

Chemistry and Biochemistry Department Newsletter

August, 1992

Number 17

Dr. Jerrold Meinwald: 13th Distinguished Visiting Lecturer

Dr. Jerrold Meinwald, Goldwin Smith Professor of Chemistry at Cornell University, was the 13th annual Distinguished Lecturer, visiting the Department of Chemistry and Biochemistry on March 4. This outstanding and popular lecture series has been sponsored for the last six years by grants from the Unocal Foundation. Support from Unocal makes it possible for a distinguished chemist or biochemist to spend a day or two interacting with faculty and students as well as delivering several lectures.



Dr. Jerrold Meinwald

Dr. Meinwald received his PhD from Harvard University, where he worked under the direction of the late Professor Robert B. Woodward. Among the many awards and honors which he has received for his work are the American Chemical Society's E. Guenther Award in the Chemistry of Essential Oils, the A. C. Cope Scholar Award, the Esselen Award for chemistry in the public interest and the Tyler prize in Environmental Achievement.

While at CSULB he delivered two lectures to overflow crowds of students and faculty. The first lecture, entitled "Chemistry of Everyday Insect Life: Violence, Sex and Drugs," related work on the isolation, identification, and in some cases, the total synthesis, of organic compounds found in the whip scorpion, firefly, silk worm, boulder spider and African monarch butterfly. These substances act as sex attractants and provide defense from predators.

For example, the whip scorpion, *mastigoproctus giganteus*, secretes a mixture of 84% acetic acid, 11% water and 5% caproic acid. The purpose of caproic acid is to dissolve the wax shell found on many

insects, allowing the corrosive acid secretion to penetrate and harm predators. The female of one species of firefly employs a steroid-like compound (similar in structure to digitalis), acquired by eating a protected male of another species, to make itself and its offspring inedible to its predators. Female silk worms secrete a species-specific pheromone which attracts males. The compound is *cis,trans*-10,12-hexadecadien-1-ol.

The second lecture of the day was titled "Insect Pheromones and Spider Venoms." Among other insects, Dr. Meinwald discussed the tiger moth, which consumes poisonous plants containing the

alkaloids, monocrotaline and/or usaramine. These alkaloids are highly distasteful, making the moth unpalatable to its prey. Deprived of a source of these substances, a female will seek an alkaloid-protected male for mating purposes so that her offspring will be indirectly protected through reception of these chemicals from the male.

In addition to being a distinguished chemist, Dr. Meinwald is a first-rate flutist of concert ability. That evening he performed with the accompaniment of Dr. Ed Harris (viola da gamba), a professor in our department, and Dr. Don Simons (harpichord), an engineering consultant. The program consisted of two Bach flute sonatas: Trio Sonata, BWV 525 (J. S. Bach) and Sonata in B-flat, Wct. 125 (C. P. E. Bach).

Editor's note: This article was written by Lorina Arriola and Oren Beske, first-year organic chemistry students.

Distinguished Alumnus: Dr. William Lake

At the May Commencement of the College of Natural Sciences, Dr. William Lake (BS, 1967, Chemistry; MS, 1968, Chemistry; PhD, 1973, Purdue University, Biochemistry) received the 1992 Distinguished Alumnus Award from former student body president Eddie Robb, representing the CSULB Alumni Association.

As director of hematotherapy research and development for Baxter Healthcare Corporation, Dr. Lake works at the cutting edge of medical technology. Currently, he is perfecting systems to remove tumor cells from bone marrow. This means that cancer patients may no longer have to wait for a compatible donor—a hope only one in four realize; instead, their own marrow can be purged of cancer cells and used for transplant. Baxter's technology will bring



Dr. William Lake

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Chairman's Report

It has become increasingly clear that the funding priorities of the State of California have changed. The California State University System is receiving an ever-diminishing portion of each dollar spent by the State, despite the fact that the CSU alumni represent more than 10% of California's entire workforce, and its 20 campuses collectively provide three out of every four teachers to educate California's exploding population of children.

The failure of the State to meet the basic support level required by the CSU System has, of course, had its repercussions on our own campus. Although at this writing the Governor and the Legislature are still in disagreement about the budget for the 1992-93 fiscal year, our administration is proceeding on the assumption that, at the very least, an 8% reduction in our budget, as compared to last year, will be necessary. This translates to a cumulative decline in support in excess of 20% over the past six years. Hundreds of temporary and part-time faculty will not be rehired for the coming year, and scores of support staff have been terminated. However, unlike the situation at several other campuses, we have managed to avoid the layoff of any tenured or tenure-track faculty at CSULB.

As for the Department of Chemistry and Biochemistry, two part-time faculty and three staff members, two from the Stockroom area and one secretary, have been terminated or reassigned (see the Staff News column). For the present, we have not been permitted to recruit for permanent faculty, although we have lost several tenured and tenure-track faculty through retirements and resignations. Obviously, the decline in faculty numbers has resulted in our offering fewer classes. Some classes which were formerly taught each semester are now offered once a year. Faculty are teaching larger classes in order to accommodate student needs, and the staff are also doing more with less, keeping our old equipment in operation and maintaining our aging facilities.

A comparison of statistics for 1986-87 and 1991-92 academic years is given. You will notice that the number of majors has grown, although the total number of students enrolled in chemistry courses has declined because we are offering fewer sections due to budget cuts.

	1986-87	1991-92	% Change
Faculty Positions	35.4	25.9	-26.8
Full-time Equivalent Students (FTES)*	582.8	505.4	-13.2
FTES/Faculty	16.5	19.5	+18.2
Majors (Undergraduate)	198	214	+8.1
Majors (Graduate)	35	31	-11.4
Operating Funds (State)	\$60,000	\$11,159	-81.4

*Total Chemistry units enrolled in by students, divided by 15 units

We are traditionally a resourceful department and, rather than succumbing to discouragement, we are coping with our financial problems in the following ways in order to protect the excellence and integrity of our programs in chemistry and biochemistry:

...We are now assessing laboratory fees, ranging from \$13.00 to \$35.00 per semester, depending upon materials expense. This money is used to purchase chemicals and other expendables (not equipment) used in laboratory courses. Our students, although not enthusiastic about the laboratory fees, understand the need for them, and there have been no student outcries.

...We are looking to business and industry, who employ our graduates, for assistance through our Annual Corporate Fund Campaign. This has been a very successful venture. In 1990-91 our department raised \$106,485 in cash and in-kind gifts, and for the current year we have received \$108,832 to date. Our alumni are also responding to our needs, and this year \$9,673, has been given, in addition to corporate funds.

I cannot tell you how much of a difference the availability of these resources has made to our department. Most cash gifts are placed in our Endowment account, from which we use the interest to meet our department's growing needs. Some of our alumni and friends have given sacrificially. We are most grateful for their aid and for the help of corporations. Not only is material assistance important to us, but the knowledge that people care about this department makes a positive impact on the morale of the faculty and staff.

Extensive administrative reorganization is contemplated for the future, and in the College of Natural Sciences, the departments of Microbiology and Anatomy and Physiology will be merged with the Department of Biology into one department of

Biological Sciences. In addition, the Department of Mathematics and Mathematics Education will be transferred from the College of Humanities to the College of Natural Sciences.

Good news! Several years ago, before the State's budgetary crisis, the department applied for and was given \$560,000 to purchase new equipment, pending completion of renovation of PH2 and PH3. Fortunately, these funds were held intact by the State and became available to us this year. Among the major items of equipment we are acquiring are the following: 400 MHz nuclear magnetic resonance spectrometer, a fast performance liquid chromatograph (FPLC) for the biochemistry area, an ion chromatograph, spectrophotometers for freshman chemistry laboratories, a gradient HPLC for analytical chemistry, and an automatic digital polarimeter. Acquisition of these instruments will assist us in offering our students contemporary experiences in laboratory instrumentation.

The other bit of good news is that Proposition 153 was passed in June. It is hoped that further renovation of Peterson Hall 3 and construction of a new \$32,500,000 science facility, primarily devoted to laboratory work, will commence within the near future.

Amidst these mixed blessings, we offer our best wishes to all of you; and again, "thank you" for keeping in touch with us and for your loyalty.

Ken Marsi

—Ken Marsi

Endowed Awards

Robert B. Henderson Memorial Award

This year there were two recipients of the Robert B. Henderson Memorial Scholarship: Sherilyn Bauer, BS Biochemistry, and Wing-Lim Poon, MS Chemistry. This award was established by Dr. Henderson's family, colleagues and friends to honor the memory of Dr. Henderson, a member of the Chemistry Department from 1955-1983, and a distinguished scientist and teacher. Recipients are chosen from among bachelor's and master's graduates as those best typifying Dr. Henderson's scholarship and commitment to the profession of chemistry.



*Sherilyn Bauer,
Robert B. Henderson Scholar*

Sherilyn Bauer

With a 4.0 GPA, Sherilyn Bauer has made the President's List every year of her undergraduate career. In addition to the Henderson Scholarship, she received the Merck Index Award and the CSULB Alumni Award for excellence in organic chemistry, the Anaheim Memorial Hospital Medical Staff Scholarship three times and the Alumni Scholarship on four occasions. She was founding president of the Student Alumni Scholars Association, served as an officer in Phi Eta Sigma/Alpha Lambda Delta, and is a member of four other honor societies. Ms. Bauer has also been a group leader for Kaleidoscope Academic Day since 1987. In the summer of 1991 she received a fellowship to participate in a National Science Foundation-sponsored undergraduate research program at the U of Virginia and has also been a research student of Dr. Margaret Merryfield in biochemistry. Each year the College of Natural Sciences elects one student to be honored by the CSULB Alumni Association as an outstanding graduate. Sherilyn was designated the 1991-92 Outstanding Graduate from among 236 science graduates during the last academic year. After working for a year, she plans to enter a PhD program in biochemistry.

Wing Lim Poon

Wing Lim Poon, MS Chemistry, received his bachelor's degree in chemistry from Hong Kong Baptist College in 1986, receiving Honors Diploma in

Chemistry. After graduation he taught in a secondary school and then worked as a chemist in the Environmental Protection Department in Hong Kong. Mr. Poon was a master's research student of Dr. Henry Po; his thesis is titled, "Reaction Kinetics of Nitrite Ion with Hexachloroiridate Ion." He was also this year's recipient of the Chemistry and Biochemistry Advisory Council Outstanding Graduate Student Award and the Hewlett-Packard Award. Wing Lim expects to continue his studies for a PhD in chemistry.



*Eloisa Gonzalez,
David Scoggins Scholar*

David L. Scoggins Memorial Award

The David L. Scoggins Memorial Award recognizes outstanding scholarship and promise by a Chemistry or Biochemistry graduate who intends to make a career in one of the health professions. This year's awardee is Eloisa Gonzalez, a BS Biochemistry graduate who will enter the Stanford University School of Medicine. Ms. Gonzalez was a research student of Dr. Mark Anjo, working on the determination of catecholamine diffusion coefficients. In 1990 she received first place in the CSULB Research Competition in the Physical and Mathematical Sciences where she presented her research results. During the summer of 1991 she was a National Science Foundation research intern in Washington, DC. Eloisa will be the first CSULB chemistry graduate to enter the Stanford University School of Medicine.



*Wing Lim Poon,
Robert B. Henderson Scholar*

Work of Alumni Subject of Featured Articles



Diana Delatore Griffith: Polyomavirus

Diana Delatore Griffith, BS 1979 (PhD 1992 Brandeis University), had her work on the internal structure of the polyomavirus featured as a cover story in the February 13 issue of *Nature* magazine. Her husband, James P. Griffith, is a co-author of this paper, a letter to *Nature*. By use of difference Fourier analysis of X-ray diffraction data obtained from crystals of empty capsids and complete virions of polyomavirus, they were able to obtain an electron-density map of the inside of the virion. Surface representations of the virion, capsid and difference maps indicate the spherical core is connected to the capsid by 72 prongs, each about 50 Angstroms in length.

Diana is presently a research associate at the Rosenstiel Basic Medical Sciences Research Center at Brandeis University.

Charles Kristensen: Milking Spiders

Charles Kristensen, BS 1980, is an arachnophile. Even as an undergraduate at CSULB we were aware of his fascination with spiders. He has turned his love for arachnids into a business, Spider Pharm, and his work is the subject of an arresting article by Kathryn Phillips in the June 1991 issue of *Discover: the Newsmagazine of Science*. Spider Pharm is located in Black Canyon City, "a two-diner town 45 miles north of Phoenix, in the heart of the spider-rich desert." Down on the "Pharm," spiders are collected, bred and milked for their venom, which has found use in neurochemical research. Spider venom is actually a complex mixture of chemicals and is collected by electro-stimulation of the spider's mouth. Components of the venom interfere with neurotransmission. For example, some venoms block calcium migration through neural channels.

Since the appearance of this article, Charles has taken a position with American Cyanamid as a "research biologist." His wife, Anita, continues to manage the "Pharm."



Beckman Instruments Awards DU 640 Spectrometer

Beckman Instruments, Inc. has given the department a new DU 640 UV-Visible Spectrometer which will be used by all sectors of our department for instructional and research purposes. The DU Series 600 Spectrophotometers were just introduced to the market in April of this year. Its focused beam technology offers precise and accurate measurements with samples as small as 5 microliters. It offers fixed wavelength analysis, wavelength scanning, spectral manipulation and kinetics investigations. Several software packages are available for use, and the instrument does not require an external computer. The wavelength range is 190-1100 nm, and applications software includes protein assay, nucleic acid determination, single and multicomponent analysis, enzyme mechanism and activity, gel/film peak area and molecular weight determination.

We express our gratitude to the following persons from Beckman who made this gift possible: Jim Harris, District Manager, and a member of our Advisory Council; John Brownlee, Senior Sales Representative, who set up the instrument and instructed our faculty in its use; and Dr. Steve Pentoney, Research Scientist for Beckman and an alumnus of our department.

The instrument, with accessories, is valued in excess of \$15,000.



Beckman DU 640 UV-Visible Spectrophotometer, a gift from Beckman Instruments, Inc. Chemistry/Biochemistry personnel, left to right: Dr. Ken Marsi, Chair; Dr. Margaret Merryfield, Associate Professor, Biochemistry; Robert Soukup, Instrument Technician.

Student Affiliates of the American Chemical Society

by Debbie Aarhus,
President 1992-93

The Student Affiliates of the American Chemical Society (SAACS) completed yet another successful and eventful year. Last fall at the annual Taco Feast we welcomed new and returning members. Faculty and students also had the opportunity to interact at the Coffee-Donut Hour, a regular Friday morning feature. The laboratory gear sale (goggles, lab coats and safety manuals) allowed students to purchase these items at an affordable price. As usual, the high point of the year was the well-attended annual Winter Holiday Party, held at Dr. Marsi's home. The year was concluded on a high note with the Pizza Awards Banquet, honoring students in Chemistry and Biochemistry for their scholarship and service. About 15 awards were presented, including the Toni Horlek award, given to Don Crow for his dedicated three-year service to SAACS.

During Kaleidoscope, the University "open house," SAACS members explained chemistry to adults and children from the community, using exciting and eye-catching demonstrations. Members of SAACS presented \$250 to the department as their contribution to the Annual Chemistry and Biochemistry Corporate Fund Campaign. SAACS had several changes during the past year. Phil Zlaket stepped in as president at the beginning of the spring semester. We would also like to thank vice president, Don Crow, and our faculty advisor, Dr. Ken Marsi, for their tireless support of our organization this past year.

As the new SAACS president for 1992-93, I would like to congratulate the new officers: vice president, Kristi Miyade; secretary, Judith Ramillano; treasurer, Jeff Knight; activities, Jennifer Lee; and publicity, Kathy Wang. We intend to make this next year the most active and rewarding ever.

Editor's note: SAACS received its charter in 1958, with Dr. Julie Parker Kierbow as the first advisor to the organization.



Officers of SAACS at the Pizza Honors Luncheon. Left to right: Kristi Miyade, Secretary; Debbie Aarhus, President; Kathy Wang, Publicity.



Donald M. Crow, Toni Horlek Awardee for Departmental Service.



Baroque trio performs for Chemistry and Biochemistry faculty and students. Left to right: Dr. Ed Harris, Chemistry and Biochemistry, Viola Da Gamba; Dr. Don Simons, Mechanical Engineer, Harpsichord; Dr. Jerrold Meinwald, Distinguished Lecturer, Flute. (See story on page 1.)

Distinguished Alumnus continued...

the system, already used in a few major institutions, to local hospitals.

Equally exciting gene therapy applications are at their earliest stages of development in Dr. Lake's laboratory. Baxter and his division are working on systems to isolate the bone marrow's stem cell, thought to give rise to all cells circulating in blood-to make it possible to correct genetic and metabolic deficiencies.

A prolific writer with a number of patents to his credit, Dr. Lake brings his exceptional perspective to the Chemistry and Biochemistry Department as an adjunct professor. In addition, he is a member of the Chemistry and Biochemistry Advisory Council and co-chairman of the Chemistry Corporate Campaign Committee for 1991-92.

Dr. Lake joins an elite group of other CSULB chemistry alumni who have been similarly recognized over the years as distinguished graduates: Dr. Fred Dorer, BS 1961 (Vice President for Academic Affairs, California State University, Bakersfield); Dr. Robert O. Hutchins, MS 1962 (Professor and Chairman, Department of Chemistry, Drexel Institute); Dr. Evord Knights, BS 1964 (Vice President, Unipure Division of Unocal); Ms. Dana Basiulis, MS 1977 (Manager, Materials Science Department, Hughes Aircraft Company).

Roger Acey's research group consists of three graduate students: Sigrid Wagner, Conrad Winn and Brent Harpham; and nine undergraduates: Barbara Ballerston, Peggy Gross, Jongseak Hong, Dennis Kawamoto, Elizabeth Lam, Mario Meallet, Shawn Misialek, Derrick Meyers and Robert Smith. Mario and Derrick are funded by the Minority Biological Science Research program. Chevron Oil Field Research and American Qualex also provide funding for this research program. Martha Lopez, another of Dr. Acey's students, received her MS degree in Biochemistry and works as a research scientist at UC Irvine.

Dennis Anjo. "We have continued research on the use of carbon electrodes for the analysis of catecholamines. Eloisa Gonzalez, who will be entering medical school at Stanford U this fall, and Krista Marantos have been working on the determination of catecholamine diffusion coefficients. Kiana Tabibzadeh and Eric Barron are investigating background current generated by carbon electrodes. Shelton Brown, who will be attending dental school at the U of Iowa, is studying optically transparent carbon electrodes, and his work has been submitted to *Analytical Chemistry*. Sue Kim and Joe Vargas, who received his MPH in Health Science this spring, have been working on the analysis of catecholamines using carbon-electrode adsorption, while Dan Meder is investigating the use of nonaqueous solvents for the activation of carbon electrodes. Linda Kennedy is attempting the preparation of buckminsterfullerene from small carbon acids."

Peter Baine. See column on Sabbatical Leaves, 1991-92.

Roger Bauer continues as the director of the Minority Access to Research Careers (MARC) training grant sponsored by the NIH and reports that the students in the program are stronger than ever. He also directs a training grant to support the development of potential high school teachers of science and mathematics, funded by the Department of Energy. He is especially interested in hearing from local high school science teachers who might be interested in becoming involved in this pre-service teacher training program. He is still the director of a series of national teleconferences on issues related to health and safety in the academic environment.

A.J. (Jack) Berry. See column on Sabbatical Leaves, 1991-92.

Stuart Berryhill is serving as secretary of the Southern California Section of

the American Chemical Society for 1992. In addition, he helped organize the annual High School Chemistry Contest which is sponsored by the Southern California Section of the ACS. CSULB served as one of the testing sites.

Jeffrey Cohlberg. See column on Sabbatical Leaves, 1991-92.

Dorothy Goldish has been elected to the chairmanship of the University Academic Senate. She will continue to lecture in general chemistry.

Edwin Harris has been responsible recently for teaching Chemistry 327, the "brief" course in organic chemistry. "This course is undergoing changes with modifications in the curriculum. Most biology majors are now required to take the two-semester course in organic chemistry (Chemistry 321A/322), and entry into the physical therapy program on this campus now mandates Chemistry 327, rather than the course designed for nursing and home economics majors. The net result is an increase in enrollment because of the large number of physical therapy majors at CSULB. We believe that the change in biology requirements to include the year-course in organic chemistry is beneficial to those students, because it provides them with a stronger background in organic chemistry for understanding biochemistry."

James Jensen continues as program director for the Minority Biomedical Research Support Program (\$470,000), the Biomedical Research Support Program (\$10,000), and the Biomedical Research Instrumentation Program (\$10,000), all funded by the NIH. In addition, he is co-director of the Howard Hughes Medical Institute Biological Sciences Initiative funded for \$750,000 covering 1991-96; Dean Fred Shair is also co-director.

Dr. Jensen's research group continues to be supported by the MBRS grant and an NSF grant, focusing on hydrolytic processes promoted by Brønsted and Lewis acids. This past year, Daniel Bernier reported on his undergraduate research at four conferences: Washington, DC, CSULB, San Francisco, and Minneapolis. Former students Rick Pagliery, Clyde Jones, Art Dixon, Alex Seizew, and Gary Martinez are progressing well in their PhD programs.

A second paper on O,S-acetal hydrolyses, mediated by mercuric complexes, was published this year, with Ty Smith (PhD, UC Irvine), Greg Shaw (West Coast Analytical Services), and Dave Maynard, (PhD, UC Riverside) as co-authors. The third paper, reporting results

obtained by Frank Hwang and Stephanie Po, will appear in early 1993.

The research done on hemiacetal hydrolyses since 1980, which involved a number of students but especially Richard Kanner and Ralph Hall, is being continued as part of a cooperative effort joining groups at the U of Toronto, the Technical U of Denmark, and CSULB.

Gene E. Kalbus presented a paper in August 1991 at the National ACS meeting in New York on "Spectrophotometric Determination of Oxalates in Plants."

Van Lieu has a total of seven undergraduates and one graduate student working with him on various analytical chemistry projects. "I am presently preparing for, and looking forward to teaching, Chemistry 200 (a first-semester course of a two-semester sequence covering general, organic and biochemistry) for the first time. I was the co-presenter of a paper at the National ACS Meeting in New York in August 1991."

Robert Loeschen. Attended the Chemical Education Conference at UC Davis this summer. Dr. Loeschen has been appointed associate dean in the College of Natural Sciences and will be involved in new construction and renovation projects.

Marco Lopez. "Last September I was asked to be part of a Minority Biological Research Support (MBRS) Program site-visit review panel for the NIH at the University of San Juan, Rio Piedras, in Puerto Rico. I spoke with PhD students there in Spanish and asked them if classes were taught in Spanish or English. I was told that all the textbooks are in English and that students are expected to speak English fluently. About half the classes are taught in Spanish and the other half in English.

"In October Cynthia Ybarra and I presented posters at the Pacific Coast Conference on Chemistry and Spectroscopy, held at the Disneyland Hotel. In November we went to the Minority Programs Symposium in Washington, DC where Cynthia presented her work. In addition she made a presentation in January at the SACNAS meeting in San Antonio, at the Fifth Annual Research Competition at CSULB in March, and at the 11th Southern California ACS Undergraduate Research Conference at Claremont in April.

"In April I was awarded a second AREA grant from the NIH. This grant will enable me to purchase a long-awaited and much-needed computer graphics terminal so that I will be able to portray molecules in three-dimension and to construct reason-

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able molecular structures as starting geometries for the Molecular Mechanics calculations we do in the "Heme Team."

"New members of the "Heme Team" are Alex Greer, a graduate student, and Juan Noverone, an MBRS undergraduate student. Mark Tanji, who is completing a large computational study on the electronic structure of several metalloporphyrins, is leaving our group."

Tom Maricich has completed his term as associate dean and will return to full-time instruction in Chemistry/Biochemistry. "As associate dean, my half-time activities concentrated on technical services and interfacing with Plant Operations and Physical Planning. We worked out an agreement with Cal State LA and Cal State Fullerton to share glassblowing services. For several years I have served as a chemical consultant on various court cases and chemical accidents. Some take-home lessons are (1) dry chlorine granules spontaneously combust with oil or cellulose, (2) dithiocarbamates release flammable carbon disulfide with acid, and (3) titanium metal/nitrate sludges from nitric acid stripping baths are explosive when dried."

Kenneth Marsi continues to serve as department chair. At the 1992 Commencement he was given the Mayfield Award by representatives of the College of Natural Sciences for his service to students.

Margaret Merryfield spent much of the 1991 summer at "DNA Camp" at Boston University. "I was a participant in a six-week workshop in recombinant DNA techniques for undergraduate laboratories, sponsored by the NSF. Among the things I learned was that, contrary to popular belief [in our department], many small colleges are in worse shape than CSULB in terms of equipment and lab facilities! In the spring, I was able to adapt some of the work we did for use in Chemistry 443 (Biochemistry Laboratory).

"During the year, my students and I continued to work on regulation by protein phosphorylation, focusing on the enzymes BCKDA, acetyl CoA carboxylase, and HMG CoA reductase. My 'copious free time' was seriously reduced by a term as chair of the School Council and service on a university-wide committee that was unofficially known as the Provost's Advisory Commission on Everything. The last few weeks of the spring semester were spent recuperating (uneventfully) from an emergency appendectomy.

"My husband, Kent, was granted tenure in the Math Department, effective in the

fall, when Mathematics will join the College of Natural Sciences.

"Dana Gilchrist entered the PhD program at Notre Dame last fall, but is making a cameo appearance in the lab this summer to finish up her thesis work. Other students moving on include Kelly Robinson (medical school), Kayvan Haghghi (dental school), and Sherilyn Bauer (to a job in the 'real world' prior to graduate school.)"

Kenneth Nakayama states that "this past year has seen some very exciting developments in our research group. Hosein Razavi presented a poster at the 1991 FACSS/Pacific Conference Joint Meeting at Anaheim. He is currently investigating asymmetric versions of a new catalytic process. Patrick Middleton is conducting a study of a very promising asymmetric addition reaction involving aldehydes. Our work is being assisted by the acquisition of a new GC/MS and polarimeter." Dr. Nakayama received an Affirmative Action Faculty Development Award for "Study in the Use of Novel L-Tartrate-Derived Chiral Auxiliaries in Asymmetric Induction."

Henry Po. See the column on Sabbatical Leaves, 1991-92.

Kimberly Schugart. "Our group's computational chemistry research efforts directed at understanding atmospheric chemistry has begun to move along. Jim Noblet finished his MS degree, and work from his thesis, which describes chemical and physical attributes of the bisulfite ion, has been submitted for publication. Jim is now pursuing a PhD in environmental science at UCLA. Graduate student Melanie Concepcion participated again this year in the campus research competition. A first-prize winner in the physical sciences last year, Melanie took second place this year, and is now finishing her thesis work on the interactions of SO₂ and H₂O. Trevor Roberti completed his BS degree and will be attending the PhD program at UC Santa Cruz."

Leslie Wynston continues advising pre-health professions students as well as teaching biochemistry and clinical chemistry. He reports that on a recent trip to Eastern Germany and Czechoslovakia he found air pollution to be unimaginably bad—far worse than the smoggiest days in Southern California. "There's lots of work for pollution-control chemists there. The Leipzig area's pollution is so severe that 80% of the population suffers from some form of respiratory disorder."

Advisory Council News

The Chemistry and Biochemistry Advisory Council, formed in 1977, is an organization of 25 scientists and executives from business and industry who meet twice each year with the Chemistry and Biochemistry faculty, student representatives, the Dean of the College of Natural Sciences, the Provost, and the President of the University to discuss matters relating to the department. Members of this group, all very committed supporters, advise the department concerning its instructional program, inform us of opportunities for interaction with the community, and offer personal assistance in securing material support.

New members added to the council during the past year are James D. Harris, District Manager, Los Angeles Sales District, Beckman Instruments, Inc.; David J. Knoth, District Sales Manager, Analytical Instruments, Hewlett-Packard Co.; Dr. Mat Malladi, Technical Manager, Torrance Refinery, Mobil Oil Corp.; Daniel R. Moothart, President, American Qualex; Dr. Michael J. Block, Manager, Agricultural Chemicals Research, Unocal Science & Technology Division, Unocal Corp.; Dr. Martin Schoell, Senior Research Associate and Group Leader, Organic Geochemistry Research, Chevron Oil Field Research Company; Steven Sinderbrand, Western Regional Sales Manager, Specialty Chemicals, International Specialty Products; Raphael C. Wong, President, Co-founder and Board Member of BioProbe International, Inc.; Herb Zimmerman, District Sales Manager, Varian Analytical Instruments.

CSULB
Chemistry and Biochemistry
Department Newsletter
August 1992, Number 17
An annual publication
of the
Department of Chemistry
and Biochemistry
for past and present students and
friends of the department. News items,
photos, and comments are eagerly
invited. All articles not signed in this
issue of the *Newsletter* were
researched and written by the editor.
Kenneth L. Marsi, Editor

Four Faculty on Sabbatical Leave 1991-92



Dr. Peter Baine at the console of a General Electric 300 MHz Multinuclear Nuclear Magnetic Resonance Spectrometer at UC San Diego.

Dr. Peter Baine

This fall Dr. Peter Baine will be returning from a year's sabbatical leave, spent at UC San Diego, working with Dr. C. L. Perrin, a physical organic chemist. There he was involved in several laboratory projects. A comparison was made between the molecular motion of $^{15}\text{NH}_4^+$ and $^{31}\text{PH}_4^+$ by measuring the relaxation time of the longitudinal magnetizations of the ^{31}P and ^{15}N nuclei. The basic idea was to see what effect hydrogen bonding has on the tumbling of the molecule in aqueous solution. A second project in which Dr. Baine was involved was to measure the kinetic isotope effect for the exchange of protons in the various isotopomers of $\text{NH}_n\text{D}_{4-n}^+$ using 2D EXSY nmr spectroscopy.

While at UCSD Dr. Baine taught in the general chemistry program where class enrollment ranged from 200-300 students. "One interesting aspect of general chemistry is that there is a professional note-taker in the classroom paid by the Student Union. These notes are then sold by the Student Union. This hardly encourages students to attend class. All in all, this has been a very busy, yet stimulating year, but I'm looking forward to returning to CSULB!"

Dr. A. J. (Jack) Berry

During my sabbatical leave I was involved with two projects which gave significant results.

The first dealt with the stabilization of dilute solutions of a peroxidase used as the signal enzyme by medical diagnostic kit manufacturers. Manufacturers want to supply the peroxidase reagent at a "working dilution" for the convenience of the user; however, peroxidase is notoriously unstable at these concentrations, even with protective buffers and proteins. Working with Dr. Peter Knight of Microbiological Research Laboratories, my project was to investigate this stabilization effect with the hope that it would lead to a commercially usable peroxidase reagent stabilization. Our work showed that fetal calf serum at a 25% dilution has an amazing stabilizing effect on peroxidase. Unfortunately, fractionation and partial purification studies revealed the stabilizing agent to be a protein and that the chemical concentration of the protein is extremely small in fetal calf serum. This information probably eliminates the use of this agent by diagnostic kit manufacturers, although it would be of interest to completely characterize the protein involved. Other studies have also shown that the

stabilizing protein is peculiar to fetal calf serum and disappears after birth.

The second project involved a study of toxic metal release from ceramic glazes on ware used for food handling or storage. Lead and cadmium are well known to be potential problems, and safety regulations have been implemented to control allowable limits of release. Barium, another toxic metal, has long been used in high concentrations (20-30% of raw glaze weight as BaCO_3) in some ceramic glazes as a flux, a matting agent, and to achieve certain color effects. Using leaching tests identical to those employed for lead and cadmium, and atomic absorption spectrophotometry as well as a colorimetric method, I developed a procedure which is as sensitive as atomic absorption. Barium release is quite variable and is highly dependent on the glaze composition as well as the maturing temperature of the glaze. One particular glaze formulated in the Ceramic Department at Alfred University (among the top ceramic programs) released barium at 4300 ppm. It has been estimated that as little as 800 ppm in the food or drink of a child is potentially lethal. There are virtually no data available on chronic exposure of human subjects to low doses of barium, although extrapolations from animal studies suggest that even 80 ppm is extremely toxic. I hope to continue this project, particularly discovering what glaze composition parameters can prevent the release of barium. Hopefully, publication of results to date will create a greater awareness of this problem.

Dr. Jeffrey Cohlberg

This article is written while I am concluding my sabbatical year in the laboratory of Marie-Madeleine Portier at College de France in Paris.

College de France had its origins in 1530. At that time, with the new spirit of the Renaissance sweeping Europe, the University of Paris continued to embrace outdated medieval traditions of scholarship which pretended to encompass all knowledge, and its privileged professors were closed to the possibility of reform. In order to counter this resistance, King Francois I established an independent body of six royal lecturers in Greek, Hebrew, and mathematics, the greatest scholars of their day, to teach and study the ancient texts in their original languages. In 1610, Henry IV established a permanent home for the College de France across the street from the University. Distinguished scholars in



Dr. Jeffery Cohlberg, standing in front of the Pantheon in Paris.



Dr. Henry Po, Professor of Chemistry.

various fields were given chairs with the sole obligation to teach a course each year, with a content of his own choosing, which would be open to any French citizen free of charge. The tradition is still maintained, with professors in fields ranging from physics of condensed matter (the 1992 Nobel prize winner Pierre-Gilles de Gennes) to music (Pierre Boulez). The courses are still open to the public, and many people still walk in off the street to attend. Some of the scientists at College de France also maintain research laboratories in fields including chemistry, physics, and biology, with an emphasis on neurobiology. While many students at the University of Paris do their thesis work there, the College itself has no enrolled students and grants no degrees.

I am working in the laboratory of Cellular Biochemistry headed by Francois Gros, well known for his work in the discovery of messenger RNA. A former director of the Pasteur Institute, Gros also maintains a laboratory at Pasteur. The laboratory at College de France is divided into eight groups studying aspects of cellular neurobiology ranging from the cytoskeleton to ion channels to neuro-transmitter biosynthesis to neuronal differentiation. Portier's group concentrates on the study of intermediate filaments in neuronal cells. I am studying the neurofilament proteins in AtT-20, a cell line derived from a mouse pituitary tumor which expresses many neuronal phenotypes but continues to divide, unlike mature neurons but like certain neuronal precursors. This foray into work with cultured cells is a new experience for me. I am studying changes in the neurofilament cytoskeleton during the cell cycle, and at this point I have some preliminary evidence indicating that there may be some dissociation of the filaments at mitosis concomitant with phosphorylation of specific sites on the three neurofilament proteins. My stay is partly funded by a fellowship from the French Ministry of Research and Technology.

College de France is located in the Latin Quarter, as the university district is known, an area in the center of Paris popular with tourists. I commute by a short metro ride from my apartment in "Chinatown," an area in the Thirteenth Arrondissement with a large Vietnamese population, complete with Chinese, Vietnamese, Laotian, Cambodian, Lebanese, Algerian, Japanese, Indonesian and Italian restaurants (we live over a noisy pizzeria). Paris is a wonderful place

to live. It's a beautiful city full of stunning architecture. No matter how many times you walk past Notre Dame, it never gets boring. It also has a special energy that often makes just going for a walk exciting. The cultural offerings are enormous, even in comparison to Los Angeles. Although after you see everything that tourists see, there are still lots of interesting things to discover. Lots of good food and wine, too. I now know what the Germans mean when they say someone living especially well is "living like God in France." And after eight months of daily exposure, I've gotten comfortable with the French language, though I am by no means fluent. Being here has also provided an opportunity for traveling to other parts of France and Europe.

I'm also doing some work with Uli Aebi at the Biozentrum of the University of Basel, Switzerland. We're using high resolution electron microscopy to assess the ability of certain neurofilament protein heterooligomers to serve as intermediates in filament assembly. This is an extension of work from CSULB.

A paper of mine with MS student Rong Guan and with Fred Hall of USC appeared this year: Guan et al. (1992), "Proline-directed protein kinase (p34^{cdc2}/p58^{cdc2}) phosphorylates bovine neurofilaments," *J. Neurochem.* 58, 1365-1371. I'll also be presenting the work on the oligomers at the Gordon Conference on Intermediate Filaments in New Hampshire at the end of June.

I'm not anxious to leave Paris for the ruins of PH3, but I am looking forward to seeing colleagues and students at CSULB this fall.

Dr. Henry Po

Henry Po spent his fall semester sabbatical at UC Irvine in Professor Herre's laboratory doing computational chemistry. "I did some calculations on the preferred conformation of several six-membered heterocycles that may have anti-viral activity. In January I returned to campus and have been working closely with William Poon and Shu Shen on their graduate research projects. William is writing his thesis and will graduate during the summer, then plans to enter a PhD program in California. Shu will continue her electrochemistry research at CSULB. An undergraduate student, Hoan Le, has just joined my group and will be investigating fast reaction kinetics."

We enjoy hearing from you. You are a source of pride for the department and the university! The information you send about your career is sometimes shared with Chemistry and Biochemistry majors who are thinking ahead about their life's work. We have an Alumni Bulletin Board where current information about alumni is posted and I can assure you that it is read with great interest. All degrees noted are in Chemistry unless otherwise specified.

1958

Philip L. Anthony, BS (MS, U of Hawaii), is currently in public service as an elected director of the Orange County Water District, an internationally recognized leader in ground water management, well head water treatment, waste water reclamation and water quality/supply research. The district now has one of the largest and best water-testing chemical laboratories in the world and is certified for more contaminant analyses than any other laboratory in California. Faculty, students and alumni who are interested in visiting the district and touring the laboratory are encouraged to contact Phil at 714/722-7575.

1962

John J. Jasnosz, BS, MS 1964, has worked in the Long Beach area for four companies over 27 successful years. He recently retired and now lives in Prescott, Ariz., with his wife Diane. They recently returned from a six-week trip to Australia and New Zealand.

1963

Joanne Farvolden Ehteshamzadeh Myers, BS, MS 1967, has two sons: Robert, who is a computer science major at Cal State Sacramento, and Raymond, a high school senior. She has become a Certified Industrial Hygienist and a Certified Hazardous Materials Manager. "I would urge graduating Chemistry/Biochemistry majors to consider industrial hygiene as a possible career direction. It provides an opportunity to be involved with responsible care and stewardship of chemicals when they leave the hands of chemists and enter the entrepreneurial world."

1964

Gary M. Hathaway, BS (PhD 1967, UC Davis), is director/coordinator for the Biotechnology Instrumentation Facility at UC Riverside. "In the fall of 1991 we moved into our new facilities, which almost doubled our space. I have been very busy adding

new instrumentation, including microbore HPLC and capillary electrophoresis. I am now looking forward to acquiring a biomolecule mass analyzer and beginning the production of synthetic peptides. My two sons, John (21) and Sean (19), both attend Riverside Community College and tower over me!"

1966

Roger Clark, BS, MS 1970 (PhD 1973, U of Utah), works for EYAquitaine, a French company that purchased Pennwalt, Roger's previous employer. "I have been doing some organosulfur chemistry and have developed a new CH_3SH catalyst and a commercial process for di-tert-butyltrisulfide, a gear oil additive." Carol and Roger have twin sons, Jim and Bill, who start college in the fall.

1967

David R. Fagerburg, BS (PhD 1970, U of Washington), is Research Associate in the Exploratory Materials Research Laboratory with Eastman Chemicals Division of Eastman Kodak Company in Kingsport, Tenn.

Robert L. Jordan, BS, MBA 1967, is Laboratory Supervisor with the Santa Margarita Water District in Mission Viejo.

William Lake, BS, MS 1969 (PhD 1973, Purdue U), is director of Research and Development for Baxter Healthcare Corporation in Santa Ana. Bill was this year's recipient of the College of Natural Sciences, Distinguished Alumnus Award. (See an article elsewhere in this Newsletter.)

1968

Lance Eggenberger, BS, MS Criminalistics 1975, is the manager of the Quality Assurance Department at DataChem Laboratories in Salt Lake City, Utah, an analytical testing laboratory for environmental samples. He is responsible for all laboratory support functions which impact the quality of analytical data reported, ranging from sample handling and analytical data production to control statistics and documentation. Lance worked in the CSULB Chemistry Department for 11 years before moving to Utah.

Angel Juarez, BS (MS, San Diego State U), is an instructor at Los Medanos College in Pittsburg, Calif.

Raymond E. Ouellette, BS, was promoted to manager of Environmental Services for Mittelhauser Corp. in Laguna Hills where he's responsible for consult-

ing services regarding air, water and waste issues. "We have staff capable of performing hazardous waste risk assessments, hazardous operations analysis, safety audits and environmental assessments. I currently have a staff of ten full-time professionals and four part-time technical associates."

Harry Schmus, BS, is Senior Applications Scientist in field-support spectroscopy for Hitachi Instruments in Danbury, Conn.

1969

Don Byers, MS Biochemistry, is the registrar for the Alberta Society of Engineering Technologists in Edmonton, Canada. "I left my job as assistant program head, Chemistry Section, and program coordinator of the Biotechnology program at the Northern Alberta Institute of Technology in 1990 for my present position. The society certifies applied science and engineering technicians and technologists in the province and accredits programs at the province's technical institutes and colleges. It presently has more than 10,000 members. I took this new position to help promote quality education in the Alberta school and college system and to influence the implementation of national standards for technology programs." The Byers have three children: Kaylee (6), Kyle (4) and Brad (2).

John E. Leonard, BS, MS 1973 (PhD Biochemistry 1978, UC Riverside), is senior scientist and preclinical product development leader for IDEC Pharmaceuticals, La Jolla. "I guide the development of promising monoclonal antibodies, produced either conventionally or via recombinant DNA technology, through preclinical testing and evaluation (both the antibody and the production cell line), production, quality assurance/quality control, and product release. I also participate in the submission of the new drug applications to the FDA and help respond to any concerns raised by them. In addition to these responsibilities, I also manage the preclinical product development group which performs many of the required analytical, biochemical and in vivo tests necessary for product development and submission to the FDA. Elizabeth and I have two children, Matthew (6) and Katherine (3), and live in Encinitas."

Alan J. Senzel, BS (PhD 1970, UCLos Angeles), is currently a project scientist at CIBA-GEIGY (Agricultural Division) in Greensboro, N.C., where he is responsible for pesticide registration. His wife, Phyllis, is child support supervisor for Wake County;

his son, Richard, is a junior at Duke U, and his daughter, Lisa, is a sophomore at Washington U in St. Louis.

1970

William Hulbrock, BS, MS Biochemistry 1974, is technical services manager for ICN Biomedicals and provides technical service for immunobiological product lines as well as for clinical diagnostic products. Bill is married with two children, the oldest of whom is attending CSULB with the goal of becoming an elementary school teacher.

1971

Walter Grove, BA (BSN, Creighton U; MSH 1990, U of Omaha), has entered the Medical College of Virginia to study for a Master's in Nurse Anesthesia and will graduate in August, 1993.

Michael R. Hoover, BS (MS 1972, Purdue U), is a Forensic Scientist in the Crime Laboratory of the Washington State Patrol in Everett, Wash.

J. Rodney Marsh, BS, MA History 1982 (MS Environmental Engineering 1974, Illinois Institute of Technology), is project manager with SCS Engineers in Long Beach. He has also served as an instructor in the Civil Engineering Department at CSULB, teaching CE 567, "Liquid and Solid Waste Project Planning and Management."

Joseph Oberlander, MS (PhD 1979, U of Utah), works as a chemist with Specialty Organics, Inc., Irwindale. He and Paulette have two sons, Michael and Joe.

Alan Rosenstein, MS Biochemistry, is research associate in the Department of Psychobiology at UC Irvine, where he is involved in the neuropharmacology, biochemistry and behavioral ramifications of the dopamine system. His group is investigating dopamine receptor-mediated C-FDS protein regulation. "I just returned from a fascinating trip to Nepal, Thailand and China where I was particularly attracted by the ornate temple architecture. I'm integrating this into my art, in which I am very involved."

Paul Schumann, BS, is a holistic health practitioner and owns his own business, "Total Body Experience," in Oceanside. "What I learned in college was more than chemistry, but also a way of tackling a problem as a challenge, not an obstacle."

1973

Walter A. Boyle III, Student 1973 (MD 1977, UC San Francisco), is a physician, living in Webster Grove, Mo.

Arthur Brown, BA, chemistry teacher at Marina High School in Huntington Beach, has accepted a two-year overseas teaching position with the Department of Defense. He will teach at the Ramstein Air Base in Southern Germany.

1974

Francisco M. Llort, BS (PhD 1978, Princeton U), is director of Research and Development at Johnson & Johnson and lives in Arlington, Texas.

1975

William J. Bonocora, MS Student, is assistant director of the Laboratory Division of the US Customs Service, Department of the Treasury. His laboratory is located on Terminal Island.

Prabha Bhalla, MS Biochemistry, "I have two children, Kiran (11) and Asheesh (7). I am busier than ever raising both of them!"

Pornpun Tanjasiri, MS Biochemistry, lives in Bangkok, Thailand where she's self employed and managing director of several businesses: Pongchai Patano, Co., Ltd.; Porn Real Estate Co., Ltd.; Bathroom Jewelry, Ltd.

1976

Christos Angeletakis, BS, MS 1978 (PhD 1982, UC Irvine), is research and development chemist and group leader for IVOCLARAG in Gamprin, Liechtenstein. "In 1991, after spending six years working for Johnson & Johnson Dental Care Co. in North Brunswick, NJ, I accepted a position with IVOCLAR AG, a major manufacturer of dental sundries and equipment. Maria and I have two children, Ellie (1-1/2) and Nicholas (1/2). Liechtenstein is a small and beautiful country situated in the Alps, between Switzerland and Austria."

Goko Hideki, MS Biochemistry, is a member of the Department of Medical Technology, School of Allied Medical Sciences, Kobe University.

Robert Moss, BA (MD 1980), is a surgeon and lives in Santa Maria.

1977

Thomas D. Augimeri, MS Student, is a software development expert for CCH Computax, Inc., and is working toward an MBA at CSULB. Tom lives in Cypress.

Danute I. Basiulis, MS, continues as manager of the Materials Science Department with Hughes Aircraft in El Segundo. Dana, a member of both the CSULB Chemistry and Biochemistry Advisory

Council and the Corporate Campaign Committee, spent three weeks this summer visiting Lithuania, where she was born and still has many relatives.

Robert K. Blair, BA, MS 1980, has been employed at BioResearch, Inc., for almost 12 years. "My research is on the synthesis on N-carboxyanhydrides, used in 'activation' for the coupling of amino acids. Presently, I am concentrating on the naturally occurring amino acids, histidine, arginine and cysteine."

Thomas B. Dillon, Student 1977 (DDS 1981, U of Southern California), is a self-employed "general dentist," practicing in Downey.

Rick Goyt, BA, is operations manager for the Santa Rosa Homeless Shelter in Santa Rosa. "Working with children at the homeless shelter has shown me the need for education in general and especially in the case of the homeless. Ninety-nine percent of the homeless have not graduated from high school. We are now seeing second- and third-generation homeless."

Kitty M. Taylor McVey, BS, is a first-year student in the PharmD program at the U of the Pacific in Stockton. "My husband, John, and I, and my daughter, Sarah (22 months), live in Elk Grove.

Ragnvald Mjanger, BA (MDU of Oslo, Norway), practices obstetrics and gynecology in St. Paul, Minn., where he is in private practice. He and his wife, Vicki, a special education teacher, have three children, Stian (20), Siv (15), and Erik (10). Stian is a college freshman, studying engineering.

1978

Betty Jane Burri, MS (PhD 1982, UC San Diego), is lead scientist with Western Human Nutrition Research Center (USDA) at the Presidio in San Francisco. "I was principal investigator on a 100-day, live-in human nutrition study in April. We studied the effects of carotene deficiency in an otherwise nutritious diet in healthy adults in an attempt to find out whether we should set a recommended daily dietary allowance for this nutrient."

Greg Dorsman, BS, MS 1983, is a research Chemist with Kerr Manufacturing, a division of Sybron Corp., Santa Ana. "My wife, Lorna, and I celebrated our 10th anniversary this past December and await this fall eagerly when our youngest of four starts kindergarten. My work in developing new dental materials continues to hold my interest. Dentistry as we know it may soon be in for another major change as Er:YAG

lasers are used to remove and replace decay as well as do soft tissue procedures."

Randall E. Smith, BA (MS Technical Management 1991, West Coast U), is a Technical specialist in non-metallics engineering with Douglas Aircraft, Long Beach.

Marianne Marsi, BS (PhD 1982, UC Los Angeles), is technical group leader in the Polymer Division of DuPont in Wilmington, Del. She and her husband, Dr. Lewis Manning, will soon move to Parkersburg, W. Va., where she will begin a position as senior research chemist with DuPont. Lewis will also continue with DuPont as an area superintendent. Both will remain in the Polymer Division. Marianne and Lewis have a daughter, Teresa (4), and a son, Gregory (1).

Daniel C. Peek, BA (MS 1984, PhD 1988, Oregon State U), is senior environmental Chemist with PTI Environmental Services, specializing in hazardous waste consulting. Dan lives in Newberg, Ore.

Joshua Prager, BS (BS 1984, OD 1986, Southern California College of Optometry), is an optometrist with Southern California Permanente Medical Group in Fontana.

Gary Tietavainen, BS, MS 1980 (MBA 1985, Pepperdine U), works as a senior environmental engineer with ARCO Products Co. Gary and his wife, Marcie, and daughter, Kristin (3), live in Long Beach. Marcie is a chemist (U of Hawaii) and also works for ARCO.

Malcolm Windsor, BS 1978, is an environmental engineer with the Department of Defense and lives in Little Rock, Ark. "I am the coordinator for the remediation of former dump sites on the Little Rock AFB. I am presently pursuing an MS Degree in Chemical Engineering at the U of Arkansas. My wife, June, completed her BSEd in 1990 and graduated Magna Cum Laude. She teaches second grade. We have two children, Matthew (14) and Elizabeth (11).

Gerald E. Wuenschell, BS (PhD U of Southern California), a research fellow at USC working with Dr. Chris Reed, was an instructor in the Chemistry/Biochemistry Department at CSULB during the spring semester of 1992.

1979

Stephen Fritch, MS, MBA 1992, is Criminalist II with the Long Beach Police Department. His crime laboratory recently acquired a GC/MS. He and Sally enjoy skiing and fishing in the Mammoth area.

Tom Johnson, BS (MS 1982, U of

Washington), is a professional photographer and lives in Los Angeles.

Patrick McKay, MS, is senior research associate with Genentech, Inc., in South San Francisco. "I'm still in the Process Development Department, currently working on scale-up processes on three of Genentech's recombinant therapeutics (DNase for cystic fibrosis, a monoclonal antibody against HER-2, a protein which is over-expressed in women with breast and ovarian cancer, and human growth hormone). I am involved with Science 2000, an organization which works with schools in trying to help them instruct students in what Recombinant DNA technology is. I was one of about two dozen Genentech employees who recently hosted a group of high school teachers and gave them a tour. A good deal of the funding for this program is coming from the Genentech Foundation."

Gary Zaremba, BA (MBA 1985, Pepperdine U), is regional sales manager for Rosemount Analytical, Inc., in LaHabra.

1980

Susan Torian Brentnall, Student 1980 (PharmD, UC San Francisco), has worked as chief pharmacist at College Hospital in Cerritos since 1987.

Gregory J. Downs, BA (MD, Marquette University), is director of anesthesia for the US Army Air Force and lives in Moreno Valley. He was awarded a critical care fellowship at UC Irvine that began in July. He has published the following papers: "New Set Decompression Tables Using 100% O₂," *Aviation, Space, and Environmental Medicine*; "Review of Non-Barbiturate Hypnotic 1,6-Diisopropylphenol," *ibid*.

Brian C. Dubow, BS, is deputy program manager, Tomahawk Anti-submarine Warfare Cruise Missile TACM and Manager of Systems Engineering of TACM and Joint Direct Attack Munition Programs at General Dynamics/Convair Division.

George Eliades, BA (DDS 1985, Northwestern U), owns his dental practice in Westminster.

Kelly Hendrix, BA (DDS, Baylor College of Dentistry), teaches part time at the USC School of Dentistry, Department of Dental Materials.

Tina M. Kishishita, BA (PharmD, UC San Francisco), is employed as staff pharmacist at the VA Medical Center, Long Beach.

K. Scott Marsi, BA (MS 1983, San Diego State U), is national sales manager, Surfactants & Specialties Group,

for Rhone-Poulenc, Inc. He and his wife, Linda, and daughters, Aiko (5) and Kimiko (1), live in Lawrenceville, N.J.

Chris Molgaard, BA (MD 1980, Baylor College of Medicine), is a radiologist practicing interventional radiology at the Lahey Clinic Medical Center in Burlington, Mass.

Michael A. Moone, MS Student, Certificate in Environmental Studies, 1980, is president of ECESIS, assisting facilities in preparation of industrial wastewater permits and "Treatment, Storage and Disposal" Facility Permit Packages and "Permit-By-Rule" Packages.

Kirk M. Morgan, BA (MD 1984, Case Western Reserve U), is director of Vitreo-Retinal Surgery at Park Nicollet Medical Center in Minneapolis, Minn. He, his wife, Peggy, and son, David (2), live in Minnetonka. He has been in practice for two years following a fellowship in vitreo-retinal surgery at the U of Virginia. Kirk is also active in research on diabetic retinopathy and retinal vascular disease at the International Diabetes Center.

Duane R. Smith, BS, MS 1982, has completed requirements for his PhD in physical chemistry at Cornell University. He and his wife, Vivian (BS 1985), live in Ithaca, N.Y.

Edward Wilson, MS Student 1980, was recently named president of BC Analytical, Glendale, a division of Brown and Caldwell.

1981

Diana Delatorre Griffith, BA, (PhD 1991, Brandeis U), is a research associate in the Department of Biochemistry at Brandeis U, where she received her PhD in 1991. (See an article elsewhere in this issue of the Newsletter.)

Tom Harmon, BA (MA Chemistry 1983, U of Southern California; MD 1987, U of Pittsburgh), is senior general surgical resident at Kaiser Foundation Hospital in Los Angeles. "Beth and I welcomed the arrival of our first child, Tyler, in September, 1991. I am finishing my last two years of surgical residency and have many colleagues at work who are also CSULB alumni, including other residents in the surgery and urology departments."

Richard Hudspeth, MS (PhD 1988, U of Southern California), is a molecular biologist and project director at Phytogen, Inc., in Pasadena.

Jack E. Long, BA (MD 1986, U of Cincinnati), completed his endocrinology fellowship in the summer of 1991 and is now working as an internist and endocrinolo-

gist at Hudson's Bay Medical Group in Vancouver, Wash. He and his wife, Emily, have two daughters, Rebecca (5) and Maggie (2). "I will always consider my time at CSULB as an invaluable period in my life...nothing but fond memories (that P-Chem final excepted!)."

Laurene Duke Montgomery, BA (DDS 1984, UC Los Angeles), practices dentistry in Bellflower. The Montgomerys have three children: 6-1/2, 4-1/2 and 2.

Amani Tadros Potter, BA (BA 1987, UC San Diego), is project manager for Client Services at GTEL Environmental Laboratories, Inc., Torrance.

David L. Smith, BA (BS Engineering 1969, USMMA; DDS 1981, U of Southern California), has a dental practice in La Mesa.

1982

Marly K. Eidsness, BA (PhD 1984, U of Cincinnati) is employed as a plant molecular biology research scientist with the Complex Carbohydrate Research Center at the U of Georgia in Athens. Her work involves biochemical and molecular biology studies of polygalacturonase, an enzyme important in plant organogenesis. Marly is married to Robert A. Scott, a chemistry professor at the U of Georgia. They have a two-year-old son, Sean Eliot Scott.

Jeff Jetter, BS, is senior chemist with Honda Research and Development, North America, Inc. in Torrance. **Pam Jetter**, BS 1982, continues as GC/MS-BNA Team Leader with International Technology Corp. in Cerritos.

Peter A. Riley, BA, MBA 1988, is director of industrial hygiene for MacDonald-Stephens Laboratories, Inc., in Laguna Hills.

Elizabeth Woods, BS (MD, Baylor College of Medicine). "I am finishing my last year of residency in OB/GYN at Harbor-UCLA Hospital and then will start a two-year fellowship in Maternal-Fetal Medicine at Harbor UCLA/Cedars Sinai." She and her husband, Gerald, have two daughters, Emilee and Danielle.

1983

Bradley G. Davis, BA (DO College of Osteopathic Medicine of the Pacific), is a physician in family practice and is associate clinical professor at Kern Medical Center in Bakersfield. He passed his national boards in Family Practice in 1991. He and his family of four boys (12, 10, 10, 2) live in Bakersfield.

Stefan Isak, BS (PhD, U of Utah), is Research Associate with Sandoz Pharma-

ceuticals in East Hanover, N.J. "I obtained my PhD in February, 1992, and look forward to living near New York City."

Dean Read, BA, is a middle school science and math teacher at Bret Harte Intermediate School in Los Angeles. "I have been teaching science and math in the sixth, seventh and eighth grades for the last four years. Tracie and I have two daughters, Christina (8) and Elizabeth (4). Tracie graduated from Long Beach City College School of Nursing with her RN in December, 1991."

1984

Eric J. Derbyshire, BA (MBA U of Phoenix), is an engineer and Group Leader in Product Technology with ICI Composites in Greenville, Texas.

Brad W. House, BA, is an engineer in an environmental analytical support group with Allied Signal in Torrance. He and his wife have a daughter (1-1/2) and a newly born son.

E. Michael Mosig, BA (DDS Georgetown U), practices dentistry in Arizona, as does his wife, Marylynn. The Mosigs announce the arrival of a son, Erich Joseph, born June 26.

1985

Michele Miller Taylor, BS (MBA, CSU Fullerton), is institutional sales representative in pharmaceutical sales for Marion Merrell Dow. "Although I have been working in the pharmaceutical industry since I graduated from CSULB, I only recently got into sales. Previously I was in R&D. The industry is great, and my job is very rewarding."

1986

Jason Brown, Student (DDS 1990, UC Los Angeles), practices dentistry in La Jolla and lives in Encinitas.

Richard Nighswonger, BA is a sales engineer with International Specialty Products in Irvine. He was married in May, 1991, and he and his wife, Tish, are expecting a child.

James Pappas, BA, is market manager in Europe for ISP Europe. He is responsible for European marketing of specialty chemicals to the electronics, coatings, adhesives and industrial cleaning markets. Jim lives in England.

Robin Underwood, BA, (MS Environmental Engineering, U of Southern California) is staff engineer/scientist and manager of environmental information for Hughes Environmental Systems, Inc., in Manhattan Beach.

1987

Kelly Carroll, MS Biochemistry, is employed as research associate with Celtrix Laboratories in Palo Alto.

Dwayne D. Gergens, BS (PhD 1992, UC Irvine), has just completed his PhD in organic chemistry. He is looking forward to a career in academic chemistry. Dwayne is an adjunct faculty member at Cypress College, teaching fundamentals of college chemistry. "I'm finding that I have both a natural ability and strong desire to teach undergraduates. In fact, Cypress College has asked me to teach second-semester chemistry in the fall. Also in the fall, Christ College, Irvine, has hired me as an adjunct faculty member to teach general and organic chemistry and earth science. As a graduate student, my research efforts focused on the synthesis and characterization of 7-metallonorbornadiene complexes of molybdenum, tungsten and iron as new routes to alkylidyne complexes." Dwayne's photograph, in his doctoral robes, appeared in color on the front page of the Sunday, June 14, Orange County edition of the *Los Angeles Times*. He was among 3,798 students receiving degrees that day at UC Irvine "in commencement ceremonies, by turns serious and raucous."

Raymond Gritton, BA (MD Hahnemann U), will complete a physical medicine and rehabilitation residency at UC Irvine.

Bill Jeong, BA, (MBA, Pepperdine U), works as a gas chromatograph supervisor with Enseco, Inc., in Garden Grove. He supervises a staff of environmental chemists.

Janet Kiang, MS, (MBA, U of Redlands), is employed at Earth Technology Corp. headquarters in Long Beach, as a senior staff chemist. Her work is in the area of quality assurance and quality control, and she is responsible for data management. In 1991 she received her Master of Management of Business Administration.

A summary report of Janet Kiang's MMBA thesis, a salary survey of CSULB Chemistry Graduates in Southern California by degree, experience, gender, employer and job function, is available to any alumnus in the Chemistry and Biochemistry Office at CSULB.

Larry C. Matsumoto, BA, has finished his third year of medical school at Creighton U and plans to pursue a career in cardiology. During his third year he was the Creighton Delegate to the National Medical Students Association. In his fourth year he plans to do research

on the effects of the pituitary function in adolescents.

Tom Murphy, BS, is a development chemist, working for Coatings/Composites in Inglewood. Tom is responsible for product development of epoxy coatings for industrial maintenance.

Patricia M. Markovich Powell, BA, is analytical laboratory services coordinator for PGP Industries, Inc. in Santa Fe Springs. She is married to **Dennis Powell**, a CSULB alumnus.

Brian Dean Schmidt, BS, laboratory technician IV with Engelhard in Anaheim, performs precious metal assays.

Joyce E. Setsuda, MS Biochemistry, has completed her second year in the biochemistry PhD program at UC Riverside, as a student of Dr. Alexander McPherson. "My project is to determine the nucleotide structure of concanavalin B of the Jack Bean (*Canvalia ensiformis*). This protein has been crystallized and the structure solved to a 3.0 Angstrom resolution by Dr. McPherson. However, it is impossible to obtain a refined structure without amino acid sequence information. Because the amino terminus is blocked, this information cannot be obtained by the usual methods. Instead, the nucleotide sequence will be used to deduce the amino acid structure. Once this is done, the X-ray structure will be refined as well as determining the nature of the protein. At present there is little biochemical data on this protein other than its ease of crystallization and that it may bind NADPH or a nucleotide."

Greg R. Shaw, MS, is senior chemist with West Coast Analytical Services, Inc., Santa Fe Springs.

Coleman A. Smith, BS, will complete work for his PhD in physical chemistry from UC Davis in September, 1992. His research, conducted with Dr. A. H. Maki, has focused on applications of optically detected magnetic resonance, an ESR technique which has been applied to phosphorescent organic chromophores. Following completion of the PhD, he will assume a postdoctoral position in the Nuclear Materials Technology Division at Los Alamos National Laboratory in Los Alamos, N.M.

Mark Smittle, BS, BSChE 1981, is an environmental engineer with Ralphs Grocery Co., in Compton.

Gerald Y. Uyesato, BA (PharmD, UC San Francisco), works as a Clinical Pharmacy Resident at the Veterans Affairs Medical Center, Long Beach.

Angela Daniels Wranic, BS, is staff chemist with Pace, Inc., in Huntington Beach. She is pursuing an MS in Environmental Science at CSU Fullerton.

1988

Navid Ahmadian, Student (MD 1992, UC Davis), received his MD degree at the June 12 Commencement of the UC Davis School of Medicine.

Andrea Baxter, BS Biochemistry, is a medical student at the U of Oklahoma and was recently commissioned an ensign in the US Navy.

Rachell Blue Batesole, BS, is hazardous waste specialist for the Orange County Health Care Agency in Santa Ana.

Elizabeth A. Brinkman, BS (PhD 1992, Stanford U), completed her work for a doctorate in physical chemistry. She worked with John Brauman, doing research in the area of electron photodetachment spectroscopy using ion cyclotron resonance spectrometry. She studied bound, excited electronic states of anions, substituent stabilization effects on various anions, including carbanions and silyl anions, and worked with cw dye lasers and high-vacuum techniques.

Hugh Cecil, Student (MD 1992, UC Davis), following receipt of his MD degree, has accepted an internship at the Latter-Day Saints Hospital in Salt Lake City, Utah, for 1992-93, followed by a four-year residency at the University of Kansas in Diagnostic Radiology.

William Ciclo, BA (MD 1992, SUNY at Stony Brook School of Medicine), is a resident in Internal Medicine at Winthrop-University Hospital in Mineola, N.Y. He was married in November, 1991, to Susan Matis, a physical therapist in private practice in Baldwin, N.Y.

Kathleen M. Coffman, BS, works as account manager with Science Professionals On Assignment, Lab Support Company, Costa Mesa. She occasionally visits our campus on recruiting excursions.

Dennis J. Davin, Student (MD 1992, U of Alabama), received his MD degree in May from the U of Alabama. He has accepted a residency position at the Oregon Health Sciences University in Orthopaedic Surgery in Portland, Ore. Bobbi and Dennis have two children, Sean and Kaylei.

Kerry W. DeGroot, BS Biochemistry (MD 1992, Georgetown U), following receipt of his MD degree in May, accepted

an internship in anesthesiology at Fairfax Hospital in Fairfax, Va. He will return to Georgetown for his residency.

Martin Edep, Student (MD 1992, UC San Francisco), was married in October, 1991, and began a residency in internal medicine at UC San Francisco.

Tim Kneebone, Student, is completing his training in podiatry at the California College of Podiatric Medicine in San Francisco, and is searching for a residency.

Jon J. Lohwasser, BA, received his PharmD in June, from UC San Francisco.

Mark McLain, Student, completed his second year of medical school at UCLA.

Elizabeth Siegfried Ronnau, BA, is a metals analyst for SCS Analytical Laboratory in Long Beach. "I was married June 21, 1991 to Andrew, who is working on his PhD in civil Engineering at the University of Illinois, Urbana. I've just recently returned after a 10-week stay in Charlotte, N.C, working on an EPA Superfund site. This is very exciting and interesting work."

Leo J. Stemler, Jr., BS, is an applications chemist with Unocal/Unipure in Fullerton, where he works with another alumnus, **Dr. Evord Knights**, BS 1964. "Aside from my duties at Unipure, I am involved with the Orange County Section of the American Chemical Society as Arrangements Chairman, and participated in the section's National Chemistry Week Committee."

1989

Alison Flora Dilleuth, Student, is a physical therapist specializing in brain injury at Rancho Los Amigos Medical Center in Downey.

David Lee, BS, is a third-year graduate student in the PhD program in chemistry at UC Davis. "I'm currently doing organic synthesis in cancer-related porphyrin research for Professor Kevin M. Smith. Recently I submitted a paper to *J. Org. Chem.* with Professor Mike Nantz. Also, I received a departmental award, 'Outstanding Teaching Assistant,' 1991-92."

Lily N. Vuong, BA, is chemist I at the Orange County Water District in Fountain Valley.

Louie Wollenberger, MS Biochemistry, is a doctoral student at the University of Lund in Sweden. "I'm currently finishing my third year of studies in biochemistry. The entire experience has been fantastic. Adapting to a new culture and learning a foreign language is a humbling adjust-

ment. The university is quite old and established; it has strong ties to the UC system and participates in a student exchange program. We have a few other Americans in our department working on their doctoral degrees as well. Most have come to Sweden to study bioseparations, in which Swedish biochemists have a long-standing tradition."

1990

Edmund Barley, BS Biochemistry, is a criminalist in the Los Angeles Sheriff's Department.

Gary J. Beck, MS, is a senior professional working in formulations with Allergan Corp. in Irvine.

David Butler, BS Biochemistry, is a third-year medical student at the Medical College of Wisconsin. "I start clinical clerkships in June and am planning on a career in either pediatrics or family medicine."

Martha Linhart Davis, BS Biochemistry, is a Scientist with Beckman Instruments in Brea, CA, specializing in data analysis.

Sandy Engstrom, BS Biochemistry, is working on her MS in Food Science at CSULB but works part time in sensory technology with Peryam and Kroll Marketing Research and Sensory Evaluation in Anaheim. "The food industry is a wonderful place to apply chemical and biochemical knowledge. I hope to go into product development, food safety or biotechnology."

Denis Guttridge, MS Biochemistry, is presently in his second year at UC Irvine in the Department of Microbiology and Molecular Genetics. "I work in Dr. Dennis Cunningham's laboratory which studies a protease inhibitor called Protease Nexin-1. My role in this study is to investigate the transcriptional regulation of the Protease Nexin gene by growth factors thought to be involved in inflammation and wound healing."

Rocky Houston, BS Biochemistry, is research and development associate in biochemistry at Diagnostic Products Corp. in Los Angeles.

David J. Lennon, BS, is project superintendent at IT Corp. in Wilmington..

Jeany Kim Nguyen, BS, is staff chemist at Earth Technology Corp.

David Porzio, BS Biochemistry, is a medical student at UC Irvine College of Medicine.

Greg Whitaker, BS Biochemistry, is staff research assistant at the Harbor-

UCLA Hospital in Torrance. He is working on the enzyme kinetics of normal hemoglobin vs. sickle cell hemoglobin to study the uptake of NAH^+ between the two cell types. Greg plans to enter Scholl School of Podiatry in Chicago this fall.

1991

Armon M. Bayati, MS, has been involved in college-level teaching in Oregon and lives in Corvallis.

Kimberly Corkery, BS, moved to Roanoke, VA. She is the proud mother of a new daughter born December 19, 1991.

Miki Aurang Csintalan, BS Biochemistry, has completed her first year of medical school at St. Louis U. She and **Rick Csintalan** were married in July of 1991. Rick has been employed at St. Anthony's Medical Center as a physical therapist but began medical school this summer, also at St. Louis U.

Robert W. Doebler II, BA, has completed his second-year, as a biophysics PhD student at the U of Virginia.

Alvin Dong, BS Biochemistry, is hazardous waste specialist in the Health Care Agency, Hazardous Materials Surveillance Section, for the County of Orange in Santa Ana.

Carina E. Fryer, BA, is a chemist with Pyramid Laboratories in Huntington Beach.

Jeffrey K. Ichikawa, BS Biochemistry, is a graduate student in the PhD program in biochemistry at UCLA.

Clyde Jones, BS Biochemistry, is a PhD student in chemistry at Tufts U in Boston.

John Molloy, BA, is employed by Acuson Company in the Los Angeles area.

John Tomaszewski, BS Biochemistry, has completed his first year of studies in the PhD program at the U of Washington, Seattle.

Don Wigington, BS. "I'm working on my MS in Biochemistry at San Francisco State U and have also been taking classes to receive a Certificate in Genetic Engineering. My research focuses on performing topoisomerase II, drug-induced cleavage assays to find genes located on chromosomal-looped domains."

Tom Wroblewski, MS, is in the biochemistry PhD program at the U of Arizona.

Current Activities of Some of Our 1991-92 Graduates

Hyun K. Ahn, BA Chemistry
PharmD Program, UC San Francisco

Mitra Basiri, MS Chemistry
Chevron, Culver City

Sherilyn Bauer
Baxter Healthcare, Santa Ana

Michael L. Bundy, MS Biochemistry
Ecology & Environment, Inc., Long Beach

Donald M. Crow, BS Biochemistry
Dental School, U of Washington

Eloisa Gonzalez, BS Biochemistry
Medical School, Stanford U

Joyce A. Harpt, BS Chemistry
McDonnell Douglas, Long Beach

Jeffrey K. Ichikawa, BS Biochemistry
PhD program in Biochemistry,
UCLA

Clyde C. Jones, BS Biochemistry
PhD program, Tufts University

Phic Lim, BS Chemistry
PharmD Program, USC

Mark M. Macelwee, BS Biochemistry
Medical School

James A. Noblet, MS Chemistry
PhD program in Environmental
Science, UCLA

Richard H. Pagliery, MS Chemistry
PhD program in Chemistry,
Penn. State U

James J. Peterson, BS Chemistry
PhD program in Chemistry,
UC Davis

Trevor W. Roberti, BS, Chemistry
PhD program in Chemistry,
UC Santa Cruz

Martin S. Rocha, BS Biochemistry
MS program in Biochemistry,
CSULB

James H. Thurmond, BS Biochemistry
Teacher Education, CSU,
Dominguez Hills

Donald P. Wigington, BS Chemistry
MS program in Biochemistry,
San Francisco State U

Philip K. Zlaket, BS Biochemistry
MS program in Biochemistry,
CSULB

Katrina Brinkman, Office Student Assistant, graduated with a major in Interior Design.

Allen Doty, Instructional Support Technician, joined the staff of the department in January as its newest member. Allen's official title is Instructional Support Technician I, but a more



Allen Doty

descriptive title is Chemistry Stockroom Chemist. Allen came to CSULB from the Unocal Science and Technology Center in Brea where for 13 years he participated in research in areas of petroleum refining, mineral ore upgrading, solvent extraction and chromatographic separations, lanthanide chemistry, and geothermal energy. Prior to working with Unocal, he was an analytical chemist with West Coast Technical Service in Cerritos specializing in AA, IR, GC, MS and HPLC. He received a BA in Chemistry, with an emphasis in Biology, from California State U, Fullerton. Among Allen's accomplishments are two US patents and two additional patent applications on file. Allen replaces John Tomaszewski, who left the department to work on a PhD in Pharmaceutical Chemistry at the University of Washington, Seattle. We are happy to have Allen as a member of our technical staff!

Judy Ferraro, has been a secretary in our department for three years. "We are losing some of our good friends among staff and faculty. They will be missed."

Joyce Kunishima, Director of Laboratories. "This has been a hectic and unusual year with the collection of course fees and the inconveniences of the PH3 (Science 3) renovation. The laboratory course fees that we began collecting for the first time last fall proved to be the department's life blood this year. I will lose my assistant, Anne Nguyen, due to the severe budget cuts that are plaguing the university. We have worked together since 1985, and I will miss her greatly."

Bob Mattice, Director of the Stockroom. "Budget cuts require that I transfer out of the Chemistry and Biochemis-

try Department. A fond farewell!"

Fran McLuen, Secretary. "After working alone in the back office for years, an adjustment period came when I was put in the same office with my co-workers."

Editor's note: *Because of budget-related staff reductions in the College of Natural Sciences, Fran is being transferred to the Department of Biology after serving for 18 years in Chemistry and Biochemistry. We will miss her. She has been a great help with the Newsletter.*

Anne Nguyen, Instructional Support Assistant. "This is my last contribution for the *Newsletter*. I would like to say "thank you" to everyone who has been so kind and supportive during my seven years of working for CSULB."

Jeannette Santage, Department Secretary. "It has not been an ordinary year for the department office. Because of the renovation in PH3, we are temporarily located in the former conference room of the Microbiology building. We are all in one room except for Dr. Marsi, who remains in his office in PH3. The distance between the two locations, including the three flights of stairs, has kept all of us slim and trim this past year."

Bob Soukup, Electronics Technician, marked 16 years with the department in June. Many of the instruments he maintains were here when he came and are still being used in the laboratories. This attests both to Bob's skill and to the lack of funding for new equipment. Bob keeps up with advances in technology in new instrumentation which the department has acquired.

Chinh Tran, Instructional Support Technician, is in her fifth year of service in the Chemistry Stockroom.

Advisory Council News

The Chemistry and Biochemistry Advisory Council, formed in 1977, is an organization of 25 scientists and executives from business and industry who meet twice each year with the Chemistry and Biochemistry faculty, student representatives, the Dean of the College of Natural Sciences, the Provost, and the President of the University to discuss matters relating to the department. Members of this group, all very committed supporters, advise the department concerning its instructional program, inform us of opportunities for interaction with the community, and offer personal assistance in securing material support.

New members added to the council during the past year are **James D. Harris**, District Manager, Los Angeles Sales District, Beckman Instruments, Inc.; **David J. Knuth**, District Sales Manager, Analytical Instruments, Hewlett-Packard Co.; **Dr. Mat Malladi**, Technical Manager, Torrance Refinery, Mobil Oil Corp.; **Daniel R. Moothart**, President, American Qualex; **Dr. Michael J. Block**, Manager, Agricultural Chemicals Research, Unocal Science & Technology Division, Unocal Corp.; **Dr. Martin Schoell**, Senior Research Associate and Group Leader, Organic Geochemistry Research, Chevron Oil Field Research Company; **Steven Sinderbrand**, Western Regional Sales Manager, Specialty Chemicals, International Specialty Products; **Raphel C. Wong**, President, Co-founder and Board Member of BioProbe International, Inc.; **Herb Zimmerman**, District Sales Manager, Varian Analytical Instruments.



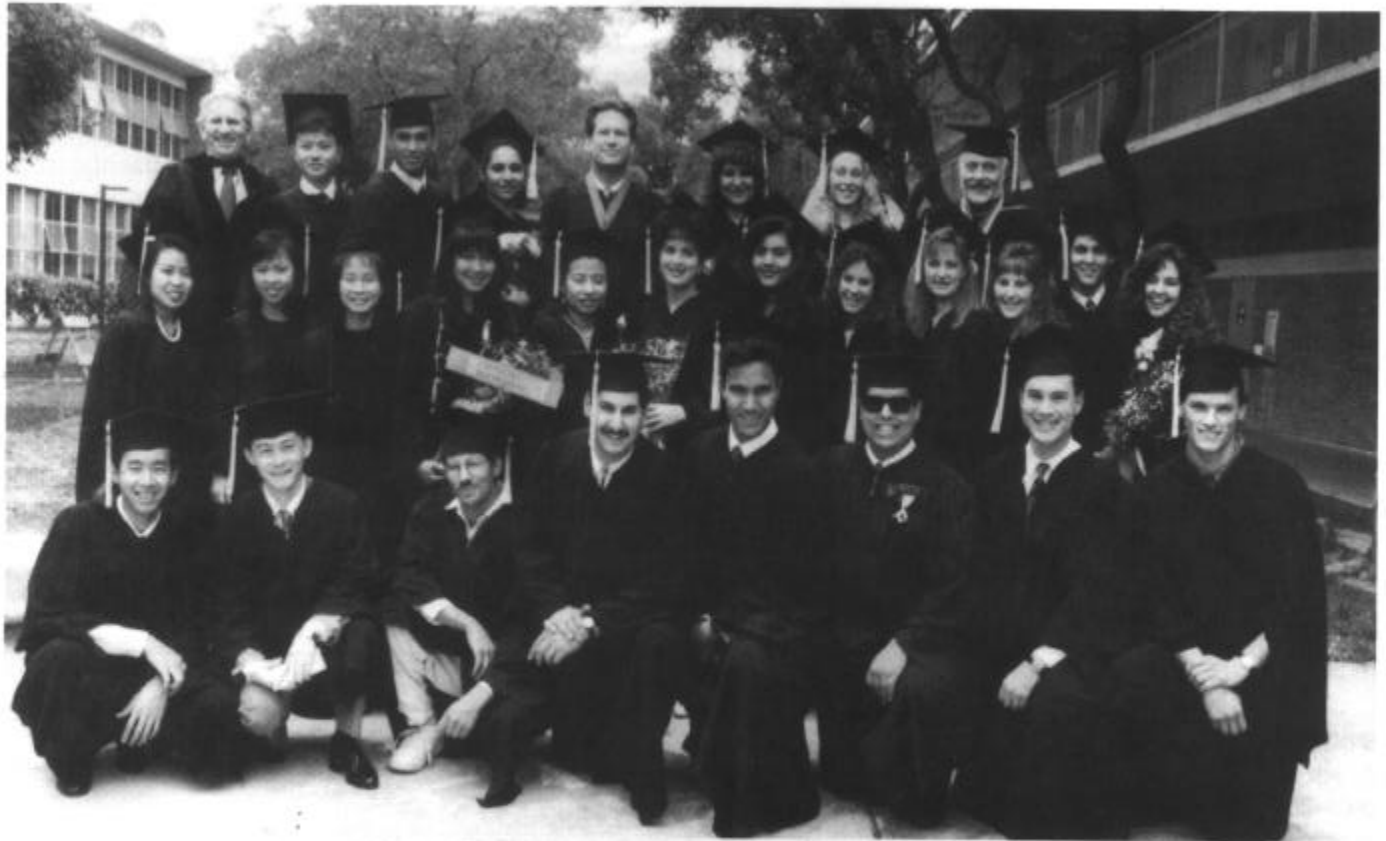
Faculty, staff and students on an annual camping trip to Sequoia National Park (not at taxpayers' expense!). Front row, left to right: Michelle Higley, Suzanne Hawn, Dr. Annie Bianchino, Dr. Richard Kanner, Steve Laven. Second row, left to right: Karin Steinhower, Efrain Mascareno, Jeff Knight, Spencer Santage, Jeannette Santage, Mark Tanji. Third row, left to right: Phil Zlaket, Mike Schlador.

Honors to 1991-92 Graduates and Continuing Students

Sherilyn M. Bauer	<i>Outstanding Graduate, College of Natural Sciences; Outstanding Graduate, Department of Chemistry and Biochemistry; Robert B. Henderson Memorial Award; Biochemistry Award; Hewlett-Packard Award; Graduation Summa Cum Laude</i>
Daniel S. Bernier	<i>Graduation Cum Laude</i>
Monique M. Chhour	<i>Graduation Cum Laude; Election to Phi Lambda Upsilon</i>
Donald M. Crow	<i>Honors for Departmental Service; Chemistry and Biochemistry Alumni Award; Dr. Khalil Salem Award; Toni Horalek Award for Departmental Service; Election to Phi Lambda Upsilon; Graduation Cum Laude</i>
Rick Csintalan	<i>Organic Chemistry Award (Merck Index); Chemistry and Biochemistry Alumni Award</i>
Eloisa Gonzalez	<i>David Scoggins Award</i>
Wai Man Denita Lew	<i>Analytical Chemistry Award; Chemistry and Biochemistry Alumni Award; Graduation Cum Laude</i>
Maria Meraz	<i>National Science Foundation Incentive for Excellence Prize; Biochemistry Award; Hewlett-Packard Award; Election to Phi Lambda Upsilon</i>
Jose Meza	<i>National Science Foundation Incentive for Excellence Prize; Election to Phi Lambda Upsilon</i>
Shawn M. Misialek	<i>Organic Chemistry Award (Merck Index); Chemistry and Biochemistry Alumni Award; Howard Hughes Honors in Science Award</i>
Tuan Nguyen	<i>Chemistry and Biochemistry Advisory Council Tuition Award</i>
Stephen Parker	<i>California Foundation for Biochemical Research Summer Fellowship</i>
James J. Peterson	<i>Robert D. Rhodes Award</i>
Wing Lim Poon	<i>Robert B. Henderson Memorial Award; Chemistry and Biochemistry Advisory Council Outstanding Graduate Student Award; Hewlett-Packard Award</i>
Trevor Roberti	<i>American Institute of Chemists Award; Chemistry and Biochemistry Alumni Award</i>
Kelly D. Robinson	<i>Election to Phi Lambda Upsilon</i>
Michael Schlador	<i>Graduate Dean's List; Chemistry and Biochemistry Advisory Council Outstanding Graduate Student Award; Hewlett-Packard Award</i>
Shu-Chin Shen	<i>Election to Phi Lambda Upsilon</i>
Sam Sperry	<i>Organic Chemistry Award (Merck Index); Chemistry and Biochemistry Alumni Award</i>
Davide Tenaglia	<i>Organic Chemistry Award (Merck Index); American Chemical Society Polymer Division Award; Chemistry and Biochemistry Alumni Award</i>
James H. Thurmond	<i>Graduation Cum Laude</i>
Jeffrey M. Whitaker	<i>Election to Phi Lambda Upsilon</i>
Ronald Yang	<i>Outstanding Freshman Award (CRC Handbook); Chemistry and Biochemistry Alumni Award</i>
Kathy Wang	<i>Howard Hughes Honors in Science Award</i>
Conrad W. Winn	<i>Election to Phi Lambda Upsilon</i>
Philip Zlaket	<i>Honors for Departmental Service</i>



Chemistry and Biochemistry students receive College of Natural Sciences Awards. Front row, left to right: Daniel Bernier, MARC Scholar; Kristi Miyade, Academic Senator from the College of Natural Sciences; Don Crow, Khalil Salem Awardee; Kathy Wang, Hughes Awardee; Maria Meraz, NSF Incentive for Excellence Award. Back row, left to right: Dr. Ken Marsi, Chair, Chemistry and Biochemistry; Sherilyn Bauer, Outstanding Graduate, College of Natural Sciences; Shawn Misialek, Hughes Awardee; Jose Mesa, NSF Incentive for Excellence Award.



Some 1991-92 graduates and faculty. Front row, left to right: Albert To, Shan Young, James Peterson, Philip Zlaket, Leonard Van Wijk, Jose Mesa, Jon Cook, Mark Miles. Middle row, left to right: Sooyun Moon, Denita Lew, Vananh Nguyen, Tuyen Nguyen, Monique Chhour, Michelle Higley, Eloisa Gonzalez, Sharon McKelvey, Cheryl Wills, Kristin Eller, Donald Crow, Sherilyn Bauer. Back row, left to right: Kenneth Marsi, Chair, Chemistry/Biochemistry; Phic Lim, Daniel Bernier, Khatereh Assadi, James Thurmond, Sahar Alamy, Michelle Fredholm; Frederick Shair, Dean, College of Natural Sciences.