AND EVOLUTION


PHYSIOLOGY


PHYSICS

Dean Dauger: Student winner in the Ninth Annual Educational Software Contest of Computers in Physics, a publication of the American Association of Physics Teachers, Winter 1999 Conference in Anaheim, CA, this award has also been announced in the inaugural issue of the Apple University Arts newsletter. The cover story is about a project named AppleSeed, for plug and play supercomputing, at the UCLA Dept. of Physics in which he is also involved.


PHYSIOLOGICAL SCIENCE


Got News for You: Changing the Guard in Foreign Press Coverage in Haiti.” ASA Section awards 1998.


URBAN PLANNING


Daniel B. Hess: Awarded an Eisenhower Fellowship by the Fellows' Grant Program (1998). In 1998-1999 school year at the headquarters of the Bureau of Transportation Statistics in Washington, D.C., evaluating the implications of the U.S. Census Bureau’s American Community Survey on transportation planning.


WORLD ARTS & CULTURES

Lauren Holt-Hansen: Conducting field research in Salvador and in Rio de Janeiro, Brazil during the Winter Quarter 1999, thanks to a Tinker Field Research Grant in connection with the Latin American Studies Center at UCLA.
Entering Graduate Students Welcomed at Chancellor’s Address

On October 12 Chancellor Albert Carnesale and Vice Chancellor and Dean Claudia Mitchell-Kernan hosted the annual Chancellor’s Graduate Students Address and a reception for entering graduate and professional students. The Address was held in the Schoenberg Hall Auditorium, where the Chancellor introduced the deans of UCLA’s schools and colleges.

In introductory remarks, Chancellor Carnesale spoke of the unique and rapid rise of UCLA, from a tiny teacher’s college in 1919 to its current status as one of the finest research universities in the United States. The Chancellor referred to the most recent survey of graduate research programs conducted by the National Research Council which ranks 13 of UCLA’s PhD programs among the top 10 in their respective fields and 31 in the top 20. He also pointed to UCLA’s 5,000 individually funded projects in progress at any given time and noted that UCLA ranks fourth in the nation for total research funding, a figure that amounted to $407 million last year.

Chancellor Carnesale emphasized the real world impact of the University’s research activities, noting that UCLA was the birthplace of the Internet in 1969, the nation’s first AIDS cases were documented here in 1981 and UCLA researchers created an entirely new field of knowledge following their discovery of secrets of the earth through the examination of microorganisms that are three-and-a-half billion years old. He further noted, “Only weeks ago, FDA approval was given to Herceptin, the first genetically engineered breast cancer drug — another product of UCLA research.” The Chancellor indicated that solving real world problems cannot be done “neatly within the domain of a single academic field. Instead, they demand a multifaceted multi-disciplinary approach,” one that UCLA actively encourages and supports.

Chancellor Carnesale concluded his remarks by challenging the new students to follow Louis Pasteur’s advice to his colleagues to “worship the spirit of criticism” as they search for higher truths, and to “take advantage of everything UCLA has to offer … and enjoy this exciting period in your lives.”

Vice Chancellor Mitchell-Kernan welcomed the class of 3,400 new graduate and professional students, noting that they come from all 50 states and 56 different countries. She reflected on her anxiety and exhilaration upon becoming Dean and Vice Chancellor in 1989, emotions the students undoubtedly share as they face the challenges of their new academic careers at UCLA.

The Vice Chancellor spoke of the Graduate Division’s current systematic review of graduate education, including an examination of such issues as student support, time to degree, attrition, mentoring and diversity. She encouraged the students to share their thoughts on these and other concerns during their time at the University. Vice Chancellor Mitchell-Kernan emphasized “the value of diversity to the educational enterprise” and UCLA’s commitment “to creating a campus whose diversity reflects the population of its hometown.”

The Vice Chancellor noted that during the past year the Graduate Division expanded its outreach program to send graduate students to the city’s community colleges and high schools to share their academic experiences with potential future graduate students; she invited the new students to join in this mission for the coming year.

The Vice Chancellor cautioned the students to expect the unexpected and to understand that in the future, they may need to plan for more than one career, as fields and the job market change. She noted that in surveys conducted by the Graduate Division, alumni expressed a high degree of satisfaction and success in the job market, and that next spring, a number of PhDs with nontraditional careers will be invited to campus to share their experiences with current students.

Continued on page 15