



*Bonding Students to Chemistry & Biochemistry*

# Event Announcements

By: Kimmy Phan

## CSULB and CNSM Important Exams

- Deadline to apply for Residency Reclassification Nov 1, 2011
- Self Service **Registration begins** (continuing students only) Nov 7, 2011
- Self Service Registration and Adjustments Nov 7, 2011- Feb 5, 2012
- November 18 2011, **last day to drop without Dean's signature.**
- November 4 2011 **Chemistry placement test.** Deadline to sign up for exam has passed.
- Thanksgiving break will be from November 23<sup>rd</sup>-27<sup>th</sup>. Class will resume the following Monday, November 28<sup>th</sup>.

## Novemember Seminar Series

- **"The HDL Receptor: How structural ambiguities affect cholesterol transport efficiency"**

Presented by Daisy Sahoo of Medical College of Wisconsin

When: Wed, November 2nd from 4-5pm @ HSCI-103

Hosted by Dr. Narayanaswami

- **"Plastic Antibodies: Synthetic Polymers with Antibody-like Affinity for Peptides and Proteins"**

Presented by Ken Shea of UCI

When: Wed, November 16th from 4-5pm

Hosted by: Dr. Marinez

- **"Facile SNAAP Sulfonimidate<sup>TM</sup> Alkylating Agents for Acids, Alcohols and Phenols "**

Presented by Tom Maricich from CSULB

When: Wed, October 19th from 4-5pm

Hosted by: Dr. Buonora

Please contact the host for more information or if you would like to join the speakers for a free lunch.

## Association of Pre-Pharmacy (APP) Announcements

- **USC Admission Director** will be speaking on: Nov 3<sup>rd</sup> at 5pm @ LA5-167
- Special Assistant to the **Dean from USC School of Pharmacy** will be speaking on: Nov 15th 5pm @ LA5-167

For more information please contact President Mariko Yokokura at marikoc yokokura@gmail.com

## SAACS Announcements

- Last **SAACS Meeting** will be on November 29<sup>th</sup> at 5pm on the MLSC Patio
- Come join us on the MLSC patio every Friday for **coffee and donut hour** from 9:30-10:30am

For more information please contact President Carolyn Kusaba at carolynandallan@gmail.com

## Career Development Center Announcements

[All workshops are located at BH-250 unless otherwise noted]

- Nov 1st: Job Search: Facebook, Twitter, & Blogs from 2-3p
- Nov 2nd: Creating Your Career Portfolio from 1-2p
- Nov 3rd: Discover Your Career Interests from 3-4:30p
- Nov 7th: Personal Statements from 3-4p
- Nov 8th: Resume Writing Techniques from 12-1p
- Nov 9th: Correcting Your Job Search Mistakes from 1-2p  
: Internships for International Students from 2-3p
- Nov 10th: Job Search: Using LinkedIn from 12:30-1:30p
- Nov 11th: Campus Closed: Veteran's Day
- Nov 14th: Strategies for Career Success from 1-2p
- Nov 15th: Just Graduated, Now What? from 12:30-1:30p
- Nov 16th: Interviewing Techniques from 3-4p
- Nov 17th: Intern to Employee from 12:30-1:30p
- Nov 29th: Employer presentation from 4-5pm  
[Carnegie Endowment for International Peace]  
: Interviewing Techniques from 2-3pm
- Nov 30th: Job Search Success from 12-1pm  
: Resume Writing Techniques from 3-4pm

## October Recap:

(Events you may have missed)

- Nobel laureate Charles Townes, the 96 year old inventor of the laser, spoke at the Physics Symposium.
- Chemistry/Biochemistry Career Day was another success. If you missed it this year make sure to sign up for it next year!
- SAACS had a bake sale for "Healthy Chemistry Week" which included vegan, pumpkin, and vanilla cupcakes.
- SAACS Halloween party was hosted at Drs. Slowinski and Slowinska's house. If you missed it this year make sure to come out next Halloween!



# Faculty Spotlight: Dr. Vasanthy Narayanaswami

By: Kimmy Phan

Editors: Monica Royer, Karen Yu, and Cindy C. Pham

Dr. Vasanthy Narayanaswami is a passionate biochemistry teacher and a dedicated researcher. Growing up in Chennai, India, she was certain medical school was the route to pursue. However, following a difficult entrance exam and a tedious interview process to determine her future, she realized it wasn't for her. Living in a caste-based society, she faced discrimination from her peers as well as the pressures of being a woman striving to achieve in her field. Rather than surrendering to these outside influences, she used them as motivation to work harder. These life-changing moments are what led to her next field of interest, chemistry.

Dr. Vas continued her education at the Indian Institute of Technology (IIT) (Madras) where she met her PhD supervisor who had a profound impact on her life - a strong, intellectual woman that was passionate about chemistry. She was so inspired that she became the first biochemist to graduate from IIT (Madras). Upon completion of her PhD degree, she was certain she wanted to do research for a living. Dr. Vas spent 18 months training, researching, and learning German as an Alexander von Humboldt Post Doctoral Fellow in Germany. She recalled her time as a Humboldt Fellow to be one of her best experiences in life thus far. A "Humboldt Fellow" is a very prestigious position one could have as a researcher. After living in Germany, she relocated to Canada and then to the Bay Area, and finally to So Cal in 2008 where she began her career at California State University, Long Beach performing research and teaching biochemistry.

Currently, Dr. Vas teaches Biochemistry CHEM 441A and research classes CHEM 496, 697, and 698. Her advice to students is: don't be afraid to ask questions. She also remarked that students need to make the best use of their free time. She strongly encourages students to come to her office, as she is more than happy to help with class material and give advice on research. She may have one more opening in her research lab, so stop by her office in the Spring! She asks that you make sure you are able to commit about 12-15 hours a week and highly suggests freshmen and sophomores students to participate.

Dr. Vas radiates excitement when she talks about her research, which involves investigating apolipoprotein E (apoE) and its role in cholesterol transport, aging, heart disease, nanovehicle transportation and Alzheimer's disease. One of her primary areas of focus is on studying the polymorphism of apoE, with the involvement of apoE4 in Alzheimer's disease. Another aspect of her research relates to the effects of acrolein on the structure and function of apoE through second hand smoke- she and her team investigate if second hand smoke exposure could potentially predispose one to heart disease. Lastly her research is focused on the use of



HDL with apoE as nanosized transportation vehicles in the plasma. Dr. Vas's use of molecular biology, biochemistry and molecular spectroscopy helps her to understand the molecular basis of the role of apoE in cholesterol metabolism.

In addition to research and teaching, Dr. Vas is involved in numerous projects. One that she is truly proud of is her work at the Children's Hospital Oakland Research Institute in the Bay Area. The institute sponsors a research-training program for undergraduate, graduate and high school students, to increase diversity in research. It reaches out across the states to recruit students with different areas of interests in science and medicine. She tries to remove the boundaries that are set forth for students from poverty ridden neighborhood wanting to further their education and have an interest in researching. She feels it is her duty to give back to the students because of the roadblocks she had faced.

Anyone who has spoken to Dr. Vas can tell that she is a very spirited woman who truly loves what she does. What keeps her motivated for research is the idea that "you may ask five more questions for every one question you ask, but it is one step closer to your answer and that makes you happy!" When asked whether biggest accomplishment in life was, she recalled someone stating: "My realization that I know nothing. The more I know, the more I realize how little I know." The more she achieves, the more humble she becomes. Dr. Vas is truly an inspirational scientist to young women trying to achieve a career in science.

**Publications:**

- 1) Bains, G., Patel, A. B. and Narayanaswami, V. (2011) Pyrene: A probe to study protein conformation and conformational changes. *Molecules* (Under review) (underlined names: graduate students)
- 2) Zheng, Y.\*, Patel A. B.\*, Narayanaswami, V., Hura, G. L., Hang, B., and Bielicki, J. K. (2011) HDL mimetic peptide ATI-5261 forms an oligomeric assembly in solution that dissociates to monomers upon dilution. *Biochemistry* **50**, 4068-4076 (\*equal contribution)
- 3) Khumsupan, P.\*, Ramirez, R.\*, Khumsupan, D.\* and Narayanaswami, V. (2011) Apolipoprotein E LDL receptor-binding domain-containing high-density lipoprotein: A nanovehicle to transport curcumin, an antioxidant and anti-amyloid bioflavonoid. *Biochim Biophys Acta* **1808**, 352-359 (\*undergraduate students)
- 4) Hauser, P. S., Narayanaswami, V. and Ryan, R. O. (2011) Review: Apolipoprotein E: From lipid transport to neurobiology. *Prog. Lipid Res.* **50**, 62-74
- 5) Bielicki, J. K., Zhang, H., Cortez, Y., Narayanaswami, V., Patel, A. B., Johansson, J. and Azhar, S. (2010) A new HDL mimetic peptide that stimulates cellular cholesterol efflux with high efficiency greatly reduces atherosclerosis in mice. *J. Lipid Res.* **51**, 1496-1503
- 6) Patel, A. B., Khumsupan, P\* and Narayanaswami, V. (2010) Pyrene Fluorescence Analysis Offers New Insights into the Conformation of the Lipoprotein-Binding Domain of Human Apolipoprotein E. *Biochemistry* **49**, 1766-1775 (\*undergraduate student)
- 7) Crutcher, K. A., Lilley, H. N., Anthony, S. R., Zhou, W. and Narayanaswami, V. (2010) Full-length apolipoprotein E protects against the neurotoxicity of an apoE-related peptide. *Brain Research* **1306**, 106-115

**Vas Fun-facts:**

- Born in Chennai, India
- Hobbies: Reading, hiking, going to the gym, traveling, observing people
- Favorite Music: western, Indian (Hindustani and Carnatic) classical, and jazz
- Favorite Artist/Band : Louis Armstrong, Pink Floyd, Deep Purple, theme songs from Star Wars, Harry potter and Lord of the Rings
- Favorite Movie: Harry Potter Series
- Favorite Book: “Too many to list but two deserve mention” . . . . (i) The Agony and the Ecstasy: A Biographical Novel of Michelangelo, and, (ii) Lust for Life. A biographical novel about Vincent Van Gogh, both by Irving Stone
- Pets: “Does my son count as a pet?”
- What element would you be? She jokingly said, “The new, as yet undiscovered, Vasanthum (Vm); it actually means ‘Spring’ (as in season in my native language, Tamil.)

## Company Spotlight: Kelly Scientific

By: *Monica Royer*

Editor: *Cindy C. Pham*

Kelly Services, Inc. was founded in 1946 by William Russell Kelly and has since become a global Fortune 500 company that specializes in job placement from science and engineering to law and finance. The scientific branch, Kelly Scientific Resources, places qualified scientists in a variety of industries. Some of these industries include biotechnical, clinical research, pharmaceutical, chemical, cosmetics, environmental, food science, and petrochemical. It is the mission of Kelly Scientific Resources to provide leading scientific industries with the best possible candidates. To prepare applicants of all degree levels, Kelly Scientific Resources utilizes their online “Science Learning Center” which offers self-paced, job-specific training courses. In addition to providing jobs for degreed scientists, Kelly also places non-degreed

scientists with the appropriate experience and training. Kelly’s Future Scientists Internship program accepts sophomore to senior-level college students with some science classes (with labs) under their belt. Interns are hired year-round, especially during the summer. In the last year, over five hundred interns were hired for a range of positions. Kelly offers great benefits for their full-time internal employees involved in Masters programs, some of which include tuition reimbursement and financial assistance. If you are in need of job placement from a company that cares, please contact Kelly Scientific Resources at <http://www.kellyscientific.com> and start your scientific career today!

▪ *We would like to give a special thanks to Dr. Narayanaswami for interviewing with us and Denise Lutz of Kelley Scientific for all of her help!* ▪

## The Fume Hood

By: Lauren Olson

*"A place where your noxious thoughts can be carefully filtered and fed back to the public!"*

Thank you for sharing your most memorable lab experiences with us, here were a few of the most intriguing lab stories we collected:

*"My most memorable lab experience was accidentally dropping my lock into my locker and breaking a sep funnel, Büchner funnel and a 500mL beaker, and not having to pay for it because it was the first day of lab!"*

*"I once stabbed my finger so badly with a syringe that I bled for an hour straight."*

### **This month's question:**

What's your favorite category of elements in the periodic table?

- A. Alkali Metals
- B. Alkaline Earth Metals
- C. Transition Metals
- D. Halogens
- E. Nobel Gases
- F. Actinides
- G. Lanthinides
- H. Post- transition Metals
- I. Metalloids
- J. Other non-metals

Let us know at [thebeakercsulb@gmail.com](mailto:thebeakercsulb@gmail.com) or post your responses on Facebook @ [facebook.com/thebeakercsulb](https://www.facebook.com/thebeakercsulb)!

## Chemistry for Today's World

By: Matt Garay

*"Your chemical connection to today's world"*

Bisphenol A is a chemical used primarily to make plastics and is a known estrogen-mimicking compound. It is found everywhere –food, drink and even purchasing receipts. Presently, there's a fierce debate between multi-million dollar industries who manufacture the chemical and research scientists who are arguing that the amount of BPA allowed for human exposure is too high. An extensive report done in the journal, *Chemical & Engineering News*, summarizes the crux of the debate:

- To date, hundreds of animal and cell culture studies have linked low dose exposure to BPA to heart disease, obesity, reproductive/puberty problems, and ADHD.
- In contrast, BPA exposure studies funded by industry have shown minimal to no adverse health effects.

In more recent news, the American Chemical Counsel, a long and ardent defender of BPA, has asked manufacturers in October to stop producing plastic baby bottles and "Sippy cups" containing BPA.

If you are at all interested in this debate, please check out the links below for more information:

<http://pubs.acs.org/cen/coverstory/89/8923cover.html>

<http://pubs.acs.org/cen/news/89/i42/8942notw9.html>

## Next Month's Issue Features...

Next month's issue features Dr. Sorin, a professor who tackles the never ending mysteries of RNA folding and much more in non-traditional methods. We all perceive chemistry to be lab coats, goggles, and elaborate glassware however, Dr. Sorin's lab consist of no such items. Read the next issue of the beaker to find out his methodologies for research.

Have a Happy Thanksgiving, readers!!!

## Chemertainment

By: Monica Royer

*"Scientific & Sci-fi recommendations from a chemistry nerd"*

### **This Month's Book Suggestion:**

"The Secret of Scent" by Luca Turin

Biophysicist Luca Turin delves into the world of perfuming and olfaction in this interesting book about the chemistry (and chemicals) of scents and his theory on how we perceive them. Turin's dry humor, irreverence for the politics of the scientific community, and grandeur writing style surely won over this organic chemist.

### **This Month's Movie Suggestion:**

"Real Genius"

Research students: have you ever suspected your lab professor of being in-cahoots with the government on a top secret weapon of mass destruction? College geniuses Mitch Taylor (the new kid) and Chris Knight (the slacker) certainly didn't in this underrated 80s comedy centered on the construction of a chemical laser. This movie's successful mixture of scientific hijinks, humor, and stressful relatable situations being a science major makes this a must see.

