

Silicon Valley Chemist

Santa Clara Valley Section

American Chemical Society

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DECEMBER 2014 NEWSLETTER TOPICS

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NASA Ames Open House Draws Over 100 Thousand Guests

Partha P. Bera

On a sunny afternoon on October 18th, the NASA Ames Research Center at Moffett Field saw over one hundred twenty thousand people from the greater Bay Area. The doors were opened to the public to commemorate the 75th anniversary of the Ames Research Center. Visitors learned about the research activities at the center and interacted with NASA scientists, who presented their work at interactive booths. There were demonstrations of the NASA Mars Rover at the Roverscape, The NASA Advanced Supercomputing Center, the Intelligent Systems Research Laboratory, SkyIran, the SOFIA observatory, LADEE, the National Full Scale Aerodynamic Complex, the International Space Station, and many other science related exhibits. The NASA Ames Laboratory Astrochemistry group performed live demonstrations of chemical phenomena such as phase transitions, sublimation, infrared spectroscopy, and liquid chromatography. School-age visitors took part in hundreds of hands-on demonstrations. Young visitors built fullerene using a

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A Year in Review

As we reflect on the past year, the local section can be proud of many accomplishments. We co-hosted a national meeting in San Francisco. We supported Foothill College by sponsoring two elements on their periodic table project and hosted a student poster session on the elements. We presented a speaker program filled with various chemistry-related topics: Dr. Peter Wipf on strained carbon and hetero-cycles, Dr. Paula Findlen on the transition from alchemy to early chemistry in the Middle Ages, and Dr. Susannah Tringe on sequencing microbial DNA. The April meeting was a documentary film on the future of automobile technologies while the October meeting was Dr. Carl Djerassi's play "Insufficiency". Our section organized and participated in school science fairs, summer camps, a "Teach the Teachers" workshop, National Chemistry Week, and Bay Area Science Festival. We started a new program of "Connect with Chemists", an opportunity to talk with other chemists over coffee or tea one morning a month. I wish to thank the many people who made these and the many other programs and events possible. It is these people who keep the section relevant and viable.

As we look to the future, I would like to encourage you to participate in your local section. What do you want to get from your section? Do you want to volunteer? Do you want employment assistance? Career development? The ACS offers many avenues for personal and professional development. Let us know!

This is my last chair's message. I would like to thank my employer, the U.S. Geological Survey, who has given me time and resources. Without their assistance, I could not have done so much. I would also like to thank you, the members of the



local section, for giving me the opportunity to be chair. The volunteers for this section put a lot of effort into our many programs and it shows. It is they who really make this section successful.

Thank you all.

Happy Holidays



New Date for the Mosher Award Presentation

– February 5th, 2015 –



Recipient: Dr. Scott Denmark
University of Illinois at Urbana-Champaign
Location: Biltmore Hotel & Suites
2151 Laurelwood Blvd.
Santa Clara, CA 95054

Reservations: www.scvacs.org
Sally Peters 650-854-4614
Reservations should be made by Tuesday, January 27th stating your name, address, company/school affiliation, number of people in party. Watch the web site for more information. If you are unable to honor your reservation please cancel by Wednesday, February 4th.

NASA, continued from front page

chemical model builder. One 10-year old was able to build fullerene from five and six-membered rings in only 18 seconds. Many others came very close to that time. Tickets to the event sold out quickly. SCVACS was able to offer three pairs of complementary tickets to readers who answered the Chem Quiz in the October newsletter correctly. One successful respondent claimed two tickets.

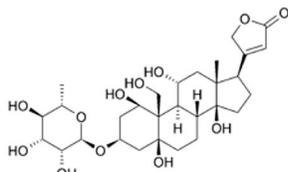
Chemistry Quiz

Approximately how many proteins are encoded in the human proteome?



Last Month's Question:

Somali tribesmen and other groups have used this molecule to poison hunting arrows. A dart tipped with this molecule can bring down a Hippopotamus as the result of respiratory and/or cardiac arrest. What is the common name of this molecule?



Answer: Ouabain (g-strophanthin)

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 spouse (or friend) will be our guests. The seminar meetings are

often the 3rd Thursday of the month at a local spot, somewhat convenient to the entire section. If you are unable to attend in the evening, perhaps you would join us for an outreach event, like judging a science fair, participating in the Chemistry Olympiad, or 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 Members for November

Benjamin Earl Allred	Franklin Langlang Lee	Timothy Rhorer
Eric C. Beiter	Susanna Lee	Alyssa Marie Robbins
Dr. Vikram Bhat	Tim MacKenzie	Professor Dewey Ryu
Christina Chu	Roshee Maha	Sarah Sandholtz
Gregory Cizio	Elizabeth McLoughlin	Dr. Aaron Sato
Carolyn Cohen	Dr. Kim Nguyen	Steven Robert Shuken
Dr. Phillip O. Crews	Robert V. O'Brien	Prithipal Singh
Curt Fischer	Glennis J. Orloff	Dr. David R. Skoff
James Hutter Gogovic	Eric Patigler	Nicholas Drake Stanley
Jessica Greger	Ariana Peck	Jennyfer Tena
Mark John Heintz	Dr. Zhihui Peng	Dr. Bo Wang
Mitsuhiro Ishii	Thanmaya Peram	Steven Wang
Dr. Robert B. Jackson	Dr. Scott D. Power	

Insufficiency More Than Sufficient

By Karen Tkach

On October 21st, the Santa Clara Valley and California Sections of the American Chemical Society were invited to a special performance of Dr. Carl Djerassi's play, "Insufficiency," at the Z-Space Theater in San Francisco. Through the story of the passionate and prideful Dr. Jerzy Krzyz, a Polish chemist whose quest for tenure turns deadly, Djerassi exposes audiences to both the real science of bubbleology, and the issues faced by modern academic scientists.

One central theme explored in the play is the way in which scientists succeed and fail in communicating their work to others. This theme is exemplified in the struggle of the protagonist Dr. Krzyz, whose exuberant intellect, defensive attitude and Polish accent both animate and impede his explanations of the science of bubbles. On one hand, Krzyz's flair for dramatic metaphors and demonstrations

allow him to successfully communicate his field to a popular magazine, a BBC anchor, and the theater audience. On the other hand, this (literally) "in your face" approach, when coupled with his vindictive need to prove himself to his peers, has devastating consequences. Moreover, while Krzyz is glad to explain his work to lay audiences as an intellectual authority, he is obsessively paranoid about sharing his work with the academic community, where someone may out-smart him. By keeping lab notebooks in Polish, refusing to publish in academic journals, and demanding non-disclosure agreements from his tenure committee, Krzyz chooses to protect his ego rather than advance science at large. Finally, Krzyz is marginalized by his university due to his inability to fit in with others as a foreigner and an eccentric lone wolf. Krzyz's refusal to compromise his identi-

ty to appease his peers is hilariously captured by his scene-ending malapropism, "I'll burn that bridge when I come to it." Thus, Krzyz's various instances of scientific communication throughout the play give the audience both lively and accessible summaries of the questions explored by bubbleology, and sobering looks at the ways ego and hostility plague the scientific enterprise.

"Insufficiency" therefore accomplishes Dr. Djerassi's stated mission for Science-in-Theater: to both "smuggle scientific facts" to lay audiences, and to provide the public with a snapshot into the "tribal culture" of working scientists. In his address to the audience after the show, Dr. Djerassi emphasized that he believes the "accuracy and plausibility" of the presented material is essential to this mission. For those interested in learning more about Dr. Djerassi's literary explorations of scientific themes, his autobiography *Carl Djerassi In Retrospect: From The Pill To The Pen*, will be released on November 30th, 2014.



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SANTA CLARA VALLEY SECTION
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FUTURE MEETINGS

- Dec 3** Imaging the Universe:
Dr. Mae Jemison
CEMEX Auditorium, Stanford, CA
<http://events.stanford.edu/events/450/45087>
- Dec 6** Hayward Fault Walking Tour:
Tule Ponds at Tyson Lagoon
Fremont Community Center
<http://msnucleus.org/haywardfault/hayward.html>
- Feb 5** Mosher Awardee: Dr. Scott Denmark
Understanding Asymmetric Phase
Transfer Catalysis Through
Chemoinformatics
Biltmore Hotel & Suites
Santa Clara, CA
- Feb 19** Teacher Scholar Award Presentation
Mission College campus