April Dinner Meeting: Potential Environmental and Health Risks of Genetically Modified Crops

Abstract

Recent polls have found that nearly half of all Americans have never even heard of genetically modified (GM) crops. Yet Americans are consuming GM foods every day. In fact, farmers have rapidly adopted GM crop varieties: US acreage devoted to GM crops rose from about 8 million acres in 1996 to about 76 million acres in 2000. I will discuss the types of GM crops currently being grown on a commercial scale, what types of GM crops we might see in the near future, the potential threats to human health and the environment, and how the US government is working to assess those risks. I will not argue that GM crops do in fact represent some terrible risk, but rather that it is not irrational to consider whether they might entail risks. Given this, we should test for risks in a rigorous and informative way. It is important to raise awareness about food safety and the environmental safety of food production, not to create panic or hysteria, but rather to be sure that our government is being vigilant on our behalves.

continued on next page

Chair’s Message

When I first saw models illustrating the shapes of molecules and the various standard hybridizations of carbon, I got a vague feeling that I had seen it all before, in early childhood. I recalled having a stuffed toy that looked like a tetrahedral carbon with four sp3 hybrid orbitals coming off it. Whatever the toy’s exact shape, I was surprised to remember it and even more surprised how relevant it had been. I certainly felt comfortable with the three dimensional aspects of hybrid orbitals and I think that the toy had helped.

What I like about this memory is that playing with a simple toy helped prepare me for concepts that I wouldn’t encounter for 15 years. I doubt my parents knew of the toy’s

continued on next page
A Message from the Chair-Elect
2002 Western Regional Outstanding
High School Chemistry Teacher Award

I am pleased to announce that Mr. Gareth Wong, an exemplary high school chemistry teacher at Homestead High School in Cupertino, has received the 2002 ACS Western Region Outstanding High School Chemistry Teaching Award. He will now compete nationally for the 2003 James Bryant Conant Award in High School Chemistry Teaching. Since there is no 2002 Western Regional Meeting, the ACS-SCV Section will present his award to him at a special luncheon at the University Club at San Jose State University on Saturday, October 19, 2002. Prior to this award luncheon, there will be a special symposium, “Celebrating Excellence in Teaching High School Chemistry” for high school chemistry teachers.

Note: If you know of an outstanding high school chemistry teacher and would like assistance nominating him/her for the Western Region Outstanding High School Chemistry Teacher Award, please contact me.

Dinner Speaker Suggestions
Requested: Your ACS-SCV Program Committee met on Tuesday, January 22, 2002 to begin planning our monthly dinner speakers and events through mid-2003. Now is the time to send your suggestions for dinner speakers to me at my e-mail address, “scharberg@pacbell.net”.

Maureen Scharberg

Chair’s Message, continued from front page

geometric significance when they got it, it was just a fun toy. Years later, I wondered if I could recreate this kind of experience for my nephew. He was 2 years old, and I looked for a toy with hidden educational content. In the late 1960’s, my folks had bought many toys, possibly even my “stuffed carbon atom”, from an outfit called Creative Playthings. When I started looking for a toy for my nephew, that company was out of business. However, there were plenty of educational toy stores, like the ones affiliated with PBS stations. But I had a hard time finding what I wanted. Many of the educational toys required adult supervision, others came with multiple-page instruction manuals- not good for passive learning through play. I decided to take a more direct approach. I bought my nephew a periodic table place mat.

He has used it for several years. I’m not sure it will make him want to be a chemist, but I hope when and if he takes chemistry he will feel comfortable with the periodic table. More recently, before my wife and I had our first child, I went out and bought a number of ‘make your baby a genius’ books. The basic theme was that one could conduct educational exercises with a baby during ‘free moments’- on the changing table, in the car; in the crib after a nap, etc. It didn’t take me long to realize that such a regime would pack a day full of structured educational play, exhausting all participants. When would the baby have time to suck her toes, to contemplate her hands? By the time my daughter was born, I had given up my grand plans of making her a genius.

But a friend of my wife brought things full circle. She sent us a rattle for the baby, a tetrahedral rattle. She has no scientific background and I doubt that she understood the toy’s secret educational value. I kind of like that, and my daughter certainly likes the rattle.

I’d like to remind you that we have an exciting dinner meeting this month, with David Rakestraw discussing chemistry on a chip (see the front page for details). Also, if you are interested, you are welcome to attend the monthly executive committee meetings where we hear committee reports, discuss section activities, and plan events. Check out the most recent ExComm minutes on our web site (www.scvacs.org) to see what goes on, and to learn when and where the next meeting will be held.

Jon
Call for Nominations
The Harry and Carol Mosher Award

The award was established in 1980 by the Santa Clara Valley Section of the ACS to (1) recognize and encourage outstanding work in chemistry; (2) advance chemistry as a profession; and (3) recognize service to the American Chemical Society. The award is named for the late Professor Dr. Harry S. Mosher of Stanford University, Palo Alto, California and Dr. Carol W. Mosher of SRI International, Menlo Park, California, husband and wife, charter members and long-time supporters of this section.

The first scientists to receive this award were Doctors Harry and Carol Mosher in recognition of the inspiration of their example. The committee noted that the Mosher,

including a brother, Dr. William A. Mosher, also a chemist and former Chairman of the Department of Chemistry at the University of Delaware, are outstanding examples of the qualities to be recognized and honored by this award.

Any scientist residing in the United States who is a member of the ACS is eligible to be nominated for the Mosher Award. Five copies of the nomination, including printed materials (reprints) should be furnished for distribution to the award Selection Committee. The award is presented on the third week of January of the following year. It consists of a commemorative plaque, a $2,000 honorarium, and traveling and lodging expenses for two for the day the award is presented. The nomination and its accompanying material must be sent to Award committee by May 31.

Chair
the Mosher Award Committee
Santa Clara Valley Section
American Chemical Society
P.O. Box 395
Palo Alto, California 94302

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Happy St. Patrick’s Day
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OTTENBERG SERVICE AWARD
2002 CALL FOR NOMINATIONS

It is 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 an honorarium 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.


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

Nominations must be received by May 24, 2002 to be considered for the 2002 award.

Grand Opening
The W.M. Keck Facility for Chemical Research
San Jose State University
Friday, April 5, 2002

Grand Opening Program
Time: 1:30pm
Location: Washington Square Hall

Keynote Address
Professor Richard Zare
Stanford University

Ribbon Cutting, Reception and Facility Tour
Time: 3:00pm
Location: Duncan Hall basement level

This lecture is free and open to the public. The seminar room is wheelchair accessible - any other special accommodations should be requested by March 30, 2002 at the contact number below.

A campus map and directions may be found on the SJSU website at www.sjsu.edu. Parking is available in the 7th Street Garage ($2 fee). If you need more information, contact Roy Okuda at 408-924-2525 or by email: okuda@sjsu.edu.

❖❖❖
Happy St. Patrick’s Day
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CHEMPLACEMENT ABSTRACTS 3598
Position Title: Chemist III/IV  Chem/Med Engineer
Job Description: Using established QC procedures, test raw mats, intermediates & finished products in support of research product development activities & accurately document results within cGMP & SOP requirements. Take part in designing/improving methods, act as tech liaison with multiple pmj groups, develop/validate analytical methods & quality instruments. Focus on ploy prep of mats, specifically particle size, thermal mechanics & rheology.
QUALIFICATIONS DESIRED
Education: BS/MS chem, mat sci, chem eng 
Experience: 8-10 yrs exp in pharm or other GMP/GLP industry. Hands-on exp in use of particle size & thermal-mech analyzers, rheometers, & tensiometers, instrument qualification & method validation exp in cGMP/GLP environment. In team environment, should be detail-oriented & able to handle multiple pmj with minimal supervision & tight deadlines.
LOCATION, SALARY, MAIL ADDRESS
Location: Mountain View
Application Instructions: Send resume indicating Job Code 01468-ACS to: Alza Corporation, HR Dept., 1900 Charleston Road, P.O. Box 7210 Mountain View, CA 94039-7210 FAX: 650-564-3056 Email: jobs@alza.com (ASCII files only)

CHEMPLACEMENT ABSTRACTS 3602
Position Title: Process Chemist (SRA)
Job Description: responsible to work with a senior scientist to establish lab setup & functions. Requires substantial interaction with multidisciplinary teams.
QUALIFICATIONS DESIRED
Education: BS/MS in exp chem
Experience: 5-10 yrs post degree exp in gpc ms or scale-up (“kilo”) lab, preferably in pharmaceutical industry. Org chemistry proficiency with a mechanistic understanding of modern syn chem reactions, scale-up issues & characterization techniques (required). BS/MS, HPLC, chromatization & chiral purifica- tion. GMP facility exp desirable.
LOCATION, SALARY, MAIL ADDRESS
Location: South San Francisco
Salary: Competitive
Description of Employer: From our well-documented advances in neurology & pain management to our pioneering development of an Alzheimer’s vaccine, to channeling the strength of an internationally growing company into biopharmaceutical innovation.
Application Instructions: For immediate consideration, please email your resume, indicating Job Code 50510046-ACS to elanpharma@wehimm.com or FAX: attn: elan at 800-205-2479 Elan Biopharmaceuticals Group 700 Gateway Blvd South San Francisco, CA 94080

CHEMPLACEMENT ABSTRACTS 3603
Position Title: Analytical Chemist (SRA/Accuei Scientist)
Job Description: Primary responsibility is to fully support the Company’s medicinal chem effort thru analytical HPLC methods & preparative HPLC of small molecules.
QUALIFICATIONS DESIRED
Education: BS, MS, PhD
Experience: Appropriate exp & excellent understanding of modern chromatographic separations. Org chemistry/organic chem required. BS/MS chem & background & application of HPLC or other methods to deth phys properties of cpds preferred.
LOCATION, SALARY, MAIL ADDRESS
Location: South San Francisco
Salary: Competitive
Description of Employer: Elan’s competitive advantage is in the discovery, development & manufacture of innovative human therapeutics for patients with unmet medical needs. We are a highly visible growth company into bio-pharma innovation.
Application Instructions: For immediate consideration, please email your resume, indicating Job Code 50510000-ACS to elanpharma@wehimm.com or FAX: attn: elan at 800-205-2479 Elan Biopharmaceuticals Group 700 Gateway Blvd South San Francisco, CA 94080

CHEMPLACEMENT ABSTRACTS 3604
Position Title: Research Associate
Job Description: Perform biological & analytical tests associated with in vitro ADMET screens. Also assist in data reporting & instrument maintenance/trouble- shooting.
QUALIFICATIONS DESIRED
Education: BS/MS in life sciences discipline
Experience: 2-5 yrs exp in anal, pharma, biol sciences or related field. Extensive HPLC method development & LC/MS coupled with a high degree of computer & data-handling exp. Electrophy, high thruput instrumentation & bio-anal methods desirable. Lab involving live cells & cellular fractionation/extracts & chromatographic methodology required; strong oral & written communications.
LOCATION, SALARY, MAIL ADDRESS
Location: South San Francisco
Salary: Competitive
Description of Employer: Elan’s advantage in neurology & pain management to our pioneering development of an Alzheimer’s vaccine, to channeling the strength of a growing company into bio-pharma innovation.
Application Instructions: For immediate consideration, please email your resume, indicating Job Code 50520002-ACS to elanpharma@wehimm.com or FAX: attn: elan at 800-205-2479 Elan Biopharmaceuticals Group 700 Gateway Blvd South San Francisco, CA 94080

CHEMPLACEMENT ABSTRACTS 3605
Position Title: Scientific Project Manager 1
QUALIFICATIONS DESIRED
Education: BA/BS scientific degree; equivalent comb of education & exp will also qualify for above requirements.
Experience: Strong communication skills, atta to details & understanding of early stage pre-clinical drug development. Exp in formlmation &/or chem related exp required (min 1 yr) & exp in conduct of GCP &/or GMP projects highly desirable. Excellent computer (windows 95/98) skills also needed.
LOCATION, SALARY, MAIL ADDRESS
Location: Menlo Park
Salary: Dependent on exp
Description of Employer: Independent research & techn orgs. See www.SRI.com
Application Instructions: Send resum & cover letter to: Attn: Daniel Swartz FAX: 650-859-4222

CHEMPLACEMENT ABSTRACTS 3606
Position Title: Scientific Project Manager
Job Description: Using established QC procedures, test raw mats, intermediates & finished products in support of research product development activities & accurately document results within cGMP & SOP requirements. Take part in designing/improving methods, act as tech liaison with multiple pmj groups, develop/validate analytical methods & quality instruments. Focus on ploy prep of mats, specifically particle size, thermal mechanics & rheology.
QUALIFICATIONS DESIRED
Education: BS/MS chem, mat sci, chem eng 
Experience: 8-10 yrs exp in pharm or other GMP/GLP industry. Hands-on exp in use of particle size & thermal-mech analyzers, rheometers, & tensiometers, instrument qualification & method validation exp in cGMP/GLP environment. In team environment, should be detail-oriented & able to handle multiple pmj with minimal supervision & tight deadlines.
LOCATION, SALARY, MAIL ADDRESS
Location: Mountain View
Application Instructions: Send resume indicating Job Code 01468-ACS to: Alza Corporation, HR Dept., 1900 Charleston Road, P.O. Box 7210 Mountain View, CA 94039-7210 FAX: 650-564-3056 Email: jobs@alza.com (ASCII files only)

CHEMPLACEMENT ABSTRACTS 3607
Position Title: Analytical Chemist I/II
Job Description: Perform analyses on chem/drug substances for toxicol studies using primarily HPLC & related field. Experience with LC/MS & prod under cGMP requirements. Must be able to work under GLP regulatory environment & meet time sensitive, formal protocols & reports. HPLC method development & validation, computer fluency with Excel spreadsheets & MS Word.
QUALIFICATIONS DESIRED
Education: BS chem or related field
Experience: Exp in GCLP/GLP environment desirable. Equivalent combination and exp also qualifies for above requirements. Pre-placement physical required.
LOCATION, SALARY, MAIL ADDRESS
Location: Menlo Park
Salary: Dependent on exp
Description of Employer: Independent research & techn orgs. See www.SRI.com
Application Instructions: Send resum & cover letter to: Attn: Daniel Swartz FAX: 650-859-4222 or email: daniel.swartz@sri.com

CHEMPLACEMENT ABSTRACTS 3608
Position Title: Analytical Chemist Supervisor, Industrial Hygiene
Job Description: Day-to-day supervision of pmj with form sched, deadlines & specific quality criteria. Long-term, multi-year pmj is to produce, test, & pack- age analytical proficiency testing samples for occupa- tional & environmental monitoring. Exp in gpc ms solvents, metals, crystalline silica & asbestos fibers. Management & training of 4 staff members.
QUALIFICATIONS DESIRED
Education: BS chem or related field
Experience: Certification in chem practice by American Board of Industrial Hygiene desirable. Verbal & writ- ten communication skills with prof participants & client staff to answer inquiries, resolve issues & develop new programs. Hands-on effort to cross-train & when needed to meet deadlines. Expertise in chem- istry, MTRG, ICP/AA, phase contrast microscopy. Exp in industrial hygiene analyses & knowledge of agency genera-tion methodology a plus.
LOCATION, SALARY, MAIL ADDRESS
Location: Menlo Park
Salary: Dependent on exp
Description of Employer: Independent research & techn orgs. See www.SRI.com
Application Instructions: Send resum & cover letter to: Attn: Daniel Swartz FAX: 650-859-4222

CHEMPLACEMENT ABSTRACTS 3609
Position Title: Scientific Project Manager 1
QUALIFICATIONS DESIRED
Education: BA/BS scientific degree; equivalent comb of education & exp will also qualify for above requirements.
Experience: Strong communication skills, atta to details & understanding of early stage pre-clinical drug development. Exp in formlmation &/or chem related exp required (min 1 yr) & exp in conduct of GCP &/or GMP projects highly desirable. Excellent computer (windows 95/98) skills also needed.
LOCATION, SALARY, MAIL ADDRESS
Location: Menlo Park
Salary: Dependent on exp
Description of Employer: Independent research & techn orgs. See www.SRI.com
Application Instructions: Send resum & cover letter to: Attn: Daniel Swartz FAX: 650-859-4222

CHEMPLACEMENT ABSTRACTS 3610
Position Title: Scientists/Research Associates Synthetic Org/Medical Chem
Job Description: Apply synthetic org, medicinal, process, combinatorial & computational chem to dis- cover new drug candidates; design/synthesize org cpds & combinatorial libraries for evaluation as part of combinatorial research process.
QUALIFICATIONS DESIRED
Education: BS/MS/PhD chem
Experience: 1-3 yrs industry exp; active experimental- is & eager to work in an integrated, multidisciplinary drug discovery environment. Expr in multiplex synthetic org & medicinal chem. Use of NMR, IR, MS, HPLC & routine cpd isolation & charac- terization methodology; record of accomplishment.
LOCATION, SALARY, MAIL ADDRESS
Location: San Francisco
Salary: Competitive
Description of Employer: Elan, a division of Discovery Partners Intl, is a world leader in design & production of innovative combinatorial chem & high- output medicinal chem.
Application Instructions: Send resum to: Email: hr@elanchem.com refer to job code SF20-ACH-ACS
Activate Your Mind and Innovate Medicine

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Potential Environmental and Health Risk of Genetically-Modified Crops
Chair's Message
A Message for Chair-Elect
Call for Nominations The Herry and Carol Mosher Award
Ottenberg Service Award 2002 Call for Nominations
Grand Opening: the W.M. Keck Facility for Chemical Research

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FUTURE MEETINGS

Mar (TBD) Chemistry Olympiad
Mar 7 Executive Committee Meeting
Mar 17-22 Pittcon 2002
Mar 21 SCV Dinner Meeting
Apr 7-12 National Meeting
Apr 25 SCV Dinner Meeting
May 23 SCV Dinner Meeting

Bob Roudon and Phil Crews

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