February 2018 Newsletter

**American Chemical Society** 

Volume 40 No. 2

#### FEBRUARY 2018 NEWSLETTER TOPICS

- February Dinner Seminar Influenza: Epidemic and Pandemic in Modern Times
- Connect with Chemists
- Chair's Message
- March Dinner Seminar 2017 Harry and Carol Mosher Awardee Dr. Nicola Pohl
- SVACS Logo Design Contest
- A Tale of the Bylaws
- Local Science Fairs in 2018
- SVACS Book Club
- Valentines Day Chemistry from ACS ChemClub
- Valentines Day Chemistry in Videos
- New SVACS Members
- ACS Short Courses
- Volunteers Needed for the 2018 Chemistry Olympiad
- Chemistry Quiz
- ACS Meetings in 2018

#### **SVACS February Dinner Seminar**

#### Influenza: Epidemic and Pandemic in Modern Times Dr. Jack Nguyen

#### Abstract:

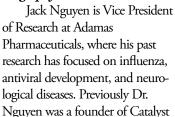
2018 marks the 100th anniversary of the Spanish flu pandemic, which killed an estimated 50-100 million people around the world. Since then, there have been at least 3 other influenza pandemics, with the last one occurring in 2009. This talk

will examine the different pandemics in the last centuries and the influenza strains that caused them, and will discuss the factors involved in the creation of an influenza pandemic, including the biology of influenza and zoonotic forces that contribute to influenza evolution.

### **Connect with Chemists**

An early morning chat with fellow chemists Thursday, February 15, 2018, at 7 a.m. Coupa Café, 538 Ramona Street, Palo Alto Contact Ean Warren (ewarren@scvacs.org) for more information or ask for Ean at Coupa.

#### Biography:



Biosciences. Dr. Nguyen has over 15 years of experience working in pharmaceutical industry. He holds a B.A. from Grinnell College and a Ph.D. in Biophysics from UCSF.

#### **SVACS February Dinner Seminar**

Date: Thursday, February 22, 2018

Time: 6:00 p.m. Social Hour 7:00 p.m. Dinner 8:00 p.m. Presentation

Speaker: Dr. Jack Nguyen Adamas Pharmaceuticals Influenza: Epidemic and Pandemic in Modern Times

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

Cost: \$30/ACS member \$15/student

> Breast of Chicken, Coq au vin **Broiled Salmon** Mushroom Crepes

#### Registration: www.scvacs.org

Reservations must be made by February 18th, 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 Tuesday, February 20th.

# **Chair's Message**

Melody Esfandiari



may think that we are using our heads to make decisions of the heart, but in reality, we are simply responding to the chemicals that are released into our bodies. While numerous chemicals are involved, my molecule of the month is phenylethylamine (PEA), which is

central to for us falling in love, or at least partially responsible. PEA is commonly nicknamed as the "love molecule." This chemical stimulates the production of dopamine and norepinephrine, which are important neurotransmitters in regulating our mood and emo-

tional responses. PEA is extra special because it is found in chocolate. So giving chocolate to your loved one on Valentine's Day might just help you develop more "chemistry."

Besides being in the month of love,

continued on next page

We have recently changed our section name from Santa Clara Valley ACS to Silicon Valley ACS. Since we made the transition, it's time to adopt a new logo. We have decided to launch a logo design contest to involve our members and foster creativity. The winning design will receive a prize (possibly chemistry related of course). Read the section in the newsletter to know all the rules. I can't wait to see how creative the bay area gets!

Have a great Valentine and hope to see you at the February talk!







#### **SVACS March 15th Dinner Seminar**

# Bridging the Gap for Biotherapeutics Development Joining Automated Oligosaccharide to Automated Peptide Synthesis

Dr. Nicola Pohl, 2017 Harry and Carol Mosher Awardee

#### Biography

Nicola Pohl, professor of chemistry and the Joan and Marvin Carmack Chair in Bioorganic Chemistry at Indiana University in Bloomington, received her B.A. degree from Harvard College in 1991 and her Ph.D. in chemistry from the University of Wisconsin-Madison in 1997. Following an NIH Postdoctoral Fellowship in the Department of Chemical Engineering doing metabolic engineering at Stanford University, she joined the faculty at Iowa State University in the fall of 2000. She was a professor of chemistry and of chemical and biological engineering and held the Wilkinson Professor of Interdisciplinary Engineering at Iowa State University before moving to Indiana University in summer 2012. She is currently also a Fellow of the Radcliffe Institute of Advanced for Advanced Study at Harvard and a Visiting Professor at MIT. She has

served as on the executive committee of the Division of Biological Chemistry of the American Chemical Society, a member-atlarge and Chair-Elect/Chair/Past-Chair of the ACS Carbohydrate Chemistry Division and is currently on the editorial advisory boards for the ACS journals Organic Letters and The Journal of Organic Chemistry. Her work has been recognized with a Cottrell Scholar Award (2003-2008), an NSF Career Award (2004-2009), a Sloan Foundation Fellowship (2005-2007), the Horace S. Isbell Award (2010) and Melville L. Wolfram Award (2018) from the ACS Division of Carbohydrate Chemistry, and the International Fluorous Technology Award (2017). Her research aims to understand and exploit the subtle differences amongst sugars in order to develop automated workflows to synthesize and analyze carbohydrates and incorporate them into biotherapeutics designs.

## **SVACS Logo Design Contest**

Your local ACS section has recently changed its name to Silicon Valley ACS, and we need a new logo to go along with this change! We would like to invite any SVACS members and any local students to participate in our Logo Design Contest. The rules of the contest are as follows:

- Please include the section name "Silicon Valley American Chemical Society" either in its entirety, abbreviated "Silicon Valley ACS", or abbreviated "SVACS".
- Only submit original designs. No copyright infringement is permitted, and the selected design will have to get approval by ACS National before we announce the winner.
- Any colors used should be CMYK, and the colors should stand out against a white background.
- 4. Use of programs such as Inkscape or Adobe Illustrator is encouraged.
- 5. Please submit files to *SVACSLogo@gmail.com*. Your submissions should be PDF files. If your design is selected, we will ask for a higher quality file.
- 6. All submissions should be labeled as: **LASTNAME\_FIRSTNAME\_#.PDF**. If you submit more than one logo, please number your files appropriately (# = 1, 2, or 3). No more than three submissions per person.

Please submit designs by March 30, 2018.

The winning logo will be featured on our website, will be used in the SVACS letter-head, and will be displayed at SVACS functions. There will also be a prize awarded to the winner!

We enthusiastically await your creative designs!

# **SVACS March Dinner Seminar**

#### **Mosher Award Presentation**

Date: Thursday, March 15, 2018

**Time:** 7:00 p.m. Social Hour *New time!* 7:30 p.m. Dinner 8:00 p.m. Presentation

**Speaker:** Dr. Nicola Pohl Indiana University *Bridging the Gap for Biotherapeutics Development* 

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

Cost: \$30/regular member \$15/student Grilled Salmon or Pasta Primavera

Registration: www.scvacs.org

Sally Peters 650-477-3027

Reservations should be made by March 11th 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 Tuesday, March 13th.

## A Tale of the Bylaws

by George Lechner, Councilor, SVACS

Toward the end of 2016, there was some discussion among several members about changing the name of our section, but to what? The discussion topics were about where is Santa Clara Valley (?) and shouldn't we have a name that talks about "us" and where we are that people recognize (?). The section covers a very large geography in California with many diverse peoples, agriculture business, high-tech companies and chemical interests. Although most of our members live and work just below South San Francisco in San Mateo and Santa Clara Counties, there are three more counties south of us, Santa Cruz, San Benito, and Monterey, where a lot of chemistry is going on in agriculture, marine science and education. Silicon, a very useful element in the high-tech arena, whose works involve everyone throughout our area, also known worldwide as "Silicon Valley", seemed like a good fit.

When the discussion came to the attention of our Executive Committee, our then Chair, Jane Frommer, queried some of the membership about changing our name to something like-Silicon Valley Section-with a positive response. The proposal was approved by the Executive Committee and placed on the November 2016 election ballot. The membership voted to approve the measure with 80% of the vote. Following this was a successful petition to the ACS Council Committee on Local Section Activities (LSAC) to approve at the ACS Spring meeting in San Francisco. This caused us to start looking at our existing bylaws, which identifies us as the Santa Clara Valley Section, Inc., of the American Chemical Society.

Wait! What? INC.? Yes, we are incorporated in California. OK, where are our Articles of Incorporation? No one knew! We need to change them! By luck, we received a

copy of the Articles from ACS in the form of a California Section (The Vortex) newsletter article, dated September, 1955, the year of our incorporation. The Bylaws Committee then got busy finding out what to do and successfully got a certification from the California Secretary of State to change our name to the Silicon Valley Section, Inc., of the American Chemical Society. We supplied LSAC all the necessary paperwork and, voila!, here comes in the mail our "new" bylaws with the name change. Job finished!

No?! Wait! Now, ACS wants us to further revise the "new" bylaws with a "ton" of new and suggested items of revision. A couple of years ago, ACS developed a set of Model Bylaws, and, with the assistance of Barbara Polansky at ACS, we received a blended version of our existing bylaws with the model and are just about to have our new set of bylaws approved by the Executive Committee, ACS LSAC, and a vote of the membership for approval in the November 2018 election. Now! The job is done! Well, almost!

### **Local Science Fairs in 2018**

by Susan Oldham-Fritts

While chocolates and flowers are high on many people's Valentine list, how a gift that keeps on giving? While the cost is minimal (a day of your time judging at the local science fair), the return is great (encouraging middle and high school students to participate in the world of STEM – science, engineering, math, and science). Sign up as either a **category judge** for one the following local area science fairs or **join our SVACS sponsored special awards judging team at the Synopsys Championship**. The latter is a qualifier for the International Science and Engineering Fair, ISEF.

Please contact me at *sofritts@gmail.com* to join our team of dedicated chemists at the Synopsys Championship on March 15th.

No matter which fair is close to home, please volunteer now!

**Sciencepalooza**\* (Santa Clara County Fairgrounds), February 3 www.outreach-foundation.org/judges/

#### San Mateo County Science, Math, and Technology Fair

(San Mateo Events Center, Fiesta Pavilion), March 4

https://www.stemfair.net/app/signup/judges

Santa Cruz County Fair (Santa Cruz County Fair Grounds), March 10 http://www.science.santacruz.k12.ca.us/judges\_registration\_new.html

#### Monterey County Science and Engineering Fair

(California State University, Monterey Bay, University Center, Bldg.29), March 17 www.montereycountysciencefair.info

**Synopsys Championship** (San Jose Convention Center), March 15 https://science-fair.org/judges-3/category-judges/judging-registration/

#### Golden Gate STEM Fair

(San Francisco County Fair Bldg., 9th and Lincoln, Golden Gate Park), March 19 http://sfbasf.org

#### **SVACS Book Club**

The next meeting of the SVACS Book Club will be held on Saturday, April 14 at 3 p.m., at a location to be confirmed. The book for discussion is: "The Poisoner's Handbook: Murder and the Birth of Forensic Medicine in the Jazz Age New York" by Deborah Blum.

This is a story of the development of Toxicology Forensics in New York City during the Prohibition years. The book is a quick read, although occasionally a little gruesome, as it deals with the causes of murders and deaths. The chemistry is mostly accurate but a little lightweight. The book contains some interesting stories of industrial radium poisoning; deliberate arsenic poisoning; and a lot of methanol poisoning, both deliberate and inadvertent.

Paperback copies are available at Kepler's (1010 El Camino Real, Menlo Park, CA, <a href="http://www.keplers.com">http://www.keplers.com</a>) or from Amazom.com.

Interested in joining the ACS
Book Club? Add yourself to the email list

svacs-book-club+subscribe@googlegroups.com
or contact Ean Warren (ewarren@scvacs.org).

<sup>\*</sup>Many students at these competitions are first time science fair participants.

## **Valentines Day Chemistry from ACS ChemClub**

Love is in the air for Valentine's Day! Check out these links for ideas to celebrate it chemistry-style. You can make science-themed valentines, create a borax crystal heart, learn a valentine demo to share with your sweetheart, and more.

#### Valentines Day Science Fun

Cool Science Experiments

#### Chemistry Valentines

Delve into your creative side—design your own valentines with chemistry-related sayings and poems.

#### Printable Chemistry Valentines

Does your valentine shine like a carbon allotrope? Find this and other free chemistry valentines—ready to print and share!

#### **Goldenrod Valentines**

Why send your sweetie an ordinary valentine when you can give them a color-changing one? It's all courtesy of chemistry.

#### Valentine's Day Cards Fit for Geeks

For when a typical Valentine card won't do. Check out the science-themed cards in this collection.

#### Geek Love: Send a #Chemvalentine To Show 'Em You Care

It's the Top 20 #Chemvalentines to woo your science sweetie.

#### 12 Science Valentines

Still looking for the perfect way to say, "I love you"? Plenty of ideas here, including one done science-fair-style.

## Welcome to the Silicon 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 SVACS Members**

Jessica S. Kachian Professor Brynna Quarles Margaret M. Abercrombie Joseph R. Allin Kimberly Larson Dr. David A. Schooley Dr. Thomas Wayne Bruice Dr. Gregg Schwarzwalder Ian Leeman Dr. Katerina Leftheris Natalija Sotirovska Dr. Kara A. Calhoun Zerubba Levi Kannan Srinivasan Dr. Charles Minh Chau Dr. Richard Steel Yu-Lun Liang Bryan Dunyak Dr. Alexander Edens Dingchang Lin Swee Sein Tan Yu Hsuan Lin Abigail Rae Taussig Melissa Fleury Christopher David Workman Dr. Adrian Liam Gill Diana Lok Richard Wu Forrest S. Gittleson Shuguang Ma Dr. Danforth Parker Miller III Yilei Wu Brooke Husic Elizabeth A. Jacobs Terrence Nguyen Bin Yao

# Valentines Day Chemistry in Videos

Milk Vs. Dark Chocolate: The Ultimate Showdown

https://www.acs.org/content/acs/en/
pressroom/reactions/videos/2017/milkvs-dark-chocolate-the-ultimate-showdown.
html

The Science of Love (Queen Parody) | A Capella Science

https://www.youtube.com/watch?v=dCMDawKCBkk

Why do roses smell so sweet?

https://www.acs.org/content/acs/en/ pressroom/newsreleases/2015/february/ why-do-roses-smell-so-sweet-video.html?\_ ga=2.143677749.1813382701. 1516652072-734584683.1516652072



#### **ACS Short Courses**

ACS Short Courses are a popular way to gain invaluable training in just a few days. Courses range from one to five day courses, including lab/lecture options. The catalog boasts over 90 short courses in eight subject areas taught by excellent instructors who are also incredible scientists. Held conveniently throughout the US during the year, there are plenty of options to receive high quality training from ACS.

Online short courses enable members to access the same high-quality instruction without taking travel time away from work. In online short courses, you can meet live and online with your instructor over a period of weeks. Classes are small to enable customized content relating directly to the work that you are doing today. With the time built in between sessions, you can apply what you've learned and bring up more questions throughout the longer course period. Wach course includes email access to the instructor, downloadable materials, and access to the session recordings so that you can keep up even if you can't attend the online session in person.

Additional information for in-person and online ACS Short Courses can be found on the ACS Professional Education Webpage at <a href="http://proed.acs.org/">http://proed.acs.org/</a>

# **Volunteers Needed** for the 2018 Chemistry Olympiad

The 50th International Chemistry Olympiad will be held in Bratislava, Slovakia and Prague, Czech Republic, July 19 – 29. Some of the world's most talented high school chemistry students will be attending from about 70 countries. The U.S. will send a team of four outstanding students, who will be selected from a pool of 20 finalists from across the United States. If you remember, in 2013 Stephen Ting from our section, admirably represented the U.S. in Moscow and in 2015 David Wang represented the U.S. and our section in Baku, Azerbaijan and last year, Steven Liu from Monta Vista High School, represented us in Nakhon Pathom, Thailand.

The selection of the 20 finalists begins in the local sections. Chemistry students from the Silicon Valley will participate by taking a standardized ACS written exam to determine their placement. The first round of testing is conducted in the local high schools in March. The local section invites and encourages over 100 high schools to participate and provides the testing materials.

Our section's top 16 students will meet on Saturday, April 21st, to compete in the national exams. That same weekend over 1000 students across the country will take the same written and lab exercises to determine the top 20 finalists for the U.S. This year, our students will join the students from the California section for a day of testing at Las Positas College in Livermore. The California section will host the day's events and provide snacks and lunch. Las Positas will provide the classrooms. This is an excellent time for our south and east bay members to volunteer and proctor the labs and exam rooms.

There is no teaching or paper grading as those exams are quickly sent to national ACS for grading. The top 20 students, chosen from the 1,000 participants, will then attend a weeklong study camp at the Air Force Academy in Colorado in June. The top four will then represent the U.S. in Slovakia and the Czech Republic in July.

Would you like to help with the process?

Encourage your local high school chemistry teachers to have their advance placement or honors students participate in the testing process. There are over 100 high schools in the valley and only about 25 schools compete. In January each school's science department is contacted by letter and invited to compete.

Local section members are needed to register the students and proctor the exams on April 21st at Las Positas College. This is an excellent opportunity to volunteer and encourage these students to think about careers in chemistry. It is also an especially good opportunity to get to meet some of your section members. No heavy chemical knowledge is required! Lunch is even provided!

Also, if someone has access to a good color printer or scanner/printer, they could help by customizing the ACS student certificates that each participate receives before the end of the school year. There are usually about 150 certificates that need to be customized.

So here are some opportunities to help your local section with the 2018 International Chemistry Olympiad – encourage the teachers to participate (maybe even offer to help in the classroom or to grade the local exams!), volunteer to be a proctor, or help print certificates. If you need more information, please contact me or another Olympiad volunteer.

#### Sally Peters

Chair of the Chemistry Olympiad
Committee
Silicon Valley Local Section of the ACS
sallybrownpeters@gmail.com
650-447-3027



Dr. Slava Becker sbekker@hartnell.edu 831-759-6005

\*

## **Chemistry Quiz**

What did English naturalist John Ray isolate in 1671 by the distillation of large numbers of ants?

The answer will appear in next month's newsletter.

#### **Last Month's Chemistry Quiz**

European mistletoe (Viscum album), and to a lesser extent American mistletoe (Phoradendron serotinum), contain the toxic lectin viscumin. What is the molecular basis for the toxicity of viscumin?

Viscumin inhibits protein synthesis by catalytically inactivating the 60 S subunit of ribosomes

### **ACS Meetings in 2018**

## 255th ACS National Meeting and Exposition

https://www.acs.org/content/acs/en/meetings.html

March 18 – 22, 2018 New Orleans, LA

#### 36th National Medicinal Chemistry Symposium

*http://www.nmcs.info/* April 29 – May 2, 2018

Nashville, TN

#### **Northwest Regional Meeting**

June 24 – 27, 2018 Richland, WA

## 256th ACS National Meeting and Exposition

August 19 – 23, 2018

Boston, MA

**Southwest Regional Meeting** November 7 – 10, 2018

Little Rock, AR

The Silicon Valley Section of the American Chemical Society is the copyright owner of all material published in The Silicon Valley Chemist. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without advance permission in writing from the editor, particularly for commercial purposes. Authorization to photocopy items for limited internal or personal use, or the limited internal or personal use of specific clients, is granted by the Executive Committee of the Silicon Valley Section of the American Chemical Society.



To receive an email when our newsletter is published on our web site, sign up at: <a href="http://scvacs.org/?page\_id=99">http://scvacs.org/?page\_id=99</a>

#### **SILICON VALLEY SECTION**

2018	Section	Officers

Director:

Liang Cao

2016 Section Officers					
Chair	Melody Esfandiari	408-924-4973	melody.esfandiari@sjsu.edu		
Chair Elect	Grace Baysinger	650-725-1039	graceb@stanford.edu		
Past Chair	Todd Eberspacher	650-723-2505	eberspacher@stanford.edu		
Secretary	Jigisha Shah	315-289-5115	jssheth@syr.edu		
Treasurer	Ihab Darwish	650-624-1389	darwishis@yahoo.com		
Councilors					
2016-2018	Linda Brunauer	408-554-6947	lbrunauer@scu.edu		
2016-2018	Sally Peters	650-447-3027	sallybrownpeters@gmail.com		
2018-2018	Peter Rusch	650-961-8120	pfrusch@aol.com		
2017-2019	George Lechner	408-226-7262	glechner@aol.com		
2017-2019	Matt Greaney	510-410-0195	greaney19@gmail.com		
2018-2020	Ean Warren	650-329-4554	ewarren@scvacs.org		
2018-2020	Natalie McClure	650-906-7831	nmcclure@drugregulatoryaffairs.com		
Alternate Councilors					
2018-2018	Alex Klevay	408-561-0087	alex.klevay@gmail.com		
2016-2018	Heidi Vollmer-Snarr	650-723-9518	hrvsnarr@stanford.edu		
2018-2018	Howard Peters	650-447-3027	peters4pa@sbcglobal.net		
2017-2019	Elizabeth Pollom	408-924-5012	elizabeth.pollom@sjsu.edu		
2017-2019	Slava Bekker	831-759-6005	sbekker@hartnell.edu		
2018-2020	Madalyn Radlauer	408-924-5482	madalyn.radlauer@sjsu.edu		
2018-2020	Jane Frommer	408-927-2225	jane@collabra.net		
Newsletter					
Editor	Kevin Greenman	408-634-2309	editor@scvacs.org		
Assoc. Editor Partha P. Bera			partha.pb@gmail.com		
ChemPloyment Abstracts					

liang.cao@aol.com

	FUTURE EVENTS	
Feb 13	23rd Annual Stauffer Lectureship	
	Dr. Scott Denmark, Stanford University	
Feb 22	SVACS February Dinner Seminar	
	Influenza: Epidemic and pandemic	
	in modern times	
	Jack Nguyen, Adamas Pharmaceuticals	
	Michael's at Shoreline Park, Mountain View, CA	
Mar 8	Hard Earth Talk: Going Green	
	Hal Harvey, Energy Foundation	
	Roble Hall, Stanford University	
Mar 8	Multiple Sclerosis: The State of the Art	
	Dr. Lucas B. Kipp	
	Stanford Health Library, Hoover Pavilion	
	Stanford University	
Mar 15	SVACS March Dinner Seminar	
	2017 Harry and Carol Mosher Award	
	Dr. Nicola Pohl, Indiana University	
	Bridging the Gap for Biotherapeutics	
	Development	
	Biltmore Hotel & Suites, Santa Clara, CA	
Mar 18-22	National ACS Meeting and Expo	
	Nexus of Food, Energy and Water	
	New Orleans, LA	
Click on links for more information or		
see this newsletter at http://scvacs.org/?page_id=99		