

CHEMISTRY BIOCHEMISTRY

FOR PAST AND PRESENT STUDENTS AND FRIENDS OF CHEMISTRY AND BIOCHEMISTRY AT CALIFORNIA STATE UNIVERSITY, LONG BEACH • FALL 1999 • NUMBER 24

CONSTRUCTION OF A NEW SCIENCE BUILDING APPROVED

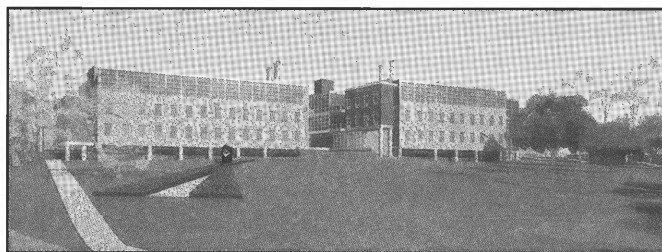
BY ROBERT LOESCHEN

In the fall of 1998 a bond issue was approved by the voters of California which will make possible the construction of a new 55,000 ft² science building. It will be located just north of Peterson Hall 3 on "Hardfact

Hill." For the past two years we have been working with architects and the University Facilities Office to complete the designs. The fume-hood-intensive building will be a three-story affair, housing parts of biological sciences, chemistry and biochemistry and providing 160 graduate research stations and 46 faculty offices. The first floor will consist of biological sciences teaching laboratories, many of which are presently in Peterson Hall 1. The second floor will house molecular biology research, biochemistry research, and the biochemistry teaching laboratory. Half of the top floor will be dedicated to organic and inorganic research laboratories, and the remaining half will be devoted to the teaching laboratories for second-semester general chemistry, quantitative analysis and organic chemistry.

If all goes smoothly and the contractor-bidding climate is good, we hope to begin construction during the fall of 2000. Approxi-

mately two years will be required to complete construction of this as-of-now nameless building. If you recently won the lottery or your company is in the market for some good advertising, a generous gift may perpetuate your or your company's name on this magnificent building!



PROPOSED NEW SCIENCE BUILDING ON "HARDFACT HILL" AS VIEWED FROM THE NORTH SIDE.

The new building is the first phase of a progressive plan to upgrade our science facilities. It is hoped that renovation of Peterson Hall 2 and 3 will follow, and we will move out of Peterson Hall 1 and Faculty Office 5. By 2005, if all goes according to schedule, the faculty, staff and students of the College of Natural Sciences and Mathematics should be the fortunate occupants of completely modern facilities.

DR. C. GRANT WILLSON: ALLERGAN DISTINGUISHED VISITING LECTURER

BY PETER BAINE

The 1999 Distinguished Visiting Lecturer, the 20th annual in this series, was Dr. C. Grant Willson, Regents Chair of Engineering and Professor of Chemical Engineering and Chemistry at the University of Texas, Austin. Dr. Willson's visit was not only one of tales of scientific accomplishments, but also one of nostalgia, for Dr. Willson began his university teaching career in our department as a temporary faculty member during 1973-74. His visit was made possible by a generous gift to the department from Allergan, Inc.

Dr. Willson's scientific saga began in the Almaden Laboratory of IBM where he started working on lithographic etching techniques and entered the materials science field.

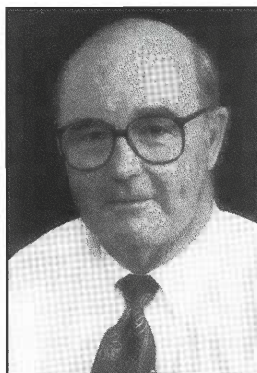
CONTINUED ON PAGE TWO

CONTENTS

NEW SCIENCE BUILDING	• PAGE 1
DISTINGUISHED LECTURER, WILLSON	• PAGE 1
NOBEL LECTURER, BOYER	• PAGE 2
MESSAGE FROM CHAIR	• PAGE 3
MESSAGE FROM DEAN	• PAGE 4
ADVANCED COURSE, ORGANIC CHEM.	• PAGE 5
FRED DORER RETIREMENT	• PAGE 5
FACULTY/STAFF NEWS	• PAGE 6
ADVISORY COUNCIL	• PAGE 11
FACULTY E-MAIL ADDRESSES	• PAGE 11
WHERE ARE THEY NOW?	• PAGE 12
IN MEMORIAM: JACK WOLF	• PAGE 13
GIFTS	• PAGE 14
HONORS AND AWARDS	• PAGE 16
PLANS OF GRADUATES	• PAGE 17
STUDENT AFFILIATES	• PAGE 18
JEANNETTE SANTAGE	• PAGE 18
ALUMNI NEWS	• PAGE 19
ALUMNI RESPONSE	• INSERTS

DR. C. GRANT WILLSON

CONTINUED FROM PAGE ONE



DR. C. GRANT WILLSON: ALLERGAN VISITING LECTURER.

Three-dimensional electronic circuits are fabricated by a series of processes collectively known as lithography. The advances in computer development are principally due to the miniaturization of electronic circuits. Miniaturization is largely due to the advances in lithographic etching which Dr. Willson and his coworkers have pioneered. This miniaturization is exemplified by the fact that, in 1965, 250 active components

could be interconnected, but 20 years later, this number had been increased to over one million such active components.

In one of his presentations, Willson quoted Webster's definition of lithography as the writing or designs on stone with a greasy material and producing printed impressions; according to Willson, this definition still applies if one translates stone as ultra pure silicon or gallium arsenide and the greasy material as an organic polymer, called in the trade, the resist. Willson explained the lithographic process as follows. The resist coats the base silicon and a mask is placed over the resist. It is this mask that defines the circuitry. The resist-coated substrate is then exposed to radiation. After exposure to the radiation, the resist is "developed" by immersion in an appropriate solvent. Depending on the nature of the resist and the solvent, the exposed areas may be more soluble in the solvent and can be dissolved off the substrate, producing a positive development. On the other hand, the nonexposed areas may be more soluble and these areas can be dissolved from the substrate giving negative development. The resist must be capable of photochemical activity, good film formation, and resistance (hence the name) to etching fluids. Last but not least it must be able to resolve small features (about 1 μm) to be etched on the substrate.

Currently, Willson's research is centered on designing photochemically-active compounds (PACS) that will interact in two-component resists to produce either positive or negative development of the substrate.

Dr. Willson began his teaching career at Fairfax High School in Los Angeles. After receiving his PhD from UC Berkeley, he taught in our department for two years, then moved to UC San Diego where he was a postdoc and faculty member. In 1978 he accepted a position at IBM's Almaden Research Laboratories in San Jose. In 1979 he was promoted to Manager of the

Lithographic Materials Research Department, and in 1983 he was made an IBM fellow and Manager of the Polymer Science and Technology Laboratory. After his retirement from IBM he accepted his present position at the University of Texas.

Among his numerous awards are the American Chemical Society (ACS) Award in the Chemistry of Materials, the ACS Carouther's Award, the ACS Cooperative Research Award, and the A. K. Doolittle Award. He has also received the National Academy of Sciences Award for Chemistry in the Service of Society, and was elected to the National Academy of Engineering. In his youth, Grant Willson was an Olympic Class racing sailor and a sailmaker at the most prestigious sail-making loft in the San Francisco Bay Area.

NOBEL LAUREATE CHEMIST
PAUL BOYER VISITS CAMPUS

BY MARGARET MERRYFIELD

The 1999 Nobel Laureate Lecture was given on March 18, by Dr. Paul D. Boyer, Professor Emeritus of Chemistry and Biochemistry at UCLA. Dr. Boyer received the Nobel Prize in Chemistry in 1997 for his work in elucidating the mechanism of ATP synthase, the enzyme responsible for synthesis of ATP in mitochondria. He delivered two lectures, one providing a general picture of his research interests as well as some reflections on the Nobel Prize experience, and the other presenting some of his studies of the mechanism of ATP synthase.

Dr. Boyer received his PhD in biochemistry from the University of Wisconsin in 1943, and has been at UCLA since 1963. His name is familiar to biochemists for his insights into the "splendid molecular machine," ATP synthase, his role as a key player in the scientific debate over the mechanism by which mitochondrial oxidation was coupled to ATP synthesis, and his work as editor of the multi-volume series, *The Enzymes*. His interest in the mechanism of ATP synthesis goes back to the 1950's. Using classical enzymological techniques, including



DR. PAUL BOYER, NOBEL LAUREATE.

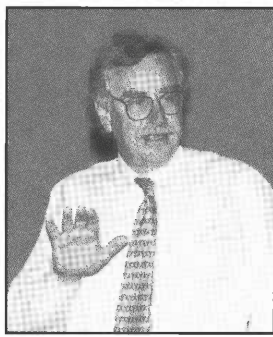
studies using ^{18}O exchanges, Boyer first observed that the catalytic subunits (3 α and 3 β subunits) of ATP synthase showed identical composition but different properties. This led to the "Binding Change Mechanism" in which the three catalytic sites form a cylinder that rotates relative to a "stalk" component, existing in three different conformational states in the course of each catalytic cycle. In this model, proton flow through the membrane-bound portion of the enzyme drives the rotation.

Boyer's model was seen as, in his words, "more possible than probable" until X-ray crystallographic studies by Dr. John E. Walker and co-workers provided dramatic support for this mechanism. Walker was a co-recipient of the 1997 Nobel Prize for this contribution. The X-ray structure shows one of the "stalk" subunits forming an asymmetrical axle in contact with the cylinder formed by the catalytic subunits. The rotation has now been visualized in an experiment performed by a Japanese group (Yoshida and colleagues) in which an actin fiber was attached to the "stalk" subunit, while the catalytic subunits were attached to the substratum. Electron micrographs were recorded showing that the actin fiber rotated in the presence of ATP, and twirled with increasing speed as ATP concentration in the medium was increased.

In order to give students an opportunity to prepare for Dr. Boyer's lectures and share in the day's discussions, Dean Glenn Nagel offered a special section of NSCI 490 (Special Topics) as a one-unit seminar. Students met weekly to discuss readings suggested by Dr. Boyer as well as background in the areas of oxidative phosphorylation and enzymology. In addition to attending the public presentations, all participants were invited to lunch or dinner with Dr. Boyer.

REMARKS BY THE CHAIR

by Nail M. Senozan



DR. NAIL SENOZAN, CHAIR, CHEMISTRY & BIOCHEMISTRY.

In May of this year chairs of the chemistry and biochemistry departments from 21 of the California State Universities gathered in Sacramento for an assessment conference as part of a program sponsored by the Chancellor to evaluate their mission. Some participants expressed disappointment and frustration over the fact that their collective wisdom and

stamp of approval are no longer viewed as adequate safeguards for quality in higher education. Others pointed out that obsession with the tools of assessment

will eventually drain their mission of content, excitement, and inspiration. Nevertheless, it was apparent that some form of objective evaluation of our programs would soon be mandated, and a home-grown assessment method was preferable to an imposed one.

In my view, the best way, if not the only way, to evaluate the effectiveness of our programs is to look at the record and testimony of our alumni. Filling out the questionnaire included with this *Newsletter* or, if you prefer, just jotting down whatever comes to your mind and sending it to us, would be very much appreciated. Your comments and recommendations will impart a personal touch to any assessment protocol and will give us a genuine opportunity to improve our programs.

For the second time in two years our department has been honored to see one of its students receive the Outstanding Graduate Award of the College of Natural Sciences and Mathematics. Janet Hunting is the recipient this year. Janet participated in extensive undergraduate research in the laboratory of Dr. Po, served as president of the Student Affiliates of the American Chemical Society, assisted in teaching the advanced organic chemistry laboratory, and managed to score at the top of nearly all of her classes. A Phi Beta Kappa graduate with a near 4.0 grade point average, she was accepted by every graduate school to which she applied, including Stanford and Berkeley. She chose Cornell for her PhD work in inorganic chemistry.

Through a generous gift from Allergan Corporation, this spring we had the pleasure to welcome Dr. C. Grant Willson, Regents Professor of Chemical Engineering and Professor of Chemistry at the University of Texas, Austin, and member of the National Academy of Engineering, as our 20th Annual Distinguished Lecturer. Dr. Willson's talk underscored the importance of organic chemistry in microelectronic device fabrication. Every computer chip today, we learned, is made using a method developed by Dr. Willson and his colleagues at IBM. Dr. Willson's return to Long Beach was a nostalgic occasion for some of the older faculty. In 1973-1974 he was a full-time lecturer in our department, teaching organic chemistry for non-majors.

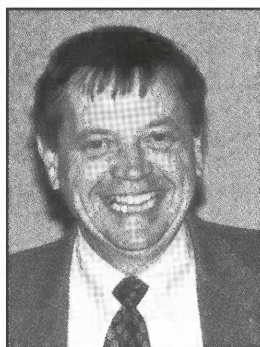
Dr. Gene Kalbus, who opted for Faculty Early Retirement in 1994 with the provision of continuing to teach half time for five years, has now fully retired after 42 years of teaching. He will, however, maintain an office in the department, and we will continue to benefit from his experience and wisdom. Dr. Kim Schugart resigned to accept a position with a prominent global investment company. Our efforts to hire an analytical chemist failed; next year the position will be re-opened, and we will also search for an organic chemist.

Please keep in touch and tell us about yourself—drop a line or send e-mail. E-mail addresses of faculty are listed later in this *Newsletter*. And thank you for your generous support of your department.

MESSAGE FROM THE DEAN

THE LONG BEACH ELEMENTARY SCIENCE/MATHEMATICS EDUCATION PARTNERSHIP

BY GLENN NAGEL



DR. GLENN NAGEL, DEAN,
COLLEGE OF NATURAL SCIENCES & MATHEMATICS.

Last fall, I wrote an article for the readers of this *Newsletter* about Teacher Education and Seamless Education in Long Beach. Since then there have been several major developments that I would like to share with you. Thinking back to when I joined the College three years ago, I never considered that teacher preparation would occupy so much of my attention. There have been numerous

meetings on campus and at Long Beach Unified and Long Beach City College, monumental efforts to redesign the entire CSULB teacher preparation curriculum, visits from government officials and professional organizations, presentations at the Education Trust, the State of Education address by Secretary Riley on the CSULB campus, and even an invitation from Senator Jeffords to share our ideas and activities with people in Washington. All of these experiences have convinced us that we have something really special in Long Beach and that collaborative efforts are establishing our community as a national leader in education.

Last June, the Colleges of Education, Liberal Arts, and Natural Sciences and Mathematics together submitted a proposal to the John S. and James L. Knight Foundation that defined a broad, three-year plan for improving teacher preparation at CSULB. In August, our College prepared and submitted a proposal to the National Science Foundation focussed strictly on elementary teachers of science and mathematics but expanded, as compared to the Knight Proposal, in the scope of activities we would undertake. I am pleased to report that both of these sources tell us that the NSF proposal has ranked first among those submitted from all over the United States! These funds, along with the intense support of our campus and the CSU system, offer us the opportunity to make a real difference in science and mathematics education and teacher preparation, and we have chosen to concentrate on elementary and middle school (K-8) teachers because we feel that is where the greatest need lies.

What are we doing? What is needed to "turn the tide" so that our students and their teachers are recognized

for their accomplishments rather than their low test scores? Here are some of the high points of our projects that we think will make a real difference.

Courses for teachers are being based on standards that have been established at the national, state, and local levels. Standards-based education is founded on the principle that one must carefully define what students should know and be able to do, and that all students, not just the top quartile or upper-half, should be capable of achieving or exceeding those standards.

CSULB and LBCC courses for teachers are being aligned with K-12 standards so that our teachers are fully prepared to teach the topics, concepts, and activities described in the U.S., California, and Long Beach standards.

Courses and experiences are being integrated so that science and mathematics principles (content) are combined with the best practices of teaching (pedagogy). Our programs in California had, in fact, been mandated to separate content from pedagogy in our former five-year program wherein students earned a bachelor's degree in their first four years and took their education classes in the fifth year along with their student teaching. I have always felt that the five-year program was like teaching science lecture courses in the early years and saving the lab courses for the last year. That makes little sense. We should integrate theory and practice with our future teachers just as we do with science and math majors. Our faculty should model best pedagogical practices. As a means to achieve more variety in teaching methods, we are encouraging team teaching involving scientists or mathematicians with educators, including faculty from the school districts.

We are involving and preparing science and mathematics faculty in the important enterprise of teacher preparation. To be honest, most of our faculty have not considered elementary school teachers to be part of their responsibility. Also, many of our faculty do not feel they know what teachers in the schools need to be successful. Many of our first-year grant activities are aimed at filling in these gaps and at setting up an appropriate reward system for faculty who undertake these important tasks. What is more important than helping students to understand science and mathematics? How will we get well-prepared students entering our colleges and universities if we don't invest in their early preparation?

Finally, we are developing ways to acquaint our students with teaching early in their undergraduate years and to motivate more students for careers as teachers. We are undertaking projects such as "SERVE" that places CSULB sophomores and juniors in K-8 mathematics classrooms. Our "Advise the Advisors" program is aimed at giving those who counsel our students positive attitudes about science and mathematics. Instead of portraying them as "hard" topics to be taken in small doses or avoided, if possible, we want

to promote the fascination and curiosity about the natural world as exciting and very human endeavors. In this vein, we want more teachers to choose science and math as areas of concentration. It was distressing to learn that only about 1% of Liberal Studies majors at CSULB had done so last year. We hope to raise that to at least 10% during the project. Finally, we also hope to begin a "Science and Math at the Beach" summer camp for kids that would be staffed by future teachers of science and mathematics. We see this as a win-win situation for us and for our community.

These are just some things that are already happening at your university. We are working closely with Long Beach City College and the Long Beach Unified School District to make our students confident and capable teachers of science and mathematics. We welcome comments and support from our alumni and friends as we continue this important work.

AN ADVANCED COURSE IN ORGANIC CHEMISTRY

BY KEN NAKAYAMA

Chemistry 420 is an advanced laboratory course in organic chemistry, which became a part of our curriculum four years ago. The course involves a one, six-hour laboratory meeting as well as a one-hour lecture meeting each week. The lecture covers mass spectrometry and NMR spectroscopy at a more advanced level than that typically done in the introductory organic chemistry course.

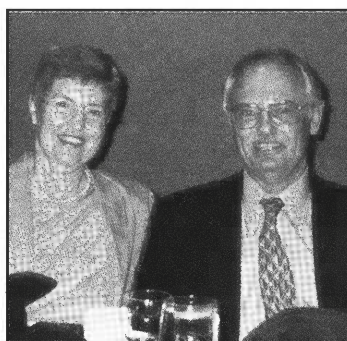
Many of the experiments incorporated into Chem 420 involve procedures taken from literature sources such as "Organic Syntheses" and *Tetrahedron Letters*. In many cases, however, the original procedure has been either expanded in order to address several chemical issues or different reactants have been selected such that the resulting products are better suited for the spectroscopic techniques employed to analyze them. The types of experimental techniques to which students are exposed in the course include column chromatography, vacuum distillation, TLC analysis, and reactions performed under water-free conditions. In addition, student samples are routinely analyzed by GC/MS and the 400 MHz FT NMR. Most students become self-sufficient in the use of the GC/MS instrument and all students are required to run a proton NMR at some point during the course.

The experiments chosen for this course cover issues dealing with Lewis acid-activation, stereoselective synthesis, kinetic *versus* thermodynamic control, peptide coupling and partial racemization, and substituent effects on the rate of benzoic acid methyl ester hydrolysis. Both GC/MS and FT NMR analysis are crucial in the determination of the ratio of stereoisomers,

which form in many of these experiments.

It has been both a pleasure and a very satisfying experience for me to work with Dr. Stuart Berryhill in developing Chem 420 over the past several years. He has also gradually developed a library literature search component for the course in which students work with the science librarian to perform chemical literature researches on CAS ONLINE and the Internet. Chair Nail Senozan has also actively supported the further development of the course by providing release time to Dr. Berryhill and myself which allows us to develop new experiments for the course.

ALUMNUS FRED DORER RETIRES AS CSU BAKERSFIELD PROVOST



DR. AND MRS. FRED DORER.

Dr. Fred H. Dorer (BS Chemistry 1961) has retired as Provost and Vice President for Academic Affairs at California State University, Bakersfield. Dr. Dorer graduated from CSULB in 1961. While an undergraduate he was a research student of Dr. John H. Stern in

physical chemistry with whom he authored a research publication [J. H. Stern and F. H. Dorer, "Standard heats of formation of 2,2-dimethoxypropane and 2,2-diethoxypropane. Group additivity theory and calculated heats of formation of five ketals," *J. Phys. Chem.*, **66**, 97 (1962)].

He earned a PhD in Chemistry at the University of Washington, and after a brief stint as a research chemist at Shell Development Company, he began his impressive career in the California State University System in 1967 as an Assistant Professor of Chemistry at CSU, Fullerton. He became chair of the Department of Chemistry and Biochemistry at San Francisco State, then a Dean and subsequently Vice President for Academic Affairs at CSU Sonoma. In 1984 he left Sonoma for the position of Provost and Vice President for Academic Affairs at Bakersfield. During his tenure at Bakersfield he also completed Harvard University's Institute for Educational Management.

Dr. Dorer served on and chaired a variety of CSU System-wide committees, including CSU committees on library staffing, academic computing, and instructional technologies.

Following retirement he will return to campus on a half-time basis to assist President Tomas Arciniega with fundraising projects. His wife, Marilyn, is also a CSULB alumnus.

REPORTS FROM FA

• **Roger Acey.** I have been on sabbatical leave in Aachen, Germany, working in the laboratory of Dr. Rainer Fischer learning phage display and using the technology to isolate and genetically engineer antibodies. I am also learning how to produce proteins in tobacco plants. Mike Mustillo (MS 1983) also took a leave of absence from his job at Whitney High School and was in residence during the fall semester here in Dr. Fischer's lab. In addition, Joshua Bryant spent 10 weeks in Aachen developing an assay for an environmental toxin. There are 46 of us from all over the world.

It has been a tremendous experience. Fortunately, the lab at CSULB continues to function in my absence. Judy Chapman, a graduate student in the Department of Biological Sciences, has joined the group and is looking at the cytotoxicity of macrophages on developing brain tumors. Dr. Martin Jadus, a research scientist at the Long Beach VA Hospital, and I are funded by the NIH AREA and VA Minority Initiative Program to conduct this study. Hong Ma completed her MS degree and is gainfully employed in the biotechnology industry. Jason Atalla, Monty Badger, Tom Kelly and Jenny Hong have nearly finished writing their theses and plan to graduate later this year. Eric Stevens and Li-Li Hseih eagerly await my return so they can complete their degrees also.

• **Dennis Anjo.** My group is continuing to search for an improved carbon electrode. Jennifer Marsh worked on a study of the pH/potential response of carbon electrodes. She found that the background signal from glassy carbon does not follow a Nernst Equation plot. A great background peak appears as the pH of the solvent becomes basic. Jennifer has been accepted and began work on a PhD in analytical chemistry at UCR during this past summer.

Jared Ashcroft is working on the effect of boron on the response of carbon electrodes. We initially attempted to prepare a carbon film with boron in the matrix. The boron-carbon matrix did not form, and we did not get stable films from pyrolysis. We are now working on using hydroboration reagents to incorporate boron in the carbon surface. This fall semester we will be using various diborane-based hydroboration reagents to improve the carbon electrode response.

Ed Flores has just finished a literature search on carbon electrodes. Ed will be working on improving the background of carbon electrodes during the fall 1999 semester. Ed is carrying out this research under the auspices of the University Scholars Program.

• **Roger Bauer.** I have enjoyed serving as one of the Directors of the Student Access to Science Center in the College of Natural Sciences and Mathematics. This gives me a great many opportunities to interact with some of our excellent students. The Center adds considerable quality to the overall educational experiences of our students and acts as a student-oriented "college within a college".

Both of the grants from the National Institutes of Health which I direct have received renewal after a busy proposal writing period. These grants include Minority Access to Research Careers and Bridges to the Baccalaureate, the latter supporting students and faculty from two neighboring community colleges to come to our campus and to conduct research with our faculty. Over 20 students are involved with these programs each year with some of the students being among our very best. I also have had the occasion to serve on several review and planning committees of the NIH. Being "retired" is just great from my perspective because it gives me a chance to spend my time in exactly the way I like and to avoid many of the unnecessary hassles that often face the faculty.

• **Jeff Cohlberg.** It has been another busy year. The lab published a paper, (Abumuhor, I. A., Spencer, P. H., and Cohlberg, J. A. (1998). "The pathway of assembly of intermediate filaments from recombinant α -internexin," *J. Struct. Biol.* **123**, 187-198), combining Ihab Abumuhor's sedimentation data with Paula Spencer's electron microscopy. This work was also presented at the 1998 Gordon Research Conference on Intermediate Filaments. I'm proud that this project was done completely by undergraduates (with a little help from me).

Our work on the assembly properties of recombinant neurofilament proteins continues. Anne Simonson is completing some circular dichroism melting studies of NF proteins; she will be starting a PhD at UCLA this fall. My other current graduate students are Frank Le, James Zarrinegar, Gene Rozumov, and Paula Spencer. Kareem Morgan, an undergraduate, joined the lab this summer. Beth DeBeus, the Dreyfus postdoctoral fellow, will be with us for one more year, making contributions both to research in the lab and to the biochemistry teaching program.

I have also spent some time helping to introduce molecular modeling and protein and nucleic acid database searching into our biochemistry courses. I have used the programs Rasmol, Chime, Mage, and

FACULTY AND STAFF

Cn3D to present images of proteins in lecture and have had the students in both undergraduate and graduate biochemistry courses complete assignments using Cn3D. Also, students in the biochem lab can now search the database to try to identify their unknown proteins from their amino acid composition data. The department is in the process of acquiring a portable computer projection system that will make it easy for faculty to present computer modeling in lecture. In addition, we will be installing the various modeling programs on computers in both the new department computer lab and in the computer lab in the college's Student Access to Science Center. Finally, I hope that by the time you read this I will have set up a "Biochemistry Links" page on the department web site that will make it easy for students (and faculty) to explore biochemical resources on the web.

- **Dorothy Goldish** served as the Undergraduate Academic Advisor for the department during the 1998-99 academic year. She will continue as Academic Advisor for 1999-2000.



DR. LIJUAN LI'S RESEARCH GROUP. LEFT TO RIGHT: DMITRY PERVITSKY, PHUONG-MAI NGUYEN, JOHN LIARAKOS.

- **Lijuan Li.** I came to CSULB last fall after three years as an Assistant Professor at McMaster University in Canada. After two semesters here, I have found CSULB to be unique because of the quality of personal interactions.

In addition to teaching Advanced Inorganic Chemistry and the second-semester general chemistry course, I have set up a modern inorganic research lab with three graduate students: John Liarakos, Dmitry Pervitsky, and Phuong-Mai Nguyen. John is one of our own graduates who joined my group in September of 1998

and is working on new inorganic materials. Mai also joined this group last year and is a part-time MS student. Dmitry, who came to my group in January, recently received the Monahan Summer Research Fellowship and the Hypercube Award. He is studying metal nitrosyl interactions with imidazole-based ligands using UV-vis spectroscopy.

In the last year or so, I have had four papers published: "Iron dinitrosyl complexes containing TCNE: a synthetic, X-ray crystallographic, high-field NMR, and electrochemical study," *J. Organometallic Chemistry*, **558**, 1-9 (1998); "The *in situ* IR-spectroelectrochemistry study of the reaction intermediates of electrocarboxylation catalyzed by metalloporphyrins," *J. Electroanalytical Chemistry*, **453**, 79-88 (1998); "ESR studies on the oxidation state of titanocene and zirconocene catalysts," *J. Polymer Sciences: Part A: Polymer Chemistry*, **37**, 1465-1472 (1999); "Polynuclear Co(II) and Cu(II) Complexes of tetraacetylene: $\text{CuII}_2(\text{dpa})_2(\text{tae})(\text{O}_2\text{CCF}_3)_2$, $\{[\text{CuII}_2(\text{dpa})_2(\text{tae})(4,4'\text{-bipy})](\text{O}_2\text{CCF}_3)_2\}_n$, and $[\text{CoII}_2(\text{dpa})_4(\text{tae})(\text{O}_2\text{CCH}_3)_2(\text{H}_2\text{O})_2]$, *Canadian J. Chemistry* (1999) (in press). (Symbols: dpa = 2,2'-dipyridylamine; tae = tetraacetylene dianion.) Two more papers were recently submitted.

As an IUPAC Travel Award recipient, I presented a paper, "The interactions of iron dinitrosyl complexes with imidazole and substituted imidazoles," at the 33rd International Coordination Chemistry Conference, Florence, Italy. In November, I gave an invited oral presentation on "Novel nonlinear optical materials containing organometallic transition-metal nitrosyls: syntheses, structures and dynamics" at the 2nd Asian Symposium on Organized Molecular Films for Electronics and Photonics, Beijing, China. Together with my students, we presented a paper, "Mechanisms of the formation and reduction of iron nitrosyl phosphine complexes containing TCNE," at the 1999 Gordon Research Conference on Inorganic Reaction Mechanisms, Ventura, Calif.; two papers, "An electrochemical and spectroelectrochemical (IR) investigation of the reduction of RCo(II)TPP : mechanistic implications in the CoTPP -catalyzed electrocarboxylation of alkyl halides," and "Iron dinitrosyl diphosphine systems: towards new inorganic polymers" at the 217th American Chemical Society National Meeting, Anaheim, Calif.; one paper, "Iron dinitrosyl systems," at the 31st Inorganic Discussion Weekend, Ottawa, Canada; and one paper, "Do electrophiles attack iron dinitrosyls?" at the

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FROM FACULTY AND STAFF

CONTINUED FROM PAGE SEVEN

82nd Canadian Chemical Conference, Toronto, Canada. In addition to these teaching and research activities, I served as an external examiner for a PhD thesis in September 1998, reviewed several NSF grant proposals, and refereed several papers for journal publications.

- **Marco Lopez.** This last year was again an eventful one for me. I had the privilege of reviewing grant applications for the NIH as part of the Minority Biomedical Research Support program. Over the years this activity has allowed me to stay in touch with activities at the NIH and to follow what other programs are doing across the country. Although this is a very time-consuming enterprise, the experience is useful to me in running the CSULB program which has been in place since 1986. In January we received word that our competitive MBRS grant, now called the Minority Student Development (MSD) grant, was funded for another cycle of four years. This grant provides some \$450,000/year, largely for student salaries and research expenses while students are exposed to biomedical research by working as employees with a faculty researcher. Also at about this time, we received word that we were now eligible to apply for more funding from the MBRS Office through the SCORE and RISE programs. I will be working on those applications this summer.

In November Dr. Roger Bauer, Dr. Henry Fung, and I joined a group of students attending the annual national minority symposium held at the World Trade Center in New York. Our students, as usual, all made a very good showing in their poster presentations. Richard Meraz delivered one of the six oral presentations allowed at this meeting. He gave an excellent power point presentation that he developed in the College's Student Access to Science Windows-to-the-World Computer Lab.

New to my research group (the "Heme Team") this year are Jose Pena, and—during the summer—Carmina Morales (from the Bridges Program), Robyn Greenberg, and Irfan Ziaulla. The latter two students are working on independent literature and research projects. Danny Ponce will be finishing his thesis this fall. Also Jing Leng and Phat Hoang should be completing their degrees in the fall or early spring. Vipal Patel and James Stinnett are in the early stages of their thesis work, but both are making progress.

Last March, the spring meeting of the American Chemical Society was held here in Anaheim. The Heme Team and I presented some eight posters in the Inorganic Division. I had the pleasure of introducing some of my students to Dr. James P. Collman of Stanford University. Dr. Collman, a member of my thesis com-

mittee, is a world famous heme chemist whose many papers have been required reading for the Heme Team.

- **Tom Maricich.** Teaching the advanced organic chemistry lab and lecture (Chem 420) this past year has given me a great appreciation for the efforts that Stuart Berryhill and Ken Nakayama have made to developing a truly professional course over the last several years. A number of students have been motivated by this course to become involved in undergraduate research. Janet Hunting, who has been doing research with Dr. Po, was a welcomed and valuable student assistant this past semester in the course.

Another top student from Chem 420 became a member of my research group. Mike Eagan began research this summer and joins with Hiral Patel, Eddie Huh and Andrea Chen. Andrea is a continuing MS candidate. Wadie Marcos and Cao Luu recently completed their projects and just graduated with their bachelor's degrees. Cao is applying for acceptance to our MS program this fall. Wadie is waiting for acceptance to medical school. Each has made valuable contributions to our studies of sulfonimidate esters. Matt Allan has completed his MS degree and taken a new job in Orange County working with another former student of mine, Clayton Harris.

Our daughter gave us our first grandchild, Dominic, last December. He has enriched our lives greatly. I send my greetings to my former students and colleagues to whom I seldom or never write! It would be great to hear from you.

- **Ken Marsi.** I am still in the Faculty Early Retirement Program, teaching half time in the fall and spring semesters. In addition to my teaching duties, I continue as editor of the *Newsletter*, as coordinator of fundraising activities for the department, and as alumni correspondent. In April I acted as the external reviewer for the Department of Chemistry at CSU San Marcos, a relatively new campus in North San Diego County. Also this spring I served as the statewide faculty representative on the Wang Family Excellence Award Committee to choose four outstanding faculty and one administrator from within the California State University System for recognition for their extraordinary and exemplary contributions to teaching and to their professions. Each received a one-time award of \$20,000. I continue as a regular chemistry reviewer for the journal, *Choice*. I have also reviewed several manuscripts for journal publication and grant applications.

- **Douglas McAbee.** The 1998-99 academic year has been busy for me and my research students. In addition to the four graduate students in the lab—George Liarakos, Pat Pierce, Daekeun Joo, and Thanh Nguyen—two undergraduates joined the lab this year: Cynthia Velting-Kidder and Sergio Lopez. Cynthia is working on expression of recombinant lactoferrin in the yeast, *Pichia pastoris*, and Sergio is collaborating with Pat on the identification of serum components that alter

lactoferrin's interaction with its hepatocyte Ca^{2+} - dependent receptor, RhL1. Both Cynthia and Sergio plan to continue to work in the lab this summer. All of us were sorry to see Xin Jian, our lab technician since December, 1997, leave the lab recently. Luckily, Xin has at least temporarily joined Dr. Gharakhanian's lab in the Department of Biological Sciences, so we can see her frequently.

During the past year, we have published two papers (Sitaram, M. P., Moloney, B., and McAbee, D. D. 1998. "Prokaryotic expression of bovine lactoferrin deletion mutants that bind to the Ca^{2+} -dependent lactoferrin receptor on isolated rat hepatocytes." *Prot. Expr. Purif.* **14**:229-236; and McAbee, D. D. and Jiang, X. 1999.

"Copper and zinc ions differentially block asialoglycoprotein receptor-mediated endocytosis in isolated rat hepatocytes." *J. Biol. Chem.* **274**:14750-14758). I have been busy writing two grant proposals as well. I anticipate that Pat and Thanh will have manuscripts to write next year.

Having just finished teaching Chem 441A (first semester of the year course in biochemistry) this past semester, I have now completed my "cycle" of course preparation, so I am looking forward to editing and revising lectures as opposed to generating new lectures. This will give me time to create web sites for my sections of Chem 441A and 441B.

- **Margaret Merryfield.** I spent the 1998-99 academic year as Coordinator of General Education Implementation, a special assignment that will continue into the next year. In the fall of 1999, the University will initiate a major revision of the general education program; my job has been to make it happen smoothly and make sure that a program is actually in place for the new freshmen. This assignment has taxed my diplomatic skills in ways that teaching biochemistry does not!

Because of the large amount of assigned time that I carried this year, I was not in the classroom as often, although I enjoyed helping the Dean with the Nobel Laureate seminar (see story on the Boyer visit on page 2). My advising activities were also curtailed, although I continued to work with new student orientation in January. In my research lab it was a year of transitions, with graduate students Dao Lim and Keynes Tong both moving into the writing phase. Keynes has been working at the Long Beach VA Medical Center for Dr. Tom Ma. Along with a graduate student, Avina Patel, he is studying the role of protein phosphorylation in regulating tight junctions in intestinal epithelial cells. I have increased my involvement in this project as well.

Meanwhile, for the summer of 1999, I will have two new students and a familiar face working with me—Sylors Chem, Ndeke Nyirenda, and Sofia Aguero, back for another turn in the McNair program.

Names from the past: Jehan Almeer, who was a graduate student with me some years ago, was featured

on the front page of the *Los Angeles Times* when she was one of six women to run for a seat on a government council in Qatar. (She didn't win, but it was the first time women had been allowed to vote or campaign.) She is now a professor at the University of Qatar. I'm also looking forward to Dana Gilchrist's wedding later this summer.

In my free time I have continued to work with the Women and Scientific Literacy project and somehow have gotten involved in developing a laboratory course in chemistry targeted to future elementary school teachers.

- **Kensaku Nakayama.** I have continued to teach Chem 420 (Advanced Organic Chemistry laboratory and lecture) and Chem 320A/B (Introductory Organic Chemistry lecture) during the 1998-99 academic year. Demand for Chem 420 has increased over the last two years, and we are now offering three laboratory sections per semester. During the 1999-2000 academic year, my teaching responsibility will be focussed on Chem 421/521 (Physical Organic Chemistry) and 522 (Special Topics in Chemistry). I plan to devote most of Chem 522 to a survey of current methods in stereoselective synthesis. Currently, my research group is composed of two very enthusiastic undergraduate students, Sotiria Contos and Bich-Hong Dang. We plan to work during the summer on a project involving the study of phosphate ester stereochemistry.

On a personal note, I was delighted to host the visit of Dr. Jon D. Rainier from the University of Arizona last fall as a seminar speaker. Jon finished his master's degree with me in 1990 and has since obtained his PhD at UC Riverside with Professor Steve Angle. After a two-year postdoctoral stay with Professor Amos B. Smith at the University of Pennsylvania, Jon became an assistant professor at the University of Arizona.

- **Henry Po.** I returned to teach my favorite course, Advanced Inorganic Chemistry, after two years of General Chemistry, and it was wonderful. The students were enthusiastic and eager to learn and I thoroughly enjoyed a great semester.

Dr. Senozan and I are still adding new ideas to Chemistry 111B. We received the University Innovation Award on our project, "Computer Enhanced Learning in General Chemistry." We plan to create several "theme" modules of computer-enhanced calculations, simulations, and "live" graphical presentations of chemical phenomena.

I still manage to do some research after teaching and running the Chemistry graduate program. Students in my group carry out synthesis of silver(II) macrocycles and study their reaction kinetics using stopped-flow techniques and also their redox properties using cyclic voltammetry. They were very productive, and they all presented their results at the ACS conference in Anaheim and at the Pacific Conference in San Francisco. In addition to research in inorganic chemistry, I am also

FROM FACULTY AND STAFF

CONTINUED FROM PAGE NINE

doing computational chemistry with colleagues at UC Irvine. Last year we published a paper titled, "Ab Initio Molecular Orbital Study of 3,4-Dihydro-1,2-dithiin, 3,6-Dihydro-1,2-dithiin, 4H-1,3-Dithiin, and 2,3-Dihydro-1,4-dithiin," in *J. Computational Chemistry*.

Here is some news about the students in my group. Huilin Huang and Ted Nguyen graduated in December 1998. Huilin is now working in combinatorial chemistry at Sugen in San Jose. Ted plans to enter a health-related profession in the near future. Janet Hunting was honored at Commencement as the College's Outstanding Undergraduate, and she is going to Cornell University for her PhD. Monica Weiss is writing her master thesis. Tuyen Nguyen is working in industry as an analytical chemist.

Listed below are the presentations of my group at various meetings. Presentations 1-4 were at the Pacific Conference on Chemistry and Spectroscopy in San Francisco in October of 1998 and 5-7 were at the American Chemical Society 217th National Meeting in Anaheim in March of 1999.

1. Huilin Huang and Henry N. Po, "Kinetics and Mechanisms of the Oxidation of Methoxylamine and Ascorbic Acid by Complexes of Iridium(IV)."
2. Theodore H. Nguyen and Henry N. Po, "Kinetics and Mechanism of the Oxidation of Thiourea by Silver(II)-Cyclam in Acidic Solution."
3. Janet L. Hunting and Henry N. Po, "Electrochemistry and UV-vis Spectroscopy of Ag(II) Complexes of Porphyrin and Tetraaza Compounds."
4. Tuyen Q. Nguyen and Henry N. Po, "Electrochemistry and UV-vis of Cu(II) Complexes of Tetraaza, Phenanthroline, and Bipyridine Compounds."
5. Janet L. Hunting, Monica Weiss, and Henry N. Po, "Electrochemistry and Reaction Kinetics of Macrocyclic Complexes of Ag(II) and Substituted Mercaptoprimidines."
6. Theodore H. Nguyen and Henry N. Po, "Kinetics and Mechanism of the Oxidation of Benzimidazole-2-thiol by Hydrogen Peroxide."
7. Henry N. Po, F. Freeman, and W. J. Hehre, "A Computational Study of Organotellurium Compounds."
8. Henry N. Po, F. Freeman, and W. J. Hehre, "Molecular Orbital Calculations on the Conformers of Dihydrodioxins and of the Conformational Energies of 2-Alkyl-4H-1,3-Dioxins." Presented at the 216th National Meeting of the American Chemical Society in Boston, August 1998.
9. F. Freeman, Henry N. Po, and W. J. Hehre, "Molecular Orbital Calculations of 3,4-Dihydro-1,2-diselenin, 3,6-Dihydro-1,2-diselenin, 4-H-1,3-Diselenin, and 2,3-Dihydro-1,4-diselenin." Presented at the 1998 Computational Conference in Jackson, Mississippi, in November.

[Editor's Note: Dr. Po received the "Most Valuable Professor Award." which was presented at the 1999 Commencement of the College of Natural Sciences and Mathematics.]

- **Nail Senozan, Jerry Devore** and former graduate student, Ken Lesniewski, published an article titled, "Hemoglobin-oxygen-carbon monoxide equilibria with the MWC Model," in *Biophysical Chemistry*, Vol. 75.

- **Robert Soukup**, Instrument Technician. I am now the most senior staff member in the Chemistry Department with 23 years of service. I have had the pleasure of knowing many of you as students and have seen a lot of change in the department, too. I still have my cabin in the Idyllwild area and go up there as often as I can. This past year the California black bear made a reappearance in the Idyllwild area; bear tracks were found in the snow across the road from my cabin. Needless to say, I have warned my daughter to be vigilant when playing in the woods around the cabin.

My daughter, Jennifer, is a lovely and lively 10-year-old now. She loves science (wonder why?). My wife, Elizabeth, is active with the Greater Long Beach Girl Scout Council, serving on various committees that steer the future of the Council. I volunteered to help update the Girl Scout Council office computer network.

My main project in the department this year is the construction of a computer lab. I served on a college-wide technology committee, and thus was able to help obtain twenty new PCs for a much needed computerized teaching facility. The room where the lab will be located is a former underutilized wet chemistry lab located in Peterson Hall 2 that has been cleared and is awaiting remodeling. Once the room is ready I will be able to start installing the network wiring, the PCs, and configuring software. I am hoping to get this completed by the beginning of the fall 1999 semester.

- **Leslie Wynston**. I joined the Faculty Early Retirement Program at the end of the summer of 1998 and am now teaching spring semesters only. This gives me more time for my favorite pastime, foreign travel. Since September of 1998 we have made four trips to Europe. In September we visited Germany, Denmark and Sweden (where my daughter, Lani, and her husband moved last summer). In November we went to the south of France (Provence), in March to Paris for a few days, and in June again to France (this time to Brittany and Picardie).

Last April I received an award from the Western Association of Advisors to the Health Professions for my 34 years of service as a Pre-Health Professions advisor at CSULB. I continue to teach Biochemistry and Clinical Chemistry each spring.

NEW APPOINTMENTS TO THE CHEMISTRY & BIOCHEMISTRY ADVISORY COUNCIL

Affiliated with our department is an active group of about 30 scientists and business persons who help us forge a link with the chemically-related community in the area. It is a mutual support group. Members of the Advisory Council help us place our graduates, are available for technical advice, and help provide resources for the maintenance of our educational programs. We in turn refer potential employees to them and offer our help in other ways; for example, use of our technical library, and occasional instrumental and consulting services. New representatives joining the Council in the past year:



DR. CHRISTOS ANGELETAKIS,
KERR CORP.

Dr. Christos Angeletakis, a CSULB alumnus (BS '76, MS '78) received his PhD at UC Irvine in 1982. Chris's career has been in the field of dental materials. After working for American Hospital Supply Corp. in Irvine (later Sybron Corp.) until 1985, he joined the Research Department of Johnson and Johnson Dental Products Company in North Brunswick, NJ, where he worked on the development of composite filling materials and resins as a principal scientist. In 1991 he joined the research department of Ivoclar AG in Liechtenstein, a small European country between Switzerland and Austria, where he worked on the development of amalgam replacement composite restoratives one of which, Compoglass, is widely marketed in Europe. In 1996 he returned to California where he is working again for Sybron Corporation in Orange. His research interests still involve development of materials to replace mercury-containing amalgam use in dentistry and better functioning dental adhesives and restoratives. Commenting on the future of dental materials he says, "It is likely that polymeric materials will eventually replace metals and porcelain as advances in materials science are applied to dentistry, since they are more versatile and biocompatible."

Chris's work has resulted in 22 publications, five patents and numerous presentations here and in Europe.

John Brownlee, is the representative of Beckman Coulter Co. to the Advisory Council. He has been employed for 32 years as a scientific salesman with Beckman, working in Southern California during that period of time. Mr. Brownlee, a BS Chemistry graduate of Iowa State University, served as a lieutenant in the Marine Corps prior to his employment with Beckman. John is well known in our department since he has been a sales and service representative to CSULB for many years. John will be a replacement for **James Harris**, who was an active member of the Council for several years.

Jean Kigozi, who replaces **Yvette Lloyd** as the representative from Lab Support, received her BS in Food

Science and Technology at Bristol University in England and her MS in Nutrition at the University of New Haven in Connecticut. Prior to joining Lab Support she was employed by Kalkan Mars, Inc. in Vernon, Calif. and worked in quality assurance with Hansen's Juices in Azusa, Calif.



MUKESH R. PATEL,
BACHEM CALIFORNIA.

Mukesh R. Patel, representing Bachem Inc., California, is Assistant Director of Production at the Torrance facility. He received his BS in Chemistry and MS in Organic Chemistry from Sardar Patel University in India and is licensed by the Board of Pharmacy (USA) to manufacture pharmaceutical products. He previously worked for Gujarat Insecticides Ltd. in Ankleshwar, India, and subsequently with Applied Biogenics, Inc. in Gardena. At Bachem, where he has worked since 1996, he supervises the production of peptides from gram to kilogram quantities. Mr. Patel replaces **Dr. John Carlson** who has retired from Bachem.



DENNIS VAN WESTERHUYZEN

Dennis Van Westerhuyzen, an alumnus of our department (BS 1967), is Manager of the Technical Laboratory in the Department of Sensors and Electronic Systems, Raytheon System Co. (formerly Hughes Aircraft Co.) in El Segundo. He also earned his MBA in Business at Pepperdine University. After graduation from CSULB he was employed in the Aerospace Division of Allied Signal where he worked until 1985 when he joined Hughes Aircraft. He is the author of several publications dealing with equipment and material failure analysis. Dennis is a member of the International Society for Hybrid Microelectronics, ASM International, International Society for Testing and Failure Analysis, and the American Vacuum Society. Dennis replaces **Danute Basiulis**, MS 1977, an active member of the Council until her retirement from Raytheon Systems Co. last December.

FACULTY E-MAIL ADDRESSES

SHOULD YOU WISH TO CORRESPOND WITH CHEMISTRY/
BIOCHEMISTRY FACULTY, THEIR E-MAIL ADDRESSES ARE LISTED
FOR YOUR USE. THEY WOULD BE HAPPY TO HEAR FROM YOU.

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Margaret Merryfield	mmerry@csulb.edu
Henry Po	hpo@csulb.edu

WE HAVE BEEN FORTUNATE TO HAVE HAD THE SERVICES OF SO MANY PERSONS WHO MADE IMPORTANT CONTRIBUTIONS TO OUR DEPARTMENT OVER THE YEARS, BUT WHO, FOR VARIOUS REASONS, CHOSE TO CONTINUE THEIR CAREERS ELSEWHERE. A FEW HAVE RETIRED. WE REMEMBER SOME OF THEM IN THIS COLUMN. WE WOULD LIKE TO HEAR FROM OTHERS AS WELL.

Dr. J. Kenneth Bartlett (Professor 1954-56), the first faculty member in the chemistry program at what was then Long Beach State College, has retired from Southern Oregon State College in Ashland, Oregon, where he was Professor of Chemistry and chair of the department. He and Mrs. Bartlett recently celebrated their 50th wedding anniversary.

Dr. Annie Bianchino (Lecturer 1981-84, 1988-92) presented a workshop at the 148th Two-year College Chemistry Conference on "A small-scale approach to General Chemistry: It's not what you're thinking," in March 1999.

Dr. Isidore "Izzie" Goodman (Lecturer 1981-84) was married in August of 1998 to Perri Sloane, a senior services administrator for Jewish Family Services. During 1997-99 he was Visiting Professor of Science Education at UCLA, teaching a basic chemistry course to a class heavily populated with minority students. He also continues as chair of the Chemistry Department at Pierce College.

Dr. Tom Goyne (Lecturer 1986-88) and his wife, Cheryl, announced the birth of their third child, Arthur Dalton. "Two kids are a lot more work than one, but a lot less than three." Tom is Professor of Chemistry at Valparaiso University in Indiana.

Dr. Reef Hardy (Lecturer 1995-96) is in his second year as a full-time faculty member at Occidental College teaching freshman chemistry.

Dr. Jon E. C. Hutchins (Lecturer 1974-76) is Professor of Chemistry at Buena Vista University, Storm Lake, Iowa, where he has finished his 23rd year of teaching. His current projects involve GC headspace and environmental analysis.

Dr. Margaret "Peggy" Kline (Lecturer 1984-88) continues as Professor of Chemistry at Santa Monica College. "We're teaching in our new building after our five-year occupation of the Science Village trailer park! Also among other members of the faculty at SMC are alumna **Dr. Deborah Schwyter** (BS Biochem '83, MS Biochem '85) and **Dr. Jamey Anderson** (Part-time Lecturer 1996)."

Dr. Shelly Kumar (Lecturer 1985-87, 1988-89) is Professor of Chemistry at Governors State University in the Chicago area. He has developed a web-based course in organic chemistry and written a laboratory

WHERE ARE THEY NOW?

manual for the short course in organic chemistry using microscale equipment. He has twice received Faculty Excellence Awards.

Dr. Steve McDowell (Assistant Professor 1985-1990) is Associate Professor and Chair of the Department of Chemistry and Chemical Engineering at South Dakota School of Mines and Technology in Rapid City. The department consists of 13 faculty: 6 in chemistry, 5 in chemical engineering and 2 in biology. There are 80 chemistry majors and 250 chemical engineering majors. For former students wishing to correspond with him, his e-mail address is smcdowel@silver.sdsmt.edu.

Frances "Fran" McLuen (Secretary 1975-92) informs us that she is enjoying her retirement and spending more time at their mountain chalet in Crestline. Their younger son, Scott, was married to Danna in November 1997, and they are living in San Diego.

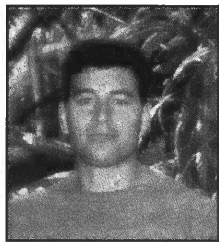
Dr. Kimberly Schugart (Lecturer 1989-90, Assistant/Associate Professor 1990-99) resigned her position to accept a post with KPMG in Los Angeles. In her new position she evaluates private companies for tax purposes and as candidates for acquisition. She continues to live in Pasadena.

LaVona Thomas (Secretary 1996-99) has resigned to become a full-time mother to her three children.

Virginia Whitcher (Department Secretary 1976-77) lives in Rancho Palos Verdes. "We have been able to travel worldwide, missing only Africa and Egypt. It just doesn't seem possible that it has been almost 23 years since I retired."

Dr. C. Grant Willson (Lecturer 1973-74), Professor of Chemistry and Chemical Engineering at the University of Texas, Austin, where he has worked since 1996, was this year's Distinguished Visiting Lecturer. See an article elsewhere in this *Newsletter*.

CALIFORNIA FOUNDATION FOR BIOCHEMICAL RESEARCH SUMMER FELLOWSHIP



GEORGE LIARAKOS, CALIFORNIA FOUNDATION
FOR BIOCHEMICAL RESEARCH SUMMER FELLOW.

The California Foundation for Biochemical Research Summer Fellow for 1999 is **George Liarakos**, a graduate student in Biochemistry. George received his BS Degree in Biochemistry at CSULB in 1996 and is now working on his MS Degree in Biochemistry in Dr. Douglas McAbee's laboratory where he is

studying the analysis and identification of the iron-dependent lactoferrin receptor on isolated rat hepatocytes. The \$2,000 award has enabled him to spend the summer pursuing his research interests and concluding his thesis research. After receiving his MS late this year, George plans to enter the job market in the field of biotechnology.

Since 1978 the California Foundation for Biochemical Research, based in La Jolla, Calif., has supported 24 graduate and undergraduate students in summer research projects at CSULB.

LAB SUPPORT SCHOLARSHIP AWARDED TO LONG BEACH CITY COLLEGE STUDENT

Lab Support, a division of On Assignment, Inc., an agency which provides temporary professional assignments in laboratories, has established a \$2,500 scholarship for area community college transfer students who intend to major in chemistry or biochemistry at CSULB. This is the fifth year of the award's existence. Previous awardees have transferred to CSULB from Cypress College, Citrus College, Mount San Antonio College and Irvine Valley College.

The awardee for 1999-2000 is **Caroline Carter** of Los Alamitos, a transfer student from Long Beach City College, who intends to continue on to medical school after receiving a BA degree in Chemistry. She is a near 4.0 student who spent the past summer at Occidental College in a National Science Foundation-sponsored Undergraduate Research Program engaged in research in organic chemistry with Professor Deardorff.

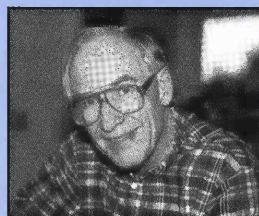
The purpose of the scholarship is to identify outstanding students for our chemistry and biochemistry programs and to foster closer relationships with nearby community colleges. The department would like to express its gratitude to Yvette Lloyd, Account Manager with Lab Support's Carson office, for facilitating this scholarship. Ms. Lloyd was a member of the Chemistry Advisory Council.



CAROLINE CARTER, LAB SUPPORT SCHOLAR.

IN MEMORIAM

JACK WOLF: 1931-1998



JACK L. WOLF.

Jack L. Wolf (MS 1965) passed away on August 8, 1998 at his home in Mission Viejo shortly before he was to return to El Camino Community College where he was scheduled to begin his fortieth year of teaching at that institution. He was a

professor in the Division of Mathematics and Physical Science and instructed classes in inorganic, organic and biochemistry. During his years at El Camino College, he and a colleague, Dr. James Campbell, developed a two-semester chemistry course for the allied health science majors that has been widely adopted throughout the state. Jack was well known for his commitment to teaching which spanned a period of 44 years. In addition to his wife, Mary, he leaves two daughters, Cynthia and Catherine. Both followed in their father's footsteps by becoming teachers.

Jack was among the first MS graduates of our department. He was a research student of Dr. Edwin Harris with whom he completed a thesis in natural-product chemistry entitled, "A Study of Occidentenol".

CSULB CHEMISTRY & BIOCHEMISTRY DEPARTMENT NEWSLETTER

FALL 1999, NUMBER 24

AN ANNUAL PUBLICATION OF THE
DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY
FOR PAST AND PRESENT STUDENTS AND
FRIENDS OF THE DEPARTMENT.

NEWS ITEMS, FEATURE ARTICLES, PHOTOS,
AND COMMENTS ARE EAGERLY INVITED.

ALL ARTICLES NOT SIGNED IN THIS
ISSUE OF THE NEWSLETTER WERE
RESEARCHED AND WRITTEN BY THE EDITOR.
THE NEWSLETTER AND OTHER DEPARTMENTAL
NEWS AND INFORMATION MAY BE ACCESSED

ON THE INTERNET AT THE FOLLOWING ADDRESS:
<http://www.chemistry.natsci.csulb.edu>



Kenneth L. Marsi, Editor

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CORPORATE GIFTS TO THE DEPARTMENT

The total value of gifts to the department, in-kind and cash, during the fiscal year ending June 30, 1999 was \$56,921. Gifts from business and industry amounted to \$24,988 and included \$18,808 in cash and \$6,180 in in-kind gifts of equipment, supplies, and books.

Included in in-kind gifts received were an HP 1090 LC Diode Array Detector from Allergan Inc.; computer software from Hypercube, Inc.; two Merck Indexes from Merck & Co.; and a Handbook of Chemistry & Physics from CRC Press.

We wish to acknowledge the help of the following persons in assisting us in securing gifts for the department:

Dr. Dennis Anjo,
Ms. Danute Basiulis,
Dr. Peter Baine,
Dr. William Drell,
Ms. Yvette Lloyd,
Dr. Ray Maddalone,
Ms. Patricia Maxwell,
Dr. Christine Peterson,
Dr. Steve Ruckmick,
Mr. James Richards,
Dr. Ercan Unver.

COMPANIES CONTRIBUTING IN-KIND AND/OR CASH GIFTS ARE LISTED:

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Matching Gifts were received from the following companies (employees whose gifts were matched are given in parentheses):

NATIONAL STARCH AND CHEMICAL FOUNDATION (ABLESTIK LABS.)* (Dwight Gergens)
ARCO* (Renee Hermes, Gary Tietavainen)
BOEING* (Dr. Arie Passchier)
JOE MCPHERSON TOYOTA (Ann Callahan)

**Companies are members of the Chemistry and Biochemistry Advisory Council*

GIFTS BY INDIVIDUALS

During the 1998-99 fiscal year the department received gifts totalling \$56,921. Of this amount, \$18,984 was in cash and \$12,949 in in-kind gifts. The faculty, staff, and students of our department are very grateful for your generosity. Without your help it would not be possible to maintain the excellent programs which we have developed in chemistry and biochemistry.

Cash gifts received are used for scholarships, awards, the seminar program, and purchase of supplies and equipment for which there is not adequate state funding. Also, the costs of publishing the *Chemistry & Biochemistry Department Newsletter* are met with private giving. You may give an income-tax-deductible gift directly to the department by making a check to:

**CSULB FOUNDATION/CHEMISTRY FUND
DEPARTMENT OF CHEMISTRY & BIOCHEMISTRY
CALIFORNIA STATE UNIVERSITY, LONG BEACH
1250 BELLFLOWER BOULEVARD
LONG BEACH, CA 90840-3903**

The Office of University Relations and Development is informed of all gifts, and you will receive a personal letter of acknowledgement from the department. You might investigate the possibility that your company matches employee gifts. In that way, the value of your gift to the department is increased.

If you are contacted through the Phonathon program and a gift is requested, please specify the Chemistry & Biochemistry Department as the recipient of your gift, if that is your intention. Thank you!

HONOR ROLL OF INDIVIDUAL CONTRIBUTORS (JULY 1, 1998-JUNE 30, 1999)

Patricia T. Abe	Raymond Gritton, MD	Phillip Megdal, DDS
Courtenay Anderson	Roger Allan Haas	Dorothy H. Middleton
Dennis M. Anjo, PhD	Michael L. Hall	Mary Milkovich
Miki Aurang, MD & Rick T. Csintalan, MD	Sharon McKelvey Hansel, DO	Lauren N. Miyaguchi
Girmachew Ayele	Gary Hathaway, PhD	Paul Mosher
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Danute Basiulis	Donald Honda, PharmD	John Nelson, JD
Andrea Ann Baxter, MD	Michael Hoover	Ursula Osborne
Allan D. Bike	William Hulbrock	Raymond E. Ouellette
Keith Bogdon, JD	Robert Hutchins, PhD & MaryGail Hutchins, PhD	Arie Passchier, PhD & Deanna Passchier
William Bope	Thomas Ito, PhD	Melanie Patterson
Teresa Marsi Bothman	Diane S. Johnson	Mark G. Phillips, DDS
Reid H. Bowman, PhD	Clyde C. Jones	Robert E. Phillips, Jr
Delina Brassard	John Thomas Jones, MD	Gary Plett
Elizabeth Brinkman, PhD	Angel Juarez	Michael L. Porter
Norman R. Byrd, PhD	Gene E. Kalbus, PhD	Michael L. & Mary E. Porter
Victor V. Cachia, DPM	Tina M. Kishishita, PharmD	Sandra Quon
Ann Callahan	Margaret Kline, PhD	Theresa M. Rohr-Kirchgraber, MD
Ronald & Kathleen Carroll	Timothy S. Kneebone, DPM	Dorothea-Ann Rzasa
William J. Centobene, PhD	William Lane	Robert Savenye
Lori J. Childres, DDS	Peter Langosh	James R. Scott, DDS
Vickie Clawson	Jennifer M. Lee	Nail Senozan, PhD
Jeffrey A. Cohlberg, PhD	John Leeb	Alan Senzel, PhD
Martin Costello	Debra Marr-Leisy, PhD & William Leisy	Stephen C. Shanklin
Alan Cunningham, PhD	Edward K. Lesniewski	Clayton Shepard, DDS
Robert Curiale	George Liarakos	Jay Siegel, PhD
Violeta D. Dadufalza	Van T. Lieu, PhD	Robert C. Sween, DDS
Fred H. Dorer, PhD	Timothy Mac Andrew	Kiana Tabibzadeh
Gregory Dorsman	Lawrence Manes, PhD	Mark Tanji
Stephen M. Fritch	Lewis Manring, PhD	William Thomasson, PhD
Daryl M. Fukuda	Phillip Daniel Marchis	Gary M. Tietavainen
Ronald Garber, PhD	Kenneth L. Marsi, PhD & Irene Marsi	Lily N. Vuong
Nancy Gardner	Marianne Marsi, PhD & Lewis Manring, PhD	Andrew Walker
Kristina Gaus	Marianne Marsi, PhD	Karen Watson-Webber
Victor Gearhart	Darwin Mayfield, PhD	Virginia M. Whitcher
Dana Marie Gilchrist	William McCully	Neill K. White
Bernard Goeders	Diane McGann	Elizabeth Yeager
Isidore Goodman, PhD	Patrick A. McKay	
Tom Goyne, PhD	Charles & Frances McLuen	
Robert Grant	Kitty Taylor McVey, PharmD	



ENDOWED AWARDS



ROBERT B. HENDERSON AWARD



JANET L. HUNTING,
HENDERSON SCHOLAR,
HORALEK AWARDEE, AND
OUTSTANDING GRADUATE.

The Robert B. Henderson Award was established by Dr. Henderson's family, colleagues, and friends to honor his memory. Dr. Henderson was a member of the Chemistry and Biochemistry Department from 1955-1983, and a distinguished scientist and teacher of organic and general chemistry. Recipients for this award are chosen from among bachelor's and master's graduates as those best exemplifying Dr. Henderson's scholarship and commitment to the profession of chemistry. This year's award of \$1,000 was presented to **Janet L. Hunting**.

Janet is a May 1999 *summa cum laude* graduate with a BS Degree in Chemistry. During her career at CSULB she received many honors, including the President's List, the Michael Monahan Summer Research Fellowship for two years, the Merck Award in Organic Chemistry, the Inorganic Chemistry Award, and the Toni Horalek Award for Leadership. In addition, she was elected to Phi Beta Kappa, an honor accorded to only 18 students out of a graduating class of about 5,000. She was also chosen this year's Outstanding Baccalaureate Graduate of the College of Natural Sciences & Mathematics for which she received an award from the Alumni Association at Commencement. She was an undergraduate research student of Dr. Henry Po and will begin a PhD program in the area of organometallic chemistry at Cornell University this fall.

KENNETH L. MARSİ SCHOLARSHIP

This \$1,000 scholarship, established by faculty, staff, family, friends, and former students on the occasion of Dr. Ken Marsi's retirement, is used to defray registration fees of outstanding junior and senior chemistry or biochemistry majors. This year's scholar is **Michael Eagan**.

Michael, a senior biochemistry major, has a perfect 4.0 grade point average and was also the recipient of the department's American Chemical Society Polymer Award for his scholarship in organic chemistry. He is an undergraduate research student of Dr. Tom Maricich and plans to enter medical school following graduation.



MICHAEL EAGAN,
MARSİ SCHOLAR AND
ACS POLYMER AWARDEE.

MICHAEL MONAHAN FELLOWSHIP



DMITRY PERVITSKY,
MONAHAN FELLOW AND
HYPERCUBE AWARDEE.

This award was established through a bequest of Dr. Michael Monahan, an alumnus of our department who received his BS in Chemistry in 1963 and his PhD in 1968 at UC San Diego in physical organic chemistry. While an undergraduate he was a research student of Dr. Robert Henderson. He was a distinguished scientist who was a member of the faculty at the Salk Institute and was subsequently a Senior Research Scientist with Beckman Instruments; he was also the founder and president of California Medicinal Chemistry Corporation. In 1985-87 he served as a lecturer in our department.

According to his will the income from his bequest is to be used to support student research in our department. This is the third year this \$2,500 award has been given.

Dmitry Pervitsky, this year's Monahan Fellow, a native of Belarus where he received a degree in Chemical Engineering, is a master's student of Dr. Lijuan Li. In addition to the Monahan Fellowship he also this year received the Hypercube Award for academic excellence. Dmitri is studying metal nitrosyl interactions with imidazole-based ligands using UV-vis spectroscopy.

SPYROS PATHOS IV AWARD

The Spyros Pathos IV Award is presented annually to a student excelling in the second semester of general chemistry, Chemistry 111B. This year is the fourth year that the Pathos Award has been granted. The award is made possible by friends of Spyros Pathos IV, who was an undergraduate chemistry major in our department at the time of his death in 1993.

Shauna Prescott, this year's Pathos awardee, is a biology major who intends to enter veterinary school following graduation from CSULB.



SHAUNA PRESCOTT,
PATHOS SCHOLAR.

DAVID L. SCOGGINS AWARD



HUY QUOC HOANG,
SCOGGINS SCHOLAR
AND BIOCHEMISTRY
AWARDEE.

The Scoggins Memorial Award recognizes outstanding scholarship and promise by a graduating chemistry or biochemistry student who intends to pursue a career in one of the health-related professions. This award, established by Dr. A. G. Tharp, now Professor Emeritus, is in memory of David L. Scoggins, a graduate student in the Chemistry Department at the time of his death in 1969.

The Scoggins scholar this year is **Huy Quoc Hoang** who was also a recipient of Departmental Honors at Graduation. Huy, a transfer student from Golden West College, graduated in May 1999 with a BS Degree in Biochemistry and will be attending pharmacy school at Long Island University in Brooklyn, New York.

JOHN H. STERN AWARD

The Stern Award, consisting of a cash prize, is given in memory of Dr. John H. Stern, internationally known for his work in solution thermodynamics and author of many publications in that field. The award was established by colleagues, former students and friends of Dr. Stern, who was a member of our faculty from 1958-1984 and a distinguished teacher of physical and general chemistry.

Yvonne Burns is the 1999 awardee. Ms. Burns also received the Merck Award in Organic Chemistry this year. She came to CSULB as a freshman from Marina High School in Huntington Beach. After graduation in the spring of 2000 with a BS in Chemistry, Yvonne plans to attend graduate school. She is currently an undergraduate research student of Dr. Stuart Berryhill.



YVONNE BURNS,
STERN SCHOLAR AND
DIAGNOSTIC PRODUCTS
CORP. SCHOLAR.

CAREER PLANS OF SOME OF OUR 1998-99 GRADUATES

Maria Avina, BS Biochemistry, BA Chemistry	• Research, VA Hospital, Long Beach
Joshua Bryant, BS Biochemistry	• Medical School, UCLA
Jason Cain, BS Biochemistry	• PharmD program, U of the Pacific
Stuart B. Chinn, BS Biochemistry	• Law school, Loyola-Marymount
Huy Quoc Hoang, BS Biochemistry	• PharmD program, Long Island U, Brooklyn, NY
Huilin Huang, MS Chemistry	• Sugen, Inc., San Jose, CA
Janet Hunting, BS Chemistry	• PhD program in Chemistry, Cornell U
Jawdat Hussein, BS Biochemistry	• PhD program in Biochemistry, Scripps Institute
Shirin Khorashadi, BS Biochemistry	• PharmD program, UC San Francisco
Cao Ba Luu, BS Chemistry	• MS program in Chemistry, CSULB
Jennifer Marsh, BA Chemistry	• PhD program in Chemistry, UC Riverside
Michael McAllister, BS Biochemistry	• MS program in Biochemistry, CSULB
Koorosh Mirfakhrai, BS Biochemistry	• Diagnostic Products Corp., Los Angeles
Theodore Nguyen, MS Chemistry	• Spason Pharmaceutical Co.
Dyna Sao, BS Biochemistry, BA Chemistry	• Hycor Biomedical, Inc., Garden Grove, CA
Anne B. Simonson, MS Biochemistry	• PhD program in Chemistry, UCLA
Paula H. Spencer, MS Biochemistry	• MS program in Biochemistry, CSULB
Jeff T. Suri, BS Chemistry	• PhD program in Chemistry, UC Santa Cruz
Keynes Tong, MS Biochemistry	• Research, VA Hospital, Long Beach
Trang Khanh Trong Vu, BS Biochemistry	• Kelly Scientific Resources
Shannon Wilson, BS Biochemistry	• MS program in Biochemistry, CSULB

AWARDS TO CHEMISTRY/BIOCHEMISTRY STUDENTS

SUBJECT AREA AWARDS

Freshman Chemistry Award	• Danielle Mitchell & Jennifer Kauk
Spyros Pathos Memorial Award	• Shauna Prescott
American Chemical Society Polymer Chemistry Award	• Michael Eagan
Merck Award in Organic Chemistry	• Yvonne Burns & Kevin Phillips
Analytical Chemistry Award	• Randal Goff
Biochemistry Award	• Joshua Bryant & Huy Quoc Hoang
Inorganic Chemistry Award	• Janet Hunting
John H. Stern Award in Physical Chemistry	• Yvonne Burns

SPECIAL DEPARTMENT AWARDS

American Institute of Chemists Baccalaureate Award	• Joshua Bryant
American Institute of Chemists Graduate Award	• Theodore Nguyen
California Institute for Biochemical Research Foundation Award	• George Liarakos
David Scoggins Memorial Award	• Huy Quoc Hoang
Departmental Honors at Graduation	• Nabil Gerges, Huy Quoc Hoang, & John Pope
Diagnostic Products Corporation Scholarship	• Yvonne Burns & Dai P. Nguyen
Horalek Award for Departmental Leadership	• Janet Hunting
Hypercube Award	• Dmitry Pervitsky
Kenneth L. Marsi Scholarship	• Michael Eagan
Michael Monahan Memorial Summer Research Fellowship	• Dmitry Pervitsky
Robert B. Henderson Memorial Scholarship	• Janet Hunting

COLLEGE OF NATURAL SCIENCES & MATHEMATICS AWARDS

Outstanding Graduate of the College	• Janet Hunting
Khalil Salem Award	• Joshua Bryant
Robert B. Rhodes Award	• Paula Spencer

ELECTION TO PHI BETA KAPPA

Joshua Bryant, Janet Hunting & Eduardo Torres

MCNAIR SCHOLARS

Sophia Aguero, Nabil Gerges & Kareem Morgan

ELECTION TO PHI KAPPA PHI

Joshua Bryant, Michael Eagan, Dai P. Nguyen



STUDENT AFFILIATES ON A FIELD TRIP TO ALLERGAN, INC. FRONT ROW, LEFT TO RIGHT: CATHIE PHUNG, TIFFANY PHUNG, ANNE DUONG, SABRINA FELTENBERGER, PHAT HOANG, DR. LIJUAN LI. BACK ROW, LEFT TO RIGHT: CATHY OVERSTREET, JANET HUNTING, DIANA FERNANDEZ, DR. PETER BAINE, STEVE KRAATZ, TARA BURKE.

STUDENT AFFILIATES OF THE AMERICAN CHEMICAL SOCIETY

BY JANET HUNTING, PRESIDENT 1998-99

The Student Affiliates of the American Chemical Society (SAACS) experienced an enjoyable and successful year. Some new members joined, and we hope to see our membership increase even more during the coming year. Our many activities included those listed below.

SAACS sponsored a field trip to Allergan Inc., a large company headquartered in Irvine that specializes in skin and eye-care products. Kathy Christopherson Kurjan (BS 1986), employed as a chemist at Allergan, organized a fascinating tour of their facilities.

The Winter Party, scheduled for the end of the fall semester, was hosted by Dr. and Mrs. Senozan at their home. The potluck party featured lots of wonderful food and drink—an excellent way to get a jump-start on the holiday season.

The Garb Sale, held the first two weeks of each semester, was a smashing success this year. This SAACS fund raiser features used lab coats, protective goggles, aprons and molecular model kits. Our thanks to all those SAACS members who helped out, and to everyone who participated in supporting the organization.

SAACS continued sponsoring the Coffee and Donut Hour. Each Friday morning students and faculty meet informally for coffee, orange juice, donuts and muffins.

The spring semester featured a field trip to the Los Angeles Coroner's Laboratory. Although some students were disappointed that the morgue was not on the agenda, the tour did include an intriguing visit to the research crime lab and the toxicology labs. Scientists use many simple and sophisticated physical methods to determine the type of weapon used in a crime. Students commented on the instrumentation—all that experience on the mass spectrometer in Chem 420, and the HPLC and other devices in Chem 451 would certainly pay off here!

The Spring Party was a wonderful affair, held at the home of the incoming SAACS president, Sotiria Contos. Her family provided a sumptuous feast for all the guests.

The Annual Awards banquet finished off the school year where 15 students received awards from the department. The funds raised during the Garb Sale helped to support this event.

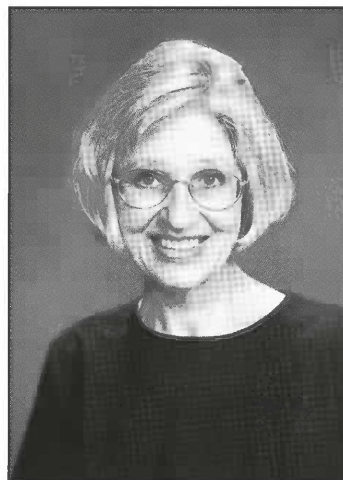
Finally, sincere thanks go to faculty advisor, Dr. Peter Baine, for his inspiring leadership throughout the year.

JEANNETTE SANTAGE TRANSFERS TO NEW POSITION

After 22 years of loyal and dedicated service to our department as Department Secretary, Jeannette Santage has transferred to the Human Development Program in the College of Liberal Arts where she will direct office activities. Jeannette is fondly remembered by generations of students who came to know her through her role as Department Secretary and as a helpful friend. In her capacity as Department Secretary, she served through more than half the lifetime of the department. [The Chemistry program became a department in 1961, and Jeannette was hired by Chairman Ken Marsi in 1977 to replace Virginia Whitcher who retired that year.] Jeannette came to us from the City of Signal Hill where she had held an office position for a number of years.

Jeannette is very well known on campus for her knowledge of University procedures and how to get things done for the department and its faculty members. She has an amazing memory for names and faces, and her interest in people made the office a pleasant place to work. Because of her acquaintance with so many of our students and the fact that she maintained contact with many of them after they had graduated, she was a key in our efforts to maintain active communication with our many alumni.

Although she will be sorely missed, we are consoled by the fact that she still remains on campus in the service of the University. She and her husband, Spencer Santage, a pharmacist with Los Angeles County, continue to reside in Belmont Shores. The faculty, staff, students and alumni are grateful for her service and wish her well in her new position!



JEANNETTE SANTAGE.

ALUMNI
NEWS

We very much appreciate the time you have taken to inform us about yourselves and we always enjoy hearing from you. The information which you send us about your careers is often shared with students who are considering professions in chemistry, biochemistry, medicine, dentistry, pharmacy, law, etc. We have an Alumni Bulletin Board where communications from alumni are posted for faculty to read. All degrees noted are in Chemistry unless otherwise specified. Alumni having both bachelor's and master's degrees from our department are listed under the year they received their bachelor's degree. CSULB degrees are in bold type. To communicate about the Newsletter or to send information, write to: Dr. Ken Marsi; Department of Chemistry/Biochemistry, California State University, Long Beach; Long Beach, CA 90840. FAX: (562) 985-8557. E-mail: kmarsi@csulb.edu.

1957-1969

Allan D. Bike, BS 1960, MA 1961, has retired as Vice President and General Manager of Shipyard River Coal Terminal, Charleston, SC and now lives in Dexter, Michigan. Allan and Wanda Bike have two children: a daughter, Dr. Stacy Bike-Birmingham, who is Assistant Professor of Chemical Engineering at the U of Michigan, and a son, Lon Bike, owner of Architects Team Three in Santa Ana, Calif.

Dr. William J. Centobene, BS 1964, MS 1967, is Professor of Chemistry at Cypress College, "and my enthusiasm for my courses is as great today as in my first year."

Dr. Roger T. Clark, BS 1966, MS 1970, is Principal Scientist with Elf Aquitaine, a French-owned chemical company in King of Prussia, Penn. "Besides my divisional research responsibilities, I write corporate research proposals. If they are approved I get an undergraduate student or postdoc [from France] for a year. My job has turned out to have many common features with university teaching and research."

Dr. Alan Cunningham, Chemistry Minor 1956, MA Biology 1958, has now fully retired after 25 years of teaching chemistry at Monterey Peninsula College, serving as department chair, physical sciences division chair, and Director of Environmental Hygiene and Safety. He and wife, Barbara, have been doing considerable motorhome traveling. The Cunningham's daughter, Carol Nillson, MD, has obtained a PhD in neurochemistry from Goteborg U. She is a postdoc at Goteborg where she teaches and is involved in studying the surface structure of *Helicobacter*.

Violeta Dadufalza, MS 1967, is employed as a research scientist at Children's Hospital in Orange, working on NIH grant-sponsored research

Alan DiStefano, BS 1968, Vice President, Sales & Marketing with Baldwin Environmental, Inc. in Reno, Nev., was recently appointed as one of 37 environmental industry executives to the Department of Commerce Environmental Technology Trade Advisory Committee for a two-year term.

Dr. Fred Dorer, BS 1961, retired as Provost and Vice President for Academic Affairs on August 1, 1999 (see article elsewhere in this Newsletter). His wife, Marilyn, recently retired from teaching. Son,

Garrett, works in the diplomatic service in Cairo, Egypt, and son, Russell, completed his MD/PhD at the U of Washington and is a resident at Harvard.

Donald J. Ferm, BS 1968, is employed as Senior Research Chemist in the Technology Department of U.S. Borax, Inc. in Valencia, Calif. Don, a member of CSULB's Chemistry & Biochemistry Advisory Council, presented a seminar to students and faculty of the department in September, 1998, entitled, "Boron from A to Zinc".

Roger A. Haas, BS 1969, MBA 1972, has worked as an aerospace engineer (the Apollo and Space Shuttle Orbiter programs) for over 30 years and is now retired (1995) and living in Kirkland, Wash. "Anyone have an extra umbrella?"

Dr. Gary Hathaway, BS 1964, is the Director of the Protein Analytical Laboratory at Caltech. "I still can't break 90 on the golf course! I would love to hear from my old classmates."

Dr. Norman Hester, BS 1968, is Technical Director at Truesdail Laboratories in Tustin, Calif., specializing in direct laboratory performing equine drug testing for the states of California and Kentucky. **Dr. Joe Bramblett, MS 1973**, is also employed at Truesdail.

Dr. Robert O. Hutchins, MS 1962, is Sasin Professor of Chemistry and Department Head at Drexel U in Philadelphia. His wife, **Dr. MaryGail Hutchins, BS 1962**, teaches general chemistry and environmental chemistry at Philadelphia College of Textiles, and also science and environmental health in Drexel's School of Environmental Science, Engineering and Policy.

Dr. William Lake BS 1967, MS 1969, retired from Baxter Healthcare, owns a Mail Boxes Etc. franchise in Redlands, Calif., and lives in the mountains near Big Bear. "You sent me some of your very best students while I was at Baxter. People like **Mike Weiler (Chem Minor 1990)**, **Ginny Ofstein (BS 1989)**, **Roy Guillermo (MS Biochem 1992)**, and **Sandy Putirka (BA 1989)** made the time at Baxter special for me. It was especially an honor to be appointed an Adjunct Professor at CSULB and to receive the Distinguished Alumni Award in 1992."

John Leeb, BS 1966, MS 1972, continues as Chief Chemist at the Naval Weapons Station in Seal Beach. He reports that **Jeany Nguyen (BS 1990)** also now works at the Naval Weapons Station.

Dr. John Leonard, BS 1969, MS 1973, is in the Research & Development Department of IDEC in San Diego where he manages four scientific activities. "These are analytical sciences (protein characterization and assay development), formulation sciences (development of product formulations), a nonclinical development activity (external and internal pharmacology and toxicology studies), and a clinical immunology laboratory (human clinical trials). I find the work demanding yet rewarding because we help develop products for people with cancer and autoimmune diseases." **Dr. Paul Chinn (MS 1983)** is also a scientist at IDEC.

John Nelson, BS 1969, a partner at Nelson & Nelson in Orange, practicing toxic torts and related insurance law, was an author of an article, "Scientific Solution: Understanding Complex Matters with Neutral Experts," in the *Los Angeles Daily Journal*, a legal publication. The article dealt with the problem of conveying scientific information to judges and lay juries lacking a scientific background. He advocates a panel of court-appointed scientists be used "to screen proposed scientific evidence to determine which testimony is worthy of consideration by the jury..."

Raymond E. Ouellette, BS 1968. "I accepted a position with Kennedy/Jenks in Irvine to assist them with permitting a treatment plant for removal of MTBE in drinking water. I have continued my association with the Orange County Section of the ACS (1999 Program Chair); I have prepared several chapters of the upcoming 'Study Guide' for the Qualified Environmental Professional Qualifying Examination in Waste Management."

Arnie Petersen, BS 1959, lives in Newport Beach where he now specializes in estate and investment properties. He was formerly employed as a scientist and engineer for Fortune 500 companies, with an emphasis in medical, scientific and industrial instrument development, production and applications.

Dr. James R. Scott, BS 1968, is a clinical staff dentist with United Health Centers of the San Joaquin Valley, Inc. and lives in Orange Cove, Calif. "I continue to work as a staff dentist in a neighborhood clinic serving farm workers and local residents. My wife, Michele, will finish her dental hygiene training, and will embark on a new career as a Registered Dental Hygienist. Our two boys, Kevin (6) and Charlie (4), are doing fine in kindergarten and preschool."

Dr. Alan J. Senzel, BS 1967, is Publications Manager for the International Union of Pure and Applied Chemistry in Research Triangle Park, NC. "I'm enjoying my new position at the IUPAC Secretariat. My wife, Phyllis, is Human Services Team Leader for Wake County Child Support Enforcement. We will celebrate our 30th anniversary this June. Our son, Richard (27) is Manager of Database Consulting Services for the Department of Geriatrics at Mount Sinai Hospital in New York, NY, and our daughter Lisa (26) is completing the 5th year of her MD/PhD program in Neurobiology at Albert Einstein College of Medicine in Bronx, NY." Alan has been President of the Raleigh Chamber Music Guild for two years, scheduling, among others, the Guarneri and Juilliard Quartets.

Dr. William Thomasson, MS 1966, is a self-employed science and medical writer. He and wife, **Penny (Heine), BS 1966,** live in Oak Park III.

1970-1979

Dr. Bruce Adams, Chemistry Minor 1973, is a dentist in San Marcos, Calif.

Dr. Ted A. Bailey, BA 1973, is an optometrist with ProCare Eye Examiners in Sand City, Calif. and lives in Carmel. He and his wife enjoy hiking, sailing and traveling.

Danute I. Basiulis, MS 1977, manager of the materials and Processes Department for the past nine years, retired from Raytheon Systems Co. on December 1, 1998. She joined the company, formerly Hughes Aircraft Co., in January 1977 as a member of the technical staff. She and her husband Al are enjoying traveling, skiing and spending time with son, Algis, and daughter, Laima, and their grandchildren, Tessa and Sean.

Steve Hansen, MS 1971, is a member of the chemistry faculty at Kwantlen University College in Surrey, British Columbia.

Steve Fritch, MS 1979, MPA 1991, is Criminalist III and Crime Lab Supervisor with the Long Beach Police Department. He reports that **Greg Gossage (BS Chemistry 1995)** and **Sara Laramie (BS Biochem 1989)** are also employed in the Crime Lab.

Leslie Gilpin (Chem Minor 1980) is a Counselor at Millikan High School "and will be moving on to Washington Middle School (Long Beach) for some 'downtown' experience."

Michael R. Hoover, BS 1971, is Forensic Scientist for the Washington State Patrol in Marysville, Wash.

Bonnie J. Jones, BS 1976, lives and work in Palm Springs, Calif.

Bill Lane, BA 1977, MS Biology 1980, is a sales engineer in technical sales and marketing for Roper Scientific, Photometrics/Princeton Instrument Division. "Roper Scientific makes image-intensified charged coupled devices (a fancy way of saying scientific camera) and spectrometers. I travel frequently and enjoy seeing CSULB alumni in the labs and offices I visit."



DR. CLAUDE LASSIGNE.

Dr. Claude Lassigne, BS 1970, is Professor of Chemistry and department chair at Kwantlen University College in Surrey, British Columbia

Kurt MacLean, BA 1978, an attorney with Oppenheimer, Wolff & Donnelly in Irvine, is recovering from a serious motorcycle accident. "My recovery is going amazingly

well. I have been in a transitional rehab program...and have been working a restricted schedule from my home."

Dr. Marianne Marsi, BS 1978, is Technical Service & Development Manager for DuPont's Fluoropolymers Division in Wilmington, Del. She and husband, Dr. Lewis Manning, also a chemist with DuPont, live with their two children in West Chester, Penn. "Teresa (11) has decided she wants to be a mechanical engineer, and Greg (7) is busy taking things apart and putting them back together. Not quite chemistry, but we're getting closer."

Patrick McKay, MS 1979, works in the Recovery Sciences (Process Development) Department at Genentech, Inc. in South San Francisco. He also teaches evening chemistry classes at Skyline College in San Bruno. He and Mary have two children, Brian (14) and Allison (10). Pat reports that he hired **Y. Julie Fukami Nagafuji (BS Biochem 1998)** to join his lab as a scientist-in-training. "We continue to work on a variety of projects, focussing most recently on antibodies."

Dr. Anthony McLaughlin, BS 1979, has opened new dental offices in Redmond, Wash.

Dr. Kitty (Taylor) McVey, BS 1977, Business Admin 1983, is a clinical pharmacist with Mercy Health Systems of Sacramento. She received her PharmD from U of the Pacific in 1994. "My husband, John, and I have two children, Sarah (9) and Megan (5).

Larry Neisess, MS 1977, is a research chemist with the Los Angeles County Sanitation Districts in Whittier, Calif.

Thomas Payne, MS Biochemistry 1971, has retired from Los Angeles Trade Tech. He was the 1996 Honored Alumnus, College of Science and Mathematics at California Polytechnic University, San Luis Obispo, Calif., where he received his BS degree in 1958.

Randall E. Smith, BA 1978, works as a non-metallics materials and process engineer with Boeing in Huntington Beach. He is looking forward to retirement and a possible second career in teaching.

Dr. Rik Tuinstra, BS 1974, is Technical Leader at Dow Chemical Co.'s Central Research Division in Midland, Mich. "I've been at Dow in Midland for over 21 years and still enjoy doing research. I've recently been investigating catalytic oxidation chemistry and am involved in Dow's corporate effort in non-Ag/no-Pharma combinatorial chemistry. My wife, Jan, and the twins, Madaline and Tara (23), are all doing fine. Jan works as a secretary at Dow. Tara is a first-year graduate student in physical therapy at Grand Valley State U near Grand Rapids, Mich. Madaline is a senior at the U of Wisconsin, Madison, and will receive a teaching certificate in Earth Science and Astronomy."

1980-1984

Dr. Victor V. Cachia, BA 1980, is a podiatric surgeon with offices in Mission Viejo and Irvine and is President of the Orange Country Podiatric Medical Association. He lives in San Juan Capistrano with his wife, Jo Lynn, and daughters, Alexandra and Victoria. He enjoys surfing and traveling as a volunteer to the third-world to do podiatric surgery on children with congenital deformities.

Dr. Lori Jo Childres, BA 1984, now lives in Redding, Calif., and is married to **David Sydow, MD (BA 1984, Biology).** Lori is a self-employed dentist in Redding. She and David have two children, Kaitlin (6) and Emily (1).

Eric Derbyshire, BA 1984, is a business group leader for Watlow Controls in Winona, Minn. He and his wife, Gretchen, have a son, Luke (1 1/2).

Brian Dubow, BS 1980, is Program Manager for F-22 Advanced Tactical Fighter and JSF Joint Strike Fighter Programs at GKN Aerospace in El Cajon. He has been married 15 years and has a son (5). Brian is an Associate Fellow, American Institute of Aeronautics and Astronautics.

Dwight Gergens, BS 1984, is Principal Business Analyst at Ablestik Laboratories. He and wife, Bridet, announced the birth of a son, Austin Michael, born on February 2, 1999.

Dr. Tom Harmon, BA 1981. "I'm with the most progressive general surgery group in Tucson, and we run our own 'show', as much as the HMOs will let us! We now have three children; the youngest of the two boys is two and our daughter Casey is five. Beth is busy with the kids and competitive tennis.

Dr. Gary Heximer, BA 1980, has been a chiropractor in Huntington Beach at Beach Chiropractic Sports Center since 1980.

Dr. Tina Kishishita, BA 1980, is a pharmacist with Kaiser.



Dr. V. GREG KRALL.

Dr. V. Greg Krall, Chemistry Minor 1982, is a self-employed podiatrist in Lomita, Calif.

Dr. Larry V. Manes, BA 1981, is Senior Manager, Contract Manufacturing at Gilead Sciences in Foster City, Calif.

Scott Marsi, BA 1980, is National Sales Manager for the Foods Division of Rhodia Corp. and lives in West Windsor, NJ, with wife, Linda, and daughters, Aiko (13) and Kimiko (8).

Paul Mosher, BS 1984, is President of Ceramic Solutions, Inc. and lives in Rolling Hills Estates, Calif.

John E. Neff II, BA 1980, is Medical Research Associate for Merck Research Laboratories. "I am currently working from a home-based office, monitoring clinical trials for Merck. With two young daughters, working from a home-based office provides a flexible schedule to balance my work and family."

Dr. Michael Nussbaum, BA 1973, is an anesthesiologist in San Marcos, Calif.

Leonard Pulig, BA 1983, is Director, Sales and Marketing, for Bio-Rad Laboratories in Hercules, Calif. "My wife is a CSULB alumna with a degree in medical microbiology. I manage a sales organization with over 225 people; we sell scientific research supplies and equipment to scientists; e.g. biochemists and molecular biologists."

Dr. Theresa Rohr-Kirchgraber, BA 1984, is Assistant Professor of Medicine and Associate Program Director of Internal Medicine at University Hospital/SUNY-HSC at Syracuse, NY. "What always struck me about CSULB was that the teachers were there because of an obvious love for teaching. You were all not only available but supportive and encouraging."

Dr. Deborah Schwyter, BS Biochem 1983, is a chemistry teacher at Santa Monica College.

Dr. Clayton R. Shepard, BA 1981, practices dentistry with Shepard Family Dentistry in Coon Rapids, Minn. and lives in Anoka, Minn.

Cheryl Shimazu, MS 1980, is Professor of Chemistry at Cerritos College and was the Local Industrial Sponsors Coordinator for the 148th Two-Year College Chemistry Conference, held at East Los Angeles College in March 1999.

1985-1989

Dr. Sean Avera, Chemistry Minor 1987, is Director, Graduate Periodontics and Center for Implant Dentistry, at the OHSU School of Dentistry in Portland, Ore. "Cathy and I have two children, Dan (11) and Erika (9)."

Dr. Andrea Baxter, BS Biochem 1988, has been appointed as a General Medical Officer at the Great Lakes Naval Station in Illinois. She and husband, Derek Case, live in Kenosha, Wis. She will be applying for either an Emergency Medicine or Family Practice residency.

Dr. Susan Boggs, BS 1988, is currently a postdoc at the Cleveland Clinic Foundation, working on the mechanism of nitric oxide synthase and preparing a manuscript, "A cognitive approach to writing chemistry lab reports."

Dr. Guy Breitenbucher, BS 1987, MS 1990, was a seminar speaker in the department's seminar series during the spring semester of 1999, speaking on the subject, "Development of Heterocyclic Combinatorial Libraries for Drug Discovery". Guy is employed by San Francisco-based Arris Pharmaceutical

Dr. Hugh Cecil, Chemistry Minor 1988, BS Biology. "I've taken a position at the two major hospitals in Flathead Valley in Northwest Montana and am pretty much the only interventional and vascular radiologist in this part of the state. I've joined a group of other radiologists." Denise teaches at the local community college. Julia is three. Hugh and Denise added a second daughter to their family, Anna, born on January 10, 1999.

Kathleen Coffman, BA 1988, a registered nurse, is a student in the Physician Assistant Program of the Western University of Health Sciences. She is married, lives in Westminster, Calif., and has two children, 11 and 9.

Dr. Kerry DeGroot, BS Biochem 1988, Assistant Professor in the Department of Anesthesiology at the Georgetown University Medical School in Washington, DC, and his wife, Dr. Jacqueline DeGroot, pathologist for the Armed Forces Institute of Pathology, announced the birth of a son, Christian Edward, on December 6, 1998.

Benny Dickens, MS Biochem 1989, is President and Chief Chemist of Tressa Chemical Inc./Black Label Sportswear Inc. in Costa Mesa. "I started Black Label Sportswear in 1998 to apply process designs developed by Tressa. Currently I am pursuing a patent application for a unique textile coating."

Dr. Raymond Gritton, BA 1987, and Dr. Liva Yates-Gritton announced two additions to their family: the adoption of Brooks S. Gritton (7) and the birth of Jasmine Lee Gritton on August 31, 1998. Both parents are physicians living in the Los Angeles area.

Darin Hayton, BS 1989, MA History 1996. "After testing a variety of disciplines (chemistry and history), I decided to combine them and am finishing my PhD work in the History and Philosophy of Science at Notre Dame. I will be spending next year in Vienna on a Fulbright Fellowship, studying 15th-century science."

Dr. John Thomas (Tom) Jones, BA 1986, is Director of Mammography and Cross-Sectional Imaging in Portage, Mich. "After fellowship training in MRI/CT/Ultrasound at Michael Reese Hospital in Chicago (1994-95), I have been practicing outpatient diagnostic radiology in Kalamazoo/Portage, Mich. for the past four years. I have helped develop the first American College of Radiology accredited ultrasound practice in Southwest Michigan. Christine Chan, an

electrical engineer, and I have been married for nine years."



DR. AND MRS. TIM KNEEBONE.

Dr. Tim Kneebone, Chemistry Minor 1988, is a podiatrist in Burbank. "I am working in a multi-specialty group and enjoying it very much. I treat the very young to the very old and am involved in teaching residents at the hospital. I recently started an office clerkship for fourth-year podiatry students. Rosalie, a recovery room RN for Kaiser-Sunset, and I were married September 12, 1998 and moved to Simi Valley."

Brett S. Kislin, MS 1987, is completing his PhD in computational chemistry at UC Santa Cruz, working with Professor Todd Wipke on the INVENTION project for drug discovery by computer.

Sara (Milloy) Laramie, BS Biochem 1989, works in the Long Beach Police Department Crime Laboratory.

Dr. Larry Matsumoto, BS 1987, a neonatologist at UC San Diego Medical School, and his wife, Susan, announced the birth of their third child, Joseph Craig, on May 26, 1999.

Melanie Milner, BA 1987, is a water quality inspector for the Los Angeles Department of Water and Power where she has worked for the past 10 years.

Thomas Murphy, BS 1987, is Chief Chemist with Coatings Resource Corporation in Huntington Beach. "Coatings Resource Corp. specializes in industrial coatings for plastics such as toys, television cabinets, cellular phones, etc. My wife, Naomi, and I had our second child, Gregory Thomas, born August 7, 1998. Our daughter, Evelyn Marie, is three."

Rita Reggio, MS Biochem 1986, is a self-employed financial services advisor and lives in Long Beach.

Elizabeth (Siegfried) Ronnau, BA 1988, BS Accounting 1998, is an auditor with Deloitte & Touche, LLP in Los Angeles. "My husband, Andrew, and I are proud to announce the birth of our first child, John Matthias, on February 5, 1998. My new career starts in September as an auditor. I've already been told that my chemistry background will be a big help."

Dr. Joyce Setsuda, MS 1987, is a postdoctoral fellow at the National Cancer Institute, NIH, in Bethesda, Md.

Leo Stemler, BS 1988, is the Exhibition Chair for the October 1999 Western Regional Meeting of the ACS to be held at the Ontario Convention Center October 6-8. "I work at RPS Industries in Santa Fe Springs. It is a small manufacturers' representative for the process control industry."

Robin Y. Underwood, BA 1986, is Senior Environmental Engineer and Program Leader at Hughes Electronics in El Segundo. She was promoted to Lieutenant Commander, United States Naval Reserves. "I'm in the process of seeking a second master's degree in business administration."

Karen Watson-Webber, BS 1989, works for Pyramid Labs in Costa Mesa

1990-1994

Dr. Miki Aurang, BS Biochem 1990, practices internal medicine with Kaiser Permanente in Riverside. Her husband, **Rick Csintalan, Student 1990 (BS Physical Therapy)**, is now completing his third year of orthopedic surgery at the UC Irvine Medical Center.

Ed Barley, BS Biochem, is a forensic chemist and Senior Criminalist with the Los Angeles County Sheriff's Department and specializes in investigating clandestine drug labs. He and Shauna have been married for 4 1/2 years and have a year-old son, Jarod. Ed also owns a franchise-based business.

Dr. Keith Bogdon, BS 1993, MS 1996, graduated with his Juris Doctor degree in May, 1999 from the McGeorge School of Law, U of the Pacific. He is scheduled sit for the California Bar Examination and the Patent Bar Examination. His wife, **Daxa Kurani Bogdon (BS 1996)**, is a chemist in Napa.

Dr. Jane Chong, BA 1993. "I graduated with a PharmD Degree from the USC School of Pharmacy in May, 1998. I have completed my first year of a two-year postdoctoral research fellowship at Rutgers U. I am a part-time lecturer at the College of Pharmacy and the Medical and Dental School of New Jersey. Most of my time is spent at Novartis Pharmaceutical Corp. in the Clinical Research-Oncology Department. I am currently involved in two trials as the Clinical Trial Leader researching and developing an antiangiogenesis compound."

Dr. Don Crow, BS Biochem 1992, and his wife, Dr. Michelle Crow, have purchased a dental practice in Everett, WA.

Robert Curiale, BS 1994, is an environmental consulting regulatory specialist with International Technology Corp. in Las Vegas, Nev. "I am in my

fourth year with IT, a global environmental consulting and remediation firm. Last year I became a Certified Environmental Manager in the State of Nevada. I had the opportunity to supervise the chemistry portion of a two-million dollar DOE-funded experiment at the Nevada Nuclear Test Site. It involved drilling a radial series of three deep wells adjacent to a nuclear test cavity. The experiment was a huge success, so successful that my colleagues and I received the IT Corp. National Quality Award."

Kristina Gaus, BS Biochem 1994, is a quality control specialist with IDEC Pharmaceuticals in San Diego. "I have been working for the last three years at IDEC and test all the products we manufacture, both commercial and clinical. IDEC focusses on the commercialization and development of targeted therapies for the treatment of cancer and autoimmune diseases. We have one product on the market called Rituxan which provides monoclonal antibody therapy for the treatment of non-Hodgkins B-cell lymphoma."

Dr. Marcel Goldberg, BS Biochem 1990, is a family physician with Las Islas Family Medical Group in Oxnard, Calif. He and wife, Judy, have two sons, Tommy (3 1/2) and Nicholas (1).

Dr. Alexander Greer, MS 1993, has been appointed Assistant Professor in the Department of Chemistry at Brooklyn College of the City University of New York beginning the fall semester of 1999. He was formerly a postdoctoral associate with Dr. Christopher Foote at UCLA.

Dr. Sharon McKelvey Hansel, BS Biochem 1991, is a family practice physician with HealthOne in Denver, Colo.

Clyde C. Jones, BS Biochem 1991, has recently moved from Cambridge, Mass. to Baltimore, Md, where he is a consultant with Tavatec. He consults primarily with pharmacy and chemical R&D companies.

Mitra Basiri Kashanchi, MS 1991, is a Process Technologist with Chevron Products in El Segundo, Calif. "This year I was transferred to crude unit engineering and hydrogen plant production."

Jeff Masse, BS 1990, MS 1992, works with Pfizer Central Research in Groton, Conn., in the Liquids Group of the pharmaceutical R&D department.

Mark Miles, BS Biochem 1992, is a chemist with Polypeptides Laboratories in Torrance, Calif. The company employs 14 chemists who are involved in polypeptide synthesis.

Dr. David Porzio, BS Biochemistry 1990, is in his second year as Cardiology Fellow at the U of Massachusetts Medical Center. "I have two more years to go! Pam and I will be moving back to Long Beach in the summer of 2001."

Dr. Jon D. Rainier, MS 1990, Assistant Professor of Chemistry at the U of Arizona, Tucson, presented a seminar for faculty and students of the Department of Chemistry & Biochemistry at CSULB in October 1998 entitled, "Synthetic efforts to bioactive natural products".

Dr. Robert Rzaa, BS 1993, completed his PhD in organic chemistry in 1998 and is now a postdoctoral student with Professor Gary Molander at the U of Pennsylvania. "My research entails the synthesis of early lanthanide Lewis acids as catalysts for reactions such as the Diels-Alder, etc. If these catalysts work, then I will try to design a chiral catalyst for asymmetric synthesis."

Stuart Schesnack, Student 1990, has been accepted to Ross Medical College where he will begin classes this fall.

Robert Stevens, BS Biochem 1993, will enter Lewis and Clark College of Law in Portland, Ore. this fall. He is particularly interested in environmental law.

Kiana Tabibzadeh, BA 1990, MS 1994, is Professor of Chemistry and Chair for the School of Physical Sciences and Technologies at Irvine Valley College.

Davide Tenaglia, BS 1994, MS 1996, is a chemist in the R&D lab at Geneva Corp. in Boulder, Colo. He and Julie live in Broomfield.

Lily Vuong, BA 1990, is Senior Chemist with the



DRS. DON AND MICHELLE CROW.

Orange County Water District in Fountain Valley. She reports that **Jay Kim (BA 1996)** and **Janice Cheon (undergraduate)** are also working in her laboratory.

Gregory Whitaker, BS Biochem 1990, DPM, is a third-year student at Nova Southeastern U College of Osteopathic Medicine in Ft. Lauderdale, Fla.

Jeffrey M. Whitaker, BS Biochem 1993 is a podiatric medical student, class of 2001, at the California College of Podiatric Medicine in San Francisco, Calif. He is already the author of four journal articles and six scientific presentations and has been the recipient of two summer grants and two President's Scholarships.

Charles Ming Yuen, MS 1990, works for Nextar in San Dimas and is Program Chair for the Orange County Section of the ACS.

1995-1999

Marcy Abbett, BS Chem/Biochem 1998, has completed her first year of studies in the PharmD program at Western U of Health Sciences.

Ihab Abumuhor, BS Biochem/BS Micro 1997, is a medical technologist at Cedars-Sinai Medical Center in Los Angeles.

Girmachew Ayele, BA 1997, is a production chemist at Diagnostic Products Corp. in Los Angeles. "I work as a production chemist, and my department makes all of the RIA diagnostic products. Once in a while I grab my chemistry book just to refresh or expand my knowledge."

Michael Barrett, BS Biochem 1996, is Territory Representative for pharmaceutical and biological sales for Wyeth Ayerst Laboratories.

Daksha Kurani Bogdon, BS 1996, works for a pharmaceutical company in Napa which is an associate of Merck (Germany). "I am responsible for supervising a formulation and then testing the product specifications."

Daniel Booker, BS 1997, works for Applied Power Concepts in Orange, Calif. as a chemist.

Martha De La Rosa, MS 1997, is a third-year PhD student of Dr. Michael Jung in the Department of Chemistry & Biochemistry at UCLA.

Thang Dinh, BS 1995, is employed as a synthetic organic chemist with IDUN Pharmaceutical in La Jolla. He works with two programs: Tissue Organ Protection Research and Central Nervous System Research.

Daniel Farney, BS Biochem 1996, is a pharmacy student at the U of Maryland, Baltimore. "I am currently in my third year of the PharmD program. I work as a pharmacy intern at Johns Hopkins Bayview Medical Center and am also finishing up a rotation at Walter Reed Army Medical Center in Washington, DC."

Kyle Findly, BA 1998, began dental school at Boston University this fall.

Dana Marie Gilchrist, MS Biochem 1995, is a graduate student in physical anthropology at UC Irvine. She and Scott were married this summer. Her doctoral thesis involves brain imaging of autistic patients.

Dana Anne Haley, BS Biochemistry 1995, is a graduate student in the Department of Molecular & Medical Biology at UCLA. "I am preparing my third manuscript for publication."

Michael Hall, BA 1995, is a training supervisor for the Pacific Maritime Association in the ports of Los Angeles and Long Beach and lives in Belmont Shores. "I'm also continuing to work with the U. S. Coast Guard, inspecting foreign flag cargo vessels."

Jason Haughton, BS Biochem 1995, works for American Training Resources, a small company which produces and distributes employee training videos. "The topics range from OSHA-type safety to sexual harassment. I am a sales representative."

Kenny Huang, MS 1995, is a PhD student in chemistry at UC Santa

Barbara.

Thach Son Ho, BS 1995, MS 1997, is a third-year PhD student at UCLA studying with Professor Yves Rubin, investigating tetracyanoquinone/tetrathiofulvene complexes.

Gail Jones, BS Biochem 1998, has moved to Roseville, Calif. "Mark is going to stay with his present employer, working from home and travelling. Talon starts second grade this summer and Mason is 3." Gail was formerly employed with the VA Hospital in Long Beach where she was involved in thyroid research.

Jennifer Lee, BS Biochem 1995, is technical sales representative with CRODA Inc. in Fullerton.

George Liarakos, BS Biochem 1996, is a master's student in biochemistry at CSULB, working with Dr. Douglas McAbee on characterization and identification of the iron-dependent lactoferrin receptor in liver cells (hepatocytes) and will be completing his thesis this year.

Phillip D. Marchis, BS 1998, is Staff Research Associate II at UCLA, Department of Molecular and Medical Pharmacology. "I work at UCLA's Biomedical Cyclotron Facility where we synthesize short-lived radiochemical imaging molecules for biological systems. The molecules are used in Positron Emission Tomography scans for clinical and research applications."

Julie Fukami Nagafuji, BS Biochem 1998, is now working as a chemist with Genentech in South San Francisco.

Bao T. V. Nguyen, Student 1997, was accepted to UCLA Dental School before receiving his BS degree in Biochemistry, and is beginning his third year of dental school this fall.

Naomi-Trang Nguyen, BS Biochem 1998, is working for Neocrin, a diabetes research company, and studying for the MCAT.

Jamie Pham, BS Biochem 1997, works for Vita Tech International in Tustin, Calif.

Sandra Quon, BS 1996, is a chemist with Stason Pharmaceuticals, Inc. in Irvine, Calif. "I work in the Quality Control Department where I do various tests on their drug products. Stason is a five-year-old company with about 30 employees."

Gil Ramirez, BA 1997, works as a metals chemist with Montgomery Watson Laboratories. "I am

currently involved in ultra-low mercury detection for environmental purposes. I plan to begin working on my master's degree this fall."

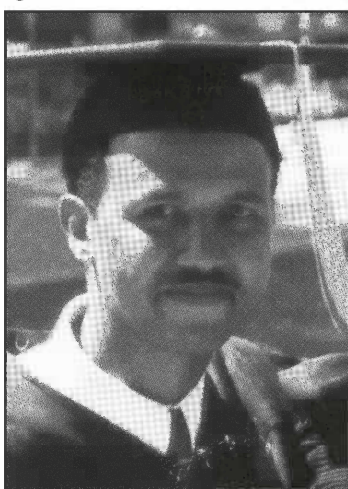
Nancy Shenouda, BS Biochem, is a physician assistant student and lives in Torrance.

Jeff Suri, BS 1998, currently working at Applied Power Concepts in Orange, will begin the PhD program in chemistry at UC Santa Cruz this fall.

Ngoc-Anh Vuong, BA 1995, is a quality assurance chemist with D & F Industries in Anaheim. They manufacture vitamins and other nutritional supplements; one principal customer is Herbalife.

Neill White, BS 1995, is a research programmer at the Scripps Research Institute in La Jolla, Calif. "I am working part-time at the Scripps Research Institute, and just finished my master's thesis in applied mathematics at San Diego State U. The title of my thesis was 'Biomer: A Java-Based Biomolecular Modeling Package'. It can be viewed at <scripps.edu/~nwhite/biomer>."

Mohammad-Reza Zarrinegar, BS Biochem 1996, is attending New York University School of Dentistry in New York City.



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