

Silicon Valley Chemist

Santa Clara Valley Section

American Chemical Society

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Nanotechnology: Manufacturing as Extended Chemistry

Dr. Ralph C. Merkle

Abstract

Manufactured products are made from atoms. The properties of these products depend on how those atoms are arranged. If we rearrange the atoms in coal we can make diamond. If we rearrange the atoms in sand (and add a few trace elements) we can make computer chips.

Today's manufacturing methods are very crude at the molecular level. Casting, grinding, milling and even lithography move atoms in great thundering statistical herds. It's like trying to make things out of LEGO blocks with boxing gloves on your hands. Yes, you can push the LEGO blocks into great heaps and pile them up, but you can't really snap them together the way you would like.

Nanotechnology promises to let us inexpensively arrange atoms in most of the ways permitted by physical law, getting essentially every atom in the right place. An effective method

of achieving low cost is to use self-replication. Nature shows this is possible: wood is inexpensive despite the fact it is made of untold billions of complex molecular machines because a tree can make more trees. We could do likewise, making molecular manufacturing systems able to make more molecular manufacturing systems — producing inexpensive products available to all. This talk will explore the fundamental principles underlying replicating systems and examine the proposals that have been advanced so far, as well as the vast differences between proposed artificial systems and the remarkably adaptable and error tolerant biological systems that have served as “proof of principal.”

For further information on nanotechnology read Dr. Merkle's latest article in the January 2001 issue of IEEE Spectrum or visit www.zyvex.com/nano

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17,824 participants registered for the 221st annual American Chemical Society meeting in San Diego! This was the third largest meeting ever, after the recent Boston and San Francisco meetings. In addition to the record number of attendees, there were a record number of papers presented, posters to view and events to attend. This year the out-of-state visitors were less concerned about earthquakes than they were concerned about power! In one hotel where I attended sessions,

the chairman was provided a sheet of instructions for emergency power outage purposes and a flashlight; neither was needed! Two innovations begun by the Society, that probably had their roots in Silicon Valley, were unveiled at this meeting. For the first time there was a Virtual Expo on the ACS web site that preceded the typical vast exhibition in the convention center. This new feature gave the exhibitors exposure from national's web site, earned the meeting some money, and

May Dinner Meeting

Date: May 24, 2001

Time: 6:00 pm Reception

7:00 pm Dinner

8:00 pm Presentation

Location: Biltmore Hotel & Suites
2151 Laurelwood Road
Santa Clara, CA
North of 101 off the
Montague Expressway
(408) 988-8411

Speaker: Dr. Ralph C. Merkle
Principal Fellow Zyvex
Corporation

Cost: \$25 with the choice of
Chicken Piccata, or Pasta
Primavera

Reservations: Shirley Radding
(408) 246-2564
(408) 296-8625 FAX

Reservations should be made by May 21 stating your name, company affiliation, number of people in the party and the meal preference. People may also register using our web site: www.scvacs.org.

Chair's Message

will be enhanced for the Chicago and future meetings. The single most-welcome innovation in San Diego was the LCD projectors. Projectors (but not laptops) were provided for each meeting room for a rental cost to the society of \$65,000. This audio-visual tool began as an experiment, but will continue for the future meetings. The social and cultural side of the meeting was treated to a premiere performance of Carl Djerassi's play, “Oxygen.”

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Nanotechnology, continued from front page

Biography

Dr. Merkle received his Ph.D. from Stanford University in 1979 where he co-invented public key cryptography. He joined Xerox PARC in 1988, where he pursued research in computational nanotechnology until 1999. He is now a Principal Fellow at Zyvex, where he continues to pursue research in nanotechnology. He chaired the Fourth and Fifth Foresight Conferences on Nanotechnology, is on the Executive Editorial Board of the journal Nanotechnology, was co-recipient of the 1998 Feynman Prize for Nanotechnology for theory, and was co-recipient of the ACM's Kanellakis Award for Theory and Practice, the 2000 RSA Award in Mathematics, and the IEEE Kobayashi Award. Dr. Merkle has published and spoken extensively and has eight patents. His home page is at www.merkle.com.



Nominations for 2002 Petition Candidates

Petition candidates can be nominated by the membership.

Offices are: **Chair-Elect**
Secretary
Treasurer
Councilor
Alternate Councilor

The requirements are:

- Member (Grade) of SCV Section.
- Agreement to run for the office.
- Agreement to attend Executive Committee meetings.
- Signatures of 15 Members (Member Grade) of the SCV Section.
- Petitions along with a brief biography and statement must be received by August 1, 2001

Mail nominations to:

Dr. Karl Marbenke
1710 Wilshire Drive
Aptos, CA 95003-2836



Chair's Message, continued from front page

Members of the audience that I talked with gave the play "two thumbs up" as a review.

In San Diego our section in partnership with the California section won a new hospitality award. LSAC, Local Section Activities Committee, presented awards to the top three sections that hosted a tour speaker in 2000. Dr. Nagyvary, our September speaker, felt our arrangements for his talk were extraordinary, so he wrote a letter nominating us for the award.

The California section hosted a memorable luncheon to celebrate their 100th anniversary as an ACS local section. After Marinda Wu, their chair for this centennial year, gave a presentation on the statewide section's early history, each "spun off" section presented a brief history of their area. Those of us in fast paced Silicon Valley are not the only ones who do not like to drive to meetings. Early East Bay members took the ferry across the bay to meetings, which doubled as 'smokers' because only men attended. Until 1984 members from Fresno drove to Berkeley for meetings!! The first national meeting in San Francisco was in 1910. Dr. Ralph Gould from the USDA in the

East Bay organized the entire event, including the entertainment! It now takes an army of people to organize a national meeting! The San Joaquin section was formed during those long car trips! We laugh now at the number of pictures that are taken at any function, but I hope this continues for historical purposes, because the California section has some marvelous old pictures of men in starched white collars and women in long skirts! Shirley Radding, our official representative, presented a lively talk about our section.

A new date on the Future Meetings Calendar is October 28-31, 2001. The Las Padres Section is hosting the Western Regional Meeting in Santa Barbara. "WERM" will include Nobel speakers, several symposia, and special programs and events. Now is the time to submit abstracts and posters. Go to their website for more information.

<http://www.2001werm.org/>

The next Executive Committee Meeting is late in May on Wednesday, the 16th in Santa Clara. This is a perfect time to meet the committee and experience your local section's officers at work! Contact me for directions.

Chemistry Olympiad

The first section of the Santa Clara Valley Chemistry Olympiad was held on March 25th, 2001. There was an exceptional turnout and everyone had a great time! Seventy-four students took the 60 question, 100-minute exam. Thanks to Craig Seran of Los Altos High School and his scantron, the exam was graded immediately. The top 16 winners (2 from each high school) were invited to take the National Chemistry Olympiad on April 21st at Santa Clara University.

The chair of the committee, Tricia Takahara, presented prizes of cash, books, or pins to the top 27 winners. University Science Books and Perseus Books donated the books and Roche Bioscience generously provided cash, snacks, drinks, and the use of their facility.

Now, drum roll please, the overall winner was Lillian Pan of Lynbrook High School. She scored 54/60 – a great score on a very challenging test! Good luck to all the students participating in the national test.

Thanks also to Bonnie Charpentier, Mark Hasegawa, Robbie Korin, Bruce Raby, and Amy Takahara for helping.



Shirley Radding and Jack Riley Receive ACS Awards

Over 20 years ago the ACS Division of Chemistry and the Law (CHAL) was born in the Santa Clara Valley local section. For several years it was a subdivision and a probationary division before it received full status in 1985. Santa Clara Valley Local Section members have been critical to the establishment and growth of the Division.

At the San Diego ACS meeting the Division presented Lifetime Achievement Awards (as engraved mantle clocks) to charter members Shirley Radding and John (Jack) Riley to recognize their long term and continued support of the Division.



Shirley Radding receives Division on Chemistry and The Law Lifetime Achievement Award at ACS San Diego Meeting from CHAL Chair Charles Hauff

Shirley is now retired from SRI International in Menlo Park and is well known to SCV members. She served as Chair of CHAL and on its Executive Committee as its newsletter editor for years and has received the Division's Middlekauf Service Award.

Jack is now retired from Lockheed in Palo Alto and is also well known to SCV members. He served as Chair of CHAL and on the Executive Committee as its membership chair for years and has received the Division's Middlekauf Service Award.

Our congratulations to Shirley and Jack for this well deserved recognition.



Jack Riley receives Division on Chemistry and The Law Lifetime Achievement Award at ACS San Diego Meeting from CHAL Chair Charles Hauff

Section Receives Hospitality Award

In September 2000 the ACS Santa Clara Valley and California local sections had a joint program at CSU - Hayward. The ACS tour speaker was Dr. Josef Nagyvary of Texas A&M University. He spoke on his avocation of violin making using chemical techniques to duplicate the tone of a Stradivarius. Three violins, including a Stradivarius, were played by a concert violinist. The speaker was so impressed with the hospitality, preparations and the venue that he nominated the two sections for a newly created ACS hospitality award. The event won a third place prize. The photograph shows Dr. Marinda Wu Chair of the California Section, Dr. Kathleen Schultz ACS Chair of the Local Section Activities Committee and Sally Peters, Chair of the Santa Clara Valley Section. Congratulations on a job well done.



OTTENBERG SERVICE AWARD 2001 CALL FOR NOMINATIONS

It is again time to nominate candidates for the Abraham Ottenberg Service Award of the Santa Clara Valley Section.

This Award was established in 1973 by the Santa Clara Valley Section to recognize members who have rendered outstanding service to the Section. It is named after Abraham Ottenberg, a former member who devoted much of himself to service to the Section. The award consists of an engraved plaque and a check for two hundred dollars. The award recipient is selected from candidates nominated by members of the Section. Nominees

must be members or affiliates of the Santa Clara Valley Section.

Previous recipients are: Shirley B. Radding (1974), Oliver F. Senn (1975), Floyd M. Hobbs (1976), Frank R. Mayo (1977), Harry S. Mosher (1978), Lois J. Durham (1979), Richard W. Gaver (1980), Alan C. Ling (1982), Ludwig A. Mayer (1983), John F. Riley (1983), Howard M. Peters (1984), June G. Jones (1986), Robert L. Montoya (1986), Malcolm Dole (1987), Donald E. Green (1991), Hubert E. Dubb (1992), Karl Marhenke (1993), Stephen N. Senzer (1994), Carol W. Mosher (1995), Bonnie Charpentier (1998), Linda Brunauer

(1999) and Herbert B. Silber (2000).

The nominating letter should include a brief biography of the candidate and a description or evaluation of the service(s) to be recognized by the award. Seconding nominations are not required but will be accepted.

Nominations should be sent to:

Chair

**Ottenberg Award Committee
Santa Clara Valley Section, ACS
P. O. Box 395, Palo Alto, CA 94302**

Nominations must be received by May 30, 2001 to be considered for the 2001 award.



Councilors' Corner

The American Chemical Society is an organization of individuals. Throughout the Society's 125 years, its success has been ultimately attributed to the voices of members and the willingness of these members to volunteer for posts at the local and national levels. Local sections and divisions, largely autonomous units that elect their own officers, are the two major components of the Society. At the national level, a Council and Board of Directors govern ACS. The board is the legal representative and policy-setting body of the Society. The Council is the Society's "House of representatives", made up of elected councilors from all local sections and divisions.

As one of the "large" (over 3300 members) sections in the ACS, the Santa Clara Valley section has 7 councilors and 7 alternate councilors. Each of our councilors participates as part of this legislative body by volunteering to serve on a governance committee of the Council. This service, in turn, keeps our section informed on Society policy, programs and actions. At April's executive committee meeting each councilor reported in detail on their committee actions. The following is a brief summary of their reports. Each councilor is eager to discuss their committee activities further and can be reached at their attached email addresses.

Last year Bonnie Charpentier was elected to the Council Policy Committee (CPC). (The national organization loves acronyms!) CPC plans the agenda for Council meetings, nominates councilors for the Nomination and Elections Committee (N & E), and conducts long-range planning studies for the future of the ACS. In San Diego they considered changing the date of National Chemistry Week (NCW) and its implications. This year's theme is "Chemistry and Art". Reports on the Presidential Task Force on financial support to local sections and divisions were discussed. Bonnie urged us all to view these reports at <http://membership.acs.org/p/ptf> if you are interested in resources and

funding for your local section or divisions.

Bonnie Charpentier

bonnie.charpentier@roche.com



Linda Brunauer was newly appointed as an associate to the Women Chemists Committee (WCC). This committee encourages women to take an active interest in the Society by focusing on attracting women to careers in chemistry, mid-career development, and recognizing the contributions of women chemists. Linda was also busy overseeing her student affiliates at poster sessions in both Sci-Mix and at research sessions, as well as, returning to Santa Clara in mid meeting to teach her classes!

Linda Brunauer

lbrunauer@scu.edu



Ean Warren was also new to committee service as a member of the Younger Chemists Committee (YCC). The mission of YCC is to lead younger chemists (under age 35) into successful careers in the chemical profession and to active roles in ACS. At this meeting they worked on improving their web site <http://membership.acs.org/scripts/y/ycc/home/default.asp> and organizing programs for the Fall meeting. In Chicago there will be sessions on "Financial Planning", "Teaching Opportunities at Small or 2-Year Colleges", and "Alternate Careers", preceded by a fun run!

Ean Warren

ewarren@scvacs.org



Sally Peters is serving her sixth year on the Meetings & Expositions Committee (M&E). M&E is responsible for the arrangement, financing, and site selection of the national, international, and regional meetings and expositions. Because of the large number of attendees and the exposition requirements of the national meetings they are currently planning for the meetings 13 years in advance! The members of M&E are planning for 2013

and 2014 without the use of a crystal ball! One visible result of this committee was the decision (and financial support) for the LCD projectors for the 75 meeting rooms in San Diego.

Salley Peters

speters@parc.xerox.com



Jack Riley is our "senior" councilor. Over the years Jack has served on at least a dozen different committees. He is probably our most knowledgeable councilor about all of the governance of the society. The SCV section has benefited continually from his commitment to the Society. Jack is now a member of Constitution and Bylaws (C&B). C&B reviews and recommends changes in the bylaws of local sections and divisions, interpreting and initiating action to eliminate conflicts with the national constitution and by laws. Currently there are 17 local sections and 11 divisions under review. The controversial issue at this meeting involved the North Jersey election of councilors that did not follow their bylaws and election procedures.

Jack Riley

jfriley@atdial.net



SOCED (Society Committee on Education) is the committee served by Maureen Scharberg. It is one of the more crucial committees because it recommends programs, funding, and policies related to chemical education for all levels - elementary school to the university level. The popular student affiliate program falls under their auspices. Maureen felt the highlights of the meeting were the projects of the ACS Education Division (www.acs.org/education) and the issues related to the federal education policies and funding. She strongly recommends joining the ACS Legislative Action Network at www.acs.org/government/action/ for updates on federal legislation involving science education and R&D policy.

Maureen Scharberg

scharbrg@pacbell.net

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Herb Silber currently serves on the Committee on Committees (ConC), which is the "granddaddy" of all the many council committees. ConC studies the composition of all of the national committees and makes recommendations to the President and Chairman of the Board for membership on the rest of the committees. As a member of ConC, he has the added function of representing them on two other committees! Herb feels the Committee on Technician Affairs (run by and for

chemical technicians) is the best organized and run of the committees!

Herb Silber

hsilber@sjsuvm1.sjsu.edu



All national committees (and there are more than 30 of them) do not require their members to be councilors. As a member of ACS you can be active in its governance by volunteering to serve on a committee. Committee work is interesting, rewarding, and fun! You work with fellow chemists; people dedicated to their profession,

and with exceptional staff members from the national organization. Get involved, join a committee! For more information on the various committees go to www.acs.org/committees/.



Happy Mother's Day



CHEMPLOYMENT ABSTRACTS – MAY 2001

CHEMPLOYMENT ABSTRACTS 3474

Position Title: Research Associate - Analytical Chemistry

Job Description: Will be responsible for developing & applying tools to solve new problems in bio-analytical science, specifically the design & implementation of novel high throughput technologies to identify improvements in pharmaceutical proteins & enzymes generated by directed evolution.

QUALIFICATIONS DESIRED

Education: BS/MS, analytical chem or relevant scientific discipline

Experience: At least 2 yrs industry or academic exp in validation of chromatog separations required. Exp in capillary electrophoresis, the derivatization of bio-molecules, org chem & protein chem helpful.

LOCATION, SALARY, MAIL ADDRESS

Location: Redwood City

Salary: Commensurate with exp

Description of Employer: Leader in design, development & application of directed evolution technologies. See www.maxygen.com

Application Instructions: Send resume to:

Maxygen, Inc.

HR, Job Code NT-144

515 Galveston Drive

Redwood City, CA 94063

FAX: 650-298-5453

Email: jobs@maxygen.com

CHEMPLOYMENT ABSTRACTS 3475

Position Title: Research Associate/Chemistry
(2 openings)

Job Description: Responsibilities are: Interpretation of spectroscopic data, Use of literature to solve synthetic problems, application of modern chromatog techniques for purification of synthetic targets.

QUALIFICATIONS DESIRED

Education: Experience: 2 yrs of academic or industrial exp in synthetic org chem. Thorough familiarity with HPLC & modern chem instrumentation is essential. Must be able to function as part of a coordinated team.

LOCATION, SALARY, MAIL ADDRESS

Location: Redwood City

Salary: Competitive salary & benefits

Description of Employer: Discovery of small molecule drugs that bind to DNA or RNA to regulate gene expression or inactive pathogens.

Application Instructions: Send resume to:

Genelabs Technologies, Inc.

HR Dept., Job #2019-SV

505 Penobscot Drive

Redwood City, CA 94063

FAX: 650-363-6080

Email: hr@genelabs.com

CHEMPLOYMENT ABSTRACTS 3476

Position Title: Research Associate, Analytical Chemistry

Job Description: Organize, order & maintain a cpd library, draw chem structures for chem database, determine purity & confirm identity of cpds by HPLC, LCMS, NMR

QUALIFICATIONS DESIRED

Education: MS/MS org chem

Experience: 1-5 yrs exp in research labs using techniques for isolation & characterization of org cpds such as extraction, chromatog, HPLC, NMR & MS. Must be familiar with Excel, ISIS, Draw or Chemdraw software. Must have good organization & communication skills.

LOCATION, SALARY, MAIL ADDRESS

Location: Mountain View

Salary: Competitive salary & benefits including options

Description of Employer: Drug discovery integrating genomic, cell, computational & molecular biology

Application Instructions: Send CV/resume with Code

SVC-MLEc to:

Iconix Pharmaceuticals

850 Maude Avenue

Mountain View, CA 94043

FAX 650-567-5545

Email: hr@iconixpharm.com

www.iconixpharm.com

CHEMPLOYMENT ABSTRACTS 3477

Position Title: Assay Development - Research Associate

Job Description: Development, optimization & validation of prototype & commercial immunoassays for novel disease markers.

QUALIFICATIONS DESIRED

Education: BS/MS/PhD, biochem, immunology, life sciences or related field

Experience: 2-5 yrs relevant industry exp. In-depth knowledge of clinical immunoassay development, optimization & validation. Exp with antibody screening, conjugation & serum based ELISA assays a plus. Ability to design exps & analyze data. Good written & oral communication skills + ability to work effectively in team setting. Strong computer skills including MS Word, Excel & a knowledge of statistics.

LOCATION, SALARY, MAIL ADDRESS

Location: Santa Clara

Salary: Competitive salary

Description of Employer: Develops & employs cutting edge bioinformatics tools which automate large-scale searches of genomics databases.

Application Instructions: Send resume to:

John Brandeau, Executive Recruiter

Email: john@setrensmallberg.com

Please include 63acs in the email subject line.

CHEMPLOYMENT ABSTRACTS 3478

Position Title: Synthetic Organic Chemist

Job Description: Participate in target design planning within a team environment that is dynamic & productive. Will be involved in various target programs as well as encouraged to attend national meetings & seminars. Opportunities for publications & patents.

QUALIFICATIONS DESIRED

Education: BS/MS, chem or related field

Experience: 1-2 yrs exp in org synthesis exp in industry. An affinity for interpreting NMR's is necessary; combinatorial chem exp, and/or heterocyclic chem exp is a plus but not required. Excellent verbal & written communication skills, self-motivation & productivity as well as ability to multi-task.

LOCATION, SALARY, MAIL ADDRESS

Location: Palo Alto

Salary: Competitive salary & benefits

Description of Employer: Focused on discovery, development & commercialization of novel, small molecule drugs for treatment of cardiovascular diseases.

Application Instructions: Send resume with cover letter in MS Word compatible format to:

Cheryl Mock

cheryl1@setrensmallberg.com

Please include 53acs on email

subject line.

CHEMPLOYMENT ABSTRACTS 3479

Position Title: Analytical Chemist Pharmaceutical Validation

Job Description: Will be involved in qualifying & validating analytical methods to meet FDA requirements for raw mats, excipients, drug substances & drug prods. Will also be involved in QC testing of raw mats, intermediates, bulk drug substance, excipients &/or finished drug prods.

QUALIFICATIONS DESIRED

Education: MS chem or related field

Experience: 2-4 yrs of relevant working exp. Min of 1 yr hands-on exp with HPLC or GC in CGMP environ required. Exp with methods validation is preferred. Strong anal chem skills & good wet chem tech are essential. Strong tech writing, verbal, interpersonal & problem solving skills are highly desirable. Exp in small molecule preferred.

LOCATION, SALARY, MAIL ADDRESS

Location: Palo Alto

Salary: Competitive salary & benefits

Description of Employer: Discover, develop & commercial of novel, small mol drugs for treatment of cardiovascular diseases.

Application Instructions: Send resume with cover letter in MS Word compatible format to:

John Brandeau at john@setrensmallberg.com.

Please include 48acs in email subject line.

CHEMPLOYMENT ABSTRACTS 3480

Position Title: Staff Scientists (2 positions)

Job Description: Responsible for designing, synthesizing & characterizing new drug candidates. Specifically, explore structure-activity relationships in a variety of therapeutic areas leading to drug candidates for preclinical development.

QUALIFICATIONS DESIRED

Education: BS/MS/PhD org chem

Experience: At least 3 yrs industrial pharmaceutical exp, including strong org synthesis skills & spectral interpretation techniques. Excellent written & verbal communication skills, the ability to multitask & a commitment to teamwork will be crucial. Source Codes: 0848KF101 and 0849KF101

LOCATION, SALARY, MAIL ADDRESS

Location: Seattle

Salary: Competitive salary & benefits

Description of Employer: Research & development org with multiple late-scale prods

Application Instructions:

Send scannable resume with

Source Code # in subject line

of email to: icos@webhire.com

FAX: (Source code must appear on cover letter)

1-800-283-8271

www.icos.com

CHEMPLOYMENT ABSTRACTS 3481

Position Title: Senior Staff Scientist, Process Chem Outsourcing Specialist

Job Description: Will coordinate & manage GLP/GMP outsourcing activities at contract drug mfg sites. Duties include sourcing raw mats, setting up contracts, & transferring technology. Also will coordinate with Regulatory, QA & Clinical teams on special projects & maintain clinical development matl/samples. You will be expected to contribute to at least one NDA submission & that you are familiar with CMC issues required for IND & NDA submissions.

QUALIFICATIONS DESIRED

Education: degree in org chem

Experience: 10+ yrs working exp in pharmaceutical process chem environment are desired. Excellent presentation, organizational, written/verbal skills will be expected. Some travel may be required. Source Code 0850KF101

LOCATION, SALARY, MAIL ADDRESS

Location: Seattle

Salary: Competitive salary & benefits

Description of Employer: Research & development org with multiple late-scale prods

Application Instructions:

Send scannable resume with Source Code # in subject

line of email to: icos@webhire.com

FAX: (Source code must appear on cover letter)

1-800-283-8271 www.icos.com

CHEMPLOYMENT ABSTRACTS — MAY 2001

CHEMPLOYMENT ABSTRACTS 3482

Position Title: Research Scientist I/II Research Associate I/II/III Chem Development/Radio Chem

Job Description: Working in a team, carry out process res activities for discovery of safe, economical synthetic routes to exp Active Pharmaceutical Ingredients (API). Carry out scale-up activities (large glassware & pilot plant equipment to produce batches of APIs per GMP guidelines.

QUALIFICATIONS DESIRED

Education: Research Scientist: PhD or equivalent in org chem; MS with 5 yrs exp; BS with 10 yrs exp. Job Code: 4172-ACS Research Associate: BS or equivalent, org chem & 10 yrs exp as above. Job Code 4167-ACS
Experience: Knowledge of synthetic org chem & bench scale lab skills required. Job Code: 4172-ACS

LOCATION, SALARY, MAIL ADDRESS

Location: Palo Alto
Salary: Competitive salary & benefits
Description of Employer: Established product line & a healthy pipeline of innovative products

Application Instructions: Send resume with appropriate job code to: Email: paloalto.hr_staffing@roche.com Roche Bioscience, A2-HR 3401 Hillview Avenue Palo Alto, CA 94304 FAX: 650-424-8159 www.roche.com/bioscience

CHEMPLOYMENT ABSTRACTS 3483

Position Title: Research Associate, Organic Chemistry

Job Description: Responsible for design, synthesis, purification & characterization of organic compounds to facilitate ACLARA's effort to rapidly commercialize innovative products.

QUALIFICATIONS DESIRED

Education: BS/MS in chemistry
Experience: Academic or industrial experience in organic synthesis

LOCATION, SALARY, MAIL ADDRESS

Location: Mountain View
Salary: Competitive salary & benefits
Description of Employer: Develops microfluidics array technologies, often referred to as "lab-on-a-chip" systems, for genomic applications and high-throughput pharmaceutical drug screening

Application Instructions: Send resume and cover letter to:

ACLARA BioSciences, Inc.
Attn: Hasan Tahir, Ph.D.
1288 Pear Avenue
Mountain View, CA 94043
FAX: 650-210-1210
E-mail: htahir@aclara.com

CHEMPLOYMENT ABSTRACTS 3484

Position Title: Synthetic Organic Chemist Biochip Department

Job Description: Responsible for executing & conducting synthesis of variety of novel org substances for biochip microarrays fabrication & protein assays. Develop a std operational procedures for novel derivatives & multifunctional reagents using broad range of functional groups, develop & implement methods for purification including polymer derivatives. Participate & lead dynamic proj teams.

QUALIFICATIONS DESIRED

Education: BS/MS, org chem
Experience: related academic and/or industrial exp, ability to perform in diverse interdisciplinary environment. Knowledge of NMR, chromatog & other identification analytical techniques is desirable.

LOCATION, SALARY, MAIL ADDRESS

Location: Fremont
Salary: Competitive salary & benefits & stock options
Description of Employer: Interdisciplinary bio-informatics company

Application Instructions: Send resume, cover letter and three references to: Email: kmeyer@lumicyte.com FAX: 650-625-1776 Phone: 510-226-3953

CHEMPLOYMENT ABSTRACTS 3485

Position Title: Protein Separation Scientist Protein Chemistry

Job Description: Responsible for developing & implementing of affinity chromatography strategies for protein separation on high-density biochip arrays surfaces. Also responsible for developing & evaluating of biochip functional performance using liquid-handling robotics laser mass spect for protein analysis. Participate & lead dynamic proj teams for solving client problems using utility-driven discovery mission of LumiCyte

QUALIFICATIONS DESIRED

Education: PhD, protein chem and/or related fields

Experience: Relevant industrial and academic exp, Hands-on expertise in protein separation & bioconjugate chem, ability to perform in diverse interdisciplinary environment. Familiarity with design of experiments (DOE) is a plus.

LOCATION, SALARY, MAIL ADDRESS

Location: Fremont
Salary: Competitive salary & benefits & stock options
Description of Employer: Interdisciplinary bio-informatics company

Application Instructions: Send resume, cover letter and three references to: Email: kmeyer@lumicyte.com FAX: 650-625-1776 Phone: 510-226-3953

CHEMPLOYMENT ABSTRACTS 3486

Position Title: Production Chemist

Job Description: As part of the Biochip production group, responsible for executing microarray std operational procedures for the production of BioChips, maintaining lab function & chemicals supplies inventory.

QUALIFICATIONS DESIRED

Education: BS/MS, org chem, preferably surface org & polymer chem.
Experience: Few years industrial lab exp. Ability to perform in diverse interdisciplinary environment. Knowledge of one or more instruments for surface QC analysis, with laser mass spect exp preferred. Familiarity with design of exp (DOE) is a plus.

LOCATION, SALARY, MAIL ADDRESS

Location: Fremont
Salary: Competitive salary & benefits & stock options
Description of Employer: Interdisciplinary bio-informatics company

Application Instructions: Send resume, cover letter and three references to: Email: kmeyer@lumicyte.com FAX: 650-625-1776 Phone: 510-226-3953

CHEMPLOYMENT ABSTRACTS 3487

Position Title: Research Associate, Medicinal Chemistry

Job Description: Provide new chemical entities for evaluation in drug discovery projects. Carry out synthetic procedures, purify prods & interpret data to support proposed structure.

QUALIFICATIONS DESIRED

Education: BS/MS synthetic org chem
Experience: 1-5 yrs exp, including exp in synthesis, purification & analysis of org molecules.

LOCATION, SALARY, MAIL ADDRESS

Location: Palo Alto
Salary: Competitive salary & benefits
Description of Employer: Innovator in human pharmaceutical research

Application Instructions: Send resume to: Roche Pharmaceuticals Job Code RBS2384-JBM 3401 Hillview Avenue, A2-HR Palo Alto, CA 94304 FAX: 650-424-8159 Email: paloalto.hr_staffing@roche.com

CHEMPLOYMENT ABSTRACTS 3488

Position Title: Analytical Chemist

Job Description: Perform chemical analysis using HPLC and wet chemistry techniques & provide timely support of chem manufacturing activities.

QUALIFICATIONS DESIRED

Education: MS/PhD chem
Experience: 2+ yrs industry exp in analytical chemistry. Strong HPLC exp required & LC-MS exp desirable. Should be efficient in word processing and spreadsheets.

LOCATION, SALARY, MAIL ADDRESS

Location: Hayward
Salary: Competitive salary & benefits
Description of Employer: Discovery of new drugs from natural sources for diabetes, inflammation & allergic diseases.

Application Instructions: Send resume & cover letter to: HR Manager Calyx Therapeutics Inc. 3513 Breakwater Avenue Hayward, CA 94545 FAX: 510-780-1025 Email: cweber@calyxti.com

CHEMPLOYMENT ABSTRACTS 3489

Position Title: Medicinal/Synthetic Organic Chemist

Job Description: Design/synthesize novel org molecules as drug candidates, interact with biologists & pharmacologists on project teams, & utilize bioassay results to expedite drug discovery process.

QUALIFICATIONS DESIRED

Education: PhD org chem
Experience: 0-5 yrs post doctoral exp in org synthesis or equiv., & excellent skills in spectroscopy (NMR, MS) & separation (HPLC, flash chromatog) methods. Excellent interpersonal & problem-solving skills are essential. Exp with natural/ parallel synthesis a plus.

LOCATION, SALARY, MAIL ADDRESS

Location: Hayward
Salary: Competitive salary & benefits
Description of Employer: Discovery of new drugs from natural sources for diabetes, inflammation & allergic diseases.

Application Instructions: Send resume & cover letter to: HR Manager Calyx Therapeutics Inc. 3513 Breakwater Avenue Hayward, CA 94545 FAX: 510-780-1025 Email: cweber@calyxti.com

CHEMPLOYMENT ABSTRACTS 3490

Position Title: Laboratory Technician

Job Description: Perform general Lab procedures. Part time or full time

QUALIFICATIONS DESIRED

Education: BA/BS science

LOCATION, SALARY, MAIL ADDRESS

Location: Hayward
Salary: Competitive salary & benefits
Description of Employer: Discovery of new drugs from natural sources for diabetes, inflammation & allergic diseases.

Application Instructions: Send resume & cover letter to: HR Manager Calyx Therapeutics Inc. 3513 Breakwater Avenue Hayward, CA 94545 FAX: 510-780-1025 Email: cweber@calyxti.com

CHEMPLOYMENT ABSTRACTS 3491

Position Title: Scientist/Sr. Scientist Stability and GMP

Job Description: Drug substances and drug product stability testing related activities, including protocol writing; contract lab selection/monitoring; stability data review; database management, stability report writing, analytical method transfer; analytical SOP writing & regulatory document controls; review of notebooks & lab data to ensure regulatory compliance.

QUALIFICATIONS DESIRED

Education: BS/MS or PhD, chem, pharmaceutical science or related field
Experience: 5-7+ yrs of pharmaceutical exp

LOCATION, SALARY, MAIL ADDRESS

Location: South San Francisco
Salary: Competitive salary & benefits
Description of Employer: Developer of small molecule drugs

Application Instructions: Send resume to: Sugen, Inc. HR Department Attn: Job Code: PG50397ACS-MT 230 East Grand Avenue South San Francisco, CA 94080 FAX: 650-837-3301 email: jobs@sugen.com (MS Word document only, please)

CHEMPLOYMENT ABSTRACTS 3492

Position Title: Analytical Chemist

Job Description: Analytical related activities, including method development/validation, GLP/GMP compliance, & contract or affiliated lab monitoring in support product development projects.

QUALIFICATIONS DESIRED

Education: BS/MS or PhD, chem, pharmaceutical science or related field
Experience: 1-2 yrs exp with pharmaceutical analytical method development.

LOCATION, SALARY, MAIL ADDRESS

Location: South San Francisco
Salary: Competitive salary & benefits
Description of Employer: Developer of small molecule drugs

Application Instructions: Send resume to: Sugen, Inc. HR Department Attn: Job Code: PG50389ACS-MT 230 East Grand Avenue South San Francisco, CA FAX: 650-837-3301 email: jobs@sugen.com (MS Word document only, please)

CHEMPLOYMENT ABSTRACTS 3493

Position Title: Research Associate, Preformulation Chemist

Job Description: Evaluate the physical/chemical properties of new drug candidates relevant to formulation development, including crystallinity, solid state & solution stability/solubility in pharmaceutically acceptable vehicles. Will also perform formulation support of basic in vivo studies.

QUALIFICATIONS DESIRED

Education: BS chem with 3 yrs exp or MS with 1 yr exp.
Experience: Background must demonstrate an understanding of fundamentals of physical-organic chem and/or pharmaceuticals; exp with pharmaceutical analysis highly desirable.

LOCATION, SALARY, MAIL ADDRESS

Location: South San Francisco
Salary: Competitive salary & benefits, including 401(k).
Description of Employer: Using proprietary drug discovery to build a major, fully integrated pharmaceutical company.

Application Instructions: Send CV/resume, indicating Job Code: 01-188 to: Advanced Medicine, Human Resources 901 Gateway Blvd., South San Francisco, CA 94080 Email: resume@advmedicine.com FAX: 650-808-6121 www.advmedicine.com

CHEMPLOYMENT ABSTRACTS 3494

Position Title: Research Associate, Chemistry

Job Description: Plan & conduct syntheses of org molecules from a wide variety of structural types, including heterocyclic systems & peptides.

QUALIFICATIONS DESIRED

Education: BS/MS chemistry
Experience: 2 yrs exp. Familiarity with HPLC & modern chem instrumentation are a must, as is the ability to work & excel as part of a well coordinated team.

LOCATION, SALARY, MAIL ADDRESS

Location: Redwood City
Salary: Competitive salary & benefits
Description of Employer: Discovery of small molecule drugs that bind to DNA or RNA to regulate gene expression or inactivate pathogens.

Application Instructions: Send resume to:

Genelabs Technologies, Inc.
HR Dept., Job#0107-SV
505 Penobscot Drive
Redwood City, CA 94063
FAX: 650-363-6080
Email: hr@genelabs.com

CHEMPLOYMENT ABSTRACTS 3495

Position Title: Research Associate, Mass Spectrometry

Job Description: Provide routine ms service for diverse small org cpds submitted by synthetic chemists. Perform routine proc of sample prep, ESI-MS instrument operation & mass spect anal of synthetic cpds & assist in development, validation & execution of HPLC & LC-MS methods to provide bioanal support for drug metabolism studies.

QUALIFICATIONS DESIRED

Education: BS/MS anal or pharm chem or related discipline.
Experience: 1-3 yrs exp in ESI-MS, HPLC or LC-MS & familiarity with MALDI-MS & practical knowledge of sample extraction, isolation & identification of metabolites, in bio sample are desired but not necessary. Good communication skills & ability to work in a team environ.

LOCATION, SALARY, MAIL ADDRESS

Location: Redwood City
Salary: Competitive salary & benefits
Description of Employer: Discovery of small molecule drugs that bind to DNA or RNA to regulate gene expression or inactivate pathogens.

Application Instructions: Send resume to:

Genelabs Technologies, Inc.
HR Dept., Job#0110-SV
505 Penobscot Drive, Redwood City, CA 94063
FAX: 650-363-6080 Email: hr@genelabs.com

CHEMPLOYMENT ABSTRACTS 3496

Position Title: Sr. Chemist/Staff Scientist

Job Description: Using liquid & gas chromatog & chem methods, perform method quality review, perform enhancement & develop & validate. Under minimal supervision, initiate reviews & any subsequent modification, establish timelines, communicate problems & solns *oversee other chemists contributing to proj.

QUALIFICATIONS DESIRED

Education: BS/MS/PhD chem or pharmaceutical sciences
Experience: 5-8 yrs hands-on analytical exp in pharmaceutical industry. Should be a team player with knowledge of regulatory requirements for raw pharmaceutical usage & GMP stds.

LOCATION, SALARY, MAIL ADDRESS

Location: Mountain View
Description of Employer: A research-based pharmaceutical company focused on developing & bringing to market prods with enhanced therapeutic value using our innovative drug delivery techniques.

Application Instructions: Send resume to:

Job Code 01-239, HR Dept.
Alza Corp.
1900 Charleston Road, P.O. Box 7210
Mountain View, CA 94039-7210
FAX: 650-564-5656
Email: jobs@Alza.com (ASCII files only)
Job Hotline: 650-564-5319

CHEMPLOYMENT ABSTRACTS 3487

Position Title: Associate Chemist

Job Description: Synthesis of new organic cpds to be evaluated as antimicrobial agents

QUALIFICATIONS DESIRED

Education: BS/BS or MA/MS org
Experience: At least 1 yr of independent research exp in org synthesis is required. A record of publication is desirable. Should also possess excellent communication skills & should have the ability to work both independently & as part of a multidisciplinary team.

LOCATION, SALARY, MAIL ADDRESS

Location: Mountain View
Salary: Competitive salary & benefits
Description of Employer: Innovative Bay Area pharmaceutical company discovering new anti-infective agents.

Application Instructions: Send resume to:

Human Resources
Attn: Job Code 808-MCA
Microcide Pharmaceuticals Inc.
850 Maude Avenue
Mountain View, CA 94043
FAX: 650-526-3034

CHEMPLOYMENT ABSTRACTS 3498

Position Title: Research Associate, Analytical R&D

Job Description: Support development proj with chem (Chromatog) & physical analysis of pharmaceutical formulations including stability analysis. Conduct analytical methods development & validating. Prepare documentation & assist with tech reports.

QUALIFICATIONS DESIRED

Education: BS/MS chem or related field
Experience: 3+ yrs preferably in pharmaceutical industry. Significant exp with analytical instrumentation, esp HPLC/GC & computerized data systems. Thorough documentation skills & attention to detail. Good math, verbal & written communication skills. Knowledge of Word, Excel preferred. Prior exp with GLPs/HMPs preferred.

LOCATION, SALARY, MAIL ADDRESS

Location: Alameda
Salary: Competitive salary & benefits
Description of Employer: Ophthalmic pharmaceutical prod development.

Application Instructions: Send resume to:

InSite Vision, Inc.
HR, Job #RCAN01-ACS
965 Atlantic Avenue
Alameda, CA 94501
FAX: 510-747-1374
Email: leslieza@insite.com
www.insitevision.com

CHEMPLOYMENT ABSTRACTS 3499

Position Title: Organic Synthetic Chemist Biochip Development Dept

Job Description: Responsible for executing & conducting synthesis of novel org substances for biochip microarrays fabrication & protein assays. Apply hands-on exp to developing std operational procedures for novel derivatives & multifunctional reagents using broad range of functional groups, develop & implement methods for purification, including polymer derivatives

QUALIFICATIONS DESIRED

Education: BS or MS org chem
Experience: At least a few yrs related academic and/or industrial exp & ability to perform in diverse inter-disciplinary environment. Knowledge of NMR, chromatog, & other identification analytical techniques is desirable.

LOCATION, SALARY, MAIL ADDRESS

Location: Fremont
Salary: Competitive salary & benefits & stock options
Description of Employer: Bioinformatics company rapidly driving the future of proteomics & health care.

Application Instructions: Send resume, cover letter & 3

references to:
Email: kmeyer@lumicyte.com
FAX: 650-625-1776
Phone: 510-226-3953

CHEMPLOYMENT ABSTRACTS 3500

Position Title: Protein Separation Scientist, Protein Chemistry

Job Description: Responsible for developing & implementing of affinity chromatog strategies for protein separation on high-density biochip arrays surfaces. Development & evaluation of biochip functional performance using liquid-handling robotics & laser Mass Spect for protein analysis. Most responsibilities will be focused in lab & will participate & lead dynamic proj teams for solving client problems.

QUALIFICATIONS DESIRED

Education: PhD protein chem and/or related fields
Experience: 3-5 yrs relevant industrial exp, hands-on expertise in protein separation & bioconjugate chem & ability to perform in diverse interdisciplinary environment & familiarity with design of experiments a plus.

LOCATION, SALARY, MAIL ADDRESS

Location: Fremont
Salary: Competitive salary & benefits & stock options
Description of Employer: Bioinformatics company rapidly driving the future of proteomics & health care.

Application Instructions: Send resume, cover letter & 3

references to:
Email: kmeyer@lumicyte.com
FAX: 650-625-1776
Phone: 510-226-3953

CHEMPLOYMENT ABSTRACTS 3501

Position Title: Production Chemist

Job Description: Responsible for executing microarray std operational proc. for the production for the production of BioChips, maintaining lab function & chemicals supplies inventory.

QUALIFICATIONS DESIRED

Education: BS and or MS org chem, preferable surface org & polymer chem
Experience: A few yrs industrial lab exp. Ability to perform in diverse interdisciplinary environment. Knowledge of one or more instruments for surface QC analysis with less mass spect exp preferred. Familiarity with design of experiments is a plus.

LOCATION, SALARY, MAIL ADDRESS

Location: Fremont
Salary: Competitive salary & benefits & stock options
Description of Employer: Bioinformatics company rapidly driving the future of proteomics & health care.

Application Instructions: Send resume, cover letter & 3

references to:
Email: kmeyer@lumicyte.com
FAX: 650-625-1776
Phone: 510-226-3953

CHEMPLOYMENT ABSTRACTS 3502

Position Title: Engineer/Sr/ Engineer

Job Description: Obtain analytical data at US location in support of matl & contaminating characterization as well as failure analysis. The primary tools used are Ion Chromatog, GC/MS, FTIR & Raman Spect. Includes work assignment planning, coordination & interaction with customers & customer engrg managers as well as process & prod managers and engrgs. Be capable of working independently & have good communication skills to relay results & recommendations.

QUALIFICATIONS DESIRED

Education: BS/MS chem, chem engrgr or related field
Experience: At least 3 yrs exp in chem lab in computer or semiconductor ind or with contract service lab. Must be capable of to work in-dependently, good communicat skills to relay results & recommendations. Exp in chromatog or spect desired.

LOCATION, SALARY, MAIL ADDRESS

Location: San Jose
Salary: Competitive salary & benefits
Description of Employer: Largest supplier of thin film disks.

Application Instructions: Send resume to: Attn: Staffing

1710 Automation Pkway
San Jose, CA 95131
Email: jobs@komag.com
FAX: 408-944-9543
Website: www.komag.com

**EMPLOYMENT HELP
IN OTHER AREAS
OF CALIFORNIA**

The following are names and addresses of contacts in other California Sections. You may write to them or call to find out how to receive their job listings or how to place a job listing with them. Do not send self-addresses envelopes unless requested to do so.

California Section

Ms Holly Kreuter
American Chemical Society
California Section
2140 Shattuck Avenue, Rm 1101
Berkeley, CA 94704
925-287-8055
e-mail: office@calacs.org

California Los Padres Section

Dr. Sandra Lamb
Chemistry Dept.
University of California,
Santa Barbara
Santa Barbara, CA 93106-9510
e-mail: lamb@chem.ucsb.edu

Mojave Desert Section

Dr. Peter Zarras
NAWCWD, Code 4T4220D
1 Administration Circle
China Lake, CA 93555
760-939-1396
e-mail: zarrasp@navair.navy.mil

Orange County Section

Geoff Anderson
Hycor Biomedical
78272 Chapman Avenue
Garden Grove, CA 92641
714-895-9558
Ron Denedour
23731 Coronel Drive
Mission Viejo, CA 92691-3306

Sacramento Section

John R. Bingham
809 W. Stadium Lane
Sacramento, CA 95209
916-927-7088
916-927-7006 FAX

San Diego Section

Renate Valois
619-260-4513
619-260-2211 FAX
e-mail: pascal@acusc.edu

San Gorgonio Section

Valerie Barrett
Sunkist Growers
e-mail:
vbarrett@sunkistgrowers.com

Southern California Section

Send a self-addressed, 55 cent stamped business envelope to:
ACS job listing
14934 South Figueroa Street
Gardena, CA 90248
310-327-1216
e-mail: office@scalacs.org
www.scalacs.org/employ.html



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AMERICAN CHEMICAL SOCIETY
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MAY 2001 NEWSLETTER TOPICS:

Nanotechnology: Manufacturing as Extended Chemistry
Chair's Message
May Dinner Meeting
Chemistry Olympiad
Nominations for 2002 Petition Candidates
Shirley Radding and Jack Riley Receive ACS Award
Section Receives Hospitality Award
Ottenberg Service Award: 2001 Call for Nominations
Councilors' Corner

CHEMPLOYMENT ABSTRACTS



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SANTA CLARA VALLEY SECTION

2001 SECTION OFFICERS

Chair	Sally Peters	650-812-4994
Chair-Elect	Jon Touster	650-723-4340
Secretary	Karl Marhenke	831-479-6263
Treasurer	Hong Gao	650-564-5197
Past-Chair	Ean Warren	650-329-4554

Councilors

1999-01	Herb Silber	408-924-4954
2000-02	Maureen Scharberg	408-924-4966
2000-02	John F. Riley	650-328-4036
2000-02	Ean Warren	650-329-4554
2001-03	Linda Brunauer	408-554-6947
2001-03	Bonnie Charpentier	650-354-2344
2001-03	Sally Peters	650-812-4994

Alternate Councilors

1999-01	Peter Rusch	650-948-0237
1999-01	Jon Touster	650-723-4340
2000-02	Roy Okuda	408-924-2525
2000-02	Donna Drogos	408-265-2600
2000-02	Lance Wong	650-829-1148
2001-03	George Lechner	408-226-7262
2001-03	Howard Peters	650-324-1677

Newsletter Editor

Steven Colby 650-812-3424
e-mail: scolby@carr-ferrell.com

FUTURE MEETINGS

May 4 - Jun 19	Illustrating Nature Exhibit Santa Cruz
May 6-10	Intel ISEF
May 16	May Excomm Meeting
May 20	Bay to Breakers Run
May 24	Nanotechnology <i>Dr. Ralph Merke</i>
Jul 28	Annual Wine Tasting & Awards <i>Stanford University</i>
Aug 26-30	National ACS Meeting Chicago, IL

CHEMPLOYMENT ABSTRACTS

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