

# CHEMISTRY

# BIOCHEMISTRY

For past and present students and friends of Chemistry and Biochemistry at California State University, Long Beach • Fall 2002 • Number 27

## CONTENTS

Dr. Marsi	1
Dr. Bauer	1
Science Building Update	2
Chairs' Messages	3
Focus on Dr. Lijuan Li	4
Editorial Box	5
Allergan Lecturer: Dr. Marc Kirschner	6
Distinguished Visiting Lecturers	6
Faculty & Staff Report	7
Faculty E-mail	11
New Faculty	12
New Staff	13
Where are they now	13
Department's Early Years	14
Student Awards	16
SAACS News	18
Honor Roll	18
Individual/Corp. Gifts	19
Alumni News	20

## Dr. Marsi Retires

by N. M. Senozan

**L**ast spring Dr. Ken Marsi wrote to us, "I will enter my 75th year this coming fall. I have dedicated a disproportionately large amount of my life to my career and now I would like to enjoy myself in other ways while I am in a good state of health." At the risk of attracting Mrs. Marsi's displeasure, we tried to convince him to reconsider his decision and continue teaching at least on a part-time basis, but it was apparent that he no longer wanted a regular assignment. He is still, however, frequently on campus and we

continue to seek his guidance.

You can reach him at [kmarsi@aol.com](mailto:kmarsi@aol.com).

When I joined Cal State Long Beach in 1964,

Dr. Marsi was an assistant professor with only two years of seniority over me. Darwin Mayfield was then the chair and Roger Bauer (later Dean Bauer) and Edwin Harris had just been promoted to associate professor. Dr. Marsi was in fact the most junior faculty member after me. As the two newest professors, we struck an early friendship. We used to drive to UCLA for seminars together and share our frustrations in launching off our research. Occasionally he expressed concern about the upcoming tenure decision and even mentioned leaving Long Beach.

That his concern was uncalled-for soon became apparent as Dr. Marsi's research on organophosphorus compounds took off. His work broke new ground in the area of the reactions and stereochemistry of these compounds. He and his students published 23 papers between 1969 and 1978. Eight of these

See page 2, Dr. Marsi

## Reflections of Dr. Bauer on Dr. Marsi

by Roger Bauer

students. As with any student projects, some odors did manage to creep into the building at times regardless of Ken's care and attention.

We all appreciate the many years he spent as chair of the department. His leadership was important in developing the reputation of the department as a student-centered one. The newsletters that he developed are a model for the campus and are only one example of his outstanding leadership. We all hope that Ken will continue to add his presence and the benefits of his long experience.



Dr. Marsi retires.

[Editor's note: Dr. Roger Bauer served as chair of the Department of Chemistry and Biochemistry from 1966 to 1975, when he became the founding dean of the School of Natural Sciences. He remained dean of the School until 1988, a period of 13 years that overlaps with Dr. Marsi's tenure as chair.]

I was very pleased when Ken Marsi came to Long Beach as he was another 'transplanted' Kansan added to our faculty. The Chemistry faculty numbered about a dozen at the time and it was a very cooperative and cordial group of individuals. The dedication of the faculty to teaching

and professional activities was always an important feature of our department.

Ken became one of the leaders in our department from both a teaching and research point of view. His teaching is nothing but exemplary. I know that anyone who has attended any of his lectures knows of his well-prepared presentations and unusually clear drawings of molecular structures. Most of us believe that he must have a secret template up his sleeve in order to get such precise structures on the board. His research has been on compounds containing phosphorous. This was the basis of his work and that of his

## Dr. Marsi

appeared in the *Journal of American Chemical Society*, regarded by many to be the most prestigious chemistry journal, and eight in the *Journal of Organic Chemistry*, another premier publication of the American Chemical Society. Meanwhile, his reputation as a teacher was growing. I remember students who went to great lengths to rearrange their schedules so that they could take "Marsi's Organic." He challenged his students and held them to the highest academic standards and they loved it.

Dr. Marsi's research achievements and his superb teaching culminated in 1984 in his recognition as the University Outstanding Professor. The following year he was named the Trustees' Outstanding Professor—a statewide honor awarded in a given year to only one of the 20,000 California State University professors.

Dr. Marsi became the chair of the Chemistry Department in 1975 when the natural sciences spun-off the School of Letters. He devoted himself to his new task with diligence and imagination. He started the present newsletter. The

original two-page black and white paper, now in its 27th year, has blossomed into one of the finest publications of its kind. He kept in touch with many of his former students and through their modest contributions built an endowment for the department now worth \$480,000. And he obtained corporate assistance to sponsor an annual Distinguished Lecturer Program that has featured some of America's greatest scientists including several Nobel laureates [see Distinguished Lecturers elsewhere in this newsletter]. When he entered the Faculty Early Retirement Program in 1996, his students, colleagues and friends established the Marsi Scholarship Fund. The \$1,000 scholarship recognizes an outstanding junior or senior majoring in chemistry or biochemistry.

"I have taught approximately 11,000 students," says Dr. Marsi and he remembers many of them. His level of interest in his students never fails to amaze me. Recently in a thank you note he sent to a former student, now a neurologist, he wrote "You probably remember the following who also went on to medical school" and listed in complete detail seven

classmates. Further down in his letter, Dr. Marsi mentioned eight other classmates of the neurologist who had received DDS's, PharmD's, and PhD's: 15 doctors of medicine, dental surgery, pharmacy and philosophy all from one small organic chemistry class.

Dr. Marsi believed in collegial administration. He found unilateral, heavy-handed, top-down pronouncements shortsighted and counterproductive and often foolish. His respect for scholarship and good teaching was the hallmark of his years as chair. Last month a check for \$500 arrived from a former part-time instructor. The contributor was not an alumnus of Long Beach and his ties to CSULB did not extend beyond the two years he had spent here as a lecturer. Yet those two years with Dr. Marsi as the chair apparently left him with such good feelings for our department that after two decades he still so generously remembers us.

"I've always counted it a privilege to teach," Dr. Marsi remarks often. Throughout his career he tried to rise to the challenge this privilege posed. And he succeeded splendidly.



## Update on the New Science Building

by Robert Loeschen

The new science building now has a name: the Molecular and Life Sciences Center. When we get a building sponsor, their name can be added (Jane Doe Center for Molecular and Life Sciences or something like that).

The contractors are in the process of adding the stucco and brick to the outside walls. The next external work will be the placement of the large air-handling units on the roof (using a large crane) and the installation of the windows. Inside the structure, workers are beginning to install the casework, laboratory benches and the fume hoods, so it is really beginning to look like a science building and the excitement is growing. Of course, there is still a lot to do, and we hope to occupy the building in late spring or early summer.

# Remarks by the Chair

by Douglas McAbee



Dr. McAbee became chair on August 26, 2002.

I was honored this past year to receive a solid vote of confidence from my faculty colleagues who elected me to the department chair. Over the next three years, I will strive to serve the professional endeavors of faculty and promote the learning experience of our students.

Next year brings novel opportunities and challenges to us as a department.

Acquisition of quality faculty is arguably the most important activity we do as a department. In this regard, we were very fortunate to have hired Dr. Michael Myers and Dr. Paul Weers, two new biochemists who bring strong teaching and research credentials and potential to our program. We search for two new full-time faculty this next year in the areas of organic and inorganic chemistry. We also look forward to the completion of the new science building, which should be ready for occupancy by summer 2003. This

facility will house teaching and research labs in the molecular sciences and will be the new home for the department's organic, inorganic and biochemistry faculty.

This past summer, the department faculty began a discussion about our program curriculum and how we can enhance student learning and achievement, a discussion that will continue throughout the coming year. I am excited about being part of this process, and I hope to facilitate a vigorous examination by our faculty of the content, approach and integration of the courses we offer in the department.

A major challenge for our department during the next few years will be to expand and improve our instruction and research in the face of budget restrictions stemming from the state's current financial difficulties. I am confident, nonetheless, in our success because of the quality of our faculty and staff and their readiness to find creative solutions to solve the problems we face collectively. For all these reasons, therefore, I look forward to the 2002-2003 academic year with much anticipation.

## Comments by the Parting Chair

by N. M. Senozan

This year I completed my second three-year term as chair and entered FERP – Faculty Early Retirement Program. Our new chair, Dr. Douglas D. McAbee, assumed his duties on August 26.

After a period of 11 years of de facto hiring freeze, I had the good fortune to oversee the appointment of eight new tenure-track faculty members during my six years as chair. The first appointment was Doug McAbee (biochemistry) in 1997; Lijuan Li (inorganic) followed him in 1998, Paul Buonora (organic) and Chris Slowinski (analytical) in 2000. Chris Brazier and Steve Mezyk, both physical chemists, were hired in 2001. This year Michael Myers and Paul Weers are joining us as the newest members of the biochemistry group. During the next academic year we are authorized to search for two additional faculty in the fields of inorganic and organic chemistry.

The new faculty have heightened the level of research activity in the department and created new opportunities for both undergraduates and



Dr. Senozan served as chair from 1996 to 2002.

master's students to pursue projects in a wide variety of fields. Meanwhile, some very good work is still coming from the faculty who have long passed the days of tenure, promotion, or merit reviews. Dr. Van T. Lieu and Dr. Gene E. Kalbus, both emeritus professors, have published another of their articles, "An

Experiment for the Determination of Molecular Weights of Gases Lighter than Air," in the *Journal of Chemical Education* April 2002.

I am honored to have served as the chair of such distinguished faculty, and I look forward to continuing my teaching and research and my interim work as the editor of this Newsletter. Please keep in touch and share your news with us.

## Focus on Faculty

by Anne Ambrose

# Dr. Lijuan Li



Laymen usually think of iron as something rigid and tough, but the scientific world considers it a transition metal with properties that are valuable in both chemistry and biology.

Supported by three grants totaling \$733,994, Dr. Lijuan Li, associate professor of inorganic chemistry, is examining characteristics of iron and other substances and their possible practical applications in technology and medicine.

"These are two separate parts of one big project," said Li, who specializes in organometallics and transition metals. She received \$44,238 for a two-year study from Research Corporation. The Research Corporation grant focuses on phosphine as a ligand between two metal centers. By trying a variety of different phosphine linkers, "we can examine which kind of phosphine is the best option for electronic communication between two metal centers," Li explained.

She received a second grant of \$25,000 from the American Chemical Society Petroleum Research Fund to expand the research for the next two years. "We're still studying two metal centers and hopefully, through the Research Corporation study, we can identify which linker is the best. Then we start substituting the metal. By changing different ligands around the metal, we can make it into an electron acceptor or an electron donor—choosing a variety of ligands with different properties. Then we can study the series and determine which linker is best, which donor is best and which acceptor is best for electronic communication."

"We specifically chose iron in our study because iron atoms are highly electron rich. We believe it will provide better electronic communication. Basically, the highly electron rich system has never really been studied before. We want to look at whether electronic

communication can be achieved with electron rich systems. If it does, it opens new doors for many other applications."

"We are particularly interested in the differences between the saturated- and unsaturated-linkers, and the donor/acceptor effects on the redox properties," she explained. "Preliminary experiments showed that the unsaturated complexes achieved greater electronic communication. The knowledge generated from this study is significant because it can be extended toward the preparation of many other different metal complexes, including mixed metal systems and polymeric materials. In addition, once these compounds are successfully prepared and reduced, then the salts of these compounds can be prepared. These salts will have many application possibilities, such as electrochemical switches, molecular magnets, capacitors and many other electronic and photonic devices."

The first two grants are materials-oriented, but the third grant addresses another part of Li's overarching research. With \$664,756 from the National Institutes of Health's Support of Continued Research Excellence (NIH-SCORE) program, Li is focusing on biological applications of iron compounds in generating and controlling nitric oxide.

In 1992, *Science* magazine named nitric oxide as molecule of the year. "Ten or 15 years ago, nitric oxide was considered to be a very bad molecule— an environmental pollutant, a toxic radical responsible for L.A. smog and acid rain," Li noted. "But in the last 10 years or so, scientists have found that nitric oxide actually exists in the human body in very small concentrations. It's a biological messenger that is responsible for long term memory, controls clot aggregation, controls blood pressure and can kill microorganisms."

The 1998 Nobel Prize in medicine was awarded to researchers who examined nitric oxide's role in bodily functions. "Because nitric oxide is so important, there is a great need in the scientific society to have a compound that can release it," Li continued. There are many applications. You can directly use it as a cardiovascular relaxing agent. You can use it to control cancer or tumor growth.

"Nitric oxide activity in chemistry and biology is not yet fully discovered. There are more than 5,000 papers alone on this subject each year. A lot more work needs to be done in this area. For people in biology who want to study how nitric oxide works in different systems, they need some kind of model compound to release nitric oxide to help them do their pharmacokinetic studies."



Dr. Lijuan Li and Eric Sundberg. Eric, an undergraduate, discovered a cyclic compound of iron in Dr. Li's laboratory.

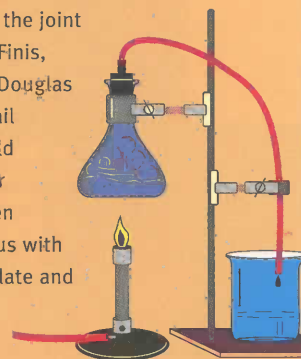
CSULB

Chemistry and Biochemistry  
Department Newsletter  
Fall 2002, Number 27

An annual publication of the Department of Chemistry and Biochemistry for the past and present students and friends of the department. News items, feature articles, photos and comments are eagerly invited. The Newsletter and other departmental news and information may be accessed on the Internet at the following address:

<http://chemistry.csulb.edu>

This issue of the Newsletter has been compiled by the joint efforts of Gina DeFinis, Joyce Kunishima, Douglas D. McAbee and Nail Senozan. We would like to express our appreciation to Ken Marsi for leaving us with an excellent template and to the alumni and friends who have taken the time to inform us.



To send information about yourself electronically for publication in the Newsletter, (1) open the Web site indicated above, (2) click on Newsletter, (3) click on the Fall 2002 logo, (4) on the side bar scroll to Alumni Response.

N. M. Senozan, Interim Editor  
562/985-4941 or 562/985-4842  
e-mail: [nsenozan@csulb.edu](mailto:nsenozan@csulb.edu)

Appreciation is extended to Connie Lane, University Publications, for the Newsletter layout, to Anne Ambrose and Barbara Parks for editorial assistance and to Bob Freligh, Audio Visual Services, David Nelson and Victoria Sanchez, University Publications, for many photographs contained in this Newsletter.

Pharmaceutical firms have a major interest in such results for developing heart, blood pressure or cancer medications. Even Viagra was the result of nitric oxide studies. Li is focusing on isolating non-heme iron nitrosyl compounds. "These type of molecules are responsible for cardiovascular relaxation," Li explained. "There are possibilities that these type of iron nitrosyls act as nitric oxide stores," in controlling how the body regulates nitric oxide.



Dr. Li and Jennifer Morrison, a graduate student in chemistry.

Too much nitric oxide can cause physical problems. "We can't have nitric oxide freely in the body. It has to be somehow stabilized and when the body needs it, it will be released. It has to be stable, but in what form, people don't know. It has been reported that nitric oxide may be stored in some types of non-heme iron nitrosyls. However, we don't know what these structures are like. What we want to do is to isolate biomimic types of molecules so that we can study the structure and say, 'here is what the structure looks like.'"

This research has two goals, she said. "One is to isolate these types of compounds so that we can tell what the structure is like. Structure is related to function. By understanding the structure, we can perhaps even predict some of the functions. The second thing we want to do, in collaboration with Dr. Peter Ford at UC Santa Barbara, is see if nitric oxide can be released from these types of non-heme iron nitrosyl compounds. By investigating the nitric oxide releasing kinetics, we will know if it can be applied to any of these activities such as controlling cardiovascular relaxation, blood pressure or cancer growth."

In addition to these studies, "We are also working on a couple of other projects that seem far away from the metal nitrosyl work. I have students working on electrochromic materials, which have kept our interests for quite a few years now. In fact, one of our areas of expertise is to use electrochemical techniques to investigate the intermediates in inorganic reactions," Li remarked.

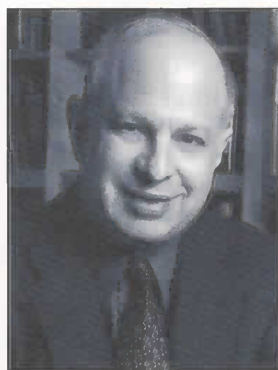
"We have an in-house designed cell that allows us to study in-situ FT-IR (Fourier Transform Infra Red) and UV-Vis (Ultra Violet-Visible) spectroelectrochemistry. In this regard, we have used a combination of electrochemistry and spectroelectrochemistry to investigate the intermediates generated from the reaction of cobalt porphyrin with alkyl halides. Based on our study, a new mechanism involving the reaction of organic radicals with the porphyrin ring was proposed. We also reported the catalytic activities of a variety of metalloporphyrins with different center metals (iron, cobalt, manganese, nickel, copper, zinc, etc.), different substitutes on the porphyrin ligands, different electrolytes and different bases for the electrocarboxylation of alkyl halides reactions," she explained.

"The results show that different metals exhibit different activities. In addition, electron-withdrawing substitutes on porphyrins lead to a decrease in catalytic activity, while electron-donating substitutes on porphyrins enhance the catalytic effects."

Li joined the CSULB faculty in 1998. She received a B.Sc. and M.Sc. in chemistry from Jilin University in Changchun, China and was working on her Ph.D at Jilin's Institute of Theoretical Chemistry before transferring into the doctoral program in chemistry at McMaster University, Hamilton, Ontario, Canada. She has published articles in many leading journals including the *Journal of the American Chemical Society*, *Journal of Polymer Science*, *Journal of Organometallic Chemistry*, *Journal of Electroanalytical Chemistry*, *Organometallics* and the *Canadian Journal of Chemistry*.

## Dr. Marc Kirschner Allergan Distinguished Visiting Lecturer 2002

by Douglas McAbee



Dr. Marc Kirschner, Distinguished Visiting Lecturer of 2002, is Professor of Cell Biology at Harvard.

Our departmental Distinguished Visiting Lecturer in 2002 was Marc W. Kirschner, the chair and Carl W. Walter Professor of Cell Biology at Harvard Medical School. Dr. Kirschner is famous for his wide-ranging work on the means by which cells exert spatial and temporal control during the development of organisms. Since the 1970s Dr. Kirschner's laboratory has done much of the pioneering work that has led to our understanding of the biochemistry of microtubules, the dynamics of their assembly and disassembly in cells, and their role in the formation and action of the chromosome spindle during mitosis, as well as in the growth of axons and in cell locomotion. His investigations into the mechanism of the cell cycle have provided key

insights into the nature of the cyclin proteins which control the timing of DNA replication and cell division and their associated protein kinase enzymes. Recent work also has focused on the role of the fibroblast growth factor in controlling the development of body patterns during embryonic development.

Dr. Kirschner was a professor at Princeton University and the University of California at San Francisco before becoming the founding chair of the Department of Cell Biology at Harvard Medical School in 1998, where he is the Carl W. Walter Professor of Cell Biology. He is a member of the National Academy of Sciences, the Royal Society of London and the American Academy of Arts and Sciences and has served as president of the American Society for Cell Biology and on the Advisory Committee to the Director of the National Institutes of Health. He is the coauthor, with John C. Gerhart, of *Cells, Embryos, and Evolution*.

Dr. Kirschner gave two lectures while at CSULB. His first presentation was titled "Cell Biology and Evolution," a talk for a general audience, which was attended by a large number of undergraduates and faculty within the college. This was an overview of the physiological and evolutionary adaptability exhibited by cells and multicellular organisms. Dr. Kirschner's other lecture was titled "Proteolysis and the Cell Cycle," a description of some of his recent work, focusing on the regulation of the ubiquitin-mediated degradation of cyclins, a key element in the regulation of cell cycle progression.

Besides his many distinguished scientific achievements and contributions, he is also the uncle of Shawn Green, the current All-Star right fielder for the Los Angeles Dodgers.

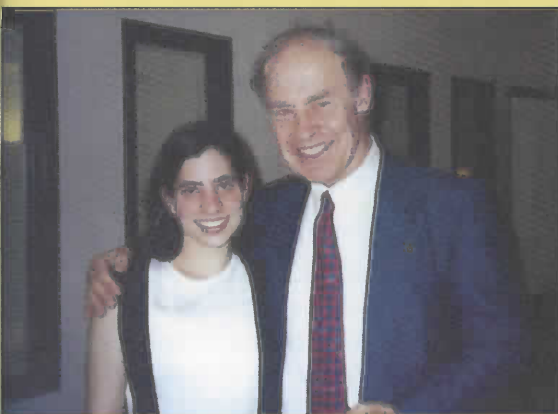
Distinguished Lectureships have been sponsored by Rachele Laboratories (1980-85), UNOCAL (1987-96), Allergan (1997-2002), and by the generous gifts of the alumni and friends of the department.

- 1980 **TAKERU HIGUCHI**, Regents Professor of Chemistry and Pharmacy, University of Kansas
- 1981 **CHARLES CASEY**, Professor of Chemistry (Organometallic), University of Wisconsin
- 1982 **ALBERT LEHNINGER**, Distinguished Professor of Biochemistry, Johns Hopkins University
- 1983 **KENNETH RAYMOND**, Professor of Chemistry (Bioinorganic), University of California, Berkeley
- 1984 **EPHRAIM RACKER**, Albert Einstein Professor of Biochemistry, Cornell University
- 1985 **HAROLD WEINTRAUB**, Senior Biochemist, Fred Hutchinson Cancer Center, Seattle, Wash.
- 1986 **PAUL SALTMAN**, Professor of Biochemistry, University of California, San Diego
- 1987 **JOAN VALENTINE**, Professor of Chemistry (Bioinorganic), UCLA
- 1988 **DONALD CRAM**, Professor of Chemistry (Organic), UCLA. 1987 Nobel Laureate in Chemistry
- 1989 **HARRY GRAY**, Arnold O. Beckman Professor of Chemistry, California Institute of Technology
- 1990 **IGNACIO TINOCO**, Professor of Chemistry (Biophysical), University of California, Berkeley
- 1991 **BRUCE AMES**, Professor of Biochemistry and Molecular Biology, University of California, Berkeley
- 1992 **JERROLD MEINWALD**, Goldwin Smith Professor of Chemistry (Organic), Cornell University
- 1993 **RALPH ADAMS**, University Professor (Analytical Chemistry), University of Kansas
- 1994 **JACQUELINE BARTON**, Arthur and Marian Hanish Memorial Professor of Chemistry (Bioinorganic), California Institute of Technology

## Visiting Lecturers

Chemistry and Biochemistry

- 1995 **NELSON LEONARD**, Reynold C. Fuson Professor of Chemistry (Organic), University of Illinois
- 1996 **F. SHERWOOD ROWLAND**, Professor of Chemistry (Physical), University of California, Irvine. 1995 Nobel Laureate in Chemistry
- 1997 **LESLIE ORGEL**, Director of the Chemical Evolution Laboratory, Salk Institute, La Jolla, Calif.
- 1998 **AHMED ZEWAIL**, Linus Pauling Professor of Chemistry and Professor of Physics, California Institute of Technology. 1999 Nobel Laureate in Chemistry.
- 1999 **C. GRANT WILLSON**, Regents Professor of Chemical Engineering and Chemistry, University of Texas, Austin. Professor Willson was a lecturer in chemistry at CSULB during 1973-74.
- 2000 **DUDLEY HERSCHBACH**, Baird Professor of Science, Harvard University. 1986 Nobel Laureate in Chemistry
- 2001 **CATHERINE FENSELAU**, Professor of Chemistry (Analytical), University of Maryland



Sotiria Contos and Nobel Laureate Dudley Herschbach. The picture was taken during Professor Herschbach's visit in 2000 as the Distinguished Lecturer. Sotiria, now a graduate student working toward an MS degree in chemistry, was at the time an undergraduate.

## Reports from Faculty & Staff



### ROGER ACEY

It has been a very eventful year for my group. A number of new students joined the lab this year. Jennifer Hines, Stacy Huntington, Cortnie Cook and Solange Wasef are the newest undergraduate students while Brian Baker and Yih Horng Tan are graduate students. We have funding from the National Science Foundation (NSF) to study the mechanism of zinc transfer from metallothionein to the apo form of zinc metalloproteins such as carbonic anhydrase and alcohol dehydrogenase. Jennifer has been developing procedures to produce the apo-forms of the two enzymes. The source of the metallothionein is my favorite organism, the brine shrimp *Artemia*. We have isolated the gene for metallothionein from *Artemia* and have applied for a patent on the sequence. The gene has been cloned into two expression vectors, one that expresses the full size protein, the other an intein fusion protein. Bertha, Cortnie and Stacy have been working on determining the conditions for optimal protein expression. Bertha is part of the MBRS program while Cortnie and Stacy are NSF Scholars.

A former student of mine showed that elevated, but non-lethal, levels of copper temporarily delayed the development of *Artemia*. Solange has been analyzing developing embryos to determine which stage of development the copper affects. Solange is a member of the University Honors Program.

As part of our ongoing studies with this protein, we have been able to clone the gene into tobacco. We hope to use this transgenic plant as a model system for phytoremediation of heavy metals. We'd like to think there is a good reason for growing tobacco and hope to convince RJR of the importance of our "little baby."

Yih Horng has been working with the metallothionein gene to study its expression during early embryonic development of *Artemia*. He

has shown that expression of the protein is developmentally regulated, i.e., the older the protein the greater the expression. In contrast, protein expression is inhibited in embryos where normal development has been delayed by copper. Interestingly, the inhibition of cell division by the anti-arthritic drug Auranofin also occurs concomitantly with diminished metallothionein expression. We're excited about these results and hope to secure funding to study the role of metallothionein in cell growth and differentiation.



Shannon Chen, Brian Baker, Dr. Roger Acey, Cortnie Cook, Erick Elchico, Ibrahim Toorawa and Yih Horng Tan.

Awhile back, we used differential display to look at gene expression in cytotoxic macrophages. Judy Chapman, a former graduate student, was able to identify a number of differentially expressed partial transcripts in the macrophages. Brian has been working on getting the full-length sequence for a down-regulated transcript. The partial sequence has not been reported as an EST and, as you might imagine, we are very excited about having discovered this unique gene.

As usual, we also have been able to recruit two students from Whitney High School, Sarah Paiji and Ibrahim Toorawa. In conjunction with Dr. Ken Nakayama's group, they have been studying the effects of aromatic phosphates on cholinesterase activity. We hope to identify compounds that differentially inhibit acetyl- and butyrylcholinesterase.

Finally, I would like to acknowledge the efforts of Mike Mustillo. He has been with us for more than 15 years and I can't say enough about his friendship and his efforts and commitment to the lab. He has been instrumental in growing and characterizing the transgenic tobacco plants.

Fortunately, we are still funded by the NSF and I just received notification that a proposal to conduct a workshop on phage display next summer was approved. On a personal note, I had my second total hip replacement this year and I'm now completely "bionic." I think all the material scientists should be fully funded by the NIH.

#### PAUL BUONORA

The first Long Beach member of my research group, Romina Panoussi, is graduating this semester. Romina was working with Arby Gutierrez on a project involving the use of dendrimers as monomers for dental composites. Arby is one of three Honors in Biological Sciences degree candidates in the group supported by the Howard Hughes Medical Institute. He will be continuing this work through the next year.

The major focus on the research group's work remains organic synthetic methods, and two other Honors in Biological Sciences students, Theresa Phan and Mike Haffziger, are working on our dihydropyridazinone synthesis project. Theresa is a President's Scholar and was working in the group last summer, while Mike joined the group in the spring.

Group members Mia Angela, Yu Jin Lim and Oscar Oo have developed an assay protocol so that we can study the conversion of bicyclic lactams to our target dihydropyridazinone and hydroxamic acids. Yu Jin and Oscar will continue this work in the coming year. Luke deSelm, who earned his BS in biochemistry in the department, and Crystal Jenkins became the first graduate students in the group since I came to CSULB. They are also working on the dihydropyridazinone synthesis project.

As Dr. Goldish moved to Academic Affairs I took over advising for the undergraduate chemistry majors. I sincerely thank Dr. Goldish and Dr. Merryfield, and Gina DeFinis and Wanda White in the office for their patience and help as I continue to master the system.

In the fall, I was able to teach the laboratory portion of the Advanced Organic course under Marco Lopez and the first semester of the yearlong organic chemistry class. Many years ago I resolved to find a method of teaching organic chemistry that made the course accessible to more students. I spent a considerable amount of time in the fall reorganizing my first semester of the yearlong organic chemistry class. In the spring I wrote a paper for the *Journal of Chemical Education*, presenting a mnemonic device I use in that class. Beyond her research Yu Jin Lim also accepted the challenge of tutoring me on the use of the program Illustrator as I prepared the paper.

#### JEFF COHLBERG

My sabbatical work at UC Santa Cruz has led to a publication: Cohlberg, J. A., Li, J., Uversky, V. N., and Fink, A. L. (2002) "Heparin and other glycosaminoglycans stimulate the formation of amyloid fibrils from  $\alpha$ -synuclein *in vitro*," *Biochemistry* 41, 1502-1511.  $\alpha$ -Synuclein is the protein found in the Lewy body deposits in neurons of people with Parkinson's disease.

As an offshoot of my sabbatical training in protein aggregation, I've embarked on a new research program, studying the aggregation of the enzyme copper-zinc superoxide dismutase. Many people think that aggregation of SOD is responsible for amyotrophic lateral sclerosis (Lou Gehrig's disease). The work is a collaboration with Professor Joan Valentine of UCLA, whose laboratory has produced a large number of the mutant SOD's which are associated with ALS. I've obtained funding for this work from both Research Corporation and the ALS Association. Undergraduate students Hadjhr Ahrns, a Howard Hughes fellow, along with Erika Handoko and Shaina Magness, have been working on the project.

I'm also finishing up some work on neurofilament assembly, with the aid of superb assistance by Chiharu Kumagai. Chiharu just graduated and is going on to a Ph.D. program in neurobiology at SUNY Syracuse. Paula Spencer completed writing her M.S. thesis on the lamprey neurofilament protein while working at Amgen.

This year we instituted the use of the booklet of molecular modeling exercises in Chem 441A, first semester biochemistry. All students now learn how to use the program Rasmol to display protein structures from files



Shaina Magness, Hadjhr Ahrns and Dr. Jeff Cohlberg

in the Protein Data Bank. I'm currently preparing material for Chem 441B to use Rasmol for displaying nucleic acids, to help students learn about the structures of DNA, transfer RNA and ribosomes.

We vacationed in Turkey this summer, where I ran into Les Wynston and his wife, along with Nail Senozan's brother, in a hotel lobby adjacent to a well-known restaurant. Small world!

#### NANCY GARDNER

After high school I came to CSULB as a student in search of a four-year degree in home economics. My senior year in pursuit of that goal, I took my first chemistry course. It was at that time I realized I had pursued the wrong major and should change to chemistry. Because of the timing, I was unable to do so, but promised myself to do just that at the first opportunity.

I spent the next six years living in Saudi Arabia and traveling to many wonderful countries such as Greece, Germany, England, Thailand, Turkey, Switzerland, Italy and many more. I learned to appreciate through art, science and history an understanding of other cultures and people. I met many wonderful people and spent a lot of time with young children. It was then I realized I wanted to be a teacher.

Upon returning to the United States, I began to work toward that goal. I created a hands-on science program for an elementary school and worked to organize and train parent volunteers to teach science in elementary classrooms. That experience confirmed my desire to teach. I started back to school and pursued a degree in chemistry at CSULB, taking classes



from many wonderful teachers who inspired me to pursue a career in teaching chemistry at a college level. With encouragement from Dr. Marsi, I decided to teach Introductory Chemistry at CSULB upon completion of my degree.

For five years, I have taught Introductory Chemistry and have made changes in this course including writing a solutions manual for the text, reviewing other introductory texts, creating a Web site and revising the laboratory manual.

In the spring of 2001, I joined the Integrated Teacher Education Program and worked with Dr. Margaret Merryfield and Dr. Mike Myers to create a new chemistry course, Explorations in Chemistry, for elementary education majors and to author a lab-lecture manual for the class. I enjoy working with the pre-service teachers in this course and learning from their enthusiasm about teaching. The Faculty Development Center awarded a grant to Dr. Myers and me to incorporate a service-learning component in this course. The service-learning component has been a wonderful learning mechanism for these teachers. The students work with Jim McKibben in the Science Learning Center (SLC), adding to the exhibits already there, creating new exhibits and teaching students visiting the SLC a lesson in chemistry. Our pre-service teachers have found this to be the most valuable component of the course, giving them confidence and experience in teaching chemistry to young adults and students visiting the SLC.

I have attended ACS meetings and symposiums for science education to enhance our curriculum and teaching techniques and have presented at science education symposiums for our course Explorations in Chemistry.

Dr. Ron Garber and I received a grant from the Faculty Development Center to develop assessment methods for Introductory Chemistry and General Chemistry. This has already helped us to improve our success rate with Introductory and General Chemistry as we continue to re-evaluate our assessment methods and curriculum for these courses.

#### **VAN T. LIEU AND GENE E. KALBUS, EMERITUS PROFESSORS**

We have published an article, "An Experiment for the Determination of Molecular Weights of Gases Lighter than Air," in the

*Journal of Chemical Education*, Volume 79, April 2002.

#### **TOM MARICICH**

I am continuing to serve as seminar coordinator for the department and welcome our research-active alumni and friends to suggest seminar speakers (including yourselves) for our program. Our alumni serve as wonderful role models for our students. The seminars continue to be held on Wednesdays at 4 p.m. and the schedule can be found on our department Web site: <http://chemistry.csulb.edu>.

Three students have been involved on my research projects this past year. Between teaching several classes for the department, Andrea Chen is completing her studies on alkylation reactions with a chiral sulfonimide and other alkylation reactions in collaboration with an undergraduate, Dustin Wride. They have shown that sulfonimidate alkylation of thiophenol and benzyl alcohol can be accomplished by an acid catalyzed promotion with borontrifluoride etherate or tetrafluoroboric acid. We will investigate sulfur-oxygen competition with thiol alcohols. Andrea discovered that reaction of a sulfonimidate with a sulfinic acid exclusively alkylates the oxygen atom to give a sulfinate ester.

Andrea Chen received the Spring 2002 CSULB Student Alumni Association Golden Apple Award for excellence in teaching. Her award message states that Ms. Chen is being recognized for her "amazing teaching ability and commitment to giving a higher education to our fellow CSULB students."

Another student in my group, Omonigho Aisagbonhi, received a McNair Scholarship for research during the summer of 2002 and continuation during the academic year. Omo has been engaged in developing another approach to sulfonimidate esters based upon some methods in the patent literature.

#### **DOUGLAS MCABEE**

The 2001-2002 year was a busy and fruitful time for me and members of the lab. Pat Pierce, the senior graduate student in the lab, is just finishing his thesis work on isolation and identification of serum lactoferrin-binding proteins (Lf-BP). Pat, with the very capable assistance of undergraduate research associate Jennifer Laprise, successfully identified several serum Lf-BPs as host defense proteins complement C4,  $\alpha_2$ -macroglobulin and immunoglob-

ulin G. We are really excited about where this work will be going during the next year, and Jennifer will be actively working on this project. Pat, Jennifer and I will be writing and submitting a manuscript describing this work by December 2002 or January 2003. Jennifer presented this work last April at the ACS-sponsored Southern California Undergraduate Research Conference held at CSU Northridge

Cathie Overstreet had a very productive year, making important strides in her work on generating and analyzing glycosylation mutants of bovine lactoferrin. She successfully introduced a number of unique ligation sites into the lactoferrin cDNA (pN16b) so that the cDNA could be directionally inserted into *Pichia* expression vectors. She also generated multiple glycosylation mutants using the same approach, so that she now has lactoferrin cDNAs with one, two, or all three consensus N-linked glycosylation domains altered. Starting in the summer, she began her expression and analysis of these recombinant variant proteins, a very exciting prospect and a payoff for Cathie who has worked so hard the last two years to get to this point.



*Vincent Yee, Cathie Overstreet, Grace Jung, Dr. Doug McAbee and Jennifer Laprise*

Vincent Yee is also near completion of his M.S. thesis work. Vince has been working on examining the effects of in vivo Fe-overloading of rat hepatocytes on the endocytic function, lectin activity, and cellular distribution of galactosyl receptors. Vince has worked hard to correlate these effects using various spectroscopic, biochemical, immunological, and cell biological techniques. We anticipate that he will finish his thesis work this fall.

Grace Jung, a second-year M.S. student, has been working on expression and analysis of recombinant lactoferrin-transferrin chimeric

proteins, specifically examining the regions of the lactoferrin molecule necessary to interact with the galactosyl receptor on hepatocytes. We have received hybrid cDNAs of human lactoferrin and transferrin from Dr. Anthony Schryvers (Univ. Alberta), which we are expressing in Sf9 insect cells using a baculovirus expression system. This is an entirely novel expression system for us, so Grace has had the difficult and time-consuming task of working out the expression of these variant hybrid proteins. Through her persistence, she has been able to get expression of one important hybrid protein, and she is now in a position to examine its ability to interact with galactosyl receptors. We are very excited about this area of investigation, and Grace has impressed us all with her hard work and enthusiasm. She has been designated "The Immunoblot Queen" in the lab as a result of the number of Western blots she has done in the last several months.

We have had to say good-bye to Sergio Lopez, an undergraduate research assistant and MBRS fellow who worked in the lab for two years on various projects. Sergio completed his undergraduate work last summer, and is now working in the pharmaceutical industry here in Southern California. Eva Morlok also finished her work this past year, graduating this spring with degrees in biochemistry, chemistry and English. She was also inducted into Phi Beta Kappa this spring. Most notably, Eva was married this summer to Arthur Rickman, a graduating microbiology major at CSULB whom Eva met in a physiology course they took together. Congratulations Eva! Sonya Botero, another undergraduate research assistant, has had an eventful year, having worked last summer in the lab of Dr. Robert Evans (Oxford University, England) as a MIRT fellow. Sonya has been working alongside Grace on expression and analysis of lactoferrin-transferrin hybrid proteins.

My own activities have focused primarily on research and teaching. This past year, I taught sections of the major's biochemistry course (441A/B), shared teaching duties with Dr. Cohlberg in biochemistry laboratory (CHEM 443), and coordinated one section of the biochemistry graduate colloquium (CHEM 595A), where I learned an awful lot of new information about protein trafficking mechanisms. I also became the undergraduate advisor for biochemistry in the department, taking

over those duties previously held by Drs. Goldish and Merryfield (to whom I still go for help). Much of my scholarly time this year has been advising students in the lab and writing grant proposals. We learned very recently that my proposal for an NIH AREA grant was successful, which will allow us to continue our work on lactoferrin structure-function analysis.

In February, I was chosen to become chair for the department when Dr. Senozan retired in August. I am honored to be selected by my faculty colleagues for this duty, and I will endeavor to confirm by action their trust in me for this position. It is, therefore, with great anticipation that I look forward to the next academic year.

#### STEPHEN MEZYK

I joined the Chemistry and Biochemistry faculty at California State University, Long Beach in August 2001. My research interests are varied, but are concentrated in studying the kinetics and mechanisms behind the chemistry that occurs in the area of environmental remediation, particularly in the areas of drinking water purification and waste stream cleanup. My particular focus is the reaction of oxidizing and reducing transients with contaminant chemicals. These studies are conducted by generating short-lived transients, using particle accelerators and lasers, and monitoring the loss of contaminant chemicals in real time. My chemical interests also are being extended to looking at the reducing and oxidizing chemistry of biochemical systems, as well as the higher temperature reactions of metal ion species.

**Research Activities:** During the first few months of 2002 three research trips—to the Radiation Laboratory, University of Notre Dame and Argonne National Laboratory, Chicago—were undertaken in order to use their pulsed electron accelerator and laser facilities. Three of my undergraduate students also had their first experience with these Department of Energy facilities, working on the following undergraduate research projects in my group:

*Annie Chi:* "Peroxy Radical Formation in the Aqueous Destruction of Gasoline Additives" This work studies the kinetics and mechanisms involved in the removal of contaminant gasoline additives (for example, methyl *tert*-

butyl ether, MTBE) from ground and drinking waters. These contaminant chemicals are introduced by gasoline combustion and spills, and are concentrated in natural waters due to their inherent stability and solubility. To remove these contaminants requires new innovative techniques such as Advanced Oxidation Processes (AOP's). In these experiments, one of the major steps in the degradation, the formation and subsequent removal of peroxy radicals for several different ethers, was characterized.

#### *Chris Milne:* "Matrix Effects in the Reductive Destruction of Chloroform in Water"

This work concentrated upon determining the chemistry involved in removing Disinfection By-Products (DBP's), such as chloroform, from drinking water. These DBP's are produced when chlorine added for bacterial disinfection reacts with natural organic matter. While laboratory measurements have established the rate constants for the reductive removal of chloroform in pure water, natural waters containing large amounts of dissolved organic matter may interfere with these processes by complexing the contaminant organic molecules. In our studies, we found that the removal (reaction) rate for chloroform in the presence of alcohol was far slower than reported in the literature, with aggregates seeming to be formed at higher chloroform concentrations.

#### *Kelly Ross:* "Superoxide Reactions with Metal Ions in Solution"

This work investigates the oxidation and reduction kinetic behavior of complexed metal ions in aqueous solution. These "simple" complexed ions are model systems for metal-containing biochemicals (for example, metallothioneins) and our interest lies in how such thermodynamically stable bound metals can be exchanged so readily between biochemicals. Our initial measurements were focused on the reactions of superoxide ( $O_2^-/HO_2$ ) with  $Cu^{2+}$  and  $Fe^{2+}/Fe^{3+}$  ions in aqueous solution.

Other research projects also were initiated during this period. These involved studying (1) mechanistic and kinetic chemistry involved in the radiolytic degradation of contaminant pesticides (such as 2,4-D and 2,4,6-T) and aromatic organics (e.g. naphthalene), (2) reactions of hydrogen atoms with biochemicals (amino acids) in aqueous solution

at biological pH, (3) reaction of hydrogen atoms with corrosion product metal ions ( $\text{Ni}^{2+}$ ) at high temperatures of interest to nuclear reactor power chemistry.

During this period I lectured in two courses, CHEM 377A and CHEM 377B. The CHEM 377A course is the first semester of the standard physical chemistry course aimed at the biochemistry majors taught at CSULB and concentrates on thermodynamics. CHEM 377B is the second semester of this course, with the focus being on kinetics, quantum mechanics and spectroscopy.

### KEN NAKAYAMA

Over the past year or so, my group has been working in collaboration with that of Professor Roger Acey in some enzyme inhibition studies. During the summer of 2001, Navindra Deoram and Dana Johnson prepared a series of alkyl phosphates which were then employed in cholinesterase inhibition studies by the Acey group. During this past summer, we prepared more advanced analogs of the inhibitors studied in 2001. Four undergraduates participated in this work: Dana Johnson, Ken Law, Long Nguyen and Elena Parada. I was fortunate to have Sotiria Contos, a master's degree candidate, as a co-worker who oversaw the undergraduates' efforts.



Dr. Ken Nakayama, Ken Law, Elena Parada, Long Nguyen, Dana Johnson and Sotiria Contos

I also taught the full year of organic chemistry (Chem 320A and B) during the past academic year. For the first time, I presented much of the course material via PowerPoint. I also utilized the Blackboard e-learning technology for establishing better communications with my students. Both have been a learning experience and I am sure I will continue to employ both approaches to varying degrees in the future.

On a personal note, my wife and I were blessed this past May with the arrival of our son, Kendall Yuji. Our 3 year-old daughter Karissa has adjusted to his presence in our family quite smoothly. I hope that it will stay that way.

### HENRY PO

My graduate student, Chosu Khin, presented her research in October 2001 at the Western Regional ACS meeting in Santa Barbara. She reported the results on the kinetics and mechanism of the oxidation of thiouracils and thiopyrimidines by silver(II) complexes using a Hi Tech stopped-flow instrument. Chosu has received a fellowship from UCSB where she is pursuing her Ph.D. this fall and working with Professor Peter Ford.

The article that Dr. Senozan and I have written on the history and limitations of the Henderson-Hasselbalch equation was published in the *Journal of Chemical Education* (volume 78, pp. 1499-1503, November 2001).

Based on this paper, we successfully incorporated a computer modeling experiment into Chemistry 111B on the pH titration profile of a weak acid comparing graphically the exact and approximate methods of calculations. We revised our laboratory manual this summer.



**ROGER ACEY**  
racey@csulb.edu

**DENNIS ANJO**  
danjo@csulb.edu

**PETER BAINE**  
pbaine@csulb.edu

**STUART BERRYHILL**  
sberryh@csulb.edu

**CHRISTOPHER BRAZIER**  
cbrazier@csulb.edu

**PAUL BUONORA**  
pbuonora@csulb.edu

**JEFFREY COHLBERG**  
cohlberg@csulb.edu

**DOROTHY GOLDISH**  
goldish@csulb.edu

**LIJUAN LI**  
llj@csulb.edu

**ROBERT LOESCHEN**  
foesch@csulb.edu

**MARCO LOPEZ**  
lopezm@csulb.edu

**TOM MARICICH**  
tmaricic@csulb.edu

**DOUGLAS McABEE**  
dmcabee@csulb.edu

**MARGARET MERRYFIELD**  
mmerry@csulb.edu

**STEPHEN MEZYK**  
smezyk@csulb.edu

**MICHAEL MYERS**  
mmyers2@csulb.edu

**KEN NAKAYAMA**  
knakayama@csulb.edu

**HENRY PO**  
hpo@csulb.edu

**NAIL SENOZAN**  
nsenozan@csulb.edu

**KRZYSZTOF SLOWINSKI**  
kslowins@csulb.edu



# New Biochemists

## Join the Faculty

### Dr. Michael Myers


**D**r. Michael P. Myers became a full-time faculty member this fall as an Assistant Professor of Biochemistry. He has been lecturing in the department part-time since the fall of 1999.

"As a post-doc at UCLA, I heard great things about the Department of Chemistry and Biochemistry at Long Beach from alumni of the department," Dr. Myers stated. "A fellow post-doc told me of a part-time lecturer position at CSULB and I jumped at the chance to teach general chemistry here." Dr. Myers taught CHEM 302 (Survey of Biochemistry) that semester while working as a NIH postdoctoral fellow in the laboratory of Diane Papazian in the Physiology Department of the UCLA School of Medicine.

Michael's work at UCLA focused on the biogenesis of voltage-gated potassium channels. These channels were first cloned by his mentor, a Harvard Ph.D. in biological chemistry, while she was in the Yan lab at UCSF (*Science*. 1987 Aug 14;237(4816):749-53). Dr. Myers received his Ph.D. in physiology from the University of Rochester School of Medicine and Dentistry in Rochester, N.Y. in 1998. His research on potassium channels has been published in journals of biotechnology, neuropharmacology and most recently in biological chemistry (*J Biol Chem*. 2001 Sep 7; 276(36): 34028-34).

"My current research interest still lies in the structure, function and biogenesis of potassium channels," Dr. Myers commented. "I remain fascinated by the complexity and physiological significance of these proteins." Recently completing a visiting professorship at Kansas State University in the laboratory of Dr. Kathy Mitchell (Assistant Professor of Molecular Pharmacology in the Department of Anatomy and Physiology) has broadened his research interests. "A colleague of mine has involved me in looking at the biochemistry of stem cells," he remarked. Stem cells have come under increased scrutiny for their ability to differentiate into virtually any cell type (*Science*. 2002 Jun 21; 296(5576): 2126-2129). "It's time for the biochemists to get involved," Dr. Myers stated. "We want to know what chemical markers these cells are expressing and when along their path of differentiation."

In addition to research, Dr. Myers has unique teaching credentials. He received an M.S. in Science Teaching and Curriculum in 1991 from the Warner School of Education and Human Development at the University of Rochester in Rochester, N.Y. Dr. Myers taught high school chemistry as a New York State certified teacher in West Irondequoit High School in Irondequoit. This background made him an excellent choice as a panelist this year for the National Science Foundation. In early August he served on the 2002 Review Panel for proposals submitted to the 2003 NSF-Graduate Teaching Fellows in the K-12 Education Program competition. The panel was convened at NSF headquarters in Arlington, Va.



Paul Weers (left) and Michael Myers.

Dr. Myers' undergraduate degree is in Comprehensive Science with a concentration in Chemistry from Roberts Wesleyan College in Rochester, N.Y. Michael was born in Batavia, N.Y. and his family resides in the area around Buffalo and Rochester. He now lives in Rancho Palos Verdes.

### Dr. Paul Weers

**D**r. Paul Weers obtained his master's degree in Chemical Biology in 1990 and his Ph.D. in Biological Sciences in 1994, at Utrecht University, Utrecht, The Netherlands. Following a brief postdoctoral program on the role of fatty acids in Limnology, he was awarded an Alberta Heritage Foundation for Medical Research Fellowship to carry out medical research in the Department of Biochemistry, University of Alberta, Edmonton, Canada (1996-2000).

In the summer of 2000, he took up an assistant research scientist position at Children's Hospital Oakland Research Institute, Oakland (CHORI). During his stay in Canada, he studied the molecular aspects of the interaction of exchangeable apolipoproteins with lipids, besides learning to appreciate the long and bitterly cold winters at the foothills of the Canadian Rockies. Apolipoproteins play an essential role in lipoprotein metabolism and are associated with lipid-related diseases. They exist as a helix bundle protein in the lipid-free state and undergo a remarkable switch to a biologically active "open-conformation" upon lipid association. Employing a combination of protein biochemistry, molecular biology and spectroscopy, he aims to unravel the mechanism of apolipoprotein-lipid interaction and gain insight into the lipid-bound conformation of apolipoproteins.

Dr. Weers has 24 publications to his credit in leading peer-reviewed journals such as *Biochemistry*, *The Journal of Biological Chemistry* and *Journal of Lipid Research*, and has won awards at the Canadian Lipoprotein Conference, Mont-Tremblant, Québec (1999) and CHORI Research Symposium, Oakland, California (2002) for excellence in lipoprotein research. He looks forward to joining the Department of Chemistry and Biochemistry in January 2003, and to pursue his research goals and teach students various aspects of biochemistry. He enjoys interacting with students and involving them in his research efforts to gain insight into the structure and function of this fascinating class of proteins.

When not in the lab, Dr. Weers likes hiking, bird-watching and practicing nature photography. He takes pleasure in listening to music and playing squash and soccer.

# WHERE ARE THEY NOW? WHERE ARE THEY NOW? WHERE ARE THEY NOW?

## **TINA CHAMBERS**

BS Biochemistry  
Varian, Harbor City, California

## **LIANG PING CHEN**

BS Biochemistry  
Medical School, Philippines

## **NENG CHHEAN**

BS Biochemistry and Chemistry  
New England College of Optometry in Boston

## **LUKE DeSELM**

BS Biochemistry  
BS Chemistry Program, CSULB

## **RACHEL HARDING**

BS Biochemistry  
MBA, UC San Diego

## **TZU-CHI HSU**

BS Biochemistry and Chemistry  
MS Biochemistry Program, CSULB

## **CHARLES JOHN**

BA Chemistry  
Spectrum Chemicals, Gardena, California

## **KIAN KANI**

MS Biochemistry  
PhD Bioinformatics Program, UCLA

## **RHONDA MOELLER**

BS Biochemistry  
Either Medical School at UCSD or PhD  
at UC Irvine.

## **EVA MORLOK**

BS Biochemistry and English  
MS English Program, CSULB

## **YVONNE NGUYEN**

BS Biochemistry and Chemistry  
Advanced Sterilization Products, Irvine,  
California

## **PHOUNG MAI NGUYEN**

MS Chemistry  
ICN Pharmaceutical, Irvine, California

## **VAHID SHAKIBAI**

BS Biochemistry  
Medical School, UC Davis

## **PAULA SPENCER**

MS Biochemistry  
Amgen, Thousand Oaks, California

## **KHANH TU**

BS Biochemistry and Chemistry  
Pharmacy School, Western University

## New Staff Members

### George Saxon



George (Buddy) Saxon is the new Administrative Support Assistant for our department. Buddy joined our department as a temporary hire in April of

2002 and decided to continue his position in July on a permanent basis. Buddy is a native of southeast Texas where he was employed by the U. S. Postal Service for six years. Two years ago he visited our area and decided to make it his home. He is a part-time student, majoring in Mathematics Education, and full-time employee. His hobbies include traveling, reading, movies, keeping fit and volunteering at the Geffen Playhouse in Los Angeles.



### Bertha Macias



Bertha Macias began work with us this summer as an Instructional Support Technician. She first came to us in the summer of 1999 as a

transfer student from Long Beach City College and joined the Bridges summer research program under the direction of Dr. Roger Bauer. In June 2000 she joined the MBRS program and began research in Dr. Roger Acey's Biochemistry laboratory. Two years later Bertha completed her BS degree in Microbiology with a minor in Chemistry. What she enjoys most is spending time with her husband and two children. "Nothing is more important than dedicating time to your family."

# Early Years of Chemistry & Biochemistry at CSULB

by Darwin Mayfield



The faculty in mid 1970s.

*[Editor's note: After serving 34 years as professor and for many years as director of the Office of University Research, Dr. Darwin Mayfield retired in 1990. In appreciation of his dedication to teaching, the students of the College of Natural Sciences and Mathematics established the "Mayfield Award" that is given annually to a professor selected by the students to be the best.]*

The academic origin of California State University, Long Beach (then Long Beach State College) is certain. Classes started in September 1949. Graduates since then remain Forty-Niners. However, there is uncertainty as to the origin of Chemistry and Biochemistry as an academic department at CSULB. Fortunately, uncertainty is not an unfamiliar concept to chemistry majors. Heisenberg's Principle is introduced in freshman texts. This article will suggest that an exact date for departmental origin may change even as you read.

For a start, let us seek a first mention. As early as Academic Year (AY) 1952-53, the college catalogue listed under the heading of Chemistry a mélange of courses such as Chemistry in Everyday Life, Chemical Analysis, Survey of Chemistry, along with Fuels, Oils and

Greases and Solvents, Lacquers and Paints. All were taught by part-time instructors. Chemistry was part of the Physical Science subunit within the Division of Natural Sciences. A physiologist, Kenneth Johnson (Ph.D., USC), was Division Head.

No mention was made in the earliest catalogues of a curriculum leading to a degree in chemistry or in the physical sciences. But by AY 1954-55 the traditional quartet of Gen Chem, Qual/Quant, Organic, and Physical Chem appeared although Paints, Oils, Fuels, etc. remained. In 1954, Kenneth Bartlett (Ph.D., Stanford) was appointed the first full-time faculty member in chemistry. Bartlett remained for two years and then moved to Southern Oregon State College in his native state. There he served for many years as department chair while enjoying the renowned Ashland Shakespeare Festival located just down the main street from the college campus.

In September 1955, two young chemists, Robert Henderson (Ph.D., UCLA) and Edwin Becker (Ph.D., Wisconsin) joined Bartlett on campus. With three faculty members in place, there is high probability that 1955 might be

regarded as the year of official genesis of chemistry on the CSULB campus. Or might it be 1956? Becker and Henderson were joined in 1956 by another pair, Darwin Mayfield (Ph.D., Wisconsin) and Donald Simonsen (Ph.D., Indiana). It was these four pioneers who participated in the arduous tasks of moving to a promised new haven with fireproof walls and working hoods. They came from temporary wooden structures located on Lower Campus (now called North Campus). Overland and uphill! Seemingly endless were the chores of ordering chemicals and equipment to serve the laboratories in the new science building (now the western two-thirds of PH2). All four instantly immersed in the minutiae of State Purchasing Procedures. Course development was still a more important task. Selection and hiring new faculty had high priority. They somehow found time to teach chemistry to students.

The chemistry faculty grew rapidly to meet the demands of science and engineering majors. By AY 1964-65 the full-time faculty numbered 15. In addition to the four mentioned earlier, they included the following:

- 1957 Julie Parker Kierbow (Ohio State)  
Clyde Osborne (California)
- 1958 Dorothy Bowman Goldish (California)  
John Stern (Washington)
- 1959 Roger Bauer (Kansas State)  
Edwin Harris (California)  
A.G. Tharp (Purdue)
- 1961 Kenneth Marsi (Kansas)
- 1962 Willard Beattie (Minnesota)
- 1964 Nail Senozan (California)  
Ruth Vincent (Harvard)

As early as AY 1955-56, basic requirements for a major in chemistry appeared in the catalog and a year later the offerings were enlarged to include *Instrumental Analysis, Biological Chemistry, Clinical Chemistry, Thermodynamics, Radiochemistry and Glassblowing*. Robert Henderson was appointed Coordinator, Physical Sciences (1957-59) and then Head, Physical Sciences and Mathematics (1959-61). Henderson was a central figure in promoting high standards for teaching, research and scholarship, standards which have guided the department to this day. Graduate work in chemistry leading to the M.S. and the M.A. degrees was approved in fall 1959. Eight graduate courses plus unit credits for Research, Seminar and Thesis were announced. During this period, research grants began arriving from Research Corporation and the National Science Foundation (Henderson and Mayfield).

The first bachelor degrees with a chemistry major were awarded in spring 1958. Graduates

included Phillip Anthony, Robert Barrett, Allan Bike, Roger Coulter, Ross Davis and Lloyd Peak. Among the Class of 1959 were Wilhelmina Loring Hathaway, Morgan Emerson, Donald Mellem, Arnie Petersen and William Rogers. Early recipients of the M.S. or M.A. degree in chemistry included Allan Bike '61, Robert Hutchings '62, John Jasnosz '63 and Arie Passchier '63.

In 1961 Chemistry received recognition as an independent department within the Division of Natural Sciences. Donald Simonsen was elected Chair of the new department for a three-year term and in 1964 was succeeded as Chair by Darwin Mayfield. The American Chemical Society, following an application process and site visit, approved the curriculum of the department in 1965. Our ACS student affiliates group (SAACS) became active soon thereafter.

Folklore is often part of the heritage of a thriving organization. Our chemistry faculty from every period have their favorite anecdotes. Here are a few from the early days:

Four-Person Offices – During the late '50s, rapid expansion of faculty and slow increase in space necessitated cozy quarters in offices designed for one or two faculty members. This made for quick acquaintances and folklore galore.

The Day a Future U.S. Vice President Visited the CSULB Chemistry Stockroom – Arnold Gandrud, who had served as Minnesota Secretary of State while Hubert Humphrey was Governor, retired to Long Beach in the late

1950s. Gandrud had taken chemistry courses in college. To fill some empty hours, he became the first chemistry stockroom manager. During a campaign visit to California, Humphrey stopped by for a visit with his old friend, Arnold. The stockroom location remains the same as it was on that day.

Who Is Familiar With the Kjeldahl Procedure? – In 1956, soon after moving into the new science building, four young chemists found a laboratory fitted with a row of heavy lead-lined hood ducts. Four chemistry Ph.D.s couldn't figure out the purpose. It was eventually learned that one of the building consultants had read somewhere that a proper chemistry lab should be equipped to run Kjeldahl analyses. Kjeldahl by then was an obsolete process for analyzing organically bound nitrogen.

It's All in the Name – The Chemistry Department had been budgeted locally to order an early model Nuclear Magnetic Resonance Spectrophotometer (NMR). The order was denied in Sacramento on the grounds that anything nuclear was too dangerous to be in the hands of college students. The following year a request was submitted for a Proton Magnetic Resonance Spectrophotometer (PMR). Order approved.



The faculty in mid 1980s.

# AWARDS to Chemistry & Biochemistry Students

## Endowed Awards

### ROBERT B. HENDERSON AWARD

The Robert B. Henderson Award was established by Dr. Henderson's family, colleagues and friends to honor his memory. Dr. Henderson was a member of the Chemistry and Biochemistry Department from 1955-83 and a distinguished scientist and teacher of organic and general chemistry. Recipients for this award are chosen from among bachelor's and master's graduates as those best exemplifying Dr. Henderson's scholarship and commitment to the profession of chemistry. This year's award of \$1,000 was presented to **CHOSU KHIN** and **RHONDA MOELLER**.



CHOSU KHIN



RHONDA MOELLER

Chosu is a Summer 2002 graduate with a M.S. degree in Chemistry who will enter the Ph.D. program in chemistry this fall at UC Santa Barbara. Rhonda graduated Magna Cum Laude in May with a BS degree in Biochemistry.

### KENNETH L. MARSII SCHOLARSHIP

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



LARISSA MARIA BALOGH

### MICHAEL MONAHAN FELLOWSHIP



GIAN PAOLA GACHO

The Monahan Award was established through a generous bequest of Dr. Michael Monahan, an alumnus of our department who received his B.S. in chemistry in 1963 and his Ph.D. in 1968 at UC San Diego in physical organic chemistry. While an undergraduate he was a research student of Dr. Robert Henderson. He was a distinguished scientist and a member of the faculty at the Salk Institute and subsequently a senior research scientist with Beckman Instruments. Dr. Monahan was also the founder and president of California Medicinal Chemistry Corp. In 1985-87, following his retirement, he served as a lecturer in our department. According to his will, the income from his bequest is to be used to support student research in our department. This is the fifth year this \$2,500 award has been given and the recipients are **GIAN PAOLA GACHO** and **YIH-HORNG TAN**. Gian is a master's candidate in chemistry under Dr. Li and Tan is a master's candidate in biochemistry with Dr. Acey.

### SPYROS PATHOS IV AWARD

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



ELDA CONAWAY



JASMINE SHAW

**JASMINE SHAW** are this year's awardees. Elda and Jasmine are both working toward B.S. degrees in chemistry.

### DAVID L. SCOGGINS AWARD

This award memorializes David L. Scoggins, a 1968 B.S. chemistry graduate of CSULB and a graduate student and teaching assistant in the Department of Chemistry at the time of his death in 1969. This award recognizes outstanding scholarship and promise by a graduating chemistry or biochemistry student who intends to pursue a career in one of the health-related professions. The Scoggins scholar this year is **VAHID SHAKIBAI**. Vahid is a May 2002 Phi Beta Kappa graduate with a B.S. degree in biochemistry. Vahid, presently a medical student at the University of California, Davis, also received the Khalil Salem Award and the Robert D. Rhodes Award.



VAHID SHAKIBAI

### JOHN H. STERN AWARD IN PHYSICAL CHEMISTRY

The Stern Award, consisting of a cash prize, is given in memory of Dr. John H. Stern, internationally known for his work in solution thermodynamics and author of many publications in that field. The award was established by colleagues, former students and friends of Dr. Stern, who was a member of our faculty from 1958-87 and a distinguished teacher of physical and general chemistry. **PHUONG T. NGUYEN** was named as the Stern awardee for 2002. She is working toward a B.S. degree in Chemistry.



PHUONG T. NGUYEN





## Subject Area Awards

Freshman Chemistry Award: **ANDREW WADE FORRESTER**; American Chemical Society Polymer Chemistry Award: **KEVIN DENNIS LORTON**; Analytical Chemistry Award: **ROGER YORK**; Merck Award in Organic Chemistry: **LARISSA MARIA BALOGH** and **ERIC BORDEN SUNDBERG**; Biochemistry Award: **JENNIFER KAUK**



ANDREW WADE FORRESTER



ROGER YORK



ERIC BORDEN SUNDBERG



JENNIFER KAUK



## Departmental Awards

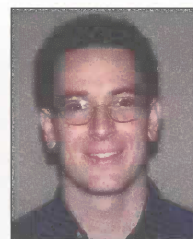
Toni Horalek Award for Departmental Service: **TZU-CHI HSU** and **JENNIFER GUZZO**; Hypercube Award: **ROGER YORK**; Diagnostic Products Corporation Scholarship: **BRIAN BAKER** and **CATHIE OVERSTREET**; Departmental Honors at Graduation: **LAURA BUTLER** and **EVA MORLOK**; American Institute of Chemists Baccalaureate Award: **BRIAN SIPPEL**; American Institute of Chemists Graduate Award: **CHOSU KHIN**



TZU-CHI HSU



JENNIFER GUZZO



BRIAN BAKER



CATHIE OVERSTREET



LAURA BUTLER



EVA MORLOK



BRIAN SIPPEL



## College Awards

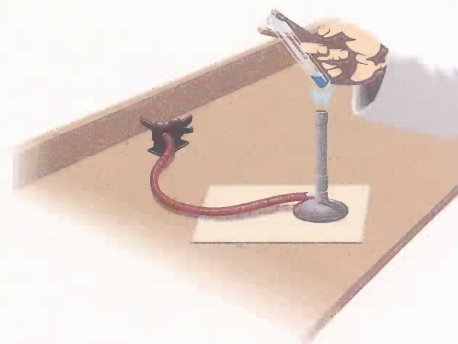
Graduate Dean's Honor List: **CHOSU KHIN** and **PAULA H. SPENCER**; Kenneth L. Johnson Award: **DMITRY PERVITSKY**; Robert B. Rhodes Award: **VAHID SHAKIBAI**; Khalil Salem Award: **VAHID SHAKIBAI**



PAULA H. SPENCER



DMITRY PERVITSKY



# SAACS News

The Student Affiliates of the American Chemical Society (SAACS) was busy in 2001-02, sponsoring activities and events to foster interest in the chemical and biochemical sciences at CSULB. Our membership grew to 21 Student Affiliates and we look forward to gaining more members in the next year.

Our biggest event of the year was the tour of Allergan, a local pharmaceutical company, generously arranged by Dr. Stephen Ruckmick and Kathy Kurjan. At the orientation, a long discussion ensued regarding Allergan's newest "cosmetic" product Botox. Many students were visibly impressed by the technology at Allergan's research facilities; the super-conducting NMR's, HPLC's and mass spectrometers, etc. left a lasting impression on us. The visit opened many students' eyes to the real world applications of chemistry and biochemistry in industry. The tour ended with a very generous reception provided by Allergan.

SAACS continued to hold semi-monthly meetings throughout the year, providing pizza and drinks for members and interested students. We held two joint meetings with the chemical engineering club and the American Institute of Chemical Engineers (AIChE). We hope to have a continuing relationship with these organizations in order to bring the students of chemical engineering and chemistry and biochemistry closer together. In addition, SAACS continued to sponsor the coffee and donut hour every Friday for students and faculty within the department.

We were pleased to host guest speaker Denise Lutz, from Kelly Scientific, during one of our regular meetings in the fall. Denise discussed interview techniques, resume writing and internships in the chemical and biochemical sciences. We gained valuable knowledge from Denise's presentation. At the annual CSULB Kaleidoscope fair in April, SAACS had a table and shared chemistry demonstrations



with the young audience in attendance. We also offered tutoring in the spring semester and created a SAACS Web page to keep students and faculty updated on our events and activities.

SAACS also sponsored several social events throughout the year. The fall semester was kicked off with the traditional student and faculty mixer and potluck, graciously hosted by Dr. and Mrs. Peter Baine, which introduced new students to the faculty and current graduate students. The fall semester ended with a holiday potluck dinner, hosted by Nancy Gardner. The spring semester was started with the annual Spring Fling party hosted by Dr. and Mrs. Nail Senozan. The spring semester ended with the annual pizza party at Ecco's hosted by SAACS on the last day of instruction. Also, during the spring semester SAACS hosted a dinner and bowling night for the Student Affiliate members.



## Honor Roll of Individual Donors (J)

COURTENAY W. ANDERSON  
GARY L. BAKER, MD  
EPHRAIM BEN-ZVI, PHD  
PRABHA & JAGMINDER BHALLA, MD  
TERESA MARSÌ & DAVID BOTHMAN  
NORMAN R. BYRD, PHD  
RAY R. CALLOWAY  
RONALD AND KATHLEEN CARROLL  
STEPHEN CASTELLINO  
DAVID A. CHERNIK

LORI JO CHILDRES, MD  
ROBERT CURIALE  
VIOLETA D. DADUFALZA  
JACK H. DEAN, PHD  
JAMES DEOLDEN  
ERIC DERBYSHIRE  
FRED H. DORER, PHD  
GREGORY J. DORSMAN  
HENRY ERAN, PHD  
STEPHEN FRITCH

DARYL M. FUKUDA  
RONALD GARBER, PHD  
NANCY GARDNER  
VICTOR C. GEARHART  
DWIGHT GERGENS  
BERNARD L. GOEDERS  
ELIHU GOLDISH, PHD &  
DOROTHY GOLDISH, PHD  
THOMAS GOYNE, PHD  
ALEXANDER GREER, PHD

E. SHEREE HALL  
SHARON MCKELVEY HANSEL, DO  
DIANE COLEY HEAD  
MARGARET HOHLY  
JIMMY HOLSTEIN  
WILLIAM HULBROCK  
JANET HUNTING  
ROBERT O. HUTCHINS, PHD  
THOMAS I. ITO, PHD  
CHARLES I. JOHN

## Gifts by Individuals



During the 2001-02 fiscal year the department received gifts totaling \$24,968.90. Of this amount, \$17,024.50 was given in cash by individuals. The faculty, staff and students of our department are very grateful for your generosity.

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

**CSULB Foundation/Chemistry Fund  
Department of Chemistry and Biochemistry  
California State University, Long Beach  
1250 Bellflower Boulevard  
Long Beach, CA 90840-3903**

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

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

Thank you!

## Corporate Gifts to the Department

The total value of gifts to the department, in-kind and cash, during the fiscal year ending June 30, 2002 was **\$24,968.90**. Gifts from business and industry amounted to \$6,813 in cash and \$1,131 in in-kind gifts.

We wish to acknowledge the help of the following persons in assisting us in securing gifts for the department: Dr. Thomas Ito, Jeff Jetter, Denise Lutz, Dr. Ray Maddalone, Dr. Ken Marsi, Patricia Maxwell, Martin Sobczak and Dr. Ercan Unver.

Companies and foundations contributing in-kind and/or cash gifts are listed:

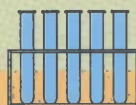
Allergan Foundation\*  
American Chemical Society, Analytical Division  
American Honda Motor Co., Inc.  
Anasazi Instruments, Inc.  
Diagnostic Products Corp.\*  
Hypercube, Inc.  
Kelly Scientific\*  
Merck and Company, Inc.  
National Starch and Chemical Foundation, Inc. (Ablestik Labs.)\*  
TRW\*

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

BP Amoco Foundation, Inc. (Renee Hermes)  
Boeing\* (Dr. Norman Byrd and Dr. Arie Passchier)

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

(July 1, 2001–June 30, 2002)



PEGGY KLINE, PHD  
JOHN D. KULLUK  
SHAIENDRA (SHELLY) KUMAR, PHD  
KATHERINE CHRISTOPHERSON  
KURJAN  
PETE LADJIMI  
JOHN E. LEEB  
EDWARD R. LEVY  
TIMOTHY MACANDREW  
LEWIS E. MANRING, PHD &  
MARIANNE MARSİ, PHD

PHILLIP D. MARCHIS  
KENNETH L. MARSİ, PHD &  
IRENE MARSİ  
DARWIN & NORMA MAYFIELD, PHD  
DAVID MAYNARD, PHD  
DIANE (COLEY) MCGANN  
PATRICK A. MCKAY  
CHARLES & FRANCES MC LUEN  
DAVID MOROMISATO, MD  
MICHAEL MUEGGE  
JOANNE A. F. MYERS

FRANK NORTON, PHD  
DAVID R. OLIVER, PHD  
CATHIE OVERSTREET  
DOROTHY PAKES  
ARIE PASSCHIER, PHD  
MELANIE M. GRADY PATTERSON  
PATRICK PIERCE  
MARY E. PORTER  
MICHAEL L. PORTER  
DIANA REED, MD  
ROBERT RZASA

ARMANDO G. SAMANIEGO, PHD  
JEANNETTE & SPENCER SANTAGE  
JAMES R. SCOTT, DDS  
NAIL AND DIANE SENOZAN  
ALAN J. SENZEL, PHD  
ARON THALL, PHD  
WILLIAM A. THOMASSON, PHD  
GREG L. WHITAKER, MD  
VIRGINIA WHITCHER  
CARTER WHITE, PHD

# Chemistry ALUMNI Biochemistry NEWS

*We very much appreciate the time you have taken to inform us about yourselves, and we always enjoy hearing from you. The information which you send us about your careers is often shared with students who are considering professions in chemistry, biochemistry, medicine, dentistry, pharmacy, law, etc. Alumni having both bachelor's and master's degrees from our department are listed under the year they received their bachelor's degree. To communicate about the Newsletter or to send information, write to: Dr. N. M. Senozan, Department of Chemistry and Biochemistry, California State University, Long Beach, Long Beach, CA 90840. FAX: 562/985-8557. E-mail: nsenozan@csulb.edu*

1960 - 1969

#### DR. FRED H. DORER

(BS Chemistry 1961, PhD 1965 University of Washington) retired from CSU, Bakersfield as Provost and Senior Vice President for Academic Affairs. He writes, "Son Garrett, MA from American University in Cairo, is now working for Chemonics, an A.I.D. contractor in Egypt. Son Russell, MD/PhD from University of Washington, is a resident and postdoctoral fellow at Harvard University. Wife Marilyn, BA in Business from CSULB, 1958, and Fred are both retired and enjoying themselves. Fred does some part-time work with Western Regional Accreditation Agency."

#### DR. ROBERT HUTCHINS

(MS 1962, PhD 1966 Purdue University) is G. Sasin Professor of Organic Chemistry at Drexel University, Philadelphia, Pa.

#### DIANE MCGANN

(Graduate work in organic chemistry, 1966, MA in Education 1987) is now a teacher in the Santa Ana Unified School District. She received the 1998 SCALACS Award in high school chemistry teaching and the 1999 Western Regional Teaching Award of the American Chemical Society. Also, she has been nominated for the James B. Conant Award for 2003. McGann writes, "Teaching chemistry has been a marvelous career for me. I was a single mother, newly divorced with three children when I entered the CSULB Master's program. I am

proud to be a CSULB alumnus. I love the challenge of chemistry." She kindly notes, "Your department [at CSULB] is spectacular."

#### DR. JAMES F. MYRTLE

(MS Chemistry 1966, PhD) is Vice President for Clinical Affairs, MediSpectra Inc. in Lexington, Mass. He writes, "An update on what I'm currently doing can be obtained by turning to my company's Web site: [www.medispectra.com](http://www.medispectra.com). Further information on my past career activities can be found by clicking on Senior Management in the Company Profile section of the Web site. [They can even find a photo there.] Greater detail on my work can be found in Nordstrom, R.L., Burke, L., Niloff, J.M., Myrtle, J.F., "Identification of Cervical Intraepithelial Neoplasia (CIN) Using UV-Excited Fluorescence and Diffuse-Reflectance Tissue Spectroscopy." *Lasers in Surgery and Medicine* 29: 118-127 (2001). We can identify neoplastic epithelial lesions without even touching the patient, a technique some refer to as optical biopsy. The application we are currently working on has the potential to replace the Pap smear. I am responsible for setting up and running our clinical trials. We completed six clinical studies involving over 1,400 patients in the past year.

"I keep in touch with one alumnus: Tim Geiser, BS, 1966. Tim, with a PhD from Cornell, works with Applied Biosystems in Foster City, Calif. By the way, my wife of 35 years, Monica, worked as a technician with beef heart mitochondria in the laboratory of Louis Perlmutt at CSULB while I was working on my MS."

#### DONALD FERM

(BS Chemistry 1968) has been with US Borax since 1964. Since 1988, he has been involved in application research directed toward use of company products as fire retardant additives. His present job title is Senior Research Chemist.

#### DR. JAMES SCOTT

(BS Chemistry 1968, DDS University of Southern California) is currently a dentist in Fresno. Dr. Scott was in the first general chemistry class that Dr. Senozan taught at Cal State Long Beach.

#### STEVE SLONIM

(BS Chemistry 1969, MS Chemistry 1974 University of California, Irvine) worked in the medical device field as supervisor of the quality assurance departments of three different companies until he decided to go into teaching. He taught chemistry and calculus at Estancia High School and Costa Mesa High School in Costa Mesa.

We are saddened to hear that in 1998 Steve was injured in an automobile accident that left him severely brain damaged. He now lives in a special residential home in Long Beach. Although severely disabled, he can still remember some of the chemistry and math learned at CSULB.

#### SANDY WRIGHT-SLONIM

(BS Chemistry 1969, MA Human Resource Management) married Steve Slonim, also a graduate of the Chemistry Department at CSULB (see above). They celebrated their 32nd anniversary in May. Sandy has been the supervisor of the chemistry department in the clinical laboratory at St. Mary Medical Center since 1982. Before that, she was the assistant director at St. Jude Medical Center in Fullerton.

**PAUL SCHUMANN**

(BS Chemistry 1971) is self-employed in the area of capital raising and debt negotiation. He writes, "I have been very successful in solving problem debts and have helped over 100 companies stay in business."

**ART BROWN**

(BA Chemistry 1973, MA Education, United States International University) is a teacher at Marina High School in Huntington Beach.

**PETE LADJIMI**

(BS Chemistry 1974, MS Chemistry 1976) lives in Long Beach and works for Conoco-Phillips in Wilmington in the area of environmental chemistry.

**PRABHA BHALLA**

(MS Biochemistry 1975) is studying computer science, which is "a new adventure for me."

**E. SHEREE HALL**

(BS Chemistry 1977) is a high school physics teacher and department chairperson in Corona-Norco Unified School District. "I'm very happily married; have two children; and 11 years of teaching high school physics and sometimes chemistry. After working 14 years in industry, I went back for my teaching credential. I feel very good about what I am accomplishing now."

**DR. DAVID TANG**

(Chemistry student 1977, DDS 1982 UCLA) is a self-employed pediatric dentist. He writes, "I'm married to Kathryn and have one son, Jarrett. Kathryn was formerly a lab technician for Shell and now runs my office. Jarrett enjoys swimming, baseball, football, basketball and rollerblading."

**DR. JOAN DIANE BAISCH**

(BS Chemistry 1978, DMD 1983 University of Washington) works as a dentist in E. Patchogue, New York.

**GREG DORSMAN**

(BS Chemistry 1978, MS Chemistry 1983) is working as a formulation chemist and operations manager at Danville Materials in Santa Ana. He writes, "Two years ago, I founded a research laboratory dedicated to discovery and development of new products to restore teeth. This year, we have received two 510K approvals from the FDA to allow us to market our new products. My son, Nick Breslin, is also involved in the effort. He

received his BS in Chemistry from Cal Poly SLO this year and plans to teach high school chemistry."

**BETTY JANE BURRI**

(MS Biochemistry 1978, PhD 1982 University of California, San Diego) is a research chemist with Western Human Nutrition Research Center at UC Davis. She writes, "I have settled in at Davis and am now an adjunct professor there as well as continuing my real job with the Department of Agriculture. My husband Kurt is retiring from San Francisco State University. SFSU really has a great retirement system - he is only in his early 50's. I am still travelling to interesting places for my work on Vitamin A and beta-carotene. We've recently been to Hanoi, Vietnam (very nice once you get past the airport), Montreal, Honolulu and Chicago. The trip to Chicago was memorable because we were travelling on Sept. 17, just a few days after the planes resumed flying. They gave us all 'lucky beads' and bumped us up to first class."

**VIRGINIA RUALO BLEICH**

(BA Chemistry 1979) is an environmental specialist with Valero Energy Corp. in Wilmington, Calif. She writes, "Current position is in the Environmental Affairs Department of Ultramar refinery, a subsidiary of Texas-based Valero Energy Corp. As an environmental specialist, I oversee the regulatory compliance of the logistics area of the refinery. Agencies involved are EPA, SCAQMD, LACSD, regional water board, etc."

**STEPHEN FRITCH**

(MS Chemistry 1979, MPA 1991) is working as a forensic chemist for the city of Long Beach.

**DR. STEVE JONES**

(MS Chemistry 1979, PhD University of California, Riverside) is the owner and manager of Jones Environmental Labs, Inc. in Fullerton.

**SUZANNE SCHOIJ**

(BS Chemical Engineering 1979, MBA 1992) is petroleum engineer with the city of Long Beach, Department of Oil Properties. She writes, "I'm in my 19th year with the city of Long Beach and I enjoy the work and the camaraderie. I am frequently on campus as I chair the Chemical Engineering Advisory Council and am fairly active with the department."

**DR. FRANK NORTON**

(Chemistry 1978-80, PhD 1985 UC Davis) is a clinical researcher and Associate Director at Alpha Therapeutic in Los Angeles.

**BILL WUHRMAN**

(MS Chemistry 1980) is working in Germany for SAP, a German software company. He manages a group of freelance writers and editors that is responsible for writing the company's global brochures.

**DAVID EWERT**

(BS Chemical Engineering 1981) writes "I have been working for Halliburton Energy Services since graduating from CSULB in 1981. I got married in 1987 (Nancy) and have two girls, Carolyn (12) and Kristen (9). I have authored several technical papers and hold three patents in energy-related processes."

**RENEE HERMES GENGLER**

(BA Chemistry 1982, MBA 1991, Pepperdine) works as a senior inventory accountant with British Petroleum. She recently married and resides in a new home in Long Beach not far from the campus. She writes, "The new home is very satisfying, large, with a vegetable garden and corn, 4 feet tall. British Petroleum recently activated our Carson refinery as a Foreign Trade Zone. As the West Coast crude accountant, I work closely with the refinery, third party storage location, and the U.S. customs. Many refineries in Southern California are going to FTZ status. This enables the refinery to import foreign crudes duty free, increasing cash flow as long as the refined products are exported. Exported products would include jet fuel products fueling international flights. A very exciting time - my completion of the CSULB Global Logistics Certificate in 1999 has been very beneficial. The contacts I have made at the Port of Long Beach have been very valuable. CSULB continues to serve me since my graduation in 1982."

**DR. DAVID MOROMISATO**

(BA Chemistry 1982, MD 1986 Loyola School of Medicine) is with the USC Keck School of Medicine as a pediatric critical care provider.

**DR. DIANE WALDMAN REED**

(BA Chemistry 1982, MD 1988 UC Irvine) is working as a neurologist in Florida. She writes, "I'm thankful for the excellent education and support at CSULB when applying to medical school."

**JOE KAUFMAN**

(BS Chemistry 1983) is Vice President in the Bioinformatics division at Agilix Corp. in New Haven, Conn. He co-founded Agilix Corp., a genomics and proteomics company, in 1999 in New Haven. The company is developing the next generation universal DNA microarrays.

**ERIC DERBYSHIRE**

(BA Chemistry 1984) is employed as the Sales and Marketing manager at Hiatt Manufacturing in Minnesota. Hiatt makes metal products, specializing in durable consumer goods for the lawn and garden market. Eric is married to Gretchen and they have two sons, Luke and Max. He writes, "My degree in chemistry has served me well over the years. I got an excellent education at CSULB."

**DWIGHT GERGENS**

(BS Chemistry 1984, MS Chemistry 1986, MBA 1988) is employed as Principle Business Analyst at Ablestik Co. in Rancho Dominguez, Calif. He writes, "I have been traveling more these past two years as we roll out our ERP system globally, i.e., Japan, Korea and U.K. We also have two children, Austin 3 and Laura 1."

**ELLEN GREENMAN**

(BS Chemistry 1984, Certificate in Landscape Architecture 1999 UCLA) is a math teacher in the Los Angeles Unified School District and also works as a landscape architect for Lawrence R. Moss and Associates. She writes, "Having spent the last two and a half years working half time in the landscape architecture field, I am now embarking full time into the world of landscape architecture. I expect to be licensed soon, which will open up many more opportunities. My daughter graduated in May with an English degree from UC Berkeley and is figuring out what to do next – perhaps a career in writing."

**RITA REGGIO**

(MS Biochemistry 1986) teaches in the Long Beach Unified School District.

**ROBIN UNDERWOOD**

(BA Chemistry 1986, MS Environmental Engineering 1990 USC, MBA 2001 USC Marshall School of Business) is the director of alumni affairs at the University of Southern California. She writes, "I have a new position at USC as the director of alumni affairs for the Marshall School of Business with management of over 63,000 alumni. Newly married to Drew Doty in June 2002." Drew Doty is the recipient

of the Leo V. Bilger Navy Region Southwest Award as commanding officer of a Seal Beach Naval Weapons Station Reserve Unit."

**DR. JOEL MCPHERSON**

(BS Chemistry 1987, DDS 1999) practices dentistry in Seal Beach..

**DR. GARY L. BAKER**

(Attended 1985-88, MD 1992 UC Davis School of Medicine) works as a physician in Southland Pain Management Centers in Lakewood.

**DR. CARTER J. WHITE**

(BS Chemistry 1989, PhD Inorganic Chemistry 1994 Iowa State University, JD 2001 University of Houston Law Center) is a patent attorney in Houston.

**1990 - 1999****DR. GREG WHITAKER**

(BS Biochemistry 1990, DO 2001 Nova Southeastern University) is an anesthesiology resident at the University of Tennessee.

**DR. ROBERT W. DOEBLER**

(BA Chemistry 1991, PhD Biophysics 1997 University of Virginia) is the Bioengineering Laboratory Coordinator at Keck Graduate Institute at Claremont University Consortium in Claremont, Calif.

**CLYDE JONES**

(BS Biochemistry 1991, MS Biochemistry 1994 Tufts University) is a Senior Implementation Analyst at Thermo Electron. His wife, Cecilia-mello, is almost finished with her PhD in biology at Johns Hopkins.

**MICHAEL MUEGGE**

(BS Biochemistry 1991) is a quality assurance validation specialist at Bayer Corp. in Berkeley, Calif.

**JON COOK**

(BA Chemistry 1992) is a senior engineer in the area of medical device manufacturing at Arthrocare Corp. in Sunnyvale, Calif. He writes, "I am doing product development in the medical device field and I am engaged to be married to Kira, who is a winemaker. Northern California is treating us well."

**DR. SHARON MCKELVEY HANSEL**

(BS Biochemistry 1992, DO 1996 Western University Health Science) is owner/physician of Advanced Family Medicine in Aurora, Colo. She writes, "I've been self-employed as a solo practitioner for over two years and loving it." She and her husband Steve were expecting their first child in August.

**JOYCE MIYAGISHIMA**

(BA Chemistry 1993) is a laboratory associate and group leader at Nichols Institute of Diagnostics in San Clemente, Calif.

**IRIS GALANIS**

(BS Biochemistry 1995, MS Food Science 1997 Chapman University) is a quality assurance manager with The Cheesecake Factory in Calabasas Hills, Calif. She writes, "I'm 28 years old and still single. I've been with The Cheesecake Factory for three years. Part of my job includes managing a micro lab where all incoming ingredients, intermediate items and finished goods (cheesecakes) are tested. I'm responsible for training employees on safety of food handling and GMP's, Good Manufacturing Practices."

**MICHAEL BARRETT**

(BS Biochemistry 1996) works for Wyeth as a territory specialist selling vaccines to pediatricians.

**DELINA BRASSARD**

(BS Biochemistry 1996, BS Accounting 2000 University of Minnesota) works as a corporate tax accountant at the Toro Co. in Minnesota.

**MARJAN FARIDPAK**

(BS Biochemistry 1996, Teaching Credential 1997) teaches chemistry and physical science at Mission Viejo High School in Calif. She writes, "Got married in August 2000 in Hawaii, been teaching for four years and it is the most rewarding job. We are in the process of remodeling our house."

**DR. DANIEL FARNEY**

(BS Biochemistry 1996, Doctor of Pharmacy 2001 University of Maryland) is finishing his post graduate residency in Milwaukee at Froedtert Hospital. He plans to move back to California in the near future and work in a critical care setting.

**MATT KOUTROULIS**

(BA Chemistry 1996) writes in a message sent to Dr. Marsi, "I wanted to let you know, both for personal interest and for the next issue of the

department's newsletter, that I have just been hired as full-time (tenure-track) instructor at Rio Hondo Community College in Whittier. The interview topic was Hofman Rearrangement. All went well and I look forward to teaching beginning in the fall. As part of my new position, I plan to try and upgrade the organic laboratory; they do not currently have a gas chromatograph or an FTIR. My current plan is to call up the labs in the local areas and see what they were planning on throwing out or in the process of updating. Thank you as always for your support; without you, that first seed of interest in organic chemistry would likely have never blossomed for me.

**DR. ANTHONY MEDAK**

(BS Biochemistry 1997, MD 2001 University of California, San Francisco) is in his second year of residency in emergency medicine in Oakland.

**PHILLIP D. MARCHIS**

(BS Chemistry 1998) is a radiochemist and a staff research associate at UCLA.

**JANET L. HUNTING**

(BS Chemistry 1999) is a graduate student at Cornell University working on her PhD. She was the Outstanding Graduate of the College of Natural Sciences and Mathematics in 1999.

2000 - 2002

**SOFIA E. AGUERO MERAZ**

(BS Biochemistry/BA Chemistry 2000) writes, "I got married in August 2000. I have been accepted to Stanford Medical School and I will start school this summer."



*Sofia and her husband*



*John Kulluk (BS Chemistry 1967, MS Chemistry 1969) sent us this photograph of the chemistry/biochemistry graduating class of 1967. Some of the members we could identify are: front row, second from left, Alan Senzel, fourth, Marge Hohly, fifth, Larry Lenon; back row, first from left, Larry Copeland, second, Tom McLaughlin, fifth, John Kulluk. Kulluk writes, "Enclosed is a photograph taken in spring of 1967 outside SC1 (now called Peterson Hall 1). After this picture, I became a graduate student of Dr. Stern down in the basement of the other Science Building with Dr. Senozan. Presently, I am the Hazardous Material Analyst for the Torrance Fire Department. I am married (second time), have two children, ages 24 and 18, and live in La Crescenta (north of Glendale)."*

**SADAF URSANI**

(BS Biochemistry/ BA Chemistry 2000) is a quality control chemist with Peptisyntha, Inc. in Torrance, Calif.

**JARED ASHCROFT**

(BS Chemistry 2001) is a graduate student at Rice University working toward a PhD on an NSF fellowship. He says, "Tell Sotiria 'sorry' about the flood."

**MATT HARRIS**

(BS Biochemistry 2001) is a medical student at USC. He writes, "The first year of medical school has been intense. If it wasn't for the excellent education I received from the Department of Chemistry and Biochemistry, I would not have done as well as I have thus far."

**CHARLES I. JOHN**

(BA Chemistry 2001) is a quality-control chemist and laboratory analyst at Spectrum Chemicals and Laboratory Products in Gardena. He says, "I wanted to establish a versatile and strong educational foundation in chemical and laboratory sciences by the time I graduated with my bachelor's. I hope to test, train and acquire valuable job skills and real laboratory experience as a chemist and analyst for another four to five years. Then I would like to come back to concentrate and apply all that I have learned to specialize and pick up more instrumental and organic training as a graduate student and earn my master's degree."

**JOHN LIARAKOS**

(MS Chemistry 2002) is a part-time lecturer in the Chemistry and Biochemistry Department at CSULB. John is responsible for a large introductory chemistry course taken primarily by nursing and allied health students.

CALIFORNIA STATE UNIVERSITY, LONG BEACH  
DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY  
1250 BELLFLOWER BOULEVARD  
LONG BEACH, CA 90840-3903

Nonprofit Org.  
U.S. Postage  
**PAID**  
Permit No. 301  
Long Beach, CA

RETURN SERVICE REQUESTED



*Members of the 2001-2002 Graduating Class with several members of the Chemistry and Biochemistry Department Faculty*

*In addition to meeting fully its obligations of nondiscrimination under federal and state law, CSULB is committed to creating a community in which a diverse population can live and work in an atmosphere of tolerance, civility, and respect for the rights and sensibilities of each individual, without regard to economic status, ethnic background, veteran status, political views, sexual orientation, or other personal characteristics or beliefs.*

*Designed by University Publications • 2002*