

CHEMISTRY

BIOCHEMISTRY

For past and present students and friends of Chemistry and Biochemistry at California State University, Long Beach • Fall 1995 • Number 20

DR. JAMES JENSEN, 1939-1995

The College of Natural Sciences and Mathematics has lost its excellent leader, Dr. James L. Jensen, who passed away on Aug. 21 after an illness of approximately three months. Dr. Jensen, after serving as Acting Dean of the College of Natural Sciences and Mathematics for one and one-half years, was appointed permanently as Dean on Jan. 1 of this year and led the college creatively and with great energy and distinction.

He began his academic career at Westmont College in Santa Barbara, where he received numerous scholarships in recognition of his academic promise. Following graduation he pursued graduate studies, receiving the MS in Chemistry at UC Santa Barbara and the PhD at the U of Washington.

Dr. Jensen joined the Department of Chemistry in 1968 and was visiting professor at Brandeis U and UC Irvine during two sabbaticals. As a faculty member he handled large freshmen chemistry sections as well as specialized graduate courses with equal enthusiasm and competence. His personalized teaching style encouraged students to realize and fulfill their highest potential. His graduate students were a special part of his academic family and received rigorous training, professional guidance and placement. He received numerous honors, among them CSULB Distinguished Scholar, and a listing in



Dr. James L. Jensen

American Men and Women in Science.

During his career he published 28 papers in leading journals and presented 23 papers at conferences since 1985. Despite the time-consuming demands of the deanship, he maintained an active and productive research program. His internationally respected research was continuously funded by a number of granting agencies such as the National Science Foundation, the National Institutes of Health, and the Petroleum Research Fund.

His administrative career began with his appointment as Associate Dean in 1983. Through that office he was able to obtain considerable grant support for programs he conceived and implemented, among them the Minority Biomedical Research Support program (NIH) and a substantial grant from the Howard Hughes

Continued on page twenty-two



Dr. Henry Po, University
Outstanding Professor, 1995

CSULB HONORS DR. HENRY PO

Dr. Henry Po, a member of the Department of Chemistry and Biochemistry since 1968, was named University Outstanding Professor for 1995. He was cited as setting a standard of excellence for the faculty in the areas of instruction, curriculum innovation, rigor of course content, and in offering challenges to his students to achieve their highest potential. His record of scholarship includes 36 published papers, several published laboratory manuals and reports, and 38 papers presented at professional meetings. He has seen 27 master's students to the completion of their theses and has served as the graduate coordinator for the department for many years.

About his teaching, Dr. Po once quipped, "You say to your students, 'get in the canoe and start paddling,' and each student paddles the canoe differently. You guide them with your insight, and

once they get enough experience, they take over. It feels great when they accomplish that."

Dr. Po received a BS in Chemical Engineering from Mapua Institute of Technology in the Philippines, the MS in Chemical Engineering from the U of Wisconsin, Madison, and the PhD in Chemistry from UC Davis.

Many of Dr. Po's students provided letters of support for his nomination. Some excerpts tell of his influence with his students:

"He not only knows his material well, but transmits the information in a stimulating and extremely effective manner. The students are not only left with the technical information, but an understanding of its applications, capabilities and limitations"... Alan Galuska, PhD, Senior Staff Chemist, Exxon Chemical Co., Baytown, Texas. (BS 1980, MS 1982).

Continued on page three

CHEMISTRY BIOCHEMISTRY

CHAIR'S REPORT

In many ways this has been a very good year for our department. Our degree programs in Chemistry and Biochemistry are attracting increasing numbers of students, our graduates are finding employment and placement in graduate and professional schools, the master's programs show signs of revitalization, we continue to improve our curriculum, private support of the department is the *highest* ever, and many honors have come to our faculty and students. Some of these positive developments are detailed elsewhere in this *Newsletter*.

On the other hand, since 1989 we have lost six faculty from the tenure track and have not been able to replace any of the vacated positions. This has placed a much greater burden on the remaining faculty. Our student/faculty ratio has increased significantly, and research-active faculty, especially in biochemistry, have large numbers of students to supervise. We have lost a Stockroom position, and this has resulted in reduced services.

Long-range plans are to convert Peterson Hall 1 to a classroom and office building, renovate Peterson Hall 2 and 3, and build a new extension to Peterson Hall 3, but funding for renovation and construction is not available yet, so plans are on hold. Meanwhile, we are having to cope with an overcrowded and deteriorating facility which is not designed for modern science. President Maxson has assured us that the proposed science construction and renovation projects have the highest priority.

Some statistical information:

• **Graduating students.** A summary of this year's graduating class of 43 is given:

BA Chemistry	9	BS Biochemistry	19
BS Chemistry	12	MS Chemistry	3

• **Majors.** The department has a total of 296 majors (138 females and 158 males), the highest ever, distributed as follows:

BA Chemistry	37	MS Biochemistry	26
BS Chemistry	69	MS Chemistry	25
BS Biochemistry	139		

• **Alumni.** Through 1995 our department has 1,027 alumni, 870 bachelor's and 157 master's graduates.

• **Fundraising.** The department raised \$131,879 from private sources during the 1994-95 fiscal year. This amounts to \$47,323 in cash and \$84,556 in in-kind gifts of equipment, supplies and services. When it is realized that we received only \$16,500 from the state for operating expenses (approximately \$4 for each enrolled student), it is readily seen that our programs are heavily dependent on gifts from alumni such as yourself, and businesses and industry. We have a wonderful support group among our alumni—by far the best in the university! Through our Advisory Council, we have a network of mutual support. If you are contacted by Phonathon callers, and decide to give a gift to the university, we would appreciate your stating that your gift is for the Department of Chemistry and Biochemistry, unless you wish otherwise.

Thanks to all of you for your letters, gifts, visits, and suggestions. When you can, please come by the department for a visit.

Sincerely,
Ken Marsi, Chair

DR. DOROTHY "DOT" GOLDISH WINS ACADEMIC LEADERSHIP AWARD

On May 30 at the Alumni Awards Banquet, held in the Long Beach Hilton Hotel, Dr. Dorothy Goldish, or "Dot" as she prefers to be called, was presented the Nicholas Perkins Hardeman Academic Leadership Award for her extraordinary service over the years to the university. As one faculty member said, "It seems that whenever a leadership emergency exists, Dot Goldish is called in to clarify issues and guide imperiled programs."

Quoting from the award citation, "She has been involved in the development, drafting or revision of nearly all academic policies since 1971. As Vice Chair of the Financial Affairs Council, then as Chair of the Academic Senate, she has been a strong voice on the Resource Planning Process Task Force, pressing the needs of the instructional program and the focus on serving students. Goldish herself has said that sometimes getting things done requires nothing more



Dr. Dorothy Goldish, Hardeman Awardee, and President Robert Maxson

In addition to her 37 years of service as a professor in the Department of Chemistry and Biochemistry, she was Acting Administrator in the Department of French/Italian; Acting Associate Dean, Educational Policy, School of Letters and Science; Acting Coordinator, Educational Policy, School of Business Administration; Acting Dean of the School of Natural Sciences; and for the past three years, Chair of the Academic Senate.

than suggesting a solution to the right person. But more often it means getting the right people to work on the issue, perhaps assisting a group to accomplish its task by defining that task clearly or by providing helpful materials or by suggesting just the right phrasing for documents."

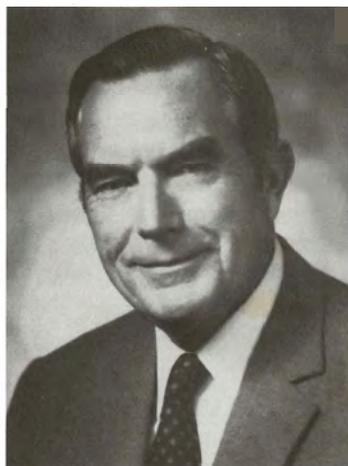
DR. NELSON J. LEONARD: 16TH UNOCAL LECTURER

by Ana R. Perez and Thomas Gillespie, Undergraduate Chemistry Students

Dr. Nelson J. Leonard, Reynold C. Fuson Professor Emeritus, University of Illinois at Urbana, and presently Faculty Associate in Chemistry at California Institute of Technology, was this year's UNOCAL Lecturer on March 29. Dr. Leonard, widely known for his work in heterocyclic chemistry and more recently for his research in bioorganic chemistry, spent a day in the department, talking with faculty and students, and presenting two lectures.

In his first entertaining but informative lecture, "What Comes First: The Problem or the Solution?" Dr. Leonard spoke of the scientific process in a refreshing light. Sometimes students think of scientists as infallible bastions of reason and truth. Dr. Leonard pointed out from his experience that the scientific process is not always as pure as the scientist's intentions. Scientists seek the truth, but when they find it, he said, they don't always "tell it like it is"; *i.e.*, they put their own slant on the outcome.

Dr. Leonard seems to prefer truly telling it like it is. If your outcome arose from an unexpected accident, mistake, or wrong turn, then let the world know. Not only does it demystify the world of science, but it can also aid in both understanding and replicating the results. The prime example of this is Roger Adams' discovery of the use of platinum oxide as a catalyst for hydrogenation. A student working with him broke the container of platinum, spilling the contents everywhere.



Dr. Nelson J. Leonard, UNOCAL Lecturer

Adams told him to scrape up all the remnants, treat them with H_2SO_4 and HNO_3 , and finally fuse the residue with $NaNO_3$. During this last step, a brown powder formed— PtO_2 —which proved to be an excellent hydrogenation catalyst. When reporting his findings, Adams merely stated the steps in the synthesis, not the fact that they were led to the discovery by an accidental spill. Dr. Leonard did mention one instance in which the researcher did credit his solution to the unexpected results—H. C. Brown's discovery of hydroboration.

Thus, solutions in science are often not acquired systematically. Much of the time, observations are made first; then a problem is formulated so that it is explained by the observation. In Dr. Leonard's own lab, many experimental results evolved from an unexpected turn of events, like the "facile" synthesis of pyrrolizidines, which came unexpectedly from a graduate student's mixing many different compounds to see what he could come up

with. Dr. Leonard also gave many examples of serendipity, or accidental discoveries, like the discoveries of Teflon, nylon, *cis*-platinum, AZT, phthalocyanin, and cyclic AMP.

In his second lecture, he discussed the synthesis of compounds that mimicked the A-U (in RNA) and A-T (in DNA) base pairs, but with covalent linkages which prevented the base pairs from coming apart. Dr. Leonard felt that if one could incorporate these A-T "cross-sections" into a DNA molecule, the DNA wouldn't replicate. Then we would have a way of stopping DNA and RNA synthesis, both of which begin with the dissociation of base pairs during the unwinding of the DNA and RNA molecules.

Dr. Leonard described attacking the problem as a series of many steps from the initial analysis of the complicated structure that they were trying to make (a planar structure with a 10-membered bicyclic ring containing six asymmetric centers), planning a synthetic strategy by reverse synthesis, the oxidation leading to ring closure, protection of the intermediate and subsequent deprotection, and the NMR, MS, and X-ray analyses of various stages of the process.

He then spoke about the use of spatial and fluorescent probes to see how ATP binds to various enzymes and to gain information about the mechanism of hydrolysis of ATP to ADP and phosphate. He also discussed applications of etheno-bridged nucleotides as structural probes of RNA and DNA and studies of the mechanisms of carcinogenesis and enzyme activity.

PO HONORED

continued from page one

"The students in Dr. Po's group somehow seemed more motivated and excited than in other groups. Someone was always working in his lab, even when the building was otherwise empty. I was impressed that he cared as much about the experience it provided students as the results of the research. The decision to join his group was an easy one for me to make. As a university professor, I am now all the more impressed by the unique professional and personal qualities of Dr. Po"...*David Morano, Associate Professor, Mankato State University, Minnesota. (MS 1979).*

"I started college at a fairly young age (15) and would not have reached my goal of becoming a physician without his thoughtful guidance and advice"...*Richard W. Lee, MD, FAACC. (BA 1977).*

"He was amongst one of my favorite professors. He was enthusiastic about research. Over the years, even with his heavy teaching load and relatively limited support, he was still able to maintain an active research program and publish continuously in leading chemistry journals"...*Rick W. K. Wong, PhD, Senior Lecturer, Hong Kong Baptist College. (BS 1974).*

"I am hopeful that the committee will select Dr. Po as the University Outstanding Professor, although in my mind and heart he already has been the most outstanding professor in all my educational years"...*Donna Nagata, DDS, Senior Dental Administrative Advisor, DentiCare of California. (Student, 1983).*

**NOBEL LAUREATE
LECTURER:
DR. KARY B. MULLIS**

by Caroline Klaess and Rutilio Fratti, Undergraduate Students

Dr. Kary B. Mullis, who received the Nobel Prize in Chemistry in 1993 for the development of the polymerase chain reaction (PCR), was the 20th Annual Nobel Lecturer. One of the monumental scientific techniques of the 20th Century, PCR is a method of amplifying DNA and has multiple applications for medicine, genetics and biotechnology, and criminalistics. He delivered two lectures during his two-day visit on April 5 and 6.

His first lecture dealt with science and the law. At first glance, science and law would seem to have nothing in common, but according to Dr. Mullis they are more alike than not. One thing they have in common above all else is that they are both in search of the ultimate truth. How they go about obtaining the truth is where they differ.

In society we look for the truth in law, but we do so according to a strict set of rules. There are normally two camps in opposition that argue their cases until the "truth" is found. The rules of law permit them to overlook some facts or judge some facts according to their personal beliefs. Scientists are also in search of the truth, but they must conduct their search in a distinctly different way. They are not supposed to form opinions about the truth they are searching for; ideally, they are supposed to make arguments based only on factual



Dr. Kary Mullis, 1993 Nobel Laureate in Chemistry

information. In science we never come to a final conclusion, because accepted truths are constantly being challenged by other scientists with newly gathered, more *truthful* facts.

Changing a scientific law takes essentially one person to declare it changed. This is the culmination of a tedious process that requires the gathering of large amounts of facts. If a law of society is broken, it is considered a bad thing. In science it is not possible to break a law, only to disprove a hypothesis. In fact, this is something that science depends on.

Science and law have met in the courtroom where complicated scientific evidence must be explained to jurors. An honest scientist will testify by giving his best considered professional opinion of the data at hand, but lawyers want to present the evidence in a way that favors their side of the case. The hiring of highly paid expert witnesses testifying for the defense or for the prosecution has the potential for having a detrimental effect on the public's perception of the nature of scientific investigation and the ethics of individual scientists.

In his second lecture on HIV and AIDS, Dr. Mullis stated that he belongs to a small but slowly growing camp of scientists who are not convinced that HIV is the causative agent of AIDS. According to Dr. Mullis, the universal acceptance of HIV as the cause of AIDS is premature. One reason for Dr. Mullis' opinion is the lack of an animal model for AIDS. In all other infectious diseases, the causative agent must be isolated from a specimen displaying the signs of the disease. Once isolated, the organism must be introduced into a healthy specimen, and the organism must then cause the same signs that were seen in the first specimen. This kind of testing has never been successfully performed with HIV.

Dr. Mullis presented an alternative hypothesis on why HIV is found in most AIDS patients. In Dr. Mullis' model, if an immune cell, which is infected with one of any number of retroviruses, is stimulated to multiply as part of an immune response, this will allow the replication of the integrated retrovirus along with the DNA of the immune cell. The virus can then be stimulated into producing progeny. The new viruses can then escape the original host cell and infect other cells while causing an immune response. Infection with a new retrovirus can result in a repetition of this process. Eventually, the host may have a large collection of antibodies to many kinds of retroviruses, any of which could be the true cause of AIDS, including HIV.

**BIOCHEMISTS
PUBLISH LAB MANUAL**

by Jeffrey Cohlberg

Drs. Roger Acey, Jeffrey Cohlberg, and Margaret Merryfield authored *Research Techniques in Biochemistry and Molecular Biology*, to be published in 1996 by Springer Verlag of Heidelberg, Germany. The book is a newly revised version of the manual for Chem 443, the biochem lab course.

The syllabus for the course was extensively revised in 1987, at the time that the BS in Biochemistry degree was introduced. Most of the experiments are based on the use of the brine shrimp, *Artemia salina*, which Dr. Acey uses as an experimental system to study the control of gene expression. The manual contains a detailed discussion of the chemical principles behind each experiment in addition to the experimental instructions. The aim is to train students at developing their own protocols and troubleshooting problems, rather than following a "cook-book" approach. The syllabus includes experiments on protein determination, amino acid analysis, gel electrophoresis, enzyme kinetics, protein purification, immunoblotting, DNA and RNA isolation, Southern and Northern blotting, and radiolabeling. Equipment for the laboratory, including a centrifuge, HPLC, spectrophotometers and chromatography equipment, was purchased with the aid of a \$39,000 matching grant from NSF in 1987.

Contacts between Dr. Acey and Springer in 1994 led to the publication agreement. Sigma Chemical Co. has agreed to market a kit of reagents and supplies to be used for each of the experiments — this is expected to be a selling point of the new text. Springer also plans to have the book translated into German!

NEW ORGANIC CHEMISTRY CURRICULUM

by Stuart Berryhill

During the 1994-95 academic year the Department of Chemistry and Biochemistry initiated a new curriculum in organic chemistry, doing away with the previous sequences: Chem 321A and Chem 321B (10 units), or Chem 321A and Chem 322 (8 units). Most of the non-chemistry majors, for whom organic chemistry was a requirement, completed the 8-unit sequence which did not have a laboratory component in the second semester, and thus the non-majors were exposed to very little preparative chemistry. Now these students will share the same lecture and laboratory experience with chemistry and biochemistry majors in the new 8-unit sequence, Chem 320A and 320B. The organic faculty believes that there are advantages to having the organic students in the laboratory throughout the entire course sequence.

By the addition of a third course for chemistry and biochemistry majors only (Chem 420, 3 units), our majors will be acquiring more advanced techniques in a smaller class setting. The lecture in Chem 420 will be devoted primarily to discussion of the applications of spectroscopy to organic structure determination. The laboratory will feature exposure to GC-MS and high field NMR instrumentation, experiments designed to explore stereochemistry and stereoselectivity, and some exposure to bioorganic chemistry through experiments involving fatty acid chemistry and peptide synthesis. Chem 420 will also include an introduction to the use of the chemical literature.

WHERE ARE THEY NOW?

Our department has 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. Some of them are remembered in this column. We would like to hear from others as well.

Dr. J. Kenneth Bartlett, Assistant Professor of Chemistry 1954-56 and the first full-time member of the Department of Chemistry, has retired as Professor and Chair of the Department of Chemistry at Southern Oregon State College in Ashland, Ore., where he continues to live.

Dr. Ephraim Ben-Zvi, Lecturer 1984-91, has retired. "Between taking care of the house, playing the market, hosting the grandchildren, and attempting to stay abreast of the avalanche of new software, I often wonder how I ever had time to work!"

Dr. Leroy Chauffe, Lecturer 1967-68, has just completed a term as Acting Dean of the School of Science at Cal State Hayward and becomes the Chair of the Department of Chemistry at CSUH.

Dr. Michael Cohen, Lecturer 1984-85, is Director of Research for Sphinx Pharmaceuticals, a division of Eli Lilly & Co., in Cambridge, Mass.

Dr. Isidore "Izzy" Goodman, Lecturer 1981-84, has been named Chemistry Department Chair at Pierce College in Woodland Hills.

Dr. Tom Goyne, Lecturer 1986-88, is Professor of Chemistry at Valparaiso University. He teaches an "Introduction to Research" course which gives talented freshmen an early taste of research. The students develop their own research projects such as analyzing environmental samples, kinetics of chemical reactions, etc. He is hoping to involve alumni in a research mentoring program where alumni would become role models as scientists.

Dr. Margaret "Peggy" Kline, Lecturer 1984-88, reports that construction of the new science building on the campus at Santa Monica College has begun. It will replace the earthquake-damaged

structures. FEMA is partially funding the building as well as helping purchase a new NMR spectrometer.

Dr. Shailendra "Shelly" Kumar, Lecturer 1985-87, 1988-89. Dr. Kumar is Professor of Chemistry at Governors State University in University Park, Ill., a suburb of

Chicago. Shelly received the University Faculty Excellence Award in April. He organized the First Annual Governors State University Research Conference, an interdisciplinary symposium for GSU students. He recently published a paper on ozonolysis of buckminsterfullerene in *Chemical Communications*. Shelly and his wife, Sangeeta, have a 1 1/2 year-old daughter, Himani.

Dr. Louis Perlgut, Professor 1965-82; part-time 1982-92. Dr. Perlgut is enjoying retirement at Leisure World in Laguna Hills and occasional visits with his grandchildren in New York.

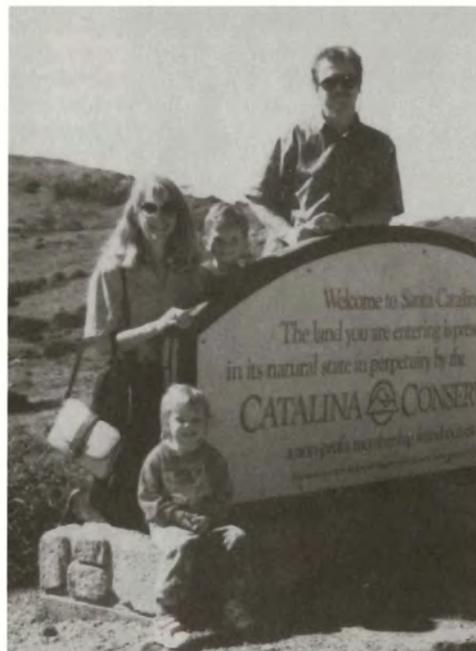
Dr. Larry Schaefer, Lecturer 1975-76, is Senior Chemist with Jacobs Engineering in Pasadena.

Dr. Gwen Raine Shusterman, Assistant Professor (1987-89), was appointed to the tenure track at Portland State University. She has the responsibility of revamping the general chemistry program, including the laboratories, and is chair of the curriculum committee.

Dr. Terri (Shaw) Speakman, Lecturer 1980-83, has "disappeared from the world of chemistry, having started to work with my husband and his printing business (Ventana Graphics) in 1987." The Speakmans have two children, Brian (6) and Lauren (4).



Above, the Goyne Family: Cheryl and Tom with son, Christopher. Below, the Speakman Family.



CLYDE E. OSBORNE: 1924-1994

Clyde Osborne, a faculty member in the Department of Chemistry and Biochemistry from 1957-76, passed away on November 25, 1994, in Arcata, Calif., where he and Mrs. Osborne moved in 1984 subsequent to his retirement in 1976. He received his first degree in meteorology from UCLA and was a weather forecaster while a midshipman in the Navy during World War II. Following the war he returned to UCLA, earning a BS in Chemistry and subsequently the MS in Chemistry from UC Berkeley. His doctoral studies were conducted under the direction of Dr. Jerome Berson at the U of Wisconsin and then at USC. After four years as a research chemist for Pitman-Moore in Indiana, he joined the faculty at CSULB. Mr. Osborne was a member of the American Chemical Society and Sigma Xi.

Mr. Osborne's area of specialty was organic chemistry. His principal teaching assignments were the "Brief Course" in organic chemistry, Chemistry 327, and the corresponding laboratory course, Chemistry 328. His research interests were mainly in the area of natural product chemistry and the chemistry of cryptophenols. Mr. Osborne worked for a number of years on the structure and reactivity of the opium alkaloid, thebaine, and its derivatives.

After retirement he committed himself to environmental and world peace causes. He was affiliated with the Schweitzer Institute, Amnesty International, the Sierra Club, the World Future Society, and the Unitarian Universalist Fellowship. Mr. Osborne's immediate survivors include his wife, Ursula, and two sons, Stanley of San Francisco and Neal of Novato, Calif.



Clyde Osborne

REPORTS FROM FACULTY AND STAFF

Roger Acey: The constituency of the lab has grown by leaps and bounds this year. There were 23 individuals working in the lab during the past summer. Dr. Roger Bauer recently established a program (SAS Bridges) to foster interactions between local community colleges and CSULB. As part of this program, Cheryl Shimazu (MS, CSULB), Adrienne Hurly, and Chris Navarro spent the summer in the lab studying the effects of heavy metals and phthalate esters on the development of the brine shrimp, *Artemia*. Patty Huang and Chang Jo, students from Whitney High School, also worked on the phthalate ester project; Patty worked on the purification of a cholinesterase associated with the hydrolysis of phthalate esters while Chang studied the genetics of this enzyme. As former members of the "Whitney Gang," Susan Peng (USC), Sheldon Okada (UC Berkeley), and Abby VenKatesh (Brown University) also spent this summer researching on different aspects of *Artemia* development. Fred Valle and Anna Concepcion, members of the MARC program, joined the lab this year. Fred has been working on the phthalate ester project while Anna spent the summer at Johns Hopkins.

Our studies on "pollutant eating bacteria" are progressing nicely. Sam Miller has isolated several species capable of utilizing hexadecane as a "food source." John Cashman, currently touring the country with the CSULB rowing team, has isolated organisms capable of growing in 10 mM solutions of metal ions such as Cu and Cd. The newest members of the environmental group, Mirta Gaus, a Howard Hughes Scholar, and Caroline Klaess, are trying to isolate and identify bacteria capable of metabolizing organonitrate and hydrazine compounds. Tom Kelley has successfully isolated two bacteria from a petroleum reservoir capable of degrading organosulfur compounds. He hopes to be completing his thesis research this summer.

Burt Secrest and Monty Badger continue to work on their research projects. I am happy to report that both Stephen Espitia and Brent Harpham are currently writing their theses. Conrad Winn has completed all the requirements for his MS in Biochemistry and will be graduating in the fall. Lest I forget, two faces from the past have joined the lab for short stints — Dr. Erich Keller is working on the mechanism of T-cell activation, and Clayton Harris is helping us synthesize a variety of organic compounds. Last but not least, I would like to acknowledge Mike Mustillo, our resident volunteer, for his devotion to the lab and his unwavering support of science education. We are supported by the NIH AREA, MBRS and MARC programs, BioLogics, Inc., Pacific Laboratories, Inc., and Harvey Universal, Inc.

Finally, as Co-Principal Investigator with two members of the Geology Department, we were awarded a \$400,000 NSF Grant to renovate a new Geochemistry Laboratory in PH 3.

Dennis Anjo: The research on carbon electrodes continues. We have had success at studying the activity of carbon electrodes as biosensors. The major work this year has been in increasing the electrode sensitivity by decreasing the background signal. Kaiser Estrada and Byron Rivera presented papers at the ACS National Meeting in Anaheim concerning the relationship between the background signal of the electrode and the signal from dopamine.

Su-Ying Lee and Eric Barron are finishing up their master's research this semester. Su-Ying Lee worked on the signal from staircase voltammetry, and Eric investigated fitting a model to the background signal observed with the electrode. A paper covering the background signal components will be presented in the near future.

Keith Bogdon is working on the signal-to-background when using the carbon electrode as a detector for liquid chromatography, to determine if our activation method is applicable to liquid chromatography. Adam Butler and Jason Haughton will be working on projects concerning carbon electrode activation beginning fall 1995.

My former students are doing well in the real world. Kiana Tabibzadeh is now a college chemistry instructor at both Pasadena City College and Irvine Valley College. Krista Marantos is a product representative for Procter and Gamble, and Michael Kahr is a post-doctoral fellow at Los Alamos National Labs.

[Editor's note: A paper from Dr. Anjo, coauthored with Kim Corkery, Eloisa Gonzalez, Krista Marantos, and Kaiser Estrada, appeared recently — "Diffusion coefficients of phenolic aromatics by chronocoulometry at the glassy carbon electrode," *J. Chem. Eng. Data* **39**, 813-816 (1994).]

Roger D. Bauer: I am very pleased that we were able to receive a new grant from the National Institutes of Health called Bridges to the Baccalaureate. This grant supports the development of a stronger linkage between our university and two neighboring community colleges, Long Beach City College and Cerritos College. Students and faculty from these colleges will be able to spend the summer on our campus doing research with our faculty in addition to other cooperative activities. These kinds of training-grant activities have kept me busy during my "retirement" and are very satisfying.

Jeff Cohlberg: With the recent burst in the number of biochemistry majors, we are expanding the biochemistry lab (Chem 443) to three sections annually of 16 students each. We're scampering to find funds to buy the additional equipment to expand the lab. This fall will be the first time we've ever had two sections in one semester, and as lab coordinator this fall, working out the logistics and scheduling will be an interesting challenge for me. I also plan to add an exercise on computer searches of the protein and nucleic acid database. With the lab manual published (see news item elsewhere), Roger, Margy, and I are looking forward to the fame and adulation we'll receive once our names are listed in the Sigma catalog!

My lab published a paper, by me, Hamid Hajarian, Tan Tran, Parvaneh Alipourjehdi, and Alexander Noveen ["Neurofilament protein heterotetramers as assembly intermediates," *J. Biol. Chem.* **270**, 9334-9339 (1995)] describing the work of three generations of students on neurofilament assembly intermediates. I've also just completed a review on neurofilament assembly for an upcoming volume of *Advances in Cell and Molecular Biology*.

With the collaboration of Mike Lee at Johns Hopkins and Don Cleveland at UCSD, we are now using truncated and mutated neurofilament proteins produced by recombinant DNA techniques to look at the roles of various domains of the NF proteins in filament assembly. Until recently, Mike Lee was making all the DNA constructs, but now graduate student Ali Ansari (with some help from Roger Acey) has initiated our lab into the brave new world of DNA cutting, pasting, PCR-ing, and cloning. Ali and I gave a poster on our initial results at the meeting of the American Society for Cell Biology in San Francisco in December, and I have been selected to give a "platform presentation" on our work at the joint conference of ASCB and the European Molecular Biology Organization on Cytoskeletal Proteins and Neurodegenerative Disease in Cambridge, England, this August.

Paul Darby, another graduate student, is boldly plunging into the world of protein Fourier transform infrared spectroscopy with our new ATI Genesis system to look at NF protein secondary structure changes upon phosphorylation. Dana Haley is working hard to solve the question of whether NF contain heterodimeric coiled coils before she starts the PhD program in Biochemistry at UCLA this fall, and undergraduates Michael Onoh and Lenore Landis have also joined the group. The work is supported by an NSF grant.

Marco Lopez: New to my group are J. Daniel Ponce, Neill White, Julia Weidler and Andrew Strelzoff. Dan is a graduate student whose thesis project is the synthesis of a new Myoglobin model; Neill is a recent chemistry graduate, finishing his research project this summer. Julia and Andrew are undergraduates who are working on computational chemistry projects; Julia's project is the extension of previous simulations toward new iron porphyrin (heme) systems; Andrew's project is a similar extension of simulations on myoglobin. These students join Martha Dela Rosa, Cynthia Ybarra, John Escobar, and Joey Vanoni. In April, these four students presented posters of their work at the 209th meeting of the American Chemical Society, held in Anaheim. This March, the first of Cynthia's projects was published in *Inorganica chimica Acta*.

Last year I was on sabbatical and missed lecturing. Like my colleagues, I enjoy lecturing to students about chemistry; as a former professor of mine puts it, "lecturing is the closest we professors get to being rock stars." In the spring I had 110 students—having that many students makes it difficult to know them all. However, it was a pleasure to meet many of them.

This year I have started to help with the administration of the college Minority Biomedical Research Support (MBRS) program and to help with the departmental scheduling. As a result, I interact more with college and department students, staff, and faculty.

Tom J. Maricich: The activity in my research laboratory is increasing with the addition of two new undergraduate assistants, Mathew Koutroulis (a Howard Hughes scholar) and Dan Farney. They are joining continuing students Matt Allan (MS candidate), Anthony Medak (MARC Scholar) and Ali Borazjani. I am looking forward to reporting our results in publications. I enjoyed this past year coordinating the first semester (Chem 320A) organic labs and teaching advanced organic chemistry (Chem 522). It was great visiting with former students at the recent ACS National Meeting in Anaheim and seeing them progress in their careers.

Ken Marsi: I have continued my fund-raising efforts for the department, and wish to thank the many of you who have participated in supporting our programs. I have reviewed a large number of papers for *J. Org. Chem.* and several NSF and NIH proposals, as well as publishing a few book reviews. In April I spent time in the Department of Chemistry at Cal State Hayward, reviewing the chemistry curriculum and facilities there in connection with their five-year review.

Margy Merryfield: The Merryfield lab this year welcomed new students Brett Moore (who is spending the summer as an intern at Amgen purifying proteins), Nadine Haddad, Lena Sripitisawad, and new graduate student Keynes Tong. Another new face this summer was Rita Lo, the office's dedicated student assistant for the last two years. Rita is spending two months in the lab using some exotic compounds to activate BCKDH kinase and completing a minor in chemistry. Kevin Merkes will start medical school at Loma Linda this August. Judith Ramillano took a job with Dep upon graduation and is now taking courses in cosmetic chemistry in her spare time. Samantha Howarth, who spent two years with me while attending St. Joseph High School, was chosen as a semifinalist in the Westinghouse Talent Search and traveled to Atlanta as part of the California delegation to the National Junior Academy of Sciences meeting. Samantha was heavily recruited by everyone (CSULB offered her a \$35,000 scholarship) and has chosen to attend Caltech in the fall.

My major extra-scientific achievement for the year was bringing the work of the Task Force on Undergraduate Education to a conclusion. Now our report, which looks at such areas as advising, the general education program, and the role of internships in the undergraduate experience, is in the hands of the campus policy-makers. I also recently took on the official title of Coordinator of Undergraduate Advising for the department.

continued on page 21

CHEMISTRY BIOCHEMISTRY

STUDENT AFFILIATES OF THE AMERICAN CHEMICAL SOCIETY

by Jennifer Lee, President 1995

The Student Affiliates of the American Chemical Society had a dynamic year, growing in size and in its activities. SAACS provides extracurricular activities through career-related seminars and helps develop student-faculty relationships through informal social gatherings. Members of SAACS were active in the College of Natural Sciences and Mathematics Student Council, co-sponsoring one of the college's most successful social events, the Taco Feast. SAACS took an active part in planning the 1995 Nobel Laureate Lecture Series. This year's speaker was Dr. Kary Mullis, the 1993 Nobel Laureate in Chemistry.

SOCIAL ACTIVITIES

Funding for the social activities and other special events for the year was derived from sale of laboratory aprons, goggles, molecular model kits, and gloves.

Taco Feast. With a large turnout the Taco Feast, an annual get-acquainted social, was held at the Soroptimist House. The traditional tacos with all the trimmings were served, and there were games and dancing for all.

Holiday Party. Dr. Loesch's home was the site of this year's holiday party for students and faculty.

Spring Party. The sun came out for the Spring Party at Dr. Marsi's home in Dana Point. Smash Ball and Frisbee were played at the beach. The 50 faculty and students in attendance enjoyed hamburgers, snacks and drinks and good company.

Awards Banquet. This year's annual Awards Banquet was held at Avenue #3 Pizza to honor 15 chemistry and biochemistry award recipients. Dr. Reef Hardy was chosen as the Outstanding Lecturer for the year. About 75 students, faculty, and guests were in attendance with a lot of pizza and refreshments to enhance this happy occasion.

Coffee and Doughnut Hour. The nearly two-decade old tradition of Friday morning coffee and doughnut hour was kept alive. SAACS provided coffee, doughnuts, bagels, tea and orange juice for students and

faculty. This weekly gathering enables faculty and students to become acquainted and discuss chemistry and current happenings in the department.

OTHER EVENTS

Kaleidoscope. Kaleidoscope is a university-wide festi-

the area to stimulate an interest in science—a possible project for the future.

Careers in Industry. Jeff Jetter, a chemistry alumnus, spoke to students about his career as a chemist with Honda Corp. He discussed the demands of his job, the process of setting

Career and Curriculum Advisement.

The Activities Coordinator of the Student Access to Science center, Maria de la Cruz, presented a program on advisement opportunities available to students on campus.



Student Affiliates at Spring Party. Left to right: Lenore Landis, Gail Jones, Heather Gordon, Lena Sripitisawad, Dr. Kenny Kwong, Caroline Klaess, Monty Badger and Mirta Gaus.

val on campus whose purpose is to bring the university and community together. Members of SAACS put on a chemistry show in order to entertain and educate young people about chemistry. Four shows were run, and about 800 parents and children attended. Parents encouraged SAACS to take their show to schools in

up a chemistry laboratory, and what to do to have a successful career in chemistry.

Chevron Tour. Chevron supplied a bus to transport students from CSULB to the El Segundo Chevron Refinery for a tour of their facilities. This was a joint project between SAACS and the Chemical Engineering student organization.

OFFICERS

Kyle Findly will be the new president for the 1995-96 academic year. Other officers are vice president, Steve Kraatz; treasurer, Mirta Gaus; Maria Avina, secretary; publicity director, Heath Beske; and director of activities, Lena Sripitisawad.

CHEMISTRY BIOCHEMISTRY

CHEM/BIOCHEM MAJORS SPEND SUMMER IN OFF-CAMPUS RESEARCH

Several students received funding to engage in research activities off campus at other institutions during the summer of 1995.

Domenica Devine, a BS Biochemistry major, worked at the Institute for the Study of Early Events in Photosynthesis at Arizona State University with Dr. Robert Blankenship on an NSF grant. She studied solar energy storage by photosynthetic organisms.

Kyle Findly, a BA Chemistry major, spent the summer at the University of New Mexico on an NSF grant working with Dr. Robert T. Paine synthesizing polymeric precursors for porous BN ceramic materials.

Brett Moore, BS Biochemistry major, received a Summer Internship position with Amgen, Inc., in Thousand Oaks. He worked with Michael Kelly. The purpose of the internship is to provide a complete learning experience and to introduce students to a growing company in the biotechnology industry.

Jeffrey White, BS Biochemistry major, worked with Medix Biotech, Inc., in a rapid test development group on immunoassays, ELISA and lateral flow, electrophoresis and conjugation of antibodies to tracer molecules and testing samples. Medix is a Genzyme Co., located in the San Francisco Bay Area.

CSULB STUDENT AFFILIATES RECEIVE RECOGNITION FROM THE AMERICAN CHEMICAL SOCIETY

In a letter from Ivan Legg, Chairman of the Committee on Education of the American Chemical Society, faculty and students were informed that the CSULB Chapter had been chosen as a Commendable Chapter for 1993-94.

On hand to receive a plaque during the awards ceremony at the National ACS Meeting in Anaheim on April 2 were SAACS members, Judith Ramillano and Kyle Findly. The chapter was again honored at the 1995 Education Awards Night of the Southern California Section of the ACS. Present to receive the award were student officers, Kyle Findly and Mirta Gaus, and Dr. Ken Marsi, Advisor.

CURRENT ACTIVITIES OF SOME OF OUR 1994-95 GRADUATES

Najat Aoun, MS Chemistry
Jason Atalla, BS Biochemistry
Oren Beske, BS Biochemistry
Jacqueline Bowen, BS Biochemistry
Paul Darby, BS Biochemistry
Thang Dinh, BS Chemistry
Rabiha El Habbal, BS Biochemistry
Nina Escasa, BA Chemistry*
Robert K. Fung, BS Chemistry
Dipa Gandhi, BS Chemistry
Nancy Gardner, BS Chemistry
Susan Gearhart, BS Biochemistry
Dana Haley, BS Biochemistry
Michael Hall, BA Chemistry
Thach Ho, BS Chemistry
Ayreen Hontiveros, BA Chemistry
Simon Jansen, BA Chemistry
Ahmed Kandeel, BS Biochemistry
Jeffrey Kaplan, BA Chemistry
Su-Ying Lee, MS Chemistry
Tuan Le-Khac, BS Chemistry
Daniel Lewis, BA Chemistry
Farzad Mansoorbakht, BA Chemistry
Michael Mercandante, BS Chemistry
Sean Monaco, BS Biochemistry
Alison Moss, BS Biochemistry
Roya Pouryavari, BS Chemistry
Judith Ramillano, BS Biochemistry
Edward Schentag, BS Chemistry
Kiana Tabibzadeh, MS Chemistry
Stephen Westerhout, BA Chemistry
Neill K. White, BS Chemistry
Linda Willhite, BS Chemistry

PhD program, USC
MS program in Biochemistry, CSULB
PhD program, UC San Francisco
University Bookstore, CSULB
MS program in Biochemistry, CSULB
Pharmaxx Corp.
VA Hospital, Long Beach
PharmD program, UC San Francisco
Formulas Laboratories, Escondido
Lab Support, Costa Mesa
MS program in Chemistry, CSULB
Calif. Laboratory for Forensic Science, Yorba Linda
PhD program in Biochemistry, UCLA
US Coast Guard
MS program in Chemistry, CSULB
Raffallo Research Laboratories, Torrance
United Oil Products
Medical School, Bowman Gray
Medical School, U of Oklahoma
Returning to Taiwan
Rockwell International, Newport Beach
Physical Therapy program, CSULB
World Trade Printing, Long Beach
Stockroom Supervisor, Long Beach City College
Memorial Hospital, Long Beach
MDL Corp., San Francisco
Dental School, Boston U
Dep Corp., Dominguez Hills
Construction industry, Nebraska
Faculty member, Irvine Valley College
Medical School, Loma Linda U
MS program, San Diego State U
May Co., Costa Mesa

*Accepted without completion of BA

CHEMISTRY BIOCHEMISTRY

HONORS TO 1994-95 CHEMISTRY AND BIOCHEMISTRY GRADUATES AND CONTINUING STUDENTS

Ihab Abumuhor	President's List; National Dean's List; Dean's List; Merck Award in Organic Chemistry; Howard Hughes Awardee
Alireza Ansari	Election to Phi Lambda Upsilon; California Foundation for Biochemical Research Summer Fellowship
Juan Arriola	Spyros Pathos IV Award
Jason Atalla	President's List; National Dean's List
Michael Aye	Merck Award in Organic Chemistry
Paul Belanger	Howard Hughes Awardee; President's List
Keith Bogdon	Election to Phi Lambda Upsilon
Jacqueline Bowen	Dean's List
Adam Butler	Kaplan Tuition Scholarship
John Cashman	Election to Phi Lambda Upsilon; Dean's List; Biochemistry Award; Howard Hughes Awardee
Tarek Dagher	Dean's List
Domenica Devine	President's List; Howard Hughes Awardee
Thang Dinh	President's List; National Dean's List; John H. Stern Award in Physical Chemistry; Robert B. Henderson Award; Robert Rhodes Award; Outstanding Baccalaureate Graduate in Chemistry; Howard Hughes Awardee
Dzoanh H. Do	President's List
Said Elaribi	Dean's List
Stephen Espitia	California Foundation for Biochemical Research Summer Fellowship
Kyle Findly	Dean's List, NSF Research Experience for Undergraduates
Iris Galanis	Dean's List
Manna-Noel Ganay	Dean's List
Dipa Gandhi	President's List
Mirta Gaus	President's List
Van Goodrich	Dean's List
Nadine Haddad	Dean's List
Dana Haley	Howard Hughes Awardee; Khalil Salem Award; Robert B. Henderson Award; Gabrielino 49er Award; Golden Nugget Award; Departmental Honors for Service; Who's Who Among Students; President's List; National Dean's List
Scarlet Hamamchian	Dean's List
Jason R. Haughton	Howard Hughes Awardee; President's List
Ingrid Hidalgo	President's List; National Dean's List; Dean's List
Thach Ho	Election to Phi Lambda Upsilon; American Institute of Chemists Baccalaureate Award; John H. Stern Award in Physical Chemistry; Merck Award in Organic Chemistry
Elie Hsiao	President's List; National Dean's List
Huilin Huang	Advisory Council Tuition Scholarship
S. Kenneth Huang	American Institute of Chemists Graduate Award
Gail Ann Jones	President's List; National Dean's List; Howard Hughes Awardee
Jeffrey Kaplan	David Scoggins Award
Mathew Koutroulis	Howard Hughes Awardee; Dean's List
Brett Krasner	Election to Phi Lambda Upsilon
Jennifer Lee	Departmental Honors for Service; Toni Horalek Award for Departmental Service
Daniel Lewis	Dean's List
Kyaw Lynn	President's List
Joel McPherson	Biochemistry Award
Anthony Medak	Howard Hughes Awardee; President's List
Diane Moss	President's List; National Dean's List; Howard Hughes Awardee; Dean's List
Lam H. T. Ngo	President's List; National Dean's List; Dean's List
Hoang Nguyen	Analytical Chemistry Award; Howard Hughes Awardee
Huang T. Nguyen	President's List; National Dean's List
Huyen-Trang Nguyen	President's List
Thien B. V. Nguyen	President's List; National Dean's List
James O'Brien	President's List; National Dean's List
Thomas Patko	Dean's List
Jason Perez	Freshman Chemistry Award (CRC Handbook)
Jeffrey Selander	President's List; National Dean's List; Howard Hughes Awardee
Paula Spencer	Dean's List
Quoc Ta	Organic Chemistry Award (ACS Polymer Award); President's List
Davide Tenaglia	Graduate Dean's List
Cuong Van Tran	President's List; National Dean's List
Julia Weidler	Howard Hughes Awardee; Dean's List
Neill White	Election to Phi Lambda Upsilon; Hypercube Award; Inorganic Chemistry Award; Dean's List
Nancy Wissa	Howard Hughes Awardee

GIFTS BY INDIVIDUALS

For the 1994-95 fiscal year (July 1, 1994-June 30, 1995) gifts *by individuals* to the Department of Chemistry and Biochemistry are valued at \$30,780. Together with corporate gifts of cash and in-kind gifts of supplies and equipment, the department received donations valued at \$131,879. Gifts were received from 177 persons, an all-time high! Cash donations from individuals ranged in value from \$10 to \$2,000. Total income from individuals and corporations amounted to \$47,323 in cash and \$84,556 in in-kind gifts.

Because of the fiscal problems of the State of California, support for the programs of the university, including the Department of Chemistry and Biochemistry, has dropped dramatically. Only about 10% of the operating expenses of the department now comes from the state. The remainder of our needs is met from non-state sources.

Most of the funds given to the department are used directly for departmental operations and student support. The following will give you some idea of what your gifts are used for:

EXPENDITURE OF PRIVATE FUNDS

Equipment ¹	\$16,136
<i>Chem/Biochem Newsletter</i>	2,128
Student Scholarships	5,400
Travel ²	1,610
UNOCAL Lectureship	2,500
Glassware	1,423
Supplies (chemicals, etc.)	2,459
Miscellaneous	930
Computer Accessories	2,238
Advisory Council	473
Seminar Program	2,191
Small Items of Equipment	299

¹*UV-Vis spectrophotometer, DNA sequencer, roto-evaporator, gamma counter, ion exchange column compressor.*

²*Funds were matched by the university and included travel for students to attend scientific meetings to present research results.*

In addition to the expenditures noted above, \$5,000 was placed in our endowment account, and approximately \$4,500 in pledges for 1994-95 is yet to be received.

On behalf of the students and faculty of the department, we wish to take this opportunity to thank all who have assisted us in our efforts to provide the best possible education for our students. Clearly, without your help the quality of our instructional programs would have suffered significantly.

CORPORATE GIFTS TO THE DEPARTMENT

Gifts from business and industry amounted to \$101,100, and included \$28,987 in cash and in-kind gifts of equipment, supplies, and services totalling \$72,113. Included in the major items of equipment received were a Fourier transform infrared spectrometer from Aerospace Corp., calculators for student awards and HPLC columns from Hewlett-Packard, and HyperChem Software from Hypercube. We wish to thank the following donors for their generous support of our programs:

Aerospace Corp.*
 American Honda Motor Co., Inc.*
 Baxter Healthcare*
 Beckman Instruments*
 Biorad
 Eastwater Scientific Products, Inc.*
 Forty-Niner Shops
 Hewlett-Packard*
 Hughes Aircraft*
 Hypercube, Inc.
 Hyundai Corp.
 Jet Propulsion Laboratory
 Lab Support*
 McDonnell Douglas (Helicopter Division)*
 McGaw Laboratories*
 National Starch and Chemical Foundation
 Nova Biomedical
 Rykoff-Sexton*
 TRW*
 UNOCAL Foundation*

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

Akzo Corp. (Terrence Van Buskirk)
 American Home Products Corp. (Ba Tu Nghiem)
 American Honda Motor Co., Inc. (Jeffrey Jetter)*
 ARCO Foundation (Jerry Aspland)*
 Borax Foundation (Robert J. Deal)
 Baxter Foundation (Sherilyn M. Inledon and Maria E. Co Sarno)*
 Hughes Aircraft (Danute Basiulis and William Garrigues)*
 MacDonald's Corp. (Christopher Appleton)
 Nalco Chemical Co. (Per B. Christiansen)
 National Starch and Chemical (Dwight Gergens)
 Rhone-Poulenc (Stephen Castellino)
 UNOCAL (Charles McLuen)*

**Members of the Chemistry and Biochemistry Advisory Council*

ADVISORY COUNCIL NEWS

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 are:

Greg Beauton, Senior Chemical Specialist; McGaw Laboratories in Irvine.

Ken Faust, Laboratory Director; Pace, Inc., Fountain Valley.

Dr. Charles Gorenstein, Health Research Scientist; Veterans Administration Medical Center, Long Beach. Dr. Gorenstein replaces **Dr. Harry Walter**, the VA representative for the past 14 years, who recently retired.

Darrel Holmes, District Manager; American Qualex, La Mirada. Mr. Holmes replaces **Dan Moothart**, President.

Colleen McDorman, Certified Account Manager; Lab Support, Costa Mesa.

Dr. Gerard Putz, Manager, Quality Assurance; Bachem CA, Torrance.

Kenneth Stoub, President; Group Seven Environmental Services, Orange.

HONOR ROLL OF INDIVIDUAL CONTRIBUTORS, 1994-95

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Chris & Beverly Appleton
Jerry & Carol Ann Aspland
Thomas D. Augimeri
Peter Baine, PhD
Michael P. Baker, PharmD
Nina Bao
Danute & Al Basiulis
Robert Bau, PhD
Ephraim Ben-Zvi, PhD
& Nava Ben-Zvi
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Allan & Diane Johnson
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Marco D. Wong, MD
Sandra Stoner Wright
Gerald Wuenschell, PhD
& Carol Wuenschell, PhD
Kenneth Yamaguchi, PhD
& Krin Bartels, PhD

LAB SUPPORT SCHOLARSHIP

Lab Support, a company specializing in temporary laboratory assignment of professionals with 30 offices nationwide and a local office in Costa Mesa, has funded a special scholarship for a community college transfer student majoring in Chemistry or Biochemistry at CSULB. This year's recipient of a \$1,500 scholarship award is Ngoc-Huyen Ho, a student at Cypress Community College who will be a BS Chemistry major in our department this fall. Ms. Ho received her high school education in Viet Nam, where she was a lab assistant for her chemistry teacher. She has a 3.44 GPA and intends to become a chemist. Her nominators from Cypress College were Dr. Dwayne Gergens and Dr. Helen Chen, Ms. Ho's general chemistry and organic chemistry instructors.

CHEMISTRY BIOCHEMISTRY



Thang Dinh, Henderson Scholar and Stern Scholar



Dana Haley, Henderson Scholar



Jeffrey Kaplan, Scoggins Scholar



Thach Ho, Stern Scholar

ENDOWED AWARDS

ROBERT B. HENDERSON MEMORIAL AWARD

Two outstanding students, both undergraduate students, were named Henderson Scholars this year, each receiving a cash award. This award was established by Dr. Henderson's family, colleagues, and friends to honor the memory of Dr. Robert B. Henderson, a member of the Chemistry Department from 1955-83 and a distinguished scientist and teacher of organic and general chemistry. Recipients 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.

Thang Dinh. Thang, a *cum laude* BS Chemistry graduate, has received nearly every award given by the department during his distinguished undergraduate career. Thang also received the Rhodes Award at commencement for his outstanding scholastic achievements. He was a research student of Dr. Nail Senozan, studying aspects of methemoglobin

formation as influenced by cupric and ceric ions. After working for a year with Pharmaxx Corp., Thang will enter an MD/PhD program.

Dana Haley. Dana, also a much-honored undergraduate, served as chair of the College of Natural Sciences and Mathematics Student Council and actively participated in other college and university-wide activities. At commencement she received the Dr. Khalil Salem Award for outstanding service and scholarship. She has been involved in an undergraduate research project under the direction of Dr. Jeffrey Cohlberg on neurofilament structure. Dana, a *cum laude* BS Biochemistry graduate, will enter the PhD program in Biochemistry at UCLA this fall.

DAVID L. SCOGGINS MEMORIAL AWARD

The Scoggins Memorial Award recognizes outstanding scholarship and promise by a Chemistry or Biochemistry graduate who intends to make a career of one of the health professions. This award is in memory of David L. Scoggins, who was a graduate student in the

Chemistry Department at the time of his premature death. This year's awardee is **Jeffrey Kaplan.** Jeff received an undergraduate degree in Electrical and Biomedical Engineering at CSULB and, after several years working as an engineer, returned to CSULB to earn a BA (*summa cum laude*) in Chemistry. He will enter medical school at the University of Oklahoma this fall. Jeff was featured in an article published in the April issue of *Reaction Times*, a nationally distributed student publication of the American Chemical Society. Jeff was formerly employed by Lab Support, a temporary placement service. The article dealt with the increasing importance of the "contingent work force" as a source of placement for scientifically trained personnel.

THE JOHN H. STERN MEMORIAL AWARD

The John Stern Memorial Award was presented to two outstanding physical chemistry students who distinguished themselves in Chemistry 371A and Chemistry 371B, the year course in physical chemistry for BS Chemistry majors. This

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 area. The award was established by colleagues, former students and friends of Dr. Stern, who was a member of this department from 1958-84 and taught physical and general chemistry.

Thang Dinh. Thang was also a Henderson awardee (*cf.* Henderson Memorial Award above).

Thach Ho. Thach was a chemistry teacher in Viet Nam before coming to the United States. He chose to study for an American degree in Chemistry, and received a BS in Chemistry (*summa cum laude*) at the June 2 commencement. He will continue with graduate work, studying for the MS in Chemistry with Dr. Henry Po at CSULB. Thach's wife, Ngoc-Anh Vuong, also graduated with a BA in Chemistry with the same graduating class.

ALUMNUS THOMAS PAYNE RECEIVES CATALYST AWARD



Juan Arriola, Pathos Scholar

THE 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 constitutes the first year of the Pathos Award which 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. This year's awardee is **Juan Arriola**. Juan, a sophomore with a 3.91 GPA, is a Chemical Engineering major, minoring in Chemistry.

Thomas Payne, who obtained his MS in Chemistry from CSULB in 1971, was presented with the coveted Chemical Manufacturers Association Regional Catalyst Award for Two-Year College Teachers.



Thomas Payne, Catalyst Award Recipient

The award consists of \$2,500, a medal, and a citation which were given to him at a special dinner and ceremony on May 24 at the Bonaventure Hotel in Los Angeles. The dinner also marked Tom's retirement from Los Angeles Trade-Technical College where he has been teaching since 1973. Tom was among only four two-year college teachers in the nation to be named a Catalyst medalist.

The Catalyst Awards Program honors individuals who have the ability to inspire students toward careers in chemistry and science-related fields

through their excellent teaching ability, in and out of the classroom. The program also seeks to draw public attention to the importance of quality chemistry and science teaching at the undergraduate level.

According to Fred Webber, president of CMA, "We need to inspire young people to learn everything they can about science and apply it to the unanswered questions of the future."

One of his colleagues at LA Trade-Tech has this to say about Tom:

"He is a *teacher extraordinaire* in the Chemical Technology Program in the Science and Math Department. He has always had a strong desire to

prepare students, especially those from the inner city, to enter professional positions in today's very competitive job market. He has a way of motivating students through lectures and demonstrations, demystifying chemistry and allowing the student to grasp chemical principles easily.

"Professor Payne has managed to consistently fill his two-year program with students eager to take the challenge. Many of the students who enter the program with poor basic skills become fearful when they hear that the pro-

gram involves physics, advanced math, computers, and organic chemistry. However, after listening to Prof. Payne tell of the successes of past students who overcame many learning obstacles and are now in the work area as managers and supervisors, they are encouraged to continue with the program.

"Student evaluations consistently praise him for his outstanding abilities in teaching all the courses in the program. Prof. Payne can often be heard saying, 'give me a student who sincerely wants to learn, and regardless of his or her educational background, I will give you a successful graduate in two years ready to enter the job market or to pursue higher education.'"

Prior to entering the MS program in Chemistry at CSULB, Tom graduated with a BS in Chemistry from Cal Poly San Luis Obispo. Following receipt of the MS degree, he worked for one and one-half years with Los Angeles County in industrial waste management and then joined LA Trade-Tech in 1973.

PER CHRISTIANSEN DESIGNATED AS OUTSTANDING ALUMNUS

Per B. Christiansen, BS Chemistry 1964, was named the Outstanding Alumnus for the College of Natural Sciences and Mathematics for 1995. As President and Chief Executive Officer of Nalco Fuel Tech, based in Naperville, Ill., an air pollution control company, he supervises the development and marketing of new technologies designed to reduce nitrogen oxides produced by the combustion of fossil fuels from stationary sources. He joined Nalco in 1969 as a district representative in the Water Treatment Chemicals group and was promoted to product specialist in 1971. He was named product manager in 1972, marketing manager in 1973, district sales manager in 1976, regional sales manager in 1982, general marketing manager in 1985, and in 1986 he was promoted to General President and CEO of Nalco Fuel Tech, a joint venture of Nalco Chemical Co. and Fuel Tech NV of England. Per was born and raised in Aagersted, Denmark, and arrived in the United States with his parents when he was 16. He and his wife, Linda, have three children, Michael, Robert and Diana, as well as two grandchildren. The award was presented at the Natural Sciences and Mathematics Commencement on June 2. He and his family were also feted at the Alumni Awards Banquet at the Long Beach Hilton.



Per Christiansen, 1995 Outstanding Alumnus

RESULTS OF ALUMNI SURVEY

by Margaret Merryfield

Every five years the Department of Chemistry and Biochemistry prepares a self study that examines the undergraduate and graduate programs. In order to assess the quality of its programs, the department surveyed all alumni in December of 1994.

Of the 111 respondents, 79 have either received advanced degrees or are in advanced degree programs. Doctoral-level degrees (PhD, MD, *etc.*) are held by 38% of respondents, while another 27% hold master's degrees. Nearly all graduates are employed in scientific, technical, or medical fields; only two respondents indicated that they were unemployed. Responses came from graduates over the last 35 years; there were 60 responses from alumni who graduated in the 1980s and '90s.

Alumni were asked to rate several aspects of the program at CSULB, including quality of education, approachability of faculty, competence of faculty, whether courses were up-to-date, academic advising, lower and upper-division laboratories, research participation, and supporting departments. Overall responses were tallied along with responses from the last 10 years. All questions received favorable responses, with little difference between recent graduates and all alumni. The single highest rating given by the recent graduates was for the competence of the faculty, at 1.40 on a 5 point scale (with 1.0 being most favorable); the lowest, at 2.0, was for lower division laboratories.

Alumni also provided written comments on a variety of topics. Among the strengths of the program noted over and over were the dedication, approachability, and overall quality of the faculty. Equipment, facilities, and lab conditions were cited most frequently as weaknesses.

Popular suggestions for additions to the curriculum included industrial chemistry and hazardous waste management. Nearly every aspect of the curriculum was cited as having been especially helpful; research experiences were cited frequently. Despite the fact that many former students thought the laboratory equipment was outdated, they rated their training in instrumentation generously (84% found it to be adequate).

The department wishes to thank all alumni who participated in this survey.

CHICAGO ALUMNI GATHER

On April 10 at La Trattoria Restaurant in Chicago, the Chicago-area alumni gathered for a reunion and dinner, hosted by the CSULB Department of Chemistry and Biochemistry. Present at this first-time affair were Chris Appleton (BS '72), McDonald's Corp.; Dr. Per Christiansen (BS '64), President of Nalco Fuel Tech, and Linda Christiansen; Dr. Tom Goyne (Lecturer '86-'88), Professor of Chemistry, Valparaiso U. Indiana, and Dr. Cheryl Goyne; Dr. Shelly Kumar (Lecturer '85-'87, '88-'89), Professor of Chemistry, Governors State U, Chicago; Dr. Bill Thomasson (MS '65), Science Writer; Iona "Penny" Thomasson (BS '65), Evron Laboratories; Greg Whitaker (BS Biochemistry '93), Medical Student, Scholl College of Podiatry; Dr. Ken Marsi, Chair, Chemistry and Biochemistry, CSULB, and Irene Marsi.

ALUMNI NEWS

Thanks for your letters and responses! We 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, and they are read with great interest! 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.

1961

Fred Dorer, BS (PhD, U of Washington), continues as Academic Vice President at California State University, Bakersfield. "We are trying to find novel ways to live with the realities of reduced financial support...and acquiring and using new technologies."

1962

Richard C. Parker, BS (PhD, U of Washington), is Associate Dean of Engineering, New Jersey Institute of Technology.

1964

Gary Hathaway, BS (PhD, UC Davis), is Director, Protein Peptide Micro Analytical Facility at Caltech. "I retired under the 'Golden Handshake' from UC Riverside after 22 years of service. I then accepted my present position in June 1994. Christine and I were married in May. She is a PhD biochemist,

working in molecular biology at the City of Hope in Duarte and we have a son, Allen (13)."

James P. Sandstrom, BS, MS 1967 (MBA, UCLA), is Vice President of Highland Federal Bank in Woodland Hills and is a real estate loan officer.

1965

Diane McGann, BA, teaches chemistry and physical science at Santa Ana High School and Rancho Santiago College. She received the 1993 Orange County Science Teacher Award in 1993, the Metropolitan Water District Award in 1994, and the Chemical Manufacturers Award in 1994.

Bill Tenney, BS, is President of Tenfield Instruments which manufactures a fluorometric interface detector used by petroleum product pipeline companies to measure interface between batches. Bill is married to **Carolyn Davis (BS 1965, Accounting)**. They have two grown daughters.

1966

Roger Clark, BS, MS 1966 (PhD, U of Utah), works with Ato Chemical, North America, a French-based company. "I still have my job after 18.5 years in spite of 'downsizing.' This has been a serious situation for the chemical industry. Twins Bill and Jim are both juniors in college. Jim is in mechanical engineering and Bill is in electrical engineering."

Don W. Hayden, BS (PhD, UC Santa Barbara), is a consultant and lives in Los Gatos.

1967

David R. Fagerburg, BS (PhD, U of Washington), presented a talk to faculty and stu-

dents in the NSF Summer Undergraduate Research Program on July 25 at the University of Florida. The talk was titled, "Weathering in Polyesters." David is Research Associate in polymer chemistry with Eastman Chemicals Division of Eastman Kodak Co. in Kingsport, Tenn.

Loren Steffen, BS, MS 1969, is Director of Laboratory Services for St. Peter's Hospital in Olympia, Wash.

1968



Alan DiStefano, BS 1968

Alan DiStefano, BS, is President of Graseby Anderson with headquarters in Atlanta, Ga. Graseby Anderson is an environmentally based company designing and manufacturing sampling and analytical instrumentation for use in air pollution testing. Alan and wife, **Sharon (BA 1970, English)**, have four children: Tony (27), who graduated from UC Davis in 1994 in Environmental Science and who works for the National Park Service in Yosemite; Gino (25), who works for the State of Nevada; Leslie (24), a loan officer for Transamerica Financial; and Teresa (20), a nursing student at U of Nevada, Reno.

1969

Reid H. Bowman, BS (MS, Princeton; PhD, UC Santa Barbara), continues as Associate Scientist for Dow USA.

Don Byers, MS Biochemistry, is Registrar for the Alberta [Canada] Society of Engineering Technologists. "My active young children convinced us to move into a larger house that backs on to a lake. I should report that the kids skate on the lake beginning early November."

Michael L. Porter, BS, is Laboratory Director for AtmAA, Inc., which specializes in environmental atmospheric analyses and is located in Woodland Hills.

Donald Woodman, BS, is Senior Quality Engineer for 3M Pharmaceuticals in Northridge. "I am currently working on the implementation of a PE Nelson SQL*LIMS system for 3M Pharmaceuticals."

1971

Jim Merrill, BS (Mechanical Engineering, CSU Los Angeles), works as Senior Chemist with Nutrilite Products Co., Inc., in Buena Park. "Our company manufactures nutritional supplements, and I run tests on raw materials, vitamins, minerals and pharmaceuticals, using wet chemical and instrumental methods (IR, FTIR, GC, HPLC, auto-titrators, etc); I also develop and write procedures."

Alan J. Rosenstein, MS Biochemistry, is Senior Research Assistant at Caltech. "After 15 years at UC Irvine, the funding became very tight, and I was laid off. Shortly thereafter, I started at Caltech in the Neuroscience Division. We are investigating the effects of conformational changes in proteins on synaptic transmission. I'm still very much into my drawing and painting, in addi-

tion to my independent studies and travels on Eastern and Western mysticism and sacred architecture and geometry."

1974

Lana Marlyn Scheff, BA (PharmD, USC; MBA, CSULA; JD, Whittier College School of Law), is Regulatory Affairs Manager for 3M Unitek in Monrovia.

Richard V. Whiteley, Jr., BS (PhD, U of Nebraska), is Associate Professor of Chemistry at Pacific University in Forest Grove, Ore. "I am nearing completion of my sabbatical leave at Eagle-Picher Industries in Joplin, Mo. EPI is the world's largest manufacturer of aerospace batteries. I was responsible for developing a rechargeable lithium technology for satellite applications. To date we have been able to manufacture anodes and cathodes with promising performance."

1975

Prabha J. Bhalla, MS Biochemistry. "I have two children, Kiran (a girl, 13) and Asheesh (a boy, 9). Kiran is a very good student of classical Bhaaral-Natgam dance and vocal music and Asheesh is into ice hockey and Indian music. Both are advanced piano students."

Richard Oelschlaeger, Student, MS Medical Microbiology, is supervisor of the microbiology laboratory at the Veterans Administration Medical Center in Long Beach.

1977

Ray Calloway, BS, has retired from Aerospace Corp. "I have many hobbies and manage to stay busy. One thing I have



The Wuenschell Family: Carol and Gerry and children, Alex and Arthur

discovered is that I will never be an accomplished pianist!"

Rick Goyt, BA, is employed as Operations Manager for Creative Property Service in Santa Rosa. "Even though I do not directly use my education in the field of chemistry, every day I use the discipline taught to me as a chemistry student."

Craig T. Snider, MS Biochemistry (MD, UC Davis), practices ophthalmology at the Montgomery Eye Center in Naples, Fla. "I was in research for several years at Genentech in South San Francisco and at Barnes Hind in San Diego before attending medical school." He and Joy have been married 13 years and have four children, three girls and a boy.

1978

Norm Hegler, BS (PharmD, UC San Francisco), is a clinical pharmacist with Kaiser Permanente in San Diego. "My sons, Daniel (4) and Max (2), keep me very busy!"

Marianne Marsi-Manning, BS (PhD, UCLA), is Technology Supervisor for Teflon Polymer Technology Development in Washington Works, Washington, W Va.

Randall E. Smith, BA (MS Technical Management, West Coast U), is Senior Engineer/Technical at McDonnell Douglas Aircraft in Long Beach.

Gerald Wuenschell, BS (PhD, USC), is teaching organic chemistry at Cal State Los Angeles. His wife, Dr. Carol Wuenschell, is a junior research faculty at the USC Center for Craniofacial Molecular Biology. Their son, Arthur, turned 5 in March, and Alex celebrated his first birthday in June.

1979

Michael Carr, BS, serves as President of ITMS in West Linn, Ore. "Four years ago I started my own company performing the sales and marketing function for electronic manufacturing in the USA and Far East. My many thanks to Dr. Jensen, for without his support I would not have made it through chemistry. I spent two years in his laboratory, which is an experience every college student should have. I still talk about the Christmas Eve I spent in the lab trying to meet a conference deadline!" Mike would like to correspond with college friends.

Stephen Castellino, BS (PhD, UC Riverside), is a research chemist in the Agricultural Chemicals Division of Rhone-Poulenc and lives in Cary, N.C.

David A. Chernik, BS (JD, Southwestern U School of Law), was in the May 21 graduating class at Southwestern. He plans to practice environmental law. David was formerly an employee of McDonnell Douglas.

Stephen M. Fritch, MS, MPA, is Lead Criminalist II in the Long Beach Police Department Crime Laboratory.

Paul M. Jordan, BA (MD, USC), is a family practice physician with the Yorba Linda Medical Group in Yorba Linda. He and his wife, Richelle, have a 3-year-old son, Seth, and are expecting a second child in December.

Robert Maiden, MS, is owner of Killdee Scientific Glass Co., Inc., in Santa Fe Springs. "In November 1994 we applied for our first US Patent related to a glass cell used in pharmaceutical research. Killdee Scientific became a "C" corporation in January."

Patrick McKay, MS, is Senior Research Associate with Genentech, Inc., in South San Francisco where he has worked for the past 15 years. "My research/development efforts seem to have grown exponentially. Besides working on scaling up one of our current proteins to production levels, I've also been working on another project which has been recently awarded development status—a large-scale process for production of multigram quantities of protein for clinical evaluation." Pat and Mary have two children, Brian (10) and Allison (6). Both are active in Scouting.

continued

Alumni News continued

David Oliver, MS, is Professor of Chemistry at Ventura College and reports, "I am presently on sabbatical and enrolled in a PhD program in Educational Psychology. I will be focusing on computer-human interface dynamics for my dissertation."

Sue Schoij, BS Chemical Engineering, Minor Chemistry, is employed as Senior Petroleum Engineer for the City of Long Beach, Department of Oil Properties.

Dan H. Woo, MS, works at Cal Resources LLC, an independent oil company, owned by Shell Oil. Dan is busy traveling around the state and flying to the offshore platforms assisting the facilities with their chemical treating programs. The Woo family includes a daughter, Michelle Elaine (1 1/2).

1980

Victor V. Cachia, BA (DPM, California College of Podiatric Medicine), is a Diplomat, American Board of Podiatric Surgery, and has his own practice in Mission Viejo and Irvine and lives in San Juan Capistrano. He is a member of the Board of Directors of the International Flying Doctors of Mercy and does volunteer work in third-world Latin American countries. He and Jo Lynn Jahns were married in 1994 and have a baby daughter, Alexandra Marie.

Brian Dubow, BS, is Director of NASA Programs for the UC San Diego Department of Medicine, and is responsible for conducting cardiopulmonary/cardiovascular research in microgravity using astronauts on the space shuttle. He is also an instructor at the

UCSD Extension Campus on Human Adaptation in Microgravity.

Tina Kishishita, BA (PharmD, UC San Francisco), is employed as Staff Pharmacist at the Veterans Administration Medical Center in Long Beach.

K. Scott Marsi, BA (MS San Diego State U), is Director of Commercial Development for the Surfactant and Specialties Division, North America for Rhone-Poulenc, Dayton, N.J.

Karen M. Rogers, BA, is the Director of Quality Assurance and Food Safety for Family Restaurants, Inc., in Irvine. This organization serves Coco's, Carrows, Chi-Chi's, El Torito, Charley Brown's, and Reubens.

1981

Erika Schneider, BS (PhD, UC Berkeley), is a Research Scientist in the Imaging & Visualization Laboratory at General Electric Co., Schenectady, N.Y.

Kenneth Yamaguchi, MS (PhD, UC Riverside), is employed as a methods development chemist with Troy Corp. in East Hanover, N.J.

1982

Robin Bjorgan, MS Biochemistry, now lives in Hesperia.

Mario Fernandez, MS (PhD, UC Irvine), is Associate Professor and Department Chairman at Morelos State University in Cuernavaca. The university is experiencing a major expansion, and the School of Natural Sciences, in which Chemistry is administratively situated, is intended to be the area of excellence for the university. There are 15

faculty members in the Chemistry Department, and a PhD program will be initiated in the fall of 1996. Dr. Fernandez was formerly with Syntex before its purchase by the Roche group. While at Syntex he authored four patents on the development of mycophenolic acid analogs as immunosuppressive agents, wrote two papers in mycophenolic acid chemistry, published a paper in *Tetrahedron Letters* and received the annual productivity award for the largest number of compounds submitted for biological testing.

J. W. Bill Mohar, BS, works in sales and marketing for Nicolet Instruments in San Jose.

William R. Shoemaker, BS (MD, UC San Francisco), is a Board Certified Internist and practices with Jacobs and Modaber, MDs, Ltd. in Las Vegas, Nev. "Both my wife and I are internists and have been in practice together for six years. Our greatest achievements have been our children, Gabriella (3) and Matthew (2)."

1984

Lori Jo Childres, BA (DMD, Washington U School of Dentistry), is married to **David Sydow, MD (BA 1984, Biology)**. Lori and David have an 18 month-old daughter, Kaitlin. They are finishing up an army obligation at Madigan Army Hospital in Washington State.

Eric J. Derbyshire, BA (MBA, U of Phoenix), is Product Manager for Watlow Controls in Winona, Minn.

Dwight Gergens, BS (MS, MBA, UC Irvine), is a marketing specialist for Ablestik Laboratories in Carson. "Ablestik continues to grow as the semiconductor market

grows. I have had the opportunity to travel to Korea, Japan, Taiwan, and Thailand."

Ellen Greenman, BS (Teaching Credential, CSU Dominguez Hills), teaches mathematics in the Los Angeles Unified School District. "I've now been teaching math for eight years at Hollywood High School with the challenges increasing each year. However, I find teaching ever-interesting and ever-changing."

Mehdi Rashidi, BS (PhD, UC Santa Barbara), is Principal Scientist and Staff Researcher with Lawrence Livermore National Laboratory in Livermore, Calif. "I am happy at LLNL as a Principal Investigator in several DOE projects."

Theresa M. Rohr-Kirchgraber, BA (MD, Cornell U), specializes in internal medicine and is Assistant Professor of Medicine at the State University of New York, Syracuse School of Medicine. "Currently, I'm involved in developing the primary care residency program and ambulatory education." She and Paul, also a physician, have three children.

Dale Shrum, BS (MS, DPM, California College of Podiatric Medicine), is a self-employed podiatrist practicing in Bermuda Dunes. He is Board Certified with the American Board of Podiatric Surgery, Board Qualified with the American Board of Podiatric Orthopedics, a Fellow of the American College of Foot and Ankle Surgeons, and Clinical Associate Professor, Los Angeles County/USC Medical Center. He and Mrs. Shrum have two children.

Anne Tolles, MS Biochemistry, is President of Advanced ImmunoChemical, Inc., in Long Beach. "Our immunochemicals group supplies the international research commu-

CHEMISTRY

BIOCHEMISTRY

nity with an expanding line of monoclonal antibodies, as well as purified proteins and recombinant antigens."

Nancy Wildman, BA, Teaching Credential. She and Scott have two children, Amanda (7) and Samuel (1 1/2). "In addition to teaching my offspring life's important lessons, I am tutoring in high school chemistry."

1985

Patricia Healy, BS Biochemistry, MS Biochemistry 1988, is a law student at UC Hastings College of Law. "I just completed my first year of law school. It was everything they said it would be!" She worked with a firm in San Diego during the summer.

Lisa Thompson, BS, is a forensic scientist with the Orange County Sheriff-Coroner Department in Santa Ana. She recently received a commendation from Judge John S. McInerney of the Superior Court of Santa Clara County which read in part, "Ms. Thompson is one of the finest expert witnesses—criminal or civil—I have ever had the pleasure of having in my court. She is the first expert witness I have ever encountered who knew, or had heard, of every outside reference to which defense counsel made reference." [Letter furnished by Lisa's proud dad, **Ray Calloway, BA 1977**].

1986

Jason Brown, Student, BS Zoology, Chemistry Minor (DDS, UCLA), has his own dental practice in San Diego.

Paz Eilat, BA (MD, Hungary). "I am alive and well in Reno, Nev. I'm in the midst of three years of internal medicine residency, and try to find enough time to ski in winter and hike in summer."

Peter Ferrera, Student (MD, Ludwig Maximilian's U, Munich, Germany), is a first-year resident in internal medicine at the U of Nevada, Reno School of Medicine.

John T. "Tom" Jones, BA (MD, St. Louis U School of Medicine), has completed a one-year fellowship in Body Imaging (CT, MRI, US) at Michael Reese Hospital in Chicago. He did his four-year residency in diagnostic radiation at Cook County Hospital and moved to Kalamazoo, Mich., in July to assume a new job at Borgess Medical Center. His wife, Christine Chan, is a self-employed electrical engineer, specializing in writing firmware for micro-controllers.

Katherine Christopherson Kurjan, BS, is Process Chemistry Specialist with Allergan, Inc., in Irvine.

Grant W. Meisenholder, BS, is attending the Ohio State Medpath program.

Robin Y. Underwood, BA, is Program Leader for Environmental Information Management Systems at Hughes Aircraft.

Van H. Woo, MS (MD, St. Louis U), is a radiation oncologist with Radiation Oncology Services in Tulsa, Okla. The Woos have two sons, Matthew (3) and Christian (1 1/2).

1987

Teresa R. F. K. Allard, BA (PharmD, UCSF), is employed as a clinical pharmacist at San Francisco General Hospital and is a faculty member at

UC San Francisco. "In November of 1994 I married **John D. Allard**, an alumnus of CSULB in Microbiology. John is now a PhD postdoctoral fellow at Stanford University."

Kelly G. Carroll, MS Biochemistry, is Vice President and Co-owner of C&C Scientific in Burlingame. "After seven years of working on the research laboratory bench, I started my own company, selling clinical labware internationally and domestically."

Anh Dong, BS Biochemistry, is employed as a chemist with ITT Corp. in Anaheim.

Dwayne D. Gergens, BS (PhD, UC Irvine), joins the faculty of Chemistry at Mesa College in San Diego.

Tim MacAndrew, BS, has moved to Agoura and is taking classes in Computer Science at Cal State Northridge.

Joel McPherson, BS, will be attending dental school at USC this fall. He formerly worked with McDonnell Douglas Corp.

Tom Murphy, BS, is Chief Chemist for Coatings Resource Corp., an industrial coating manufacturer specializing in VOC compliant coatings for plastics, located in Huntington Beach.

Tracy Wheeler, BA (Secondary Teaching Credential, CSU Dominguez Hills), is currently the Advanced Placement Chemistry Teacher at Walnut High School. "I am also the chemistry team leader in the Science Department and GATE Coordinator and club advisor. My chemistry degree has been a great asset to me. I have never had a problem finding a job in the education field. I have been married 12 years and have three children ages 10, 5, and 2."

1988

Susan Boggs, BS, is completing her PhD in inorganic chemistry at UC Santa Barbara. "Although I'm an inorganic chemist, I am currently involved in organic synthesis. I'm in the process of synthesizing a porphyrin capable of chelating a metal at a peripheral site. I am also a video-consultant for teaching assistants of all disciplines. From this experience I have written a paper titled, "The Chemistry Lab Report: A Tool to Teach Critical Thinking Skills," which was submitted to *J. Chem. Educ.*"

Hugh Cecil, BA Biology, Chemistry Minor, has completed his second year of diagnostic radiology residency at the U of Kansas, Wichita.

William M. Cicio, BA (MD, SUNY Stony Brook), has been accepted into the Internal Medicine Post-Graduate Training Program at the Health Sciences Center School of Medicine at the State University of New York at Stony Brook.

Martin Edep, BS Biology, Chemistry Minor, (MD, UC San Francisco), "I am completing my internal medicine training at UC San Francisco and am currently involved in a national research project involving congestive heart failure. I will be starting a cardiology fellowship at UC San Diego in July, 1995. My wife and I are expecting our first child."

Elizabeth Siegfried Ronau, BA, is employed as Project Manager for Geotest in Long Beach. Geotest is an environmental testing laboratory with mobile laboratory capabilities.

Leo J. Stemler, Jr., BS, served as 1994 Chairman of the Orange County Section of the American Chemical Society, and in 1995 on the Section's Education Committee.

continued

CHEMISTRY BIOCHEMISTRY

Alumni News continued

1989

Woody H. Jackson, BA (MD, UC Davis), has completed an internship in surgery at Huntington Memorial Hospital and is practicing medicine at a rural clinic in Belize, Central America.

Martha Speckman, BA (PharmD, UC San Francisco), is a pharmacist at Mills-Peninsula Hospitals in Burlingame after completing a residency at Moses H. Cone Memorial Hospital in Greensboro, N.C.

Louie Wollenberger, MS Biochemistry, has completed his PhD in Biochemistry at Lund University in Lund, Sweden. His PhD thesis was titled, "Isolation and Characterization of the Chloroplast Grana Margins."

1990

Sany Engstrom, BS, MS, 1994, Nutritional Science, is a marketing analyst with the title of New Products Marketing Supervisor with Carl Karcher Enterprises in Anaheim.

Rong J. Guan, MS Biochemistry (MD, Peoples Republic of China), is a medical resident at St. Luke's Hospital, Columbia University in New York City. "Our older son, Patrick, is going to school this summer, and our younger son, Alex, is 6 months old. Both Ping and I will finish our residence training next year. We are planning to move back to Boston where Ping will open a private practice. I will continue my clinical training and basic research at Brigham and Women's Hospital and at Dana Farber Cancer Institute as a Fellow in Gastroenterology. My main focus is to study gastrointestinal cancers."

Rocky Houston, BS Biochemistry, is Associate Chemist with Star Biochemicals in Torrance.

Gary Martinez, BS Physics, Chemistry Minor, is studying for his PhD in Chemistry at UC Santa Cruz. He is in Professor Glenn L. Millhauser's group, studying protein folding. The work of Professor Millhauser is featured in C&EN, June 26, 1995, and includes a photo of Gary and his research group.

Kiana S. Tabibzadeh, BA, MS, 1994, is a lecturer at Irvine Valley College and Pasadena City College, teaching Freshman Chemistry. "I relate my career to the potential energy profile for an exothermic reaction, where my MS from CSULB catalyzed the reaction! My Graduate Assistant and Teaching Assistant experiences in the department were very helpful to me."

Michael Weiler, BS Microbiology, Minor in Chemistry (MD, Medical College of Wisconsin), is a resident in internal medicine at the Medical College of Wisconsin Affiliated Hospitals. His wife **Laura (BA Psychology)** plans to attend law school. The Weilers have two children, Jessica (9) and Jordan (4).

1991

Miki Aurang, BS Biochemistry (MD, St. Louis U School of Medicine), following receipt of the MD in May, began her internship in internal medicine. Her husband, **Rick Csintalan**, will be doing an externship in orthopedic surgery at UC Irvine. He is a fourth-year medical student, also at St. Louis U.

Kimberly Corkery, BS, reports that she and her husband are building a home in Roanoke, Va. She and Dr. Dennis Anjo have just published a paper dealing with Kimberly's work as an undergraduate at CSULB.

Sharon M. McKelvey, BS Biochemistry, is a third-year medical student at the College of Osteopathic Medicine in Los Angeles. "I am doing rotations at Harbor/UCLA, San Bernardino County, Downey Community and Drew/UCLA Hospitals. I will probably go into family practice or pediatrics. In 1993-94 I received the Kiwanis Service Award and a Teaching Assistance Award."

John D. Molloy, BA, is a third-year law student at Pepperdine Law School and clerked during the summer with Anderson McPhaulis and Conners. This fall he is doing an externship with the Department of Justice in Washington, D.C.

Alexander Noveen, MS Biochemistry, is a PhD student at USC.

1992

Donald Crow, BS Biochemistry, began his fourth and final year of dental school at the U of Washington.

Leonard A. Good-Van Wijk, BS, married Gina Marie Good in January in Yosemite National Park.

Giap M. Nguyen, BS, works with Carol Wright Sales, Inc., in Lincoln, Neb., and plans to enter the graduate program in Chemistry at the U of Nebraska, Lincoln.

Tuyen Nguyen, BS, graduated from Cleveland Chiropractic School.

James Peterson, BS, is a PhD candidate, working with Dr. Claude Meares at UC Davis.

"I am investigating a combinatorial library of cyclic peptides for the determination of labile peptide substrates for liver proteases. This work is related to radioimmunotherapy involving certain kinds of cancer, including lymphatic and breast cancer."

Martin Rocha, BS Biochemistry, entered medical school this fall at Creighton University in Omaha, Neb.

Shan H. Young, BS Biochemistry, received her Master's in Public Health degree from Loma Linda U this year.

1993

Alec Greer, MS, is a PhD student at the U of Wyoming in Laramie and has successfully passed all his cumulative examinations. He spent the summer in Denmark performing calculations on $^1\text{O}_2$ oxidations of disulfide systems.

Joann Dao Hong, BS Biochemistry, is working at the Veterans Hospital in Richmond, Va.

Danny K. Fong, BS Biochemistry, works for Hemosphere, Inc., as a Research Associate. "I am currently developing ELISA and CELIA assays to determine fibrinogen content. Hemosphere, Inc., is a start-up biopharmaceutical company located in Irvine. The main goal of our research is development of a platelet sphere with fibrinogen attached to the surface."

Marie Laibinis, BA, is a graduate student at the U of Delaware.

Mark Murray, BS Biochemistry, works as a chemist with Bachem CA in Torrance.

Derrick Myers, Biochemistry, is a medical student at Howard U Medical School.

CHEMISTRY BIOCHEMISTRY

Robert Rzasa, BS, and Rhonda Cunningham were married on June 19 in Long Beach. Robert is a third-year PhD student in synthetic organic chemistry at Texas A&M U.

Jeffrey M. Whitaker, BS Biochemistry, began the MS program in Biochemistry at San Francisco State U where he is a Teaching Associate.

Philip K. Zlakat, BS Biochemistry (Certificate in Hazardous Materials and Transport, Fullerton College), is Operations Manager with HoltraChem Group, Inc., in Anaheim, a company specializing in the manufacture and distribution of industrial hazardous materials. His responsibilities include writing and tracking of MSDs, truck and trailer maintenance for all Western States, technical writing for ISO-9000, training of HoltraChem employees in the appropriate hazardous materials regulations.

1994

Nina Bao, MS, is a chemist with Pyramid Co. in Costa Mesa.

Delina Brassard, BS Biochemistry, works as a pharmacy technician with CVS Pharmacy in Bristol, Conn., and is applying to pharmacy school.

Kristina Gaus, BS Biochemistry, is employed as a Quality Control Associate with Pharmingen in San Diego.

Victor Mandapat, BS Biochemistry, is an MS student in the Biological Sciences Program at UC Irvine.

Darren McDaniel, BS Biology, Chemistry Minor, is an MS student in Health and Physical Education at Syracuse University, studying exercise endocrinology.

Judith Ramillano, BS Biochemistry, is employed by Dep Corp., Dominguez Hills.

1995

Oren Beske, BS Biochemistry, will enter a PhD program in Biochemistry at UC San Francisco this fall. He and Dr. Charles Gorenstein of the Veterans Administration Hospital, Long Beach, have published a paper, "Fate of lysosomes transported to the dendrites by a colchicine-induced mechanism," in *Brain Research*, **669**, (1995) 125-129.

Dana Gilchrist, MS Biochemistry, teaches science at the UC Irvine Farm School. "I am creating a hands-on physical science program for third-to-sixth graders."

Eric Harenburg, BA, is employed with McDonnell Douglas in Huntington Beach.

John Hecht, BS Chemical Engineering, Chemistry Minor, is a PhD candidate at UC Berkeley and has passed his preliminary examination.

Jeffrey Kaplan, BA, BS Electrical and Biomedical Engineering, leaves his job with Quanterra to begin his medical studies at the U of Oklahoma Medical School this fall.

May Ly, BA, is a chemist with Quanterra in Santa Ana.

Hossein Razavi, MS, has successfully passed his preliminary oral examination for the PhD in Organic Chemistry at the U of Arizona. Hossein's research is being conducted in collaboration with Professor Pollt.

Jon Spencer, BS, works as a quality control chemist with the ARCO refinery in Wilmington, Calif.

REPORTS FROM FACULTY AND STAFF

continued from page seven

Ken Nakayama: This past academic year has given me further experience in teaching the non-majors course in organic chemistry. This course has different challenges from the majors sequence, probably the most important being the lack of a suitable textbook. I have also tried to include more biochemical examples and to cover peptides and nucleic acids in some detail. I am also very excited about Chem 420, which will be taught for the first time in fall 1995. It is an advanced lab course which will complete the organic chemistry sequence, and I am looking forward to teaching it with Dr. Stuart Berryhill. In terms of my students, MS candidate, Hossein Razavi, very competently defended his thesis in June. He is doing very well in the PhD program in Chemistry at the University of Arizona. Patrick Middleton, my other MS candidate, is also enjoying success as a synthetic chemist at ICN. He hopes to file his thesis this fall.



Josephine Nguyen, Stockroom Clerk

Josephine Nguyen (our new Stockroom employee): I received my bachelor's degree in Chemistry in 1993 from UC Santa Barbara. While at UCSB I was employed as a student lab assistant. Following graduation, I was promoted to the position of Lab Technician III. A similar position and a chance to be closer to home brought me to CSULB.

Jeannette Santage: I wish I could tell you that we have a new science complex, but I can't. This year we saw the opening of the Pyramid sports complex on campus . . . very unique and impres-

sive. We have a great view of it from the department office. Meanwhile, Hardfact Hill has been almost demolished for a heating and air-conditioning facility at the bottom of the hill. I had the opportunity to participate in many exciting events on campus this year, including the Concerts in the Grove series, the Blues Festival, two wonderful musical events in the new Carpenter Performing Arts Center, and the first Homecoming in the Pyramid. Hope to see some of you at one of our many events on campus in the future.

Nail Senozan: Henry Po and I got our Chemistry 111B lab book published by Hayden-McNeil Publishing. Jerry Devore and I have a paper titled, "Carbon monoxide poisoning and some surprising aspects of the equilibrium between hemoglobin, carbon monoxide and oxygen," accepted by *J. Chem. Educ.*



Angie Taylor, Chemistry Secretary

Angie L. Taylor (our new secretary): I'm a 1974 high school graduate with four children — Jimmy (16), Johnny (14), Summer (12), and Melissa (11). One of my more interesting life experiences was being employed with Pan American World Airlines as a stewardess, where I saw the beauty of several continents. My favorite sites were Switzerland and the island of Bermuda. I have an Associate of Arts degree, with a long-term goal of becoming an elementary education teacher. Working in the Chemistry and Biochemistry Department is nothing less than a great adventure. Each day brings excitement and new challenges!

CHEMISTRY BIOCHEMISTRY



Some members of the 1994-95 Graduating Class. Front row, left to right: Jennifer Lee, Eric Barron, Thinh Dinh, Jason Attalla, Thang Dinh, Brenda Guigli; second row, left to right: Georgia Glore, Dr. Marco Lopez, Su-Ying Lee; third row, left to right: Dana Haley, Dr. Dennis Anjo, Dr. Robert Loeschen, Hue Tran, Dipa Gandhi, Alison Moss, Julie Wendt, Dr. Kenneth L. Marsi; fourth row, left to right: Paul Darby, Neill White, Manfred Kunze, Chad Messer, Michael Hall, Jeffrey Knight; fifth row, left to right: Kaiser Estrada, Daniel Lewis, Ihab Abumuhor, Ali Borazjani, Nadine Haddad.

IN MEMORIAM

continued from page one

Medical Institute. He was tireless in his efforts to help students become professionals and faculty to improve upon their professionalism.

His legacies to the department and the college are the students and faculty he has influenced and the imaginative programs he initiated which we are dedicated to continue.

Dr. Jensen is survived by his wife, Nancy, son, Randy, and daughter, Linda.

Memorial gifts may be made to the J.L. Jensen Scholarship Fund. Checks, made payable to the CSULB Foundation with a notation "J.L. Scholarship Fund," should be mailed to the CSULB Foundation, 6300 State University Dr., Long Beach, CA 90815.

CSULB CHEMISTRY AND BIOCHEMISTRY DEPARTMENT NEWSLETTER

Fall 1995, Number 20

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

Kenneth L. Marsi, Editor

Jeffrey Cohlberg, Associate Editor

Designed and Produced by University Publications

CHEMISTRY BIOCHEMISTRY

Fall 1995, Number 20.

Dear CSULB Chemistry Alumnus:

The faculty and I hope that you have enjoyed reading our twentieth annual *Newsletter* and will take time to send us information about yourself for the next edition. I would also appreciate any comments you might wish to offer about the *Newsletter*—what you enjoy reading, and what you would like to see that has not been included.

Contributions to the Chemistry and Biochemistry Department Alumni Fund are also invited. The CSULB alumni office will be informed of any gift, and contributions will be acknowledged in alumni publications. Money which is received is used for the publication of the *Newsletter*, Chemistry Alumni Scholarships and Awards, and miscellaneous projects which help maintain the quality of our department. You will receive a personal letter of appreciation for gifts in any amount. If you wish to contribute, make your check payable to:

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1. Information about yourself (job, further education, family, scientific achievements, etc.) which you would like included in next year's *Newsletter*: (Continue on the reverse side of this page if needed.)

2. If you have enclosed a contribution, please enter the amount _____. Thank you!

Kindly complete this questionnaire and enclose in the envelope provided.

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