



# ALI "QUOTES"

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THE NEWSLETTER OF THE PRINCETON ACS

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Website <http://www.princeton.edu/~pacs/>

## Monthly Dinner Meeting

Thursday, April 20, 2006

*Our guest speaker will be*

**Professor David Botstein,**

**Director of the Lewis-Sigler Institute for  
Integrative Genomics, Princeton University**

### Research Topics

The genomic sequences of humans, several eukaryotic model organisms, and numerous bacteria have opened up new opportunities and challenges for molecular genetics. Now one can study all the genes of an organism at once, promising a level of biological inference at the "system level", beyond that possible from studying separate, individual genes, gene assemblies or pathways. A major challenge is the analysis and display of huge volumes of information in ways that allow biologists to fully interpret them.

Research areas: (1) genome-wide studies of gene expression through the life cycle and experimental evolution of budding yeast (*Saccharomyces cerevisiae*), (2) mechanisms by which yeast maintain metabolic homeostasis in the face of environmental and genetic perturbations, and (3) quantitative analysis and intuitive display of genome-scale biological information in the context of genomic databases.

### Biography

Professor David Botstein is Director and Anthony B. Evnin Professor of Genomics, Lewis-Sigler Institute for Integrative Genomics.

### Reservations

The meeting will be held in room 120, Kresge Auditorium, Frick Laboratory, Princeton University (see [www.princeton.edu/~pacs](http://www.princeton.edu/~pacs) for more information). Seminar is at 6 PM followed immediately by dinner at

Prospect House. The seminar is free and open to the public. Reservations are required for dinner, which is \$35 for full members, \$25 for retirees and \$15 for students. All reservations will be billed, for the section pays on the number of reservations, not the number of attendees. Please contact Denise D'Auria at (609) 258-5202 or [denised@princeton.edu](mailto:denised@princeton.edu) by Thursday, April 13th to make or cancel reservations.

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### National Chemistry Week

Kathryn Wagner

## Section Receives Corporate Support!

This past October, letters were mailed to local companies requesting support for the sections various outreach programs. We are pleased to announce that Bristol-Myers Squibb and Wyeth Research have agreed to be corporate sponsors of the section for 2005-2006. Their generous contributions will go toward the funding of our various community activities including Chemagination, National Chemistry Week open house, 2006 Outstanding High School Chemistry Teacher Award and Earth Day celebration, among others. The executive committee of the Princeton section extends a grateful thank you to Bristol-Myers Squibb and Wyeth Research for their support.

Louise Lawter,  
Past-Chair, ACS Princeton Local Section

## Winners Announced!



By Louise Lawter  
Chemagination Co-chair

The 2006 Chemagination contest, sponsored by the Princeton and Trenton ACS sections was held on Saturday, March 18. Chemagination is a contest in which high school students are asked to imagine that they are living 25 years in the future and have been invited to write an article for ChemMatters, a magazine for high school students that focuses on the role of chemistry in everyday life. The subject of the article is: "Describe a recent breakthrough or innovation in chemistry and/or its applications that has improved the quality of people's lives today." The article is written to fit in one of four categories (either Alternative Energy Sources, Environment, Medicine/Health, or New Materials.) In addition to the article, students are asked to design a cover for the magazine and prepare a poster. Students work in teams of two or three members. Evaluation is based on their article, presentation of their innovation on poster display and interviews with judges.

Sixteen teams representing four area high schools competed. The candidates demonstrated a high degree of creativity and innovative science as can be seen by the titles of the articles! Six members of the Princeton ACS volunteered to serve as judges: Schuyler Antane, William Barnard, David Carrick, Istvan Pelczer, William Sachs, and Klaus Wagner. They had the difficult task of selecting the winners from among the many strong entries.

First, second and third place, overall prizes were awarded. Winning team members received \$100, \$75 and \$50 savings bonds, respectively. In addition, prizes were given for the first and second place winners in each category. The first place category winners will represent

the local ACS sections at the regional Chemagination contest. It will take place at the ACS Mid-Atlantic Regional Meeting (MARM 2006), June 4-7, at the Hershey Lodge and Convention Center, Hershey, PA. A \$250 stipend for travel to MARM was awarded to each first place category team.

During the tallying of the scores, Dr. Kathryn Wagner demonstrated some phase changes while helping the students turn cream into ice cream using liquid nitrogen. Who would have thought chemistry could be so delicious!

I would like to thank everyone that helped to make this contest a success this year including Sharon Sibilia, Chemagination co-chair, Kitty Wagner, our judges and all the students who participated. A special thank you also goes out to the faculty advisors, Ms Karen Galley, West Windsor-Plainsboro High School South, Ms Susan Krempasky, Notre Dame High School, Mrs. Linda Kruegel, Princeton High School and Dr. Lillian Rankel, Hopewell Valley Central High School.

## Category Winners

### Alternate Energy:

First Place: "*Innovations in Transportation: The Fuel Cell Revolution*", Christopher Sipos, James Dobrowolski, Dan McQuarrie, Notre Dame High School.

Second Place: "*Fueling the Future: The Development of Enzymatic Fuel Cells*", Eliana Ritts, Denise Xu, Princeton High School.

### Environment:

First Place: "*Oil Spills: A Thing of the Past*", Michael Weintraub, Brian Solomon, West Windsor-Plainsboro High School South.

Second Place: "*We Need Food, We Need Oxygen*", Jennifer Jin, Laura Mraz, Hopewell Valley Central High School.

### Medicine/Healthcare:

First Place: "*Holy Cow! It's ... Alpha-Twirlase*", Daphne Ezer, Catherine Wei, West Windsor-Plainsboro High School South.

Second Place: "*Internal Dialysis Machine*", Owen Healy, Trevor Saunders, Hopewell Valley Central High School.

### New Materials:

First Place: "*Neutratooth Prevents Cavities*", Jen Grosso, Jesse Lee, Tara McGuinness, West Windsor-Plainsboro High School South.

Second Place: "*REMattress*", Charlene Seto, Jamie Tsai, Susan Yue, West Windsor-Plainsboro High School South.

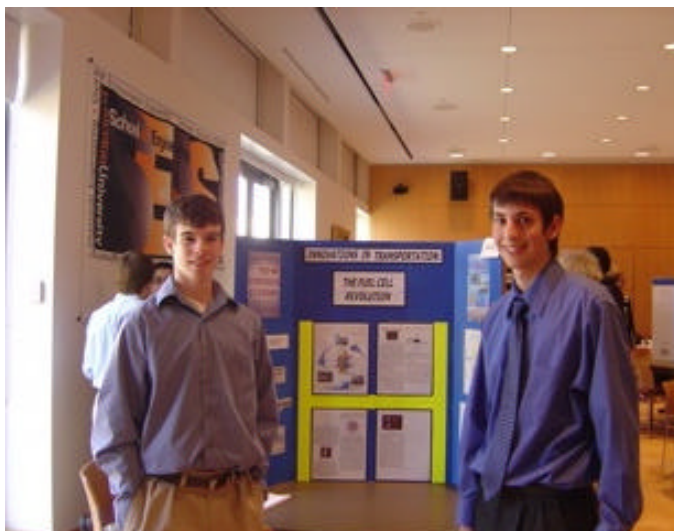
## Overall Contest Winners



First Place:

Team Members: Jen Grosso, Jesse Lee, Tara McGuinness, West Windsor-Plainsboro High School South

*Neutratooth Prevents Cavities*



Second Place:

Team Members: Christopher Sipos, James Dobrowolski, Dan McQuarrie, Notre Dame High School

*Innovations in Transportation: The Fuel Cell Revolution*



Third Place:

Team Members: Daphne Ezer, Catherine Wei, West Windsor-Plainsboro High School South

*Holy Cow! It's ... Alpha-Twirlase!*

## What Do You Think?

By Louise Lawter, Past-Chair, Princeton ACS

**T**his past year we experimented with different formats for some of our monthly dinner meetings. To find out what our members thought of these changes, and to help in planning future events, we conducted a short survey.. Members attending the last two meetings of the year were asked:

Question I: In March, we had a joint meeting with the Trenton Section. In place of dinner at Prospect House we walked to a local restaurant, Kalluri Corner. Did you: \_attend? \_like offsite dinner? \_like restaurant choice? \_like to see similar in future? \_Comments?

Question II: In September, we held a joint meeting with the AICHE at the Friend Center. Following the talk, in place of a formal dinner we had a poster session and reception. Did you: \_attend? \_like the reception format? \_like the poster session? \_like to see similar in future? \_Comments?

Question III: In October we held our meeting at Wyeth Research. We had a social hour before the talks and a buffet dinner following. Did you: \_attend? \_like the offsite location? \_like the social hour? \_Comments?

Question IV: The cost of all these meetings was lower than that of our regular dinners at Prospect House. Would you like to continue to have some lower cost meeting options next year? \_Comments?

The results of the survey were informative. As expected, people liked the meetings and dinners at Prospect House but also enjoyed doing a few different things. Everyone liked having some lower cost options as well. The overwhelming majority of those responding would like to see similar formats for at least some future meetings.

Some of the comments received on question I:

- I like Kalluri Corner
- Indian restaurant was excellent
- I like to do it occasionally; a good alternative to Prospect
- I think Prospect is worth the cost
- needs to be close (walking distance)

Some comments for Question II:

- good selection of food
- many interesting topics
- this was a lot of fun
- the poster session was good but reception format strongly lacked the conviviality of sit down dinner

- food was just enough, good attendance by faculty and industry

- I like the idea of combining a talk, poster session & reception

-  
Some comments for Question III:

- food not as good as Prospect House
- nice way to get to know the Wyeth people personally
- how about a wine chemistry talk held at a winery; occasionally
- yes, but I did not care for the buffet
- nice to hear how pharma research is done
- it was difficult to get there without a car

We also asked for ideas for future meetings and received many good ones. Here is a sampling:

- speaker on hot topic like "global warming
- please continue general interest meetings: medical & drugs, biochemistry, plastics
- more talks on medical and environmental issues
- speaker from recycling or energy field
- a cheminformatics and get acquainted session to be held at local library on Witherspoon street
- biochemistry, pharmaceuticals, personal products;
- presentations from collaborators of Princeton Institutes (environment...), future plans of chemistry department with some past history

If you have some comments or ideas for future meetings, please email me at [louise.lawter@gmail.com](mailto:louise.lawter@gmail.com). Ideas are always welcome!

## CHEMISTS SUPPORT EARTH DAY

By Schuyler Antane, Earth Day Coordinator

Local chemists will celebrate Earth Day on **Saturday, April 22** with a couple of planned interactive events

based on the theme, "Dig It!". The Princeton Local Section of the American Chemical Society (ACS) will use the day to educate the public on the positive role chemistry plays in the world. We have partnered with Princeton Geosciences to provide real down-to-earth presentations.

Please join Chemists Celebrate Earth Day at the West Windsor branch of the Mercer County Library (Saturday 4/22/06 from 10-11 am) and later at Princeton MarketFair





(1-3 pm). These gatherings complement our outreach program efforts to West Windsor-Plainsboro and Princeton Regional Schools. In the classroom demonstrations we provide hands-on activities (pH/soil buffering/effects on daphnia) that reflect the positive role that chemistry plays in addressing environmental issues. We have scheduled demonstrations for Village School and Grover Middle School in the months of March and April. If you would like to schedule an Earth-Day chemistry demonstration for your class please contact antanes@wyeth.com for further information.

The first official recognition of Earth Day was on April 22, 1970, as a way to demonstrate support for a healthy environment, raise awareness about environmental issues and remind people that we all need to contribute to a sustainable planet. Princeton ACS has taken part in Earth Day since 2004 under the theme 'What do you know about H<sub>2</sub>O?'.

For more information about ACS Earth Day activities, please visit <http://chemistry.org/earthday>. For local ACS info, please visit <http://www.princeton.edu/~pacs/>

## 2006 Calendar Of Events

### Princeton Section

Monthly meetings are held at Princeton University, Frick Laboratory unless noted otherwise. Lecture is at 6PM. Contact Denise D'Auria at (609) 258-5202 or denised@princeton.edu for more information.

April 20, 2006: Professor David Botstein, Director of the Lewis-Sigler Institute for Integrative Genomics, Princeton University will speak on "Maintenance of Nutritional Homeostasis of Yeast Cells".

May 17: Our speaker will be Professor Robert Cava, Princeton University; also will have presentation of Outstanding High School Teacher Awards. Meeting to be held in room 120, Frick laboratory.

June: Dr. Mark Viant from University of Birmingham, UK, will speak about environmental metabolomics. Date TBA.

July: Our speaker will be Dr. Catherine Hunt, 2006 ACS President-Elect. Date TBA.

September: Our speaker will be Dr. Nelly Aranibar, from Bristol-Myers Squibb. Date TBA.

October: Joint meeting with AICHE.

### Trenton Section

Meetings are held at Rider University, Fireside Lounge. Dinner is at 6PM followed by the lecture at 7PM. For more information contact trentonacs@lycos.com.

## MARM 2006 SPOTLIGHT

### Targeting Heterodimeric G Protein-coupled Receptors as an added Dimension in Drug Design

**Philip Portoghese, University of Minnesota**



A major technical program for MARM 2006 centers on medicinal chemistry. As part of this program, a full-day symposium in honor of the Alfred Burger Award in Medicinal Chemistry will be held, featuring past award recipients and the rising stars in medicinal chemistry. MARM

2006 is honored that the keynote lecture in this symposium will be presented by the Distinguished Professor Philip Portoghese from the University of Minnesota. Professor Portoghese is internationally well known for excellence in medicinal chemistry and has received numerous awards, including the Oak and the Tulip Medal (European Federation of Medicinal Chemistry), Edward E. Smissman-Bristol-Myers-Squibb Award (ACS Division of Medicinal Chemistry), Nathan B. Eddy Award for Excellence in Drug Abuse Research (NAS-National Research Council), Research Achievement Award in Medicinal Chemistry (American Association of Pharmaceutical Scientists), and the Alfred Burger Award in 2000. His research has made positive contributions to understanding opioids and opioid antagonists, the conformational and configurational analysis of biologically active compounds, and the design and synthesis of affinity labels as receptor probes. His lecture at MARM will focus on recent results from this research group on heterodimeric G protein-coupled receptors in medicinal chemistry.

## PACS Members Help with Middle School Outreach

By Kitty Wagner, Chemistry Event Coordinator

Many thanks to the PACS volunteers who helped with the Princeton Science and Engineering Expo on March 21 at Princeton University. Over 900 seventh grade students from ten different schools in Princeton, Trenton, West Windsor-Plainsboro, Cranbury, Hopewell, Montgomery, and Freehold took part in the event at Princeton University. Activities were organized by members of science and engineering programs and departments at Princeton and the Geophysical Fluid Dynamics Lab and by



scientists from local industries and organizations, including Wyeth, FMC Corp., Sensors Unlimited/Goodrich and the Stonybrook-Millstone Watershed Association. Thanks to marathon efforts by Joe Sundeen (Bristol-Meyers Squibb), David Wood, Ginny Sari, Carmen Drahl, Kelsey McNeeley, Lara Margolis, and Julie Arnheim (Princeton U.), Jonathan Chun and Sharon Sibilia, and retired chemists Bill Barnard, Bill Sachs, Louise Lawter, George Rovnyak, Gerald Cooper, Paul Eckler, and Klaus Wagner, the students were able to experiment with invisible ink and "magic" paper in a real chemistry lab. (My apologies to anyone I have inadvertently overlooked.) In early responses from students, the chemistry lab activities and the chemical demonstrations presented by Kitty Wagner (Princeton U) have made quite a few "Three things I learned" and "Two things I thought were cool" lists. Considering the large number of cool things that were available to learn at the Expo, we can be proud!



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