The 49th International Chemistry Olympiad
Bringing Home the Gold

The U.S. National Chemistry Olympiad program proudly announces the extraordinary performance of the U.S. team at the 49th International Chemistry Olympiad competition in Nakhon Pathom, Thailand.

Steven Liu, a 2017 Monta Vista graduate, won a gold medal, as did his co-participants; Joshua Park of MA, Harrison Wang of IL, and Brendan Yap of IN. 297 high school students represented the 76 participating countries. The U.S. team tied with Taiwan as the top performing countries.

Steven said that the team was so successful because each member brought his individual strength and skill which complimented each other. Plus, “we studied really hard, and I think that paid off!”

The competition consisted of a five-hour theoretical exam plus a five-hour practical laboratory exam. In addition to the grueling exams, all of the teams were treated to excursions around the countryside, to historic palaces and temples and a floating market, where they sampled fresh coconut and the exotic fruit, mangosteen. Most of the students found the excursions very interesting, but the heat and humidity were hard on our California kid!

The most interesting part of the trip for Steven was meeting so many like-minded people his age. They bonded in the evenings over card games and just ‘hanging out’! The students from all the countries spoke English! But everyone tried their native languages on each other.

The team and their mentors were in Thailand from July 6 -15. Their expenses were paid by the American Chemical Society.

The most difficult part of the trip was waiting for the results at the awards ceremony according to Steven. But our students did extremely well and made our country proud!

Congratulations, Steven, on a job well done!
in an elected position within the local section, do contact Melody or myself chair@scvacs.org, there is still time to participate. There are many opportunities to participate in outreach activities. Feel free to contact us about that as well.

The September 13th dinner meeting features FBI Special Agent Todd Piantedosi giving a talk entitled The FBI, Weapons of Mass Destruction, and the Chemical Industry. This should be a very interesting talk and I encourage everyone to attend, if possible.

Also in September is the next installment of The Flavors of Chemistry series jointly hosted with the surrounding sections and held on the UC Davis campus. The event this year is centered around Coffee, Olive Oil, and Chocolate. Local chocoholics and this year is centered around Coffee, Olive Oil, and Chocolate. Local chocoholics and section members Sally and Howard Peters will be among the presenters. Details are on the section website.

Elsewhere in this newsletter is an announcement for the YCC Home Brew Competition. I want to encourage everyone to show up and participate. This event will be with the Senior Chemists and the Cal Section.

Finally, earlier this year I found an abstracts book from the 133rd National Meeting of the American Chemical Society held in San Francisco in April 1958. Flipping through the pages, a few titles struck me as interesting. One that struck with me is related to our new name, Silicon Valley Section. It is an abstract entitled "Mechanized Information Memory Using Large-Scale Random Access Memory" by John J. Nolan, International Business Machines Corp., San Jose, California. The abstract describes the use of large scale magnetic storage devices such as the IBM RAMAC magnetic disk unit for data management. For many years, one of the new in 1956, hard drives sat in the lobby of the IBM Almaden Research Facility. I believe that system now lives at the Computer History Museum in Mountain View. Interesting to me is that nearly 60 years ago we were talking about how to deal with the large data sets scientists can generate…and we are still discussing this under the term 'big data'. If you care to browse the book, it will be in the Chemistry Library at Stanford.

Enjoy what is left of the Summer.

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**September Dinner, continued from front page**

and investigations for four years, after which he was promoted to Headquarters. There, he oversaw counterproliferation cases nationwide and managed several WMD programs. In January of 2016, he relocated to the FBI's San Francisco office, where he recently assumed the role of WMD Coordinator.

Special Agent Piantedosi is a graduate of Brown University and The Catholic University's Columbus School of Law. He lives and works in Oakland.

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**Committee Members Needed**

The BUBBLE GRANT program was established in 2011 by a generous donation from an ACS member. Awards of up to $500 per year are granted to worthwhile science projects at K-12 California schools. Grants are awarded for projects that enhance the teaching of physical, life or earth science. Qualified uses of the funds are for purchases related to the proposed project such as scientific equipment, instructional materials and/or supplies. Time commitment is minimal and mainly includes reading proposals and awarding the grant. If you are interested in improving K-12 education in our state, please join our committee. Please contact me by e-mail if your interested in participating.

Joseph A. Castellano, Ph.D.
E-mail: drjcast@aol.com

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**September Dinner Seminar**

**Date:** Wednesday, September 13, 2017
**Time:** 6:00 p.m. Social Hour
7:00 p.m. Dinner
8:00 p.m. Presentation

**Speaker:** Todd J. Piantedosi
Special Agent, WMD, Coordinator, San Francisco office of the Federal Bureau of Investigation (FBI)
The FBI, WMD, and the Chemical Industry

**Location:** Michael's at Shoreline
Mountain View, CA
http://michaelsatshoreline.com/

**Cost:** $30 for members, $15 for students

**Menu:** Broiled salmon, Breast of chicken Florentine or Mushroom crepes

**Registration:** www.scvacs.org

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**ACS Book Club**

Interested in joining the ACS Book Club? Add yourself to the email list scvacs-book-club+subscribe@googlegroups.com or contact Ean Warren (ewarren@scvacs.org).

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**A Tasting, Judging, and Networking Event**

**YCC Home Brew Competition in Partnership with the Senior Chemists**

**Date:** Saturday, November 11, 2017
**Time:** Noon-3 pm

**Location:** Golden State Brewery, 1252 Memorex Drive, Santa Clara, CA 95050

**Lead Contact:** Matt Greaney (SCV Councilor and YCC Lead); greaney19@gmail.com

**Registration Site (under construction, stay tuned)**

**Food and beer will be included with the registration cost. We are still on the hunt for additional teams to enter a home brew, so please contact Matt Greaney if you are interested in entering a brew or if you have any additional questions. He can be reached at greaney19@gmail.com.** Stay tuned for additional announcements in the near future.
August Molecule of the Month
- Glutathione Transferases -

Glutathione transferase tags toxic molecules, making them easy to recognize and remove.

Cells are filled with a confusing jumble of small molecules. Sometimes dangerous molecules get introduced in the mix, and cells need a way to find and remove them. In a first line of defense, enzymes like cytochrome p450 modify slippery carbon-rich toxins, making them more soluble. In a second line of defense, the glutathione transferases attach a convenient handle to unwanted molecules, which is then recognized by the cell's export machinery.

Molecular Handle

The trick to making a useful molecular handle is two-fold. First, the handle needs to be recognizable, and recognizably different from other molecules in the cell. Glutathione is composed of three familiar amino acids: a glutamate, a cysteine and a glycine. But it won’t be confused with normal peptides through its sidechain. Second, a molecular handle needs an easy chemical way to attach it to other molecules. Glutathione has a sulfur atom at the center (part of the cysteine) that is easily activated and attached to a variety of different molecules.

Welcome to the Santa Clara Valley Section of ACS

Each month, the section receives a spreadsheet from national ACS with the names of members new to our section. The members are either new to ACS, have transferred in from other areas, or are the newest members — students. To welcome you to the section and get to know you, the Executive Committee offers new members a free dinner! To encourage you to attend a monthly section seminar meeting, we would like you to be our guest. When you register, make certain to mention that you are a new member and you and a friend will be our guests. The seminar meetings are held at a number of local venues. If you are unable to attend in the evening, perhaps you would join us for an outreach event, like judging a science fair, proctoring the Chemistry Olympiad or participating in a National Chemistry Week event in October. Then, there is our annual wine tasting and awards picnic in July. The local section is a volunteer organization. Please attend an event, volunteer to help and get to know your local fellow chemists. Welcome!

New SCVACS Members

| Nicholas P. Calta       | Dr. Carmela Molinaro       | Lalit Kumar Sharma       |
| Hsing-Ta Chen           | Dr. Alper Nese             | Rabindra V. Shivnaraine  |
| Yiming Chen             | Darkene H. P. Nguyen       | Dr. Raghuvir Singh       |
| Dr. Natalie L. Gruenke  | Anthony Ken Ogawa          | Eric Taw                 |
| Dr. Sven Hackbusch      | Kaz Otsuka                 | Dr. Ankit Vora           |
| Dr. Sarah C. Heilshorn  | Thomas Patterson           | Xiaoke Wang              |
| Kaylene Kay Hung        | Dr. Madalyn Radlauer       | Zijun Wang               |
| Angelina Tien Huynh     | Jing Ren                   | Dr. Rex W. Watkins       |
| Pearl Lee               | Dr. Masato Sasaki          | Dr. Shunqi Yan           |
| Bo Lu                   | Dr. William M. Seganish    | Meng Zhao                |
| Joshua Michael Massey   |                            |                         |

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

FUTURE EVENTS

Sep 13  SCVACS Dinner Seminar
The FBI, WMD, and the Chemical Industry
Special Agent Todd J. Piantedosi
Michael's at Shoreline
Mountain View, CA

Sep 23  Free Community Day at the Exploratorium
Flavors of Chemistry
Sep 30  Joint meeting between the Sacramento, Cal,
and Santa Clara Valley ACS sections
Davis, CA

Oct 21  SCVACS National Chemistry Week
Celebration "Chemistry Rock!"
Hands-on Chemistry Fun for Elementary to
Middle-School Students
MLK Jr. Library, San Jose, CA

Oct TBD  Monterey Bay ACS Dinner Seminar
Dr. Claudia Luhrs, Naval Post Graduate School,
Cabrillo College, Aptos, CA

Nov 11  SCVACS YCC Home Brew Competition,
Judging and Tasting
Joint with Cal section and Senior Chemists
Contact Matt Greaney to enter a home brew
in the competition
Click on links for more information or
see this newsletter at http://scvacs.org/?page_id=99