

# BIO SCI BRIEFS



A Newsletter for Alumni and Friends of the School of Biological Sciences

WINTER 2010



## DEAN'S MESSAGE

Greetings from the School of Biological Sciences. This edition of Bio Sci Briefs is reaching you near the mid-point of the 2010 academic year, one that has already been filled with challenges. I want to share with you some of the stark realities of the ongoing budget situation, followed by ways you can help. Now more than ever before, alumni and friends can have an immediate and lasting impact on UC Irvine.

Since joining UCI and Bio Sci in 1974, I have seen state support of the UC System decline steadily. The most drastic cuts were made in 2009. For students, fees increased between the Fall and Winter quarters this year, meaning that current students saw their costs rise during the school year for the first time. Nearly all faculty and staff campus-wide are on a mandatory furlough program, with required days off and a commensurate decrease in salary. To meet our portion of the budget reductions, our School has been forced to take the painful actions of returning unfilled or vacated faculty positions, laying off staff, discontinuing all temporary lecture positions, and freezing all hiring. The budget for the State of California continues to be uncertain, giving all of us on campus cause for continued worry.

While the budget news is nothing short of dire, there is still much to be proud of in the School of Biological Sciences. Student and faculty achievements continue, as you will see in the following pages. Many of our alumni and friends, despite the strained economy, have stepped up to offer their time and talent as well as their financial resources. I have been particularly inspired by people who have reached out to help in response to budget realities in the news, including Judith Wagner, whose dedication to student support is described on page three.

Sustaining the superb education provided by UC Irvine and the School of Biological Sciences is crucial at this juncture. Simply put, **WE NEED YOUR INVOLVEMENT**. For those in California, I ask that our alumni and friends contact your elected state officials to urge them to support higher education. Details on advocacy in action are outlined on page five. We have also begun the 2010 Annual Fund Drive for the School, and this year, more than ever, I hope that you will put thoughtful consideration toward a gift if a student calls you. Personal involvement in our Mentor Program, now in its tenth year, would share your career expertise with a current student and help you reconnect with the campus as well. There are also many events sponsored by the School, some listed here with more on our home page. Your attendance is welcomed and appreciated.

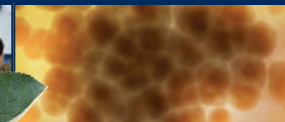
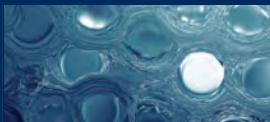
Maintaining the level of excellence at Bio Sci benefits not only current students, but all alumni of the School as well. Departmental milestones, student achievements, and faculty accolades only enhance the value of the degrees held by our graduates. As we navigate a challenging time ahead, I would like to thank you in advance for considering how you might help the School of Biological Sciences, UCI, and the University of California weather this proverbial storm.

Sincerely,

Albert F. Bennett

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## FACULTY IN THE NEWS



University Professor **Francisco J. Ayala** was awarded a *Doctor Honoris Causa* degree from the University of Buenos Aires, and another *Doctor Honoris Causa* degree from the University of La Plata, also in Argentina, in November 2009.

The American Association for the Advancement of Science (AAAS) named 10 UC Irvine professors new fellows in December 2009, and five of these are from Bio Sci. The honorees are **Steven Frank**, Ecology & Evolutionary Biology; **Anthony Long**, Ecology & Evolutionary Biology; **Ian Parker**, Neurobiology & Behavior; **Michael Rugg**, Neurobiology & Behavior; and **Stephen Weller**, Ecology & Evolutionary Biology. With the induction of these new members, 115 UCI professors are fellows in the AAAS, the world's largest general scientific society.

**Tom Lane**, Professor of Molecular Biology & Biochemistry, is among 15 U.S. researchers who recently received five-year Collaborative MS Research Center Awards from the National Multiple Sclerosis Society. With \$742,500 in funding, Lane has assembled a team to investigate the use of cell-replacement therapy to regenerate MS-ravaged nerve tissue. The award is a result of Lane's work eight years ago when he helped discover a way to prevent multiple sclerosis from affecting the central nervous system.

**Chris Hughes**, Professor and Chair of Molecular Biology and Biochemistry, was awarded the first annual Dean's Triumvirate Grant along with Drs. Bernard Choi, Beckman Laser Institute, and Steven George, Professor of Biomedical Engineering and Director of the Edwards Lifesciences Center for Advanced Cardiovascular Technology. The Dean's Triumvirate Grant was set up through the UC Irvine School of Medicine to foster collaborative projects between various schools on campus. The 2010 Triumvirate Grant of \$50,000 will fund the project "Dynamic in vivo visualization of anastomosis between a prevascularized implantable tissue construct and host circulation," one of 28 campus submissions.

**Timothy Bradley**, Professor of Ecology & Evolutionary Biology, was awarded the Daniel G. Aldrich Jr. Distinguished University Service Award in December 2009. This honor recognized his service to the University in numerous capacities, ranging from serving as Chair of Ecology and Evolutionary Biology to Chair of the UCI Academic Senate. He has held countless other positions, including service to the arboretum and to the Natural Reserve System.

Faculty in Ecology and Evolutionary Biology have been awarded a major grant from the Department of Energy. **Steve Allison** (Director), **Mike Goulden**, **Adam Martiny**, **Jen Martiny** and **Kathleen Treseder** propose to assess plant response to environmental changes, particularly deposition of nitrogen and levels of rainfall. The main goal of the new grant is to connect microbial diversity with the extracellular enzyme systems that catalyze the decay of organic material. The group will also determine whether different groups of microbes and their enzymes respond to environmental changes, and whether they can recover from such changes. They'll complement empirical studies with mathematical models that predict the responses of microbial communities and their associated functions under new environmental conditions.

An international team of researchers led by Associate Professor **Adriana Briscoe** in Ecology & Evolutionary Biology, has linked the evolution of vision to species recognition in butterflies. The team reports that *Heliconius* butterflies have evolved new photoreceptors in their eyes for detecting UV colors and express UV-yellow pigment on their wings not found in close relatives lacking the UV vision gene. This is one of the first examples in terrestrial animals where positive selection of a vision gene has been linked to the evolution of a signal for species recognition. The results were reported recently in the Proceedings of the National Academy of Sciences, U.S.A. and other publications.

**Valeria Souza**, visiting scholar and longtime associate of Ecology and Evolutionary Biology, will receive the "Love of the Planet" Award in March 25, 2010 in Mexico City. The award, sponsored by Volkswagen, is accompanied by a check for \$50,000 and goes to researchers who have championed causes in basic research and conservation in Mexico. Souza won the award based on her efforts in the Cuatro Ciénegas Basin, where her work synthesizes basic research on microbial ecology and evolution with extensive outreach to local education and with national political advocacy.

**Douglas Wallace**, who has a faculty appointment in both the Department of Ecology and Evolutionary Biology and the School of Medicine, was elected to the Institute of Medicine in October 2009. The Institute of Medicine, the medical arm of the National Academy of the Sciences, bestows this singular honor through a highly selective process that recognizes individuals who have made major contributions to the advancement of the medical sciences, health care, and public health.



## DONOR SPOTLIGHT

### The Family and Friends of Dr. Edward K. Wagner



The School of Biological Sciences is honored to announce the establishment of the Edward K. Wagner Memorial Endowment in Virology. This endowment was created through the generosity of Mrs. Judith Wagner, her family, and friends in December 2009. The new endowed fund, which repurposes a lectureship previously in place in memory of

Dr. Wagner, will support undergraduate and graduate students studying virology in the Department of Molecular Biology and Biochemistry.

This endowment honors the career of Dr. Edward K. Wagner, who first joined the Department of Molecular Biology and Biochemistry in 1970. His early work on campus led directly to the development of the Center for Virus Research. Dr. Wagner had a long and productive career researching virology and was known internationally for his expertise in herpes viruses. His research focused on the understanding of gene expression and latency of the human herpes simplex virus. Dr. Wagner demonstrated a lifelong commitment to virus research and teaching, and was the recipient of the Associated Graduate Students Faculty Mentoring Award. He contributed to the design of an award-winning web site on virology, and co-authored a prominent textbook, "Basic Virology," which is still in publication. Dr. Wagner contributed directly to the growth and development of his department and the School of Biological Sciences from the time he joined UC Irvine.

Always a strong advocate of public higher education, Dr. Wagner was also well known for his strong voice and firm views on issues related to UC Irvine. Judith Wagner, always having shared Dr. Wagner's commitment to education, had planned for some time to create an endowment in his memory. Recent headlines about fee increases made the gift a very timely one and the School of Biological Sciences is deeply grateful to the Wagner family and friends. The School is honored to hold this endowment in perpetuity to memorialize Dr. Wagner and support students in the field that was so important to him.

## EXTERNAL RELATIONS UPDATE

**Bryan Carlson** became the Senior Director of External Relations and Communications for the School of Biological Sciences in November 2009. He joins BioSci after four years in the Corporate Development office in UCI's central University Advancement division. Bryan has held past positions in Corporate and Foundation Relations at Concordia University, Irvine and UC Riverside. He previously served at UCI as Associate Director of Annual Giving and as Associate Director of Alumni Relations at his Alma Mater, the University of Redlands.

**Alyssa Cruz**, Director of Special Events, has worked at the School for over seven years in various capacities. Her primary responsibilities include alumni and public relations, volunteer programming and event management. Alyssa received her bachelor's degree from UCI and master's in public administration from Cal State Long Beach.

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# Undergraduate STUDENT SPOTLIGHT

## Cycling for a Cause



*Originally by Stephanie Vatz for the New University, Jan. 5, 2010*

When third-year Biological Sciences students Huy Do and Adam Truong began planning a cycling trip for the 2009 winter break, they knew they wanted to combine their passion for bicycling with their passion for the medical field. But after they did some brainstorming, a simple bike trip that started as a 15-day, 650-mile ride from San Diego to San Francisco, stopping to volunteer at free clinics along the way, evolved into a new organization called Perpetual Medicine.

Originally, Truong and Do had planned on stopping at hospitals instead of free clinics, but they had a change of heart after meeting Tipu Khan, a second-year resident at the Harbor-UCLA County Family Medicine Residency Program. Truong was walking on Ring Road one day when he saw a flyer for a forum that Khan would be holding. While neither student attended the forum, they contacted Khan later to meet him in person.

Khan was doing outreach work, working at the grassroots level to empower the free clinic system. He explained to Truong and Do that most free clinics struggled financially more than hospitals, and were more in need of volunteers. In addition to his advice regarding free clinics, Khan also encouraged the riders to document their journey in detail and try to get sponsors. For this trip, Perpetual Medicine's only major sponsor was Bike Religion, the on-campus bike shop at UCI. Bike Religion donated some bike parts and gave the team a discounted price on others.

Truong and Do joined their friends and fellow cyclists Jared Wong, third-year biochemistry and molecular biology major, and Brett Lando and Michael Nguyen, third-year biological science majors. The team began its journey on December 16th, 2009, with support of non-cycling team members Kevin Nguyen, third-year biological science major, and Alex Truong, third-year biochemical engineering major.

The group began in San Diego where they volunteered at UC San Diego's student-run free clinic. From San Diego, the team continued up highway 101 to Northern California, finishing in San Francisco. The journey was not without its difficulties. "The hardest part was the 30 miles between Los Angeles and the Simi Valley" Truong said. "It was 30 miles of uphill climbing, which we did not expect. We thought that the 30 miles would be really easy, but it was a lot harder than expected and we ended up having to ride during night which is really dangerous. We are actually pretty lucky we survived because we had a couple of close calls with cars." Do also mentioned technical difficulties involving their bicycle tires, as well as an incident where a police officer pulled the riders over on the 101 Freeway because there were areas that were not passable by bike, forcing the group to take side routes.

Despite these setbacks, Do affirmed that Perpetual Medicine accomplished everything it had set out to do. The group traveled to every clinic on its itinerary and rode the full journey. In total, they stopped at six free medical clinics, concluding with the St. Anthony Free Medical Clinic in San Francisco. According to Perpetual Medicine's mission statement, their goals in volunteering were primarily to raise awareness about free clinic systems and also about "the general health disparities" currently facing the United States. "Our volunteer roles varied from clinic to clinic. In one clinic, Perpetual Medicine painted a few old rooms. Another clinic tasked the group with setting up a volunteer center."

Of all the accomplishments and proud memories of the trip, Truong said that one of his favorites was the final stop. "Actually getting to San Francisco was a huge moment, and it took a while to hit me that we were finally done and we were finally there," Truong said. "To see this whole thing come together, with our crazy ideas here and there, we definitely see how we could have improved [certain] things. But, to see an idea go all the way from thought to action is really unbelievable."

Perpetual Medicine seeks to continue to encourage community awareness and support for free clinics while advocating a healthy lifestyle through cycling. According to Truong, "This is only the beginning."

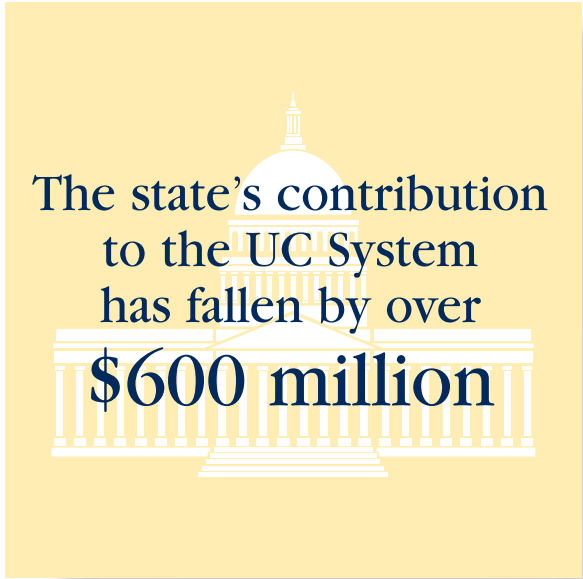
# ADVOCACY UPDATE

In the past year, the state's contribution to the UC System has fallen by just over \$600 million, a 20% cut in state funds. To counter this trend, UCI's Office of Community and Government Relations has been actively sharing information on campus and in the community, with a goal of reaching 10,000 contacts with state legislators. We encourage all alumni and friends to visit [www.ucforcalifornia.org/ucirvine](http://www.ucforcalifornia.org/ucirvine) for information on how to contact your State Assembly representative and State Senator.

Alumni of the School of Biological Sciences can be instrumental in this advocacy effort, given the wide variety of careers pursued by our graduates. Each voice makes a difference, so we ask you to participate in supporting UCI by writing to your elected officials, urging them to make public higher education a priority:

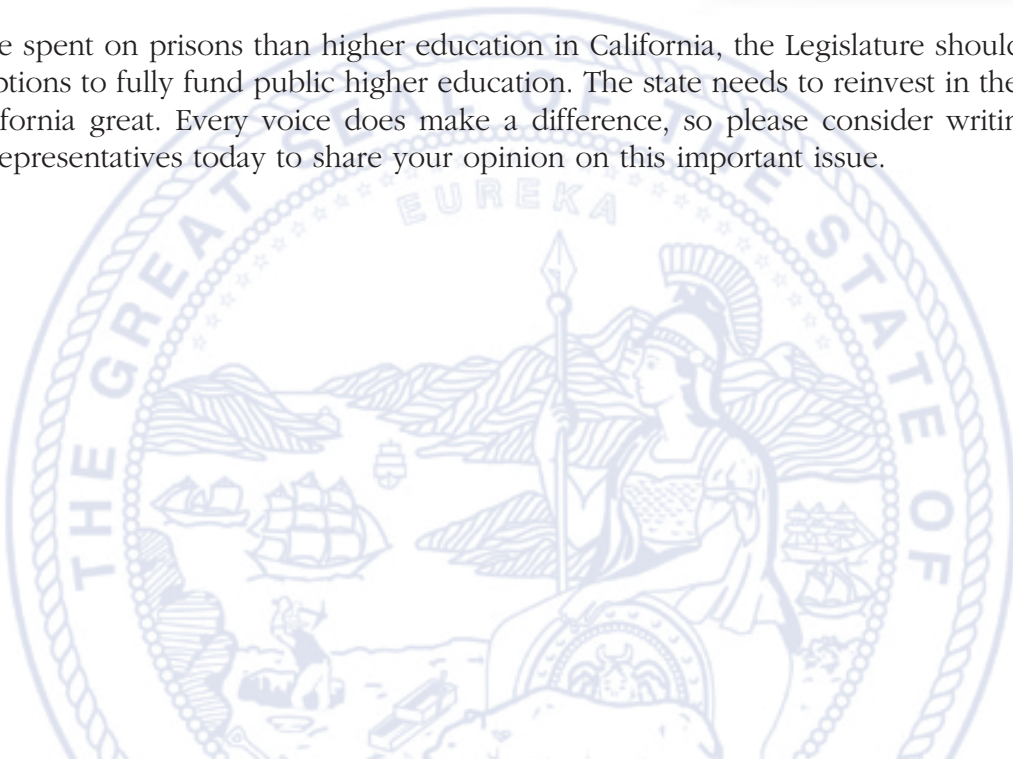
➔ While the Governor's 2010-11 budget proposal for UC is a significant step in the right direction, it still falls short of what the University needs in the long run to preserve educational quality and access. Ask your State representatives to support the Governor's spending plan as a starting point, and to provide the \$913 million requested for the fall that will bring funding to a level that matches the 2007-08 fiscal year.

➔ In addition, please ask your legislators to engage in a serious discussion around the Governor's initiative to enact a constitutional amendment for public higher education. The proposed amendment would set funding for UC and the California State University system at a minimum of 10 percent of the State's General Fund budget. This plan would establish a stable funding stream for public universities.



The state's contribution  
to the UC System  
has fallen by over  
**\$600 million**

With much more spent on prisons than higher education in California, the Legislature should be encouraged to explore all options to fully fund public higher education. The state needs to reinvest in the institutions that have made California great. Every voice does make a difference, so please consider writing a letter or an e-mail to your representatives today to share your opinion on this important issue.







# UPCOMING EVENTS

## The Allergan Foundation Lecture in Modern Biology Series

*Why Zebras Don't Get Ulcers*

Robert Sapolsky, Ph.D.,  
John A. and Cynthia Fry Gunn Professor,  
Department of Biology, Department of  
Neurobiology & Neurological Sciences, and  
Department of Neurosurgery, Stanford University

Tuesday, May 11, 2010  
7:00 p.m.  
The Arnold and Mabel Beckman Center  
of the National Academies of  
Sciences and Engineering

## The UCIAA Lauds & Laurels Ceremony



Thursday, May 13, 2010  
6:00 p.m. Reception  
7:00 p.m. Dinner  
Fairmont Newport Beach

For more information about Lauds & Laurels,  
contact UCIAA at 949.824.ALUM

## The School of Biological Sciences Graduate Honors Convocation and Teaching Awards Ceremony

An award ceremony and celebration to honor the  
School's outstanding graduate students, post-docs  
and faculty award recipients

Thursday, June 3, 2010  
2:00 p.m. Ceremony  
3:00 p.m. Reception  
Natural Sciences I, room 1114  
UC Irvine



## The School of Biological Sciences Undergraduate Honors Convocation

A celebration to honor the School's outstanding  
undergraduate student award recipients



Sunday, June 13, 2010  
10:00 a.m. Ceremony  
11:00 a.m. Reception  
Pacific Ballroom,  
UC Irvine Student Center

## The School of Biological Sciences Commencement

Sunday, June 13, 2010  
1:00 p.m. - 3:00 p.m.  
Bren Events Center, UC Irvine



*For information about these events,  
please contact the  
Bio Sci External Relations office  
at 949.824.2500 or  
biosci-events@uci.edu.*

## Graduate STUDENT SPOTLIGHT

### Cecilia Batmalle

Cecilia Batmalle is a doctoral student in Ecology and Evolutionary Biology, studying under Dr. Adam Martiny, Professor of Earth System Science and Ecology and Evolutionary Biology. Her research involves studying the effects of nutrient limitations on marine cyanobacteria. Specifically, she seeks to understand how changing marine environments cause shifts in phosphate and nitrogen gene uptake in *Prochlorococcus* and *Synechococcus* species.

Originally from France, Cecilia has been in the U.S. for the past three years. Her parents' diplomatic postings around the world have led her to study in a wide variety of places. She started her undergraduate education at Ryerson in Toronto, Canada in applied chemistry and biology. After her third year, the family moved to Canberra, Australia where Cecilia completed her bachelor of science, Honors degree. It was then time for another family move, this time to Los Angeles. Cecilia joined a volunteer program at the Center for Health Sciences at UCLA, where she conducted research involving determining pathogenesis and virulence of *Staphylococcus epidermidis*. She then joined the Ecology and Evolutionary Biology graduate program at UCI and is currently in her second year.



Cecilia hopes to contribute to the understanding of Earth's environment through her research. Understanding how microbes respond and adapt to environmental changes has the potential to help predict the effects of global climate change on ocean ecosystems. She has had a very positive experience on campus so far. "Being a graduate student at UCI has allowed me to pursue my research interest in an enjoyable environment, surrounded with enthusiastic faculty members who are always willing to give feedback."

In addition to a busy academic schedule, Cecilia enjoys reading, music, movies and writing in her cooking blog, where she always has an eye on incorporating her knowledge of chemistry with her culinary creations. After completing her Ph.D., Cecilia plans to become a professor at a research university, dedicating her career to research and education.



## BIO SCI STUDENTS TODAY

Reflecting remarkable growth, the number of students in the School of Biological Sciences for 2009–10 is:

Undergraduate Majors	4,751
Masters Students	28
Doctoral Students	377

Looking toward the 2010–11 academic year, the School of Biological Sciences continues to attract record numbers of applicants. The following shows the increase in applications between fall 2009 and the coming fall quarter, 2010:

Applicants	Fall 2009	Fall 2010	Numerical Increase	Percentage Increase
Total UC Irvine	54,758	59,657	4,899	8.9%
BioSci First-year	7,694	8,005	311	4.0%
BioSci Transfers	1,278	1,747	460	35.9%
Total BioSci	8,901	9,752	771	8.6%



## Mentor Program Celebrates Ten Years

The School of Biological Sciences is proud to celebrate the 10th year of its Mentor Program during the 2009-10 academic year. Going strong since 2000, the program matches undergraduates with Bio Sci alumni and community members from a wide variety of career disciplines for professional and personal development.

The Mentor Program has enabled more than 1,000 Bio Sci undergraduates to benefit from the guidance, leadership and practical wisdom of over 300 mentors from a wide variety of careers. The length of mentor and student partnerships varies from a year to as long as four years. This is decided upon by the mentors and students. Participants establish and develop relationships that last long after students graduate from UC Irvine. Former student mentees have kept in touch with their mentors, and several are now mentors themselves in the program. Dr. Denis Kitayama '76, a Pharmacy Project Manager and Charter member of the Mentor Program, shares that "participating in the Mentor Program has been a truly rewarding experience. Having a relationship with students for an academic year gives me the opportunity to learn their unique backgrounds that lead to their career choices. I have had the pleasure of seeing many of my mentees succeed in their career paths long after the formal mentor-mentee relationship has ended. It is gratifying to know that providing some guidance can help a student achieve acceptance into professional school."

The Bio Sci Mentor Program gives students a unique opportunity to gain practical knowledge and a real-world understanding of their mentors' career paths and decisions through one-on-one contact and other methods of communication. Mentors serve as role models, advisors, and counselors. They are an invaluable resource and an incredible support system for the students. With the guidance of their mentors, students became skilled at clearly identifying their career goals, communicating effectively and professionally, conducting informational interviews, and honing their networking skills. In today's economic climate, there is great value in these contacts and opportunities for networking as students develop a plan for their job search.



Mentor, Ahmed Al-Qahtani PhD '07



Mentor, Linda Tran '88



Mentor, Eric Quimbo '97





Mike Numamoto '83, Vice-President of Marketing at Uptake Medical Corporation and another charter member of the program, states that "The Mentor Program provides Bio Sci Alumni with a way to give back to UCI by sharing their career experiences which helps strengthen the program over all." The Mentor Program also fosters a tighter community of Bio Sci alumni who are indeed making a difference in the lives of students. Michael Nguyen, a student mentee indicated, "Before learning about the Bio Sci Mentor Program in my freshman year, I did not realize how valuable and exciting it was to have a role model to guide me through my undergraduate years towards focusing on a future career in medicine. Now, as a senior, the Bio Sci Mentor Program not only developed my interest in learning more about the natural sciences, it also taught me the advanced skills and strategies to succeed in working with other health professionals and even opened the doors to explore other related fields, such as public health."

Ed Chang '84, entrepreneur and also a charter member of the Mentor Program, says "It makes me proud to see the Bio Sci Mentor Program flourish over the last ten years and become a campus resource for undergraduate students exploring their future. I am happy to see all the alumni mentors who have stepped up to be part of the Mentor Program offer their personal insight and inspiration." The School of Biological Sciences is extremely grateful to all of the mentors and students who have shown such strong commitment to the Mentor Program over the past ten years.



Mentor, Ed Chang '84



Mentee, Gloria Lin



Mentors, Hawaai Ali '05 & Rita Jakel '85

If you are interested in making a difference in a student's life by becoming a mentor, please contact Alyssa Cruz at 949-824-4742 or [alyssac@uci.edu](mailto:alyssac@uci.edu).

# BIO SCI NEWS

## Bio Sci Alumni Steering Committee Formed

Alumni involvement is a key part of the success of any renowned university. In the School of Biological Sciences, what started as a new school with a few dozen enterprising students decades ago has grown to a fully-mature program with thousands of top-notch undergraduate and graduate students. We have experienced a tremendous amount of growth, with over 4,750 undergraduate graduate majors - a 70% increase in just five years - and 404 graduate students - a 40% increase in five years. A recent admission report shows that for fall 2010 applications, UCI is fourth in the UC System for overall applicants.

To capitalize on this momentum and create greater ties between the School and its alumni, the School of Biological Sciences Alumni Steering Committee was launched in fall 2009 by an enthusiastic group of ten BioSci alumni. Representing a variety of professions from the classes of 1976 through 2005, members are identifying opportunities for alumni to stay connected with the School and UC Irvine. According to Kathy Hills '83, Owner and Managing Director of Krush Creative and committee chair, "The purpose of the new Bio Sci Alumni group is to build a community, create traditions, reunite with old friends, meet new friends, network, and support the School of Biological Sciences in a variety of ways, including feedback, advocacy and mentoring. Our goal is to reach out to every Bio Sci alum, from the first graduating class to the most recent. It's low pressure, we have a lot of fun, and it's a great way to reconnect with the School."

The group has already held two events, an alumni mixer at Steelhead Brewery in October, and a reception before the recent UCI vs. Cal State Long Beach men's basketball game. The committee is planning to meet several times a year to promote alumni involvement with the School. Dr. Don Shook '84, emergency room physician and Steering Committee member, said "Through the BioSci Alumni group, I've learned about the research and advancements being made by the School of Biological Sciences and I'm proud to say that they have developed into a world class program. UC Irvine provides an outstanding resource for our community and I'm certain any alumni who decide to get involved with the school will find it a rewarding experience."

By developing a dynamic Bio Sci alumni network, the Alumni Steering Committee will help to strengthen the connections between Bio Sci alumni and UC Irvine. A Bio Sci Alumni Group website is currently in development and alumni will be notified when it goes live. Features of the site will include a list of activities and events as well as other ways to become involved. For now, the Steering Committee is eager to hear from all interested alumni as the group builds interest. Please take a moment to update your Bio Sci Alumni profile at [www.krushcreative.com/uci](http://www.krushcreative.com/uci). The Bio Sci External Relations office will maintain the information and use input and suggestions to plan future alumni activities. You will also be notified of upcoming Bio Sci Alumni group events. For any questions, please contact Alyssa Cruz in the Bio Sci External Relations office at [alyssac@uci.edu](mailto:alyssac@uci.edu) or 949.824.4742.

