

Silicon Valley Chemist

Santa Clara Valley Section

American Chemical Society

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JULY 2008 NEWSLETTER TOPICS

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Chair's Message

The calendar year is almost half over as I write this message, and will definitely be half over by the time that the newsletter goes out. Don't forget to sign up for the Annual Family Picnic at Stanford, which is on the 12th of July. Use our website <http://www.scvacs.org> to sign up. Come and enjoy yourself with an afternoon of wine tasting, discussion, and food (catered by Armadillo Willy's).

Now that the section has voted to have all elections electronically, your ExComm is working out the technicalities of how to set the process up. Unfortunately for us, National doesn't seem to be much help, in terms of direction – lots of smoke, little fire. ExComm, however, is forging ahead with the project, and I have great confidence that we will work everything out satisfactorily. If you would like to help with the project, please contact one of your ExComm members.

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September Dinner Meeting

The Role of Transporters in Drug Discovery: Developments for Improving Safety and Efficacy

Please join us on September 18 at the Biltmore Hotel for the September dinner meeting. We will start the school year with an interesting talk on the biologic mechanisms that cells use to acquire resistance to drugs. With an understanding of these mechanisms, drugs can be intelligently designed to overcome safety concerns and enhance efficacy. Although the meeting isn't scheduled until September, the summer passes by quickly. So mark your calendars now and place your reservations for the meeting!

Abstract:

Since the 1976 discovery of the transmembrane P-glycoprotein efflux pump (P-gp) and the role it plays in acquired resistance to oncology drugs, much has been learned about active transporters. More than 350 human transporters have since been discovered including both efflux and uptake pumps. It is now known that transporters can mediate both drug safety and efficacy since they can be responsible for absorption, distribution, metabolism and elimination of substrates.

Transport activity has explained many clinical observations such as the unsafe adverse reactions experienced when co-administering digoxin with verapamil or quinidine. The FDA has recognized the importance of transporter based drug-drug interactions (DDI) and has included 25 major human transporters in the 2006 Draft Guidance "Drug Interaction Studies —



Study Design, Data Analysis, and Implications for Dosing and Labeling".

This talk provides an overview of transporters and examines case studies in which transporters retroactively explained the safety and efficacy of approved drugs.

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September Dinner Meeting

Date: Thursday, September 18

Time: 6:00 Social Hour
7:00 Dinner
8:00 Presentation

Location: Biltmore Hotel & Suites
2151 Laurelwood Blvd.
Santa Clara, CA 95054

Speaker: Dr. David Lustig
Optivia Biotechnology
The Role of Transporters
in Drug Discovery

Cost: \$27.00 with a choice of:
Chicken Cannelloni
Vegetarian Pasta Primavera

Reservations: www.scvacs.org
Shirley Radding
408-246-2564
408-296-8625 Fax

Reservations should be made by September 15th stating your name, address, company affiliation, number of people in party, and menu selection. If you are unable to honor your reservation and do not cancel by Tuesday, September 16th, you will be invoiced following the dinner meeting.

Chair's Message, continued from front page

Volunteers will be needed to help with the National Chemistry Week activities in October. Please contact Abby Kennedy akennedy@exelixis.com if you can spend some time helping.

Our regular monthly meetings will resume in September.

See everyone at the picnic.



Sept. Meeting, continued from front page

Additionally, it presents drug discovery strategies for the prospective use of transporters to design compounds with better bioavailability and targeted

tissue distribution for safer, more efficacious therapies.

Biography:

David Lustig received his Ph.D. in analytical chemistry from the University of Michigan in 1991. His dissertation research focused on novel laser ionization mass spectrometric techniques for biomolecules. David has over 15 years of drug discovery and development experience in the pharmaceutical industry starting in the core mass spectrometry lab at Syntex and then moving into DMPK/ADME groups at Roche Bioscience and CV Therapeutics. David has served in

roles including individual contributor, head of discovery bioanalysis, DMPK representative to drug discovery project teams, steering committee member for outside research collaborations and member of the Research Management Committee at CV Therapeutics (CVT) overseeing all preclinical discovery projects. At CVT, David moved into business development where he was responsible for in-licensing and out-licensing of cardiovascular drugs. David is currently a member of the senior management team at Optivia Biotechnology, a transporter technology company in Menlo Park, CA.

20th Annual Undergraduate Research Symposium

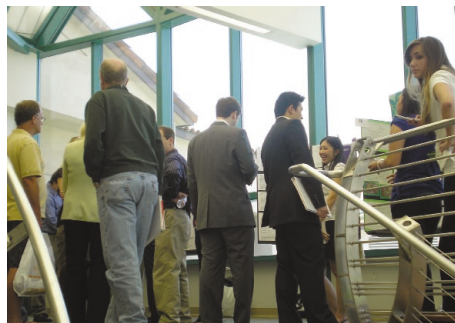
Each year the Santa Clara Valley and California Sections of the American Chemical Society provide a portion of the funding needed to sponsor a research symposium for chemistry and biochemistry undergraduates. This annual conference gives young students a chance to present the results of their individual research projects in a somewhat relaxed atmosphere. What started out as a small-scale operation in 1989, with about 6 or 7

oral presentations, soon blossomed into a full-scale event. The 20th anniversary symposium was held this year on May 3rd at Santa Clara University; Symposium Director, Dr. Linda Brunauer, was delighted to report that there was a tremendous response to the Call for Abstracts and that there were 29 oral and 72 poster presentations given by a group of very enthusiastic undergraduates. Nearly 200 student presenters and their sup-

port "crew" of fellow students, faculty mentors, and friends attended the conference. Dr. Richard Zare (Chair, Department of Chemistry, Stanford University) gave a wonderful keynote address entitled "Cars: Chemistry in Motion" which emphasized the challenge of reducing CO₂ emissions in order to reduce the risk of incurring severe global climate change.



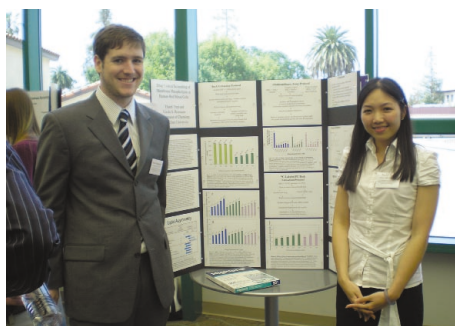
Group shot at the poster session



Group shot at the poster session



Dick Zare's Keynote



(SCU students) Daniel Daugherty and Thanh Tran



(SCU students) Kelly DiLorenzo, Merve Karabulut, and Trevor Axelrod



(SCU students/faculty) Daniel Daugherty, Dr. Steve Suljak, Misbah Palla, Nicole Van Groningen, Kuan-Lin (Chappy) Huang, Mary Lucas and Scott Hickey

Annual Family Picnic and Awards Ceremony

Our next Section event will be our summer picnic on Saturday, July 12. It will feature a special red wine tasting hosted by Floyd Hobbs. The afternoon will also include a catered picnic outside the Mudd chemistry building at Stanford and ceremonies honoring our 50-year and 60-year members and other award winners.

50 year members

Dr. Andreas Acrivos
Dr. Lionel Bailin
Dr. John Brauman
Dr. James Cope
Dr. Manfred Eberhardt
Mr. Ross Fuller
Mr. Clarence Johnsen
Mr. Akio Nishino
Mr. Michael Rothenberg
Mr. David Russell
Dr. Stanley Williamson
Dr. Leon Yengoyan

60 year members

Mr. W. Ray Booth
Mr. James Brackett
Mr. William Burton
Mrs. Rosalie Dinkey
Dr. Reed Gray
Dr. Donald Hildenbrand
Dr. Mary Harriette Huff
Mr. Drace Kutnewsky
Mrs. Adrienne Mitchell
Mr. Edgar Oerman
Dr. Chester Poetsch
Mr. William Van Horn

Wine Tasting

Floyd Hobbs has offered to arrange a wine tasting. This year we will taste a variety of red wines. The

wines produced today are very different from those produced 30 years ago. Grapes today are allowed to hang on the vine longer which increases their sugar content. Consequently, the wines made from these more mature grapes are higher in alcohol (in the range of 13.5 to 15.5%) and have a deeper, full-bodied jammy flavor. We will have a blind tasting of wines selected from the following varietals: Cabernet Sauvignon, Cabernet Franc, Merlot, Pinor Noir, Petite Sirah, and Zinfandel.

Dinner

Armadillo Willy's will cater the picnic, as they did last year. The tentative menu will include:

- Smoked Barbequed chicken
- Beef brisket • BBQ beans
- Spicy coleslaw
- Corn bread muffins
- Green Salad • Beer, soda, water
- Dessert

Where:

The Stanford Chemistry Department.

When:

- 4:30 p.m. Wine Tasting
- 5:30 p.m. Buffet BBQ Dinner
- 7:00 p.m. Awards

Directions:

From Route 101 (Bayshore Freeway): Take University Avenue west through

Palo Alto. It becomes Palm Drive on the Stanford Campus. Turn right on Roth Way and continue to the Chemistry Department. Park in the parking structure on your right. Keck and Mudd chemistry buildings are across Roth Way from the parking structure.

From Route 280: Take the Sand Hill Road exit. Drive east and turn right on Stock Farm Road. Then turn left on Campus Drive West and right on Roth Way. Park in the parking structure immediately on your left. Keck and Mudd chemistry buildings are across Roth Way from the parking structure.

Reservations:

A reservation form for this event is included here. You can also make reservations by accessing the Internet at our website:

www.scvacs.org/Local_Folder/din_mtg.html

Remember, this is the one meeting where you have to send a payment with your reservation. The cost will be the same as it was last year: \$16 for adults, \$5 for kids 4-12, and kids under 4 free. Reservations and payments must be received by Monday, July 7.

Volunteer Retired Scientists and Engineers Needed

Numerous studies over the past 20 years have shown a decline in the number of U.S. college graduates seeking careers in science and engi-

neering. Project RESEED (Retirees Enhancing Science Education through Experiments and Demonstrations) is a

continued on next page

RESERVATION FORM

Annual Family Picnic and Awards Ceremony

Stanford University – Saturday, July 12, 2008 Deadline for Reservation – Monday, July 7, 2008

Name(s): _____ Telephone No.: (_____) _____

Number of Reservations at \$16.00 _____

Number of Children (age of 4-12) at \$5.00 _____

Total Amount Enclosed\$ _____

Make check payable to: Santa Clara Valley Section – ACS

Mail check and reservation form to: Ms. Shirley Radding, 2994 Cottonwood Court, Santa Clara, CA 95051

Please check if you can volunteer: I can help set-up I can help clean-up

Volunteer, continued from previous page

program aimed at stimulating greater interest in science among students at the middle school level (grades 6, 7 and 8). RESEED has trained hundreds of volunteer retirees nationwide and about 25 volunteers are now active in Silicon Valley.

Retirees typically receive 2 to 3

days of training before being matched with a teacher-partner to work with students. The training is less focused on the pre-existing content knowledge of the retirees, but more on pedagogical questions and research on what we know about how children learn. In addition, selected volunteer retirees relate their experiences in the

RESEED program.

RESEED offers retired scientists and engineers the opportunity to use their technical knowledge and experience to support teachers and work with children. Scientists in disciplines other than the physical sciences (e.g. in the life sciences, earth sciences, and astronomy) also use the RESEED

CHEMEMPLOYMENT ABSTRACTS JULY 2008

CHEMEMPLOYMENT ABSTRACT 3902

Position Title: Senior Engineer - Late Stage Cell Culture

Job Description: This position will drive the development of high-throughput systems for cell culture in Late Stage Process Development. Responsibilities include the evaluation, acquisition and implementation of state-of-the-art high-throughput laboratory automation technology to support media and process development efforts. This position will also include supervisory responsibility and oversight of high-throughput laboratory activities.

QUALIFICATIONS DESIRED:

Education: The candidate must have a Bachelor's degree in Chemical/Biochemical Engineering (or equivalent) with a minimum of five years of experience, or a Ph.D. with a minimum of two years of relevant experience.

Experience: Prior expertise in the application of automated high-throughput systems (e.g. liquid handling systems) is a must. A strong understanding of mammalian cell culture process development is desired. The ability to collaborate with internal and external groups is required. The candidate should have excellent communication skills (verbally and in writing) and should be able to deliver high-quality scientific presentations.

LOCATION, SALARY, MAIL ADDRESS:

Job Location: South San Francisco, CA

Salary: DOE

Employer Description: For more than 30 years, Genentech has been at the forefront of the biotechnology industry, using human genetic information to develop novel medicines for serious and life-threatening diseases.

Application Instructions: Genentech is dedicated to fostering an environment that is inclusive and encourages diversity of thought, style, skills and perspective. To learn more about our current opportunities, please visit our careers page, click on "Job Postings" and reference Req. #1000022869. Please use "Web - ChemEmployment" when a "source" is requested. Genentech is an Equal Opportunity Employer.

CHEMEMPLOYMENT ABSTRACT 3904

Position Title: Lecturer in Chemistry (non-tenure-track)

Job Description: Teaching two sections of General Chemistry (CHEM 11)

QUALIFICATIONS DESIRED:

Education: Ph.D. in Chemistry or closely allied field

Experience: College teaching experience is highly desirable. Experience in teaching a diverse student population is preferred.

LOCATION, SALARY, MAIL ADDRESS:

Job Location: Santa Clara, CA

Salary: \$5,500 per section

Employer Description: Santa Clara University, a highly ranked Catholic Jesuit institution with ACS-approved undergraduate majors in biochemistry and chemistry, is an EO/AA employer committed to excellence through diversity, and welcomes applications from women, persons of color, and members of historically underrepresented groups.

Application Instructions: By 7/11/08, submit cover letter, curriculum vitae, copies of undergraduate and graduate transcripts, two letters of recommendation, and teaching evaluations for any lecture course(s) taught to Prof. Jack Gilbert, Chair, Department of Chemistry, Santa Clara University, 500 El Camino Real, Santa Clara, CA 95053 or jgilbert@scu.edu. For additional information, visit www.scu.edu/hr/careers/faculty.cfm

CHEMEMPLOYMENT ABSTRACT 3903

Position Title: Analytical Chemist

Job Description: In this position you will plan and execute assigned experiments, select appropriate methods and techniques in performing experiments, contribute to the development of project strategy, recommend alternatives, and research new methods and techniques. Present results of work, interpret data, and draw conclusions regarding presented material and nature of work.

QUALIFICATIONS DESIRED:

Education: A BA/BS or a MS degree in a scientific discipline.

Experience: With a BA/BS 7-8 years of relevant experience or with a MS 3 years of relevant experience required. Requires the ability to use common tools for effective scientific communication. Demonstrated ability to recognize anomalous and inconsistent results and interpret experimental outcomes. Developed skills in data analysis and the ability to evaluate quality of data.

LOCATION, SALARY, MAIL ADDRESS:

Job Location: Foster City, CA

Salary: DOE

Employer Description: Gilead Sciences is a biopharmaceutical company, our mission is to advance the care of patients suffering from life-threatening diseases worldwide. Gilead has operations in the United States, Europe and Australia.

Application Instructions: Reference Req# 1713 and apply online today at: <http://gilead.apply2jobs.com/index.cfm?fuseaction=mExternal.showJob&RID=1713&CurrentPage=1>

We are an Equal Opportunity Employer

CHEMEMPLOYMENT ABSTRACT 3905

Position Title: Research Associate

Job Description: The successful applicant will join the Chemistry Department as part of a team developing advanced new synthesis processes for the production of high-density GeneChip® oligonucleotide probe arrays. Primary job duties include planning and conducting experimental synthesis and characterization of arrays using prototype equipment, materials and processes.

QUALIFICATIONS DESIRED:

Education: B.S. or M.S. in chemistry with 1-3 years of industrial R&D exp.

Experience: Requires a B.S. or M.S. degree in chemistry, and 1-3 years of practical experience in contemporary analytical and organic chemistry, preferably in an industrial R&D setting. Also desirable is experience in solid-phase synthesis and/or microlithographic process technology, an affinity towards instrumentation; and proven organizational, communication and teamwork skills.

LOCATION, SALARY, MAIL ADDRESS:

Job Location: Affymetrix Inc., Santa Clara, CA

Salary: competitive salary

Employer Description: Affymetrix is originator and leading manufacturer of the miniaturized high-density DNA array for genetic analysis. GeneChip® production is based on an innovative combination of modern semiconductor and DNA synthesis technologies.

Application Instructions: Please see

www.affymetrix.com/corporate/careers/careers.jsp (Requisition # 3748).

Volunteer, continued from previous page

model for involving qualified retirees in science education partnerships. Most of those who have been involved in the program value their experience as among the most meaningful in their lives.

Educators involved in systemic reform of science education also use RESEED as a model for valuable and often untapped resources (qualified retirees) to support teachers as they learn new ways to teach science that require scientific habits of mind and

ways of thinking, as well as a deeper understanding of science content.

For more information on the program and to learn how you can become involved, please contact Joseph A. Castellano, Ph.D., at drjcast@aol.com.

CHEMPLOYMENT ABSTRACTS JULY 2008

CHEMPLOYMENT ABSTRACT 3906

Position Title: Scientist/Chromatographer - Requisition #51510062

Job Description: This advanced position will join Elan's Research Analytical and Separations Group using separation methods to assist drug discovery efforts.

QUALIFICATIONS DESIRED:

Education: MS or PhD (or equivalent based on experience) in Chemistry and 0-5 years experience.

Experience: Substantial experience with HPLC applications is required including experience in preparative HPLC. Experience with chiral analysis/separations is highly desired. Skill in the operation of Agilent's Chemstation and/or Varian's Star or Galaxie software is very highly desired. An advanced degree in Analytical Chemistry is highly desired. Excellent written and verbal communication skills in English are required.

LOCATION, SALARY, MAIL ADDRESS:

Job Location: South San Francisco, CA

Salary: DOE

Employer Description: At Elan, we hold a fundamental belief that our science has the potential to improve patients' lives. Our pipeline of developing compounds and investigative therapies reflects our commitment to bring innovative products to patients with unmet needs in the areas of neurodegenerative diseases, autoimmune diseases and severe pain.

Elan's commitment to patients is reflected in all that we do: we are a company driven by the knowledge that our work is important and the desire to make a difference. Elan offers prospective employees exciting challenges, unique opportunities for career growth, and a fast-paced environment that emphasizes innovation and achievement.

Application Instructions: Qualified Applicants should submit their resume to: lee.latimer@elan.com and apply online at www.elan.com

CHEMPLOYMENT ABSTRACT 3907

Position Title: Chromatographer

Job Description: This position will join our Analytical and Separations Group using separation methods to assist drug discovery efforts.

Responsibilities: •Apply HPLC methods to assist drug discovery efforts in both analytical and preparative mode •Develop and apply chiral separation methods as needed, •Develop new methodologies as needed and to integrate new technologies where appropriate •Be a resource to the drug discovery effort in our research department.

QUALIFICATIONS DESIRED:

Education: BS or MS in Chemistry; advanced degree in Analytical Chemistry is preferred.

Experience: •5 years experience in an industrial lab after graduation. •Substantial experience with HPLC applications is required including experience in preparative HPLC. •Experience with chiral analysis/separations is highly desired. •Skill in the operation of Agilent's Chemstation and/or Varian's Star or Galaxie software is very highly desired. •Excellent written and verbal communication skills.

LOCATION, SALARY, MAIL ADDRESS:

Job Location: South San Francisco, CA **Salary:** DOE

Employer Description: At Elan, we hold a fundamental belief that our science has the potential to improve patients' lives. Our pipeline of developing compounds and investigative therapies reflects our commitment to bring innovative products to patients with unmet needs in the areas of neurodegenerative diseases, autoimmune diseases and severe pain.

Elan's commitment to patients is reflected in all that we do: we are a company driven by the knowledge that our work is important and the desire to make a difference. Elan offers prospective employees exciting challenges, unique opportunities for career growth, and a fast-paced environment that emphasizes innovation and achievement.

Application Instructions: Qualified Applicants should submit their resumes to: lee.latimer@elan.com

CHEMPLOYMENT ABSTRACT 3908

Position Title: Research Associate – Medicinal Chemistry

Job Description: We currently have three openings for talented Research Associates to join our Medicinal Chemistry department. The successful candidates will be responsible for the design and synthesis of biologically active small molecules. The individuals will participate in our drug discovery efforts as part of a multi-disciplinary project team in our South San Francisco location.

QUALIFICATIONS DESIRED:

Education: A Bachelor's or Master's degree in Chemistry is required.

Experience: A minimum of two years of experience in synthetic organic chemistry is required. The candidates should possess a demonstrated expertise in multi-step synthesis, compound purification and structural characterization

LOCATION, SALARY, MAIL ADDRESS:

Job Location: South San Francisco, CA

Salary: DOE

Employer Description: For more than 30 years, Genentech has been at the forefront of the biotechnology industry, using human genetic information to develop novel medicines for serious and life-threatening diseases.

Application Instructions: Genentech is dedicated to fostering an environment that is inclusive and encourages diversity of thought, style, skills and perspective. To learn more about our current opportunities, please visit: careers.gene.com and reference Req. #1000023603, 1000023605 or 1000023607. Please use "Web - ACS" when a "source" is requested. Genentech is an Equal Opportunity Employer.



July
4th

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SANTA CLARA VALLEY SECTION
AMERICAN CHEMICAL SOCIETY
P.O. Box 395, Palo Alto, CA 94302

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SANTA CLARA VALLEY SECTION

2008 Section Officers

Chair	Mark Kent	408-736-0989	marklent@yahoo.com
Chair-Elect	Natalie McClure	650-906-7831	nmccclure@drugregulatoryaffairs.com
Past Chair	George Lechner	408-226-7262	glechner@aol.com
Secretary	Karl Marhenke	831-688-4959	karlmar@armory.com
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Councilors

2006-2008	Abby Kennedy	209-640-2005	akennedy@exelixis.com
2006-2008	Ean Warren	650-329-4554	ewarren@scvacs.org
2007-2009	Linda Brunauer	408-554-6947	lbrunauer@scu.edu
2007-2009	Sally Peters	650-812-4994	Sally.Peters@parc.com
2007-2009	Peter Rusch	650-961-8120	pfrusch@aol.com
2008-2010	George Lechner	408-226-7262	glechner@aol.com
2008-2010	Herb Silber	408-924-4954	hsilber@science.sjsu.edu
2008	Howard Peters	650-854-4614	peters4pa@sbcglobal.net

Alternate Councilors

2006-2008	Ihab Darwish	650-594-1654	darwishis@yahoo.com
2006-2008	David Parker	408-615-4961	dparker@ci.santa-clara.ca.us
2006-2008	Bruce Raby	408-294-6718	brida954@comcast.net
2007-2009	Stephanie Gehling	408-261-3974	s_gehling@hotmail.com
2007-2009	Natalie McClure	650-906-7831	nmccclure@drugregulatoryaffairs.com
2007-2009	Maureen Scharberg	408-924-4966	maureen.scharberg@sjsu.edu
2008-2010	Mark Kent	408-736-0989	marklent@yahoo.com
2008-2010	Ferenc Makra	650-855-5368	ferenc.makra@roche.com

Newsletter

Editor: **Cinzia Muzzi** 408-864-5790 muzzicinzia@deanza.edu

ChemPloyment Abstracts

Director: **Charles Sullivan** 650-359-0731 cdansullivan@sbcglobal.net

FUTURE MEETINGS

- Jul 12** Annual Awards, Wine Tasting,
and Picnic
Stanford Chemistry Department
Stanford, CA
- Aug 3-8** Gordon Research Conference on
Green Chemistry
Bates College
Lewiston, ME
*[www.grc.org/programs.aspx?
year=2008&program=green](http://www.grc.org/programs.aspx?year=2008&program=green)*
- Aug 17-21** 236th ACS National Meeting
Philadelphia, PA
- Sep 23-27** Western Regional Meeting
Las Vegas, NV
<http://membership.acs.org/w/WRM2008>
- Oct 19-21** Topics and Tactics in Current
Drug Design
ACS ProSpectives Conference
Cambridge, MA