

# THE OCTAGON



Volume 86, No. 8, November 2003

Lehigh Valley Section of the American Chemical Society

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## *768<sup>th</sup> LVACS Meeting:*

**Date:** Wednesday, November 19

**Location:** East Stroudsburg University

**Reception:** 5:45 pm, Wine and hors d'oeuvre - P&J's Café - Center for Hospitality Management - Atrium

**Dinner:** 6:15 pm, P&J's Café - Center for Hospitality Management

**Meeting:** 7:15 pm, Kurtz Lecture Hall, Moore Biology Bldg.

**Talk:** 7:30 pm, Kurtz Lecture Hall, Moore Biology Bldg.

**Menu:** Greek Bean Soup, Broccoli Salad

Choice of Chicken Kiev (skinless chicken breast with chives, garlic, parsley and baked to a golden brown) or Ratatouille Provencal (classic vegetable stew with eggplant, onion, tomato, flavored with fresh herbs and spices). Entrees served with Italian Zucchini, sliced, sauteed in olive oil, braised in freshly made stock

and Pesto Potatoes Parmesan, small new potatoes mixed with Parmesan and Romano cheese in a fresh pesto sauce

Desert: choice of flavored scones, oatmeal date bars with chocolate icing or fruit cobbler

**Cost:** \$22.00, students \$11.00

**Contact:** Please call Kathy Curnoles at (570) 422-3342 or e-mail [kcurnoles@esu.edu](mailto:kcurnoles@esu.edu) by 4 PM Thursday, Nov. 13.

Please give your name, affiliation, and choice of dinner entrée and desert.

**Directions:** directions to ESU and campus maps are available on the web at:

[http://www2.esu.edu/servlet/RetrievePage?site=esu&page=virtualtour\\_welcome](http://www2.esu.edu/servlet/RetrievePage?site=esu&page=virtualtour_welcome)

P&J's Café is in the rear of the Center for Hospitality Management.

**Speaker:** Dr. John Elwood

John received his Ph.D. in Physics from the California Institute of Technology and a B.A. in both Physics and Chemistry from Cornell University. John was an assistant professor at Kent State and from there came to East Stroudsburg University. His research interests involve the study of quark and lepton hierarchies with an emphasis on their implications for unification and the neutrino sector. He also has an avid interest in String Theory, M-Theory and physics beyond the standard model.

**Talk:** "Now We See the Past, Darkly"

**Abstract:** Dark Matter. Dark Energy. When did the universe get so dark? In this journey to the frontier of cosmology, we'll explore the dynamics of the universe and, in particular, touch on the implications that recent observations have for its mysterious "dark" components. The roles of particle theories, string theories, and brane-theories in illuminating cosmic structure will also be discussed.



**P&J's Café is run by the Hotel, Restaurant, Tourism, and Hospitality Management Program at ESU. The reception and dinner will be planned, cooked and served by students in this program. All profits from the dinner will be donated to the program in Hotel, Restaurant and Tourism Management for the direct benefit of students in that program. The food is fabulous, the atmosphere charming and it is a great cause!**

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## October Meeting Minutes:

The 767th meeting of the LVACS was called to order by Chair Paul Bouis at 7:05 PM on Thursday, October 16, 2003. Lehigh University hosted the meeting on their campus, and approximately 70 members were in attendance. Paul began the meeting by announcing those members who have reached their 50<sup>th</sup> ACS Membership Year in 2003.

Dr. David M. Anderson	Bethlehem, PA
Dennis M. Fahey	Hamburg, PA
Dr. John Robert Lovett	Allentown, PA
William H. Norton	Bethlehem, PA
Douglas Stephen Richart	Reading, PA

Unfortunately, none of these distinguished gentlemen were able to attend.

The September minutes were approved. Prior to the main meeting, the Executive Committee met to discuss two main items – the election and volunteer request for two committees. For the former item, we will have one contested election for Councilor, Carol Baker Libby vs. Roger Egolf. The vote count will determine Councilor and Alternate-Councilor. Information will be available in the November Octagon. Members will mail ballots to the Secretary. The Secretary will bring those ballots to the November meeting, and those in attendance who did not submit a ballot will vote at the meeting. Therefore, new officers will be determined at the November meeting. For the latter item, Steve Weiner asked for volunteers for the Publicity Committee, chaired by Chris Hamann from Albright College. The goal of this committee is to generate more public awareness of our activities, for example in celebration of National Chemistry Week. Carol Libby asked for volunteers to participate in the Women Chemists Committee. This committee works in conjunction with the National group, but our local group will help to develop, promote, and recognize women in our area. This is also a wonderful opportunity to network & mentor. Please see additional information in the November issue of the Octagon, and contact Steve or Carol if interested in either or both committees.

John Freeman presented the Treasurer's Report. We have \$1,605.46 in our checking account, \$1,554.59 in our scholarship fund, and \$29,788.86 in our investment account. The Question of the Month was, "What globe trotting Physicist won the Nobel Prize in Chemistry even though his PhD was in Physics? Hint: his career began in the Netherlands, continued to Munich, Zurich, and finally the U.S. at Cornell." The answer is Peter Debye. More information can be found at [www.nobel.se/chemistry/laureates/index.html](http://www.nobel.se/chemistry/laureates/index.html). Next, Paul reviewed some demographic statistics he received from National. These are from December 2002, and have a total section count of 958 members. Michelle Jones-Wilson mentioned we currently have over 1000 members.

Some notable statistics from National:

1. Approximately 30% list various aspects of research under Job Description..
2. Largest group under Job Title is chemistry / metallurgy
3. Most of our section members list Manufacturing as their nature of business; however, we have a strong showing in the teaching field.
4. Although many of the numbers are close, a majority listed Analytical Chemistry as their field of interest.
5. Approximately 15% of our members list Chemical Engineering as Major, and the number of Bachelor and Doctorate degrees in Chemistry are fairly close, 41% & 36% respectively.
6. Our section has approximately 12% in the 41-45 age group and 71+ age group (largest percentages in the survey).

Keith Shray introduced our speaker for the evening, Dr. Joe Vinson. Dr. Vinson discussed the chemistry of chocolate. He began with a history of chocolate. The earliest recording of chocolate is from 500 BC; the ancient Mayan people grew cacao and made it into a beverage. Drinking chocolate was an important part of Maya and Aztec life; it was a particularly favored beverage for royalty. The first chocolate house is dated circa 1657 in England, the liquid was very bitter as no sugar was added until many years later. In 1826, Suchard sold the first solid chocolate bar, and are still in business today. In 1875, Nestle added condensed milk and sugar to the chocolate liquor to make milk chocolate, and in 1894 Hershey opened its famous doors, creating numerous chocolate confections.

There are three main types of cacao: *forastero*, *criollo*, and *trinitario*. *Forastero* is native to the upper Amazon region, and it's the most widely cultivated variety of cacao, producing nearly 90% of the world's chocolate. *Criollo* was cultivated by the Maya, but it's more difficult to grow and produces fewer seeds. This type of cacao is considered the best quality by connoisseurs. *Trinitario* was developed in Trinidad, and it's a cross between *forastero* and *criollo*. Because the trees are grown close together and in large numbers, they have a restricted genetic background. This makes the plant prone to disease, creating many problems for those people living off the cacao riches.

The seeds are very unusual in that they grow as a pod on the trunk of the cacao tree. Each of these pods must be picked by

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hand, and then the fermentation process can begin (very messy). The beans are the size of almonds, and can be considered as grapes when making wine, as each type of bean can have a distinct flavor and aroma. The beans are broken up and covered to ferment for many days. This process is complete when the seeds turn a rich, dark brown colour. Then they are dried (roasted) in the sun prior to further processing. Dr. Vinson shows the audience examples of the seeds and powder, the latter is the liquor after pressing out the yellow cocoa butter (pure fat). Sugar and milk are added to the liquor to create the milk chocolate bar.

Next, Dr. Vinson discussed the chemistry behind chocolate, and some of the studies performed (both formal and informal) relating to taste, and antioxidant potential. Noteworthy is a more expensive chocolate is not necessarily the best tasting. In terms of compounds in chocolate, there are many, some of which affect the same receptor as THC. One would need to ingest a significant amount of chocolate to achieve the same effect.

Some definitions for further clarification:

**Chocolate liquor:** the mass produced by grinding cocoa nibs.

**Cocoa butter:** the natural, cream-colored vegetable fat extracted from cocoa beans during the process of making chocolate and cocoa powder. It is obtained by pressing chocolate liquor. Adds smoothness and flavor.

**Cocoa powder:** once cocoa beans are fermented, dried, roasted and cracked, the nibs (center of the cocoa bean) are ground to extract about half the cocoa butter, leaving a dark brown paste called chocolate liquor. After drying again, the hardened mass (press cake) is ground into the powder known as unsweetened cocoa, available in different fat levels. May be natural or Dutch processed.

**Dutch processed:** an alkaline treatment of the nib prior to grinding, or the liquor prior to pressing. This process darkens the resultant chocolate liquor or cocoa and modifies the chocolate flavor, helping to neutralize cocoa's natural acidity.

**Natural process:** non-alkalized chocolate liquor or cocoa processed without an alkaline treatment.

**White chocolate:** originates from the cocoa (cacao) plant, but it is not 'chocolate.' According to the FDA, to be called 'chocolate' a product must contain chocolate liquor, which is what gives it the bitter intense chocolate flavor (and color) to dark and milk chocolates. White chocolate contains cocoa butter, milk solids, sugar, lecithin and flavorings (usually including vanilla).

Dr. Vinson next explained how, in moderation, chocolate is a very good food antioxidant for heart disease. He showed an epidemiological summary of heart disease rates in Pennsylvania, noting there are many other variables affecting the rate in populations. From data in short and long term clinical studies, Dr. Vinson explained the fat in chocolate is more pro-oxidant, and the chocolate-proper is antioxidant. The fats in milk chocolate consist of: Oleic Acid (34%), Palmitic Acid (27%), Steric Acid (61%), and others (9%). The antioxidants in chocolate are polyphenols, whereby the original bean has ~8% and the final product has ~1% in concentration. The greater the liquor content, the greater the polyphenol concentration; therefore, the darker the chocolate, the more antioxidant concentration. Dr. Vinson detailed chemical and epi studies supporting the hypothesis. He also noted that since these are free radical reactions, very few molecules of these antioxidants are needed.

Lastly, Dr. Vinson gave the audience a pictorial tour of the University of Scranton. Dr. Vinson answered many questions, and was presented with a gift to express the section's appreciation. The meeting was adjourned at 8:35 PM.

Respectfully Submitted, Tara S. Baney, Secretary, LVACS , 20-October-2003

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### ***2003-2004 Meeting Schedule***

January 27 - Albright College  
February 18 - Kutztown University  
March - DeSales University  
April - Moravian College  
May - Cedar Crest College

### ***Chemistry Question of the Month***

Who coined the term "gas"?

(This is an old one!)

*Come to the November meeting for the answer*

### ***LVACS Officers - 2003:***

**Chair:** Paul Bouis

Mallinckrodt Baker Inc., Phillipsburg, NJ 08865  
[paul.bouis@tycohealthcare.com](mailto:paul.bouis@tycohealthcare.com) 908-859-9443

**Chair Elect:** Steve Weiner

Chemistry Department, Muhlenberg College  
2400 Chew Street, Allentown, PA 18104  
[sweiner@muhlenberg.edu](mailto:sweiner@muhlenberg.edu) 484-664-3665

**Immediate Past Chair:** Joe Sherma

Lafayette College, Easton, PA 18042  
[shermaj@mail.lafayette.edu](mailto:shermaj@mail.lafayette.edu) 610-330-5220

**Secretary:** Tara Baney

MRL, Clinical Molecular Profiling  
Mail Code WP53B-120  
West Point, PA 19486  
[tara\\_baney@merck.com](mailto:tara_baney@merck.com) 215-652-7486

**Treasurer:** John Freeman

522 Raub St., Easton PA 18042  
[jcf2@rcn.com](mailto:jcf2@rcn.com) 610-923-3587

**Councilor:** Roger Egolf

Penn State LV Campus, Allentown, PA 18051  
[rae4@psu.edu](mailto:rae4@psu.edu) 610-285-5110

**Councilor:** Pamela D. Kistler

Cedar Crest College, Allentown, PA 18104  
[pdkistler@cedarcrest.edu](mailto:pdkistler@cedarcrest.edu)  
610-437-4471 x 3507

**Alternate-Councilor (and Octagon Editor):**

T-Michelle Jones-Wilson  
East Stroudsburg University  
East Stroudsburg, PA 18301  
[mjwilson@po-box.esu.edu](mailto:mjwilson@po-box.esu.edu) 570-422-3446

**Alternate-Councilor:** Carol Baker Libby

Moravian College, Allentown, PA 18018  
[cblibby@cs.moravian.edu](mailto:cblibby@cs.moravian.edu) 610-861-1629

### ***The Age of Glass***

Guest Columnist: Matt Bouis

Reciprocity is an appropriate term to describe the interaction between the scientific glassworkers that spawned the glass-working field and the artists that currently drive innovation in the industry. The antiquity of Art-glass goes back to Roman times; however, in our time a form of glass unknown to the ancient world has been developed that has made this ancient art form in great demand professionally and recreationally. The form of glass that the Romans created in ancient kilns is known today as Soda Lime or Soft glass. Borosilicate, otherwise known as Hard glass, is a much more durable and versatile glass which has created an industry and is now supporting thousands of independent artists trying to make a mark in what we call the Age of Glass.

The composition of Soda Lime glass is made up of sodium, potassium, calcium, and varying amounts of aluminum and iron, all combined with sand as complex silicates. The trade name of borosilicate, called Pyrex 774 glass, contains a larger amount of silica, less of the alkalies, virtually no calcium, a substantial amount of boron, and a tiny amount of aluminum. Many soft glass workers remain, however, as the virtues of borosilicate are discovered, many workers turn away from the ancient glass and focus on the modern refinement known as Pyrex 774.

It is this fortunate development that has enabled the glassworking community to assist chemists and scientists alike in creating customized controlled environments for very specific applications and reactions. From this need, the area of Vineland, New Jersey evolved into a Mecca for the scientific glass society, known as the ASGS, or American Scientific Glassblowers Society. Now that the scientific glassworkers created an industry to support their needs, artists looking for a new medium stumbled upon a revolution in the waiting.

Investigating the development of lampworking, or the term that has been applied to the artists developing the field, is quite easy: check the supplier. Interestingly enough, a local Lehigh Valley supplier exists in Hellertown, courtesy of Wale Apparatus. I had a chance to sit down during a busy morning with Mike DeMasi, the sales manager at Wale. I asked him when he saw that the industry was altering from a strictly scientific driven one to a artist driven one. He commented that it was sometime in the mid-eighties at a GAS, or Glass Art Society conference in Corning, New York. It was here that the collective team from Wale learned that the new wave of tools, equipment, burners, and business would be from the art community.

Since this awakening at the GAS conference, what was once a stagnating industry has dramatically grown. A company grew from humble beginnings in Washington State called Glass Alchemy. This company has driven the

### ***Part-time Organic Adjunct Faculty Position for Spring Term at Moravian College.***

The Moravian College Chemistry Department seeks an adjunct faculty member (Ph.D. preferred) to teach a laboratory section of our introductory organic course. The lab meets on Friday afternoons from 12:45-3:45 PM beginning January 16, 2004 and ending on April 30, 2004. Those interested should contact Dan Libby, Chair ([rdlibby@cs.moravian.edu](mailto:rdlibby@cs.moravian.edu); 610-861-1436).

### ***There are active Women Chemists Committees in 36 local sections of the ACS.***

Would you like to see Lehigh Valley ACS on that list? Become part of the planning committee. Contact Carol Libby, [cblibby@cs.moravian.edu](mailto:cblibby@cs.moravian.edu); 610-861-5272.

discovery process in what elements contribute to what colors can be created with borosilicate. The owner of GA, a man by the name of Henry Grimmett has gone around the country educating the artistic community through group seminars about his colors and the ways that they should be applied. For instance, I had the privilege of attending one of these seminars at Art Glass Invitational or AGI. Henry detailed the chemicals and additives that create the distinct colors in borosilicate. For instance, a group of colors called the crayon colors, which include Yellow, Orange, Red, Chocolate, and Olive Green are all rich in Cadmium in its unbound state. Cadmium sublimes at around 1750 EF, which happens to be below the typical working temperature of borosilicate. This overheating, which is seen as bubbling on the surface of the color is the cadmium being released in a gaseous state and this is one of the major hazards of working borosilicate.

Just a listing of the many elements found in borosilicate colors is an easy way of conveying the hazards of working these colors. Namely, the most used elements are Silver, Cadmium, Selenium, Copper, Manganese, Gold, and Cobalt. Obviously this is a very hazardous group of elements to be working at temperatures in excess of 2000 EF. Most important for the lampworker is a powerful ventilation fan. This fan must be capable of pulling the hazardous by-products of working the glass away from the face to avoid inhalation. Another major hazard is the sodium glare and UV and IR wavelengths of light given off while working borosilicate in the flame. For this reason, glassworkers use what is called Amethyst Contrast Enhancer glasses, or ACE glasses. This lens, developed by Schott Glass must be augmented with a light welder's shade somewhere between 3 and 6. The reason the ACE glass must be used with a welder's shade is because the metals in the borosilicate color glare similarly as the metals that welders are commonly working. There are no more unseen hazards such as UV and IR light, but the intensely white glare coming from the colors can deeply impair vision permanently.

Regardless of the potential hazards of working glass, the glassblowing industry is growing at a rate unseen just two decades ago. The help of companies like Wale Apparatus are bringing this art form to the masses, with better tools and technologies. Namely, Wale just released a torch developed in house by their machinist/torch designer. This torch, called the *Firebird* was developed specifically for the lampworker looking for a small versatile torch that was cool to the touch, clean burning, extremely quiet and capable of a wide variety of flames. I had a chance to use this torch while I was speaking with Mr. DeMasi and I was amazed at the potential this torch design has. It's width is no greater than 15mm and only weighs 2Lbs 7 ounces. This is only the beginning; the innovation upcoming in the field will blow away what are the current standards. Hopefully, for years to

come, companies such as Glass Alchemy, Corning, and Wale will continue to drive a field that they have helped from the beginning to develop and foster. The renaissance in glass is just beginning to take shape and the artistic glassworking community will rapturously engage any and all innovations.

### ***AWIS-PHL Announces Travel Awards***

Association for Women In Science, Philadelphia Chapter Call for Nominations for the Robert E. Davies Student Travel Award. This award was established in 1993 by AWIS-PHL in memory of Professor Robert E. Davies whose life was characterized by untiring efforts toward the entry and advancement of women in science. The Robert E. Davies Student Travel Award supports the attendance of a female graduate student at a national meeting of the scientific society appropriate for her discipline at which she will be presenting her own research. Advisors are encouraged to nominate students for conferences that will provide significant exposure for the student and her work. AWIS-PHL will make one award each year in the amount of \$500.00, to be applied to the costs of transportation, registration, housing, and meals for the student. Should the actual costs exceed \$500.00, those additional costs must be covered by other resources available to the student. The recipient will present AWIS-PHL with a published or final abstract of the work presented at the meeting and an accounting for \$500.00 of meeting-related expenses. The application deadline is December 1 for conferences held any time during the following calendar year. For more information see the LVACS website or call Dr. Steel at (610) 917-6926; Fax (610) 917-5947; email: [angela.steel-1@gsk.com](mailto:angela.steel-1@gsk.com)

### ***LVACS Elections***

#### **Nominees for Office for 2004**

**U Chair-Elect** (one-year term starting January 2004) -  
**Tara Baney**

**U Secretary** (one-year term starting January 2004)-  
**David Skee**

**U Councilor** (runner up to be Alternate Councilor, both to serve 2003-2006)

**Roger Egolf                      Carol Libby**

#### **Continuing Officers**

**U Chair** (current Chair-Elect, will assume Chair Jan. 2004)  
**Steven Weiner**

**U Treasurer** (current treasurer will continue in 2004)  
**John Freeman**

**U Councilor** (term 2003-2006)  
**Pamela Kistler**

**U Alternate Councilor** (term 2003-2006)  
**T. Michelle Jones-Wilson**

**Editors Note:** The following biographical sketches were provided by the candidates running for LVACS offices for 2004. They were edited for format uniformity.

### **Tara S. Baney**

**Position:** Associate Medical Program Coordinator in the Clinical Molecular Profiling Department of Merck & Co., Inc. - West Point, PA.

**Education:** Tara received her B.S. in Chemistry (1994) and B.A. in Psychology (1995) from Cedar Crest College, her M.S. (2000) in Chemistry from Lehigh University, and her Certificate in Clinical Trial Management (2003) from Temple University.

**Qualifications/Statement:** Tara is the current Secretary for the section, and a member of the Biological Chemistry Division of ACS. She is on the Alumnae Board at Cedar Crest College, where she is Chair of the Career Networking and Annual Fund committees. She is a part-time chemistry instructor at Cedar Crest College. She has also presented scientific rationale and procedures at general investigator meetings and internal departmental meetings.

**Professional Interests:** Her industrial activities include development & implementation of relevant genotyping databases for pharmacogenomic analyses, creating Phase II/III PGx plans, and supporting subject sample and data collections in focused exploratory studies (using array technologies, including RNA expression experiments and serum biomarker studies).

### **David Skee**

**Position:** David C. Skee is currently a Process Chemist in the Product Development Department of Mallinckrodt Baker, Inc.--Phillipsburg, NJ.

**Education:** David received his A.A.S. in Chemical Technology and A.S. in Liberal Arts Math/Science from Hudson Valley Community College in 1991 and a B.S. in Chemistry with minor in Computer Science from the State University of New York at Albany in 1993.

**Qualifications/Statement:** David has been a member of the American Chemical Society and Electrochemical Society for a number of years. David currently has 4 U.S. patents awarded with 2 more pending and has authored or co-authored 9 technical papers. He has also presented a paper at an international meeting of the Electrochemical Society.

**Professional Interests:** David's current responsibilities include process optimization and new product scale-up in the Microelectronics Materials area and all cGMP process and cleaning validations in the Specialty Manufacturing area.

He is also currently supporting new product development in the Process Chromatography area, as well. Prior to his current assignment, David was a Senior Research Chemist working in the Research and Development Department at Mallinckrodt Baker, where he worked for 9 years in developing new microelectronic cleaning products.

### **Roger Egolf**

**Position:** Roger A. Egolf is currently Associate Professor of Chemistry at Penn State - Lehigh Valley Campus where he has taught since 1989.

**Education:** Roger received his B.S. in Chemistry (1985) from Kutztown University and his M.S. (1987) and Ph.D. (1990) degrees in Organic Chemistry from Lehigh University.

**Professional Interests:** Roger's research interests include the synthesis of anion transport protein inhibitors and the history of chemical education in the 19th century.

**Qualifications/Statement:** Roger has previously served the section as Treasurer, Chair, and National Chemistry Week Coordinator, and is currently finishing his first term as Councilor and is a full member of the Divisional Activities Committee and is co-chair of its annual reports subcommittee. He also serves as the Program Chair for the ACS Division of the History of Chemistry. Besides the HIST division, Egolf is also a member of ORGN, MEDI, CHED, and COMP divisions. In addition he is a member of Sigma Xi.

### **Carol Baker Libby**

**Position:** Adjunct professor at Moravian College

**Education:** Carol received her B.S. and Ph. D. from Penn State University

**Professional Interests:** Enzyme mechanisms and biotechnological applications of enzymes. Advances in chemical education to improve student understanding of chemistry.

**Qualifications/Statement:** Carol has been active in the ACS for over twenty years, serving in various officer positions in several sections. Since 2001, she has been Alternate Councilor for the Lehigh Valley section of the ACS. Nationally, she served on the ACS Women Chemists Committee (1990-2000) and continues a close working relationship with that committee and other ACS leaders. As councilor her interests would be to ensure that the ACS continues to improve individual members' opportunities for professional growth and service, as well as outreach to the general public--both in the Lehigh Valley and nationally.

## *Elections for 2004 Officers of the Lehigh Valley Section of the American Chemical Society Ballot*

Please Choose one Candidate for each office. Please cut or photocopy the ballot from your newsletter. Email subscribers - please print page 7 of your newsletter.

### **Chair Elect**

Tara Baney

### **Secretary**

David Skee

**Councilor** (choose one, the candidate receiving the most votes will serve as councilor, the second place candidate will serve as alternate)

Roger Egolf

Carol Libby

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### **Please carefully follow these instructions for voting :**

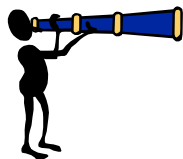
1. After indicating your choice, seal your ballot in a plain envelope. Write the word BALLOT on the envelope. Sign or initial the seal.
2. Fold the envelope and insert in another envelope, affix appropriate postage and return address, address to:

Tara Baney  
LVACS Secretary  
Merck Research Laboratories,  
Clinical Molecular Profiling  
Mail Code WP53B-120  
West Point, PA 19486

**Deadline - envelopes must be postmarked no later than November 16, 2003.**

Ballots will also be accepted at the November meeting.

**Your Vote Counts! Let your voice be heard!**



*Look For LVACS on the web  
at [www.esu.edu/lvacs](http://www.esu.edu/lvacs)*