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M by the Dean

LAURA KINGSFORD

Despite the economic downturn and worries about budgets, lots of good things are happening in the College of Natural Sciences and Mathematics, and I'm very optimistic about our future. One of the things we are all enjoying is watching the construction of our new Hall of Science. Last June, we held a "Wake" to say goodbye to PH3 before the building was demolished over the summer.

Then on Oct. 3, we held the ground-breaking ceremony for the Hall of Science. As I write this in December, there is a huge hole in the ground, about 20-30 feet deep surrounded by retaining walls. In about two weeks, the contractors will start the foundation. Complete funding for this building was acquired prior to the economic downturn, so we are happy to know that construction will continue. At a cost of \$105 million, it will be one of the largest science buildings in the CSU system (164,000 square feet) and, along with the Molecular and Life Sciences Center (MLSC) and Microbiology Building, will give us an outstanding science complex. The building is scheduled to be completed in the spring of 2011, and we anticipate moving in that summer. Part of the Department of Chemistry and Biochemistry is housed in MLSC, and the rest of the department, including the department office, will be located in the new Hall of Science when it is completed. If you want to watch the construction, you can access a webcam at <http://www.csulb.edu/projects/ph3/cameras/index.html>.

CSULB again is ranked first among master's degree granting colleges and universities who produce the highest number of baccalaureate students who go on to doctorate (Ph.D.) degrees in science or engineering in the United States. The last "Baccalaureate Origins of U.S. Research Doctorate Recipients: 1997-06" is part of the annual *Survey of Earned Doctorates* that tracks characteristics of doctoral recipients. It is a joint project of the National Science Foundation, National Institutes of Health, U.S. Department of Education, National Endowment for the Humanities, U.S. Department of Agriculture and NASA, in collaboration with the National Opinion Research Center at the University of Chicago. This ranking is a strong indicator of the quality of the undergraduate students we attract and the many opportunities available for them to do research here. When they graduate, they are highly competitive for top-notch doctoral and health professional programs and go on to become leaders in academia, industry and government. One of the keys to this success is their engagement in research as undergraduate students with faculty mentors. When I talk with these students, they are excited, articulate and knowledgeable about what they are doing—the passion for the process of discovery is clearly evident. The research they are doing is cutting edge and not trivial. Many are involved in research projects and doing techniques that funding agencies have considered not doable by undergraduates. Yet, they are successful. Their work is presented at professional meetings, and they are published as co-authors with their faculty mentors. We are proud of the accomplishments of our students and the faculty who play a major role in their success.

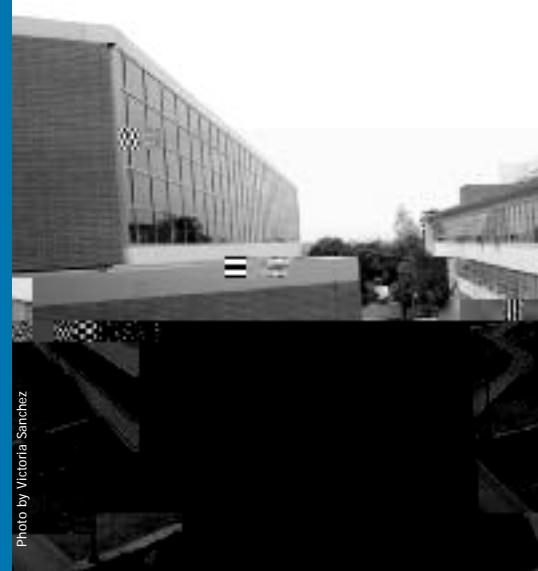
Just recently, we had a reception and dinner to welcome and honor Dr. Matthew Becker as the Bert and Ethel Conrey Endowed Chair in Hydrogeology. This is the first endowed chair in the college and the third in the university. As I indicated to our faculty, I think this signifies a real turning point in our college regarding the emphasis on development and the excellence we can attain with fundraising and the collaborations we set up with our alumni, industrial/business partners and friends in the community. Recently, we also had the first naming for our new Hall of Science. One of the two 80-seat lecture halls will be known as the Georgia Griffiths/GS Software Systems Lecture Hall. Georgia is an alum of the math department and gave a generous gift of \$112,000 to endow a scholarship in the Department of Mathematics and Statistics. We anticipate that this is the first of many more "namings" to come. We would welcome any who are interested in a naming opportunity or any other type of gift giving to contact Maryanne Horton, our director of development in the college. Her e-mail address is mhorton@csulb.edu, or you may call her at (562) 985-1687.

As always, we thank you—faculty, staff, students, alumni and friends—who have contributed in some way to the teaching and research programs for our students. State funding only covers part of the cost of educating our students, and it is the collaboration and support from all of you who help make it possible to provide the high-quality programs for our students who leave CSULB with highly valued degrees.

Photo by Victoria Sanchez



Photo by Victoria Sanchez



Top photo: MLSC and PH3 buildings before the demolition. Middle photo: President F. King Alexander at the groundbreaking ceremony.

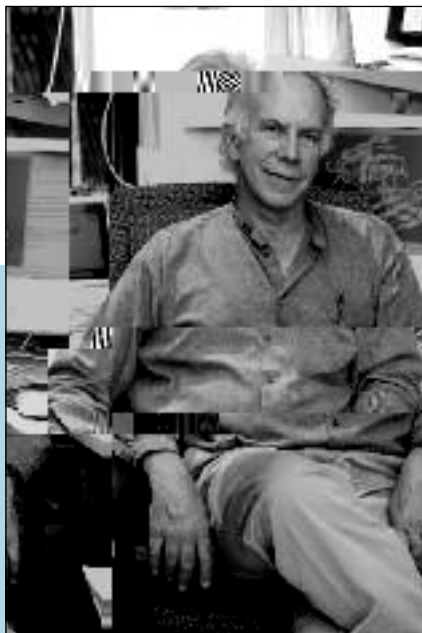


Wilson





My time as department chair has coincided with a number of significant changes in the life of the department. Since 2002, we have hired several excellent faculty members (Drs. Bu, Marinez, McClain, Myers, Narayanaswami, Schramm, Shon, Slowinska, Sorin and Weers) who have brought expertise, diversity of interests and great energy to our department. Our faculty are our most important asset, and these newest members have been great additions. We have also witnessed a large expansion in the number of students taking chem-



CSULB's Department of Chemistry and Biochemistry came under new leadership in fall 2008 as long-time Professor Jeffrey A. Cohlberg began a three-year term as department chair.

Cohlberg began his career at Cal State Long Beach in 1975 after earning his B.A. in chemistry from Cornell University and his Ph.D. in biochemistry from UC Berkeley and serving as a postdoctoral fellow at the University of Wisconsin.

"I'm a physical biochemist who studies protein structure and assembly. Most recently, I've been studying an enzyme called superoxide dismutase (SOD1) that is involved in ALS (amyotrophic lateral sclerosis) or Lou Gehrig's disease," he said. In order to devote time to his chair's responsibilities, he will be turning over his research lab to new faculty member Vas Narayanaswami.

Having studied SOD1 since 2001, Cohlberg is writing journal articles about his research results. "We've demonstrated that certain changes in the protein lead to deposits called amyloids, and we've demonstrated that mutations in the protein favor amyloid formation. More specifically, they make it easier for the protein, which is normally a dimer, to come apart into single molecules, which is a step in the aggregation process. We have some information about the pathway by which the soluble, properly folded protein goes through partially unfolded intermediates and eventually forms amyloid aggregates," he explained.



With the weight of the economic downturn coming down to bear on higher education, many of the exceptional students who aspire to obtain a degree in chemistry or biochemistry are unable to afford the cost of a CSULB education without financial assistance. Tuition has more than doubled since 2002 and increased another 10 percent in 2008. In addition, most of our students hold down part-time jobs while attending school.

Consequently, scholarships that support our students are enormously beneficial to our department, and their importance to student success cannot be overstated (see page 1 for a story about successful alumni who were

scholarship recipients). We are very grateful to the generous donors who have made these scholarships possible.

Below are the department's newest scholarship offerings and their generous donors:

NHK Laboratories, Inc. Biochemistry and Organic Chemistry Award

The NHK Laboratories, Inc. Award is designed to promote academic excellence in the areas of biochemistry and organic chemistry. In addition to a \$1,000 cash award, the recipient has the opportunity to work as an unpaid intern at NHK's

analytical laboratory in Santa Fe Springs, Calif., for four to six weeks on a part-time basis. NHK works with faculty in the CSULB Department of Chemistry and Biochemistry to develop a suitable work assignment and ensure that the minimum 120 hours of field experience required by the three-unit course, NSCI 492 Internships in Natural Science, are met.

The award is open to all junior and senior level chemistry or biochemistry majors with a minimum 3.0 GPA, who have completed at least one year of general chemistry, and who have completed the following prerequisites: CHEM 100, CHEM 101, CHEM 102, CHEM 103, CHEM 104, CHEM 105, CHEM 106, CHEM 107, CHEM 108, CHEM 109, CHEM 110, CHEM 111, CHEM 112, CHEM 113, CHEM 114, CHEM 115, CHEM 116, CHEM 117, CHEM 118, CHEM 119, CHEM 120, CHEM 121, CHEM 122, CHEM 123, CHEM 124, CHEM 125, CHEM 126, CHEM 127, CHEM 128, CHEM 129, CHEM 130, CHEM 131, CHEM 132, CHEM 133, CHEM 134, CHEM 135, CHEM 136, CHEM 137, CHEM 138, CHEM 139, CHEM 140, CHEM 141, CHEM 142, CHEM 143, CHEM 144, CHEM 145, CHEM 146, CHEM 147, CHEM 148, CHEM 149, CHEM 150, CHEM 151, CHEM 152, CHEM 153, CHEM 154, CHEM 155, CHEM 156, CHEM 157, CHEM 158, CHEM 159, CHEM 160, CHEM 161, CHEM 162, CHEM 163, CHEM 164, CHEM 165, CHEM 166, CHEM 167, CHEM 168, CHEM 169, CHEM 170, CHEM 171, CHEM 172, CHEM 173, CHEM 174, CHEM 175, CHEM 176, CHEM 177, 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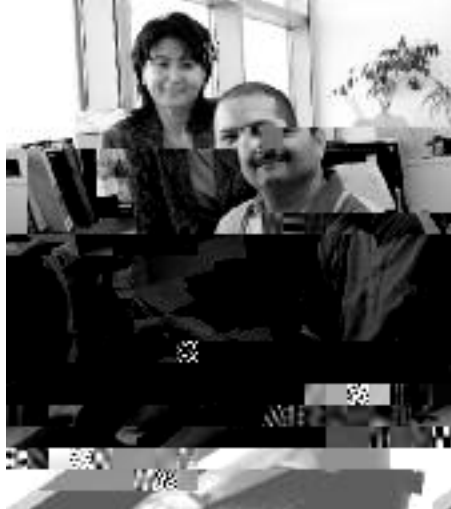


Honorees

Pervitsky is a native of Belarus and earned his master's degree at CSULB in the lab of Professor Lijuan Li. At UC Irvine, he studied the interaction of nitrosyl hydride (HNO) with heme proteins such as myoglobin (Mb) and hemoglobin (Hb) that resulted in several articles published in the *Journal of the American Chemical Society*.

"The first step was a generation of HNO-Mb with over 90 percent purity by using a reducing agent," he explained. "So far, it is the only published preparation which gives over 90 percent purity of HNO-Mb. Last year, my friend Dr. Ravi Kumar and I found another way of making HNO-Mb, but that preparation has not yet been submitted for a publication. After finding a reliable preparation of generating pure HNO-Mb, we investigated the interaction between ferrous Mb and HNO applying flash photolysis techniques."

"In 2004 we published a paper in which we investigated the rate of reaction between ferrous Mb and HNO using ^1H NMR techniques (*JCS* 2004,126(4),1096-1101); however, the reaction rate between ferric Mb and HNO was not considered. In addition, we did not consider the possibility of a side reaction between generated HNO-Mb and HNO. All of these were investigated last year. We found



new approaches to determine relative rates of reaction between HNO and heme proteins. The results were presented last year at a regional ACS meeting and submitted to *JCS*, but not published yet. We also were the first group who generated HNO-Hb of over 60 percent purity and assigned proton peaks to alpha and beta subunits comparing EPR spectra of HNO-Hb samples of various purity with EPR spectra of pure NO-Hb. These results were also presented last year at a regional meeting, but not submitted yet," he said.

"In addition to Mb and Hb, we generated HNO adducts of other heme proteins, never done before, showing that other heme proteins form stable HNO adducts. This project was done by Dr. Kumar with some of my help and also presented at a regional meet-

ing last year, with submission to *JCS* this summer," he stated. "Besides working with proteins, I found a reliable preparation of synthesis of organic HNO donors."

Pervitsky is still considering which research career path to take, possibly in organic and inorganic synthesis, computational chemistry or working with proteins. He recently joined the U.S. Army Medical Corps as a biochemist, where "I hope that I will get a chance to continue my study of interaction between HNO and hemoglobin."

As a CSULB student, Pervitsky also was responsible for supporting his family and was grateful for his scholarships. "It was very exciting for me to receive these and other awards. For me, it was an indication that I was on the right track and that my academic and teaching efforts were noticed by the department. This money also helped us to pay off some of our bills. At that time, my wife was a full-time student at Golden West College and a full-time mom taking care of our two daughters," he said.

"I was very lucky to meet and work side by side with such remarkable professors such as the late Dr. Ken Marsi, Dr. Peter Baine, Dr. Henry H. Po, Dr. Senozan, Dr. Li, Dr. Maricich and others," he remarked. "I consider time spent at CSULB as the best time in my life."

Allergan, Inc.

Allergan, Inc., a multi-specialty health care company focused on discovering, developing and commercializing innovative pharmaceuticals, biologics and medical devices, gave out two \$3,500 undergraduate summer research fellowships for faculty-directed research during summer 2008. One was funded by the Allergan Foundation and the other was funded by Allergan Chemical Sciences. The fellowships were awarded to Arti Patel, who is working in Dr. Paul Weers's biochemistry lab on apolipoproteins in connection with their ability to neutralize the endotoxin lipopolysaccharide, which could lead to therapeutic approaches for treating tuberculosis.

Nancy Gardner Produces Podcasts of Lab Techniques

By Stuart Berryhill

Coming soon to your laptop or iPhone—videos of chemistry lab techniques! The podcasts are being produced by Nancy Gardner, a long-time lecturer in our department, along with Walter Gajewski, the coordinator of University Media Technologies, at CSULB.

Instructors in beginning chemistry courses have long noted the problems that students have in mastering some basic techniques. Now a student can watch a video of the technique before coming to class that shows how the technique is performed

and emphasizes safety precautions. The videos have proven to be an effective teaching tool for Chemistry 105 (Chemistry Explorations) and Chemistry 111A (General Chemistry).

Nancy gave a talk to the Division of Chemical Education at the spring American Chemical Society meeting that got a very enthusiastic response. The response from the broader community has also been enthusiastic. In April, one of the podcasts was the second most popular science podcast on iTunes, and overall, more than 10,000 hits were recorded during the first few months the podcasts were posted. Inquiries have also streamed in from chemistry instructors and students worldwide.

The podcasts, which can be viewed at <http://chemistry.csulb.edu/chem105/vodcast/index.html>, currently include lessons on proper use of pipets as well as both vacuum and gravity filtration. The development of several more podcasts is being currently supported by an internal grant from the CSULB Faculty Development Center. Nancy and Jim Kisiel, from the Department of Science Education, have submitted a pZMeNRVZMINRVZMoRVZMcNRVZbM

For the second year in a row, a Chemistry and Biochemistry Department lecturer has received the Mayfield Award for Outstanding Teaching in the College of Natural Sciences and Mathematics at the Commencement ceremonies last May. The 2008 recipient was Dr. Ron Garber.

This annual award is sponsored by the college's student council and was established 19 years ago at the suggestion of members of the council to honor Darwin Mayfield, professor emeritus of chemistry and biochemistry who retired that year at the age of 70. It was designated the Mayfield Award to recognize its first recipient.



"My classroom style is to be energetic and highly modulated in my delivery, hoping to keep everyone awake," Garber said. "In addition, I try to make connections between principles we study and front page examples of those subjects. Is ethanol a practical substitute for gasoline? What's the real deal with regard to nuclear power?"

Garber teaches Chemistry 111A, which is the first semester of the yearlong General Chemistry sequence required of all science majors and pre-professional students. The average class size is around 125 students.

"The course is arguably the most difficult on campus," admitted Garber. "The difficulty is not intellectual in nature. We require some minimal understanding of the subject matter as demonstrated by a previous passing grade on an introductory course or qualifying exam. The trouble comes because a sizeable number of students have not been asked to perform at a university level before this, even in previous college classes.

"Much of our early class meetings are spent discussing overreaching with respect to course load, work hours or family obligations," Garber continued, "Accepting responsibility for one's situation is a sign of maturity missing in the group that has trouble. Strangely, students who fulfill their part of the bargain find it relatively easy to get at least a B in the class.

"I was stunned by the announcement that I had won the Mayfield," Garber commented. "I tend to polarize my students, and there are enough of the disaffected around at the end of any semester that I never expect to win a popularity contest. Also, I shared an office with Darwin Mayfield for several years, and he's one of the classiest people I've ever known at CSULB. It's an honor to have my name associated with his."

Stephen Mezyk, an associate professor of chemistry and biochemistry, was honored with the 2008 Distinguished Faculty Scholarly and Creative Achievement Award, just one year after receiving the Distinguished Faculty Teaching Award.

Ask Mezyk for the key to his research success and he'll tell you it's student involvement. A physical chemist with interests in energy and the environment, Mezyk has worked with 18 under-



graduate and graduate students at CSULB to conduct cutting-edge research that focuses on the study of free-radical reactions with drinking water contaminants. He is currently working with nine students on removing cancer-causing mutagenic nitrosamines—chemical compounds that have been turning up in water in small amounts. They are performing their research at CSULB as well as national laboratories and universities throughout the country.

Mezyk's research has been og theh n snMgNRVZMhNRwRVZMnNRVZ

associate dean of the School of Letters and Science, acting dean of the College of Natural Sciences and, in 2001-03, as the acting dean of Undergraduate Studies. She is especially proud of her work with committees in developing educational policies and in promoting effective advising. People using the faculty handbook may have seen her name as one of the people responsible for developing and updating the handbook. From 1992-95, she was the chair of the Academic Senate. Her distinguished service as a faculty leader earned her the Nicholas Perkins Hardeman Academic Leadership Award in 1995, the highest honor the faculty can confer to one of its members. She also delivered the prestigious Legacy Lecture in 1992.

Dr. Goldish's "Last Lecture" was titled "Chemistry and the Chemistry (and Biochemistry) Department, Then and Now" and provided a perspective on the alchemy and people that created a vibrant department. In it she said, "If you have read Malcolm Gladwell's *The Tipping Point*, you know how he identifies a point at which there was a substantial change from one state to another. I see the 1950s as a tipping point in chemistry. We were fortunate in starting out with a faculty ready to work with the 'new' chemistry."

In April 2008, the Peterson Hall 3 building was closed to begin demolition and ultimately the construction of the new Hall of Science. The building served the college for 46 years, having opened in 1962. The college marked the occasion with a wake in early June, when several current and former faculty members reminisced about the history of the building and its denizens. While space prevents relaying those reminiscences in this issue, I invite our readers to send their own mem-

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Reports from Faculty

DOUGER ACEY

We're back...I'm sorry for having missed last year's newsletter. It's been a very exciting year for us. We had two patents issued, one U.S. and one international. The patents describe a novel technology for removing and recovering toxic or precious heavy metals from water. In addition, Dr. Richard Kanner (a former graduate student of Dr. Berryhill) and I submitted a patent application describing a point-of-use medical device for removal of mercury-based preservatives from clinical products. We are now actively searching for external funding to commercialize our technology.

I'm sure many of you remember us as "Artemiologists," investigators using brine shrimp to study embryonic development. However, we are now a stem cell lab. We are using the cells to study the role of butyrylcholinesterase in both neuron development and the progression of Alzheimer's Disease (AD).

Drugs currently used in the treatment of AD target butyrylcholinesterase. Dr. Nakayama and his students have synthesized a series of organic phosphates that we have been testing as potential butyrylcholinesterase

Back row, standing from left: Dr. Xianhui Bu, Dr. Christopher Brazier, Dr. Eric Marinez, Dr. Margaret Merryfield, Dr. Stephen Mezyk, Dr. Dorothy Goldish, Dr. Marco Lopez, Dr. Paul Buonora, Dr. Peter Baine, Dr. Kasha Slowinska, Dr. Krzysztof Slowinski, Dr. Dennis Anjo and Dr. Ken Nakayama.
Front row, sitting, from left: Dr. Robert Loeschen, Dr. Paul Weers, Dr. Tom Maricich, Dr. Jeffrey Conberg, Dr. Douglas McAbee, Dr. Nail Senozan and Dr. Brian McClain.

inhibitors. The results have been startling; the compounds are potent, highly specific irreversible inhibitors of butyrylcholinesterase. Dr. Nakayama and I have submitted a patent application describing the compounds.

I am happy to report that my senior graduate students have completed their research and are writing their theses. Wafa Mana's project focused on expression of butyrylcholinesterase during neuron differentiation and how phthalate esters interact with the enzyme. Chad MacArthur's research involved measuring the inhibitory activity of Dr. Nakayama's compounds on butyrylcholinesterase and their effect on neuron development. The results of Wafa's and Chad's research were the basis of a proposal recently submitted to *utism Spea s*.

Rebecca Graziano, Dani Tsuboi and David Jang, all undergraduates, have been working with derivativSmolbEV'bSrXaKUa

total of five publications in my group through their work on the synthesis and structural characterizations of homochiral framework materials using camphoric acid as a structural building block. One of my favorite undergraduate students, Henry Valle, has just completed his undergraduate work and will attend the graduate program at CSULA in the fall of 2008. He has been offered the LSAMP fellowship there, which provides him with very generous financial and research support. Another undergraduate student who graduated in the past year is Areg Zingiryan. Areg developed a novel strategy to create homochiral materials through the co-assembly of two structurally similar ligands, one chiral and one achiral. His work has resulted in a publication in the journal *Organic Chemistry*. His work was so nicely done that all referees recommended "publication as is." None of my other manuscripts has enjoyed such a review. Just when I started to feel lonely after the departure of all these wonderful students, four undergraduate students (Jignesh Tijoriwala, Ruben Nieto, Hellen Ngo and Trixia Sarmiento) joined my research during the past year. I look forward to an exciting new school year working with my new students.

AUL UONORA

The 2007-08 academic year brought new courses. After teaching the Advanced Organic Chemistry Laboratory for three years, I taught the one-semester Fundamentals of Organic Chemistry course for food and nutrition and marine biology majors in the fall and the first semester of the new two-semester, non-majors Organic Chemistry course in the spring. Under my responsibilities as the coordinator to the university's NIH-Research Initiative for Student Enhancement (RISE) program, I created and taught a course titled "Preparing for a Laboratory Science Career," which was designed to provide students with perspectives on the necessary skill set development as they progress from undergraduate student through research mentor and renowned scientist.

In the research lab, Joe Badillo, Angela Bustamante, Susanne Cyrus and Bryan Fiamengo finished their research careers in the group. Joe has moved on to UC Davis and into the Ph.D. chemistry program. Angela fell off the face of the earth. Susanne presented her work on developing a

Karplus Constant analysis based on the bicyclic lactam molecules, which we have been synthesizing for some time, in a poster at the spring national meeting of the ACS

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research success over these past few years and to focus these interests for the future. Once again, I anticipate another outstanding year to come!

MICHAEL MEYERS

This year has been another exciting and productive year for my research group. We published a review paper in the journal *International Immunopharmacology* and have another paper accepted in the journal *PLoS ONE* on my lab's collaborative work with Dr. Jadus at the VA center. I continue to work on our CSULB funded NSF (National Science Foundation) MRI (Major Research Instrumentation) grant while finishing my CSUPERB (California State University Program for Education and Research in Biotechnology) Faculty-Student Collaborative Research Seed Grant this year on the role of Maxi-K channels in a viral therapy for glioma cell cancer. These grants have allowed me to continue productive research collaborations and to continue to publish our data.



Thanks go to all my undergraduate students working on these projects this year: Alexandria Brooks, Jimmy Pham, Gerald Vandeusen, Angi Carelli and Ye Li. Thanks also go to Dr. Linda Callahan of the Nursing Department, who continues to work in my group. I am happy to report that Jimmy Pham has decided to stay in the lab and work on his master's degree in public health in my laboratory.

I continue to work in the department to do research in chemistry education. I presented an abstract at the Sixth Annual International Conference on Education earlier this year in Honolulu, Hawaii, on my work studying the use of eLearning by faculty to facilitate student success. The work we are doing involves assessing how faculty can use

Vasanthy Narayanaswami, known to her colleagues and friends as Vas, hails from Chennai (formerly known as Madras), a sunny coastal city in South India. She completed her undergraduate degree from Madras University and is a proud alumnus of the Indian Institute of Technology (Madras), where she carried out her graduate studies in biochemistry in the Department of Chemistry. Her graduate work investigated the role of selenium in glutathione and hydroperoxide metabolism and in oxidative stress. She then did post-doctoral training at the University of Dusseldorf in Germany with a fellowship from the Alexander von Humboldt Foundation, an organization that actively promotes cultural and scientific exchange of scholars. "This was one of the most exciting times in my life," recalls Vas. "I obtained further insights into oxidative stress research in Prof. Helmut Sies's laboratory, which established the foundation for my current research program. I also had a fantastic time traveling and experiencing the rich cultural atmosphere around me in Europe."

After the short stint in Germany, Dr. Narayanaswami then moved on to Edmonton, Canada, where she continued her post-doctoral training in lipoprotein research. The transition from a place where she was accustomed to ambient temperatures of 33 °C to one where -33 °C was considered merely cold was indeed challenging, to state it mildly. Staying indoors most of the time and broadening her research horizon as a post-doc was certainly one way of dealing with the cold—which she did! However, once she realized that she had to learn to deal with the cold instead of battling it, her experience was more enriching. The aurora borealis and the long daylight hours during summer were phenomenal, and she remembers those days fondly.

Dr. Narayanaswami comes to Long Beach from the Bay Area in Northern California, where she was an assistant scientist at the Children's Hospital Oakland Research

hard during the spring and summer of 2008 on some chiral organophosphorus synthesis. Graduate student Eunice Cheung has made major progress in her synthetic methods project and will be completing her work by the end of 2008. Meanwhile, graduate student Ricardo Gallardo has been working on aminophosphonate synthesis, and we are close to publishing our preliminary findings. The work of graduate student Long Nguyen, who joined our group in the spring semester of 2007, involves the resolution of a library of chiral phosphates and is also slowly gaining momentum.

I have been involved during the past year in teaching the advanced organic laboratory course (Chem 420), which has been revamped several times, now. I continue to try and incorporate reactions from the literature into the course curriculum to give students an opportunity to experience "real-world" challenges.

On a personal note, our daughter Karissa (nine years old) is a very articulate child with command of both English and Japanese. Judging from her interests, her future goals seem to vacillate between becoming either a clothing designer or a shark biologist. Our son Kendall (six years old) is getting very

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I would have never thought that I would be visiting these places that I have read so much about. To be there in person gives one a different perspective of these countries.

Many of you came to my last seminar on April 30 and also to the retirement reception for Dr. Goldish and me a week later. I would like to thank all of you for taking time from your work and coming to the seminar and the reception. In no particular order, I would like to thank the following people for coming to my retirement: Gian Gacho Grant, Dr. Silvero Arano, Dr. Kedy Ying Jao, Nick Jones, Ted Nguyen, Dr. David Anvar, Ming Yuan, Dr. Ximeng Wang, Gary Tietavainen, Dr. Kenneth Huang, George and John Liarakos, Danute Basiulis, Dr. Dmitry Pervitsky, Josephine Yee, Dr. Steve Jones, Janet Kiang Tsukamoto, Melanie Concepcion Gonzales and Dwayne Ishida. The flowers that were sent to the seminar were from Dr. Jao and those sent to the reception were from Huilin Huang. Thank you both for your thoughtfulness.

I also received many cards and e-mails with well wishes and kind words from as far as Heidelberg (Dr. Chosu Khin), New Hampshire (Jeffrey Masse), Ithaca (Professor Janet Hunting), Hong Kong (Dean and Professor Ma Kam Ping), and New York City (Professor Alexander Greer). Well wishes from Mrs. Jensen, Atty. Linda Sarno, Professor Robert Bao (USC) and Huicun Guo were also received. I shall treasure all the kind gestures and supports from all of you.

Since PH-3 has been demolished and is going to be replaced with a state-of-the-art science building, I neither have an office nor a lab, now. However, I am still doing QC calculations, but in Dr. Li's lab. She has provided me with space for my PCs. My most recent publication, "Electrochemical Oxidation of 2-Pyrimidinethiols and Theoretical Study of Thiol Dimers, Disulfides, Sulfenyl Radicals, and Tautomers," appeared in the *Journal of Physical Chemistry*, A 2008, 112, pgs. 1643 – 1655. There are two computational projects that I have started before moving out of PH3-204. One has to do with Fourier analysis of the total rotational energy barriers of small molecules and the other is on the stabilities of realgar and its invertmer. An undergraduate student is helping me with these calculations, and I hope to complete them soon.

Most of you know that my early research was on the reaction kinetics and mechanisms of inorganic reactions and electrochemistry of inorganic complexes; however, nine years ago I decided to take on a new area, computational chemistry. On a sabbatical leave,

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AUL WEERS

The Weers research group aims to gain insight in structural and functional aspects of apolipoproteins in lipid transport processes and innate immunity. We use the insect apolipoprotein, apolipoprotein III as a model system because of the structural resemblance with human apolipoproteins, availability of high-resolution structures and biophysical properties. Larnaies.



OBER ENDERSON A ARD

Dr. Henderson was a member of the
Department of Chemistry and Biochemistry

SUBJECT AREA AWARDS

Freshman Chemistry Award:

DAO

American Chemical Society,
Polymer Chemistry Award:

AL AREZ

American Chemical Society,
Analytical Chemistry Award:

SEY URRAN

Organic Chemistry Award:

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Inorganic Chemistry Award:

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Merck Award in Organic Chemistry:

OMAS OMBA EE

Biochemistry Award:

SEY URRAN



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DEPARTMENTAL AWARDS

Toni Horalek Award for
Departmental Service:

RIS INE RADFORD

Hypercube Award:

AN

Departmental Undergraduate Honors:

REER McMIC AEL SEY URRAN and

ASANDRA O

Departmental Graduate Honors:

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American Institute of Chemists

Baccalaureate Award:

ASANDRA O

American Institute of Chemists

Graduate Award:

EI U

American Institute of Biochemists

Baccalaureate Award:

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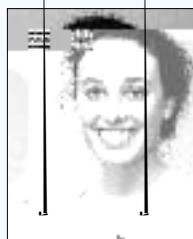
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COLLEGE UNIVERSITY AWARDS

Graduate Dean's List of University
Scholars and Artists:

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Robert B. Rhodes Award:

ASANDRA O

Khalil Salem Award:

REER McMIC AEL

Initiated into Phi Beta Kappa:

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Photos by David J. Nelson

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Student Affiliate of the American Chemical Society

