



# THE FILTERPAPER



May 2013

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## May Dinner Meeting & Chemistry Olympiad Recognition

### Technology for the Developing World

Dr. Doug Sisk and Dr. Marya Lieberman

Tuesday May 28<sup>th</sup>, 2013

Social Time:	5:00-6:00
Dinner:	6:00-7:00
Chemistry Olympiad Recognition & Research Presentation:	7:00
Dinner Location:	St Mary's College -Noble Dining Hall Notre Dame, IN
Menu:	Picnic Fair (Hamburgers, Brats, Potato chips, Broccoli salad, Fruit Salad, Beverages)
Dinner Cost:	\$10 ACS Members & Guests, Chemistry Olympiad Students, Parents and Teachers Free

#### Abstract

We are developing analytical devices to detect fake pharmaceuticals and perform other analytical tasks. Several different tests are run simultaneously on a single sample. The devices are paper based, contain all necessary reagents, do not need electricity, and can be read by taking a picture with a cell phone and sending it to a web site. The overall goal of this project is to "crowdsource" chemical analysis, revealing spatial and temporal information that will be useful for public health, forensic, and environmental applications.

#### Speakers

Doug Sisk, Ph.D.

Chemistry Teacher, Marian High School Science Dept.

U.S. Chemistry Olympiad Coordinator, St. Joseph Valley Local Section, ACS

Dr. Sisk graduated from Indiana University in South Bend in 1973 with a BA in Chemistry and from The George Washington University in 1983 with a Ph.D. in Psychology. He completed an Alexander von Humboldt Post-doctoral Research Fellowship at the University of Bonn Medical Center in Bonn, Germany in 1985. Dr. Sisk has been involved in research while at Marian through participation in the RET Program at the University of Notre Dame, studying the crystalline structure of aluminum oxide in diodes to correlate structure with electrical conductance. He has implemented student-centered, guided-inquiry methods for science instruction utilizing financial support from the Department of Education to set up datalogging computer stations in Honors and ACP Chemistry classes. Dr. Sisk has coordinated the U.S. Chemistry Olympiad exam in our local section for over 10 years, consistently growing regional participation in the program. The U.S. National Chemistry Olympiad and the International Chemistry Olympiad are multi-tiered competitions that bring together the world's most talented high school students to test their knowledge and skills in chemistry through written examinations and laboratory practicals.

Marya Lieberman, Ph.D.

Associate Professor, University of Notre Dame Dept. of Chemistry and Biochemistry

Professor Lieberman studied chemistry at the Massachusetts Institute of Technology, graduating with a B.S. in 1989. She worked with Professor Tomikazu Sasaki at the University of Washington on the *de novo* design of protein structure, receiving her Ph.D. in 1994. She investigated semiconductor-liquid junction solar cells as a National Science Foundation postdoctoral fellow with Professor Nathan Lewis at the California Institute of Technology and joined the faculty of the University of Notre Dame in 1996. She was promoted to associate professor in 2002.

RSVP: Dan Brown (Daniel.brown@bayer.com or Phone: 574-256-7754) by Friday May 24<sup>th</sup>

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# Executive Committee Meeting Minutes

**Saint Joseph Valley Section (ACS)****Executive Committee Minutes**March 7<sup>th</sup> 2013

**Present:** Matt Odom (Chair), Daniel Brown (Past Chair), Abe Brubaker (Councilor) Phil Bayes (Member-at-Large), Andy Edelbrock (Filterpaper Editor, Alt. Councilor & Webmaster), Pat Boettcher (Treasurer), Patsy Boehler (NCW Chair) & Roger Fleming (Secretary).

**Resolutions Approved:**

1. Local Section to underwrite expenditures for Abe Brubaker to attend the ACS Spring Meeting in New Orleans
2. Local Section to provide \$2500 for SEED again this year.

**Action Items:**

1. Solicitation of volunteers for Chair elect for the local section ballot (Patsy to talk with Science-2-Go bus driver; Matt to approach Monika Felten).
2. Roger will procure or compile a list of secondary chemistry teachers in the geographic region covered by our local section to facilitate local section outreach efforts.
3. Abe and Patsy will explore how we SJVACS can participate in the Yellow Jug Program. Patsy will determine the deadline for posters for the Earth Day event.
4. Andy to publish scholarship information in the next Filter Paper.

**Treasurer's Report (Pat):** As of 28 Feb 2013: (This is before distribution of the annual allotment from the ACS)

Checking:	\$	7,907.54
Savings:	\$	2,056.83
CD xxx156	\$	5,000.00
CD xxx498	\$	2,969.55
CD xxx512	\$	7,725.36
<b>Total:</b>	<b>\$</b>	<b>25,659.28</b>

**Earth Day:**

We discussed how we could align chapter activities with the ACS national theme for the year which is environmental awareness.

Patsy is meeting with a group of local environmental groups in the area to plan Earth Day activities. The national ACS may have some activities that can be offered. Patsy is also looking on the web for activities, and making connections with this community.

Abe advocated the Yellow Jug Program in as a worthy environmental awareness program that the SJVS could promote. Outdated, unused, and unwanted pharmaceuticals are collected in yellow jugs at participating institutions in states bordering the Great Lakes. The drugs are incinerated rather than landfilled so they do not enter the water table. Locally in Michigan, Hospice is a participating organization. The SJVACS could assist by buying jugs for MI and spreading awareness of the program. Indiana does not participate in the program. By spreading awareness, we may be able to encourage SJVACS tier counties to participate. This program has prospects of appeal to a diverse profile of groups. Abe and Patsy will explore how we SJVS can participate in the Yellow Jug Program. A poster could be used in a number of events whose attendees may have interest in the program. Patsy will determine the deadline for posters for the Earth Day event.

**Elections:****Annual Report**

The annual report was submitted on time insuring funding for SJVACS from national.

**Engineering Week ASME / SAE**

SJVACS purchased 1 table for the Engineering Week Dinner presentation.

**ACS Leadership Institute (January 27, Dallas Texas)**

New chair Matt Odom attended the ACS Leadership Institute, received training, and hob-nobbed with the movers and shakers on the national level.

**STEM:**

Dan commented that it would be nice to have female representatives from industry at the Women in Science Day so that young women had objective proof there was a more diverse future in science than teaching.

(Continued next page)



## SJV-ACS 2012 Executive Committee Minutes Continued

### SEED

SEED seems to be growing. Last year we had trouble attracting 4 applicants; this year, for the first time, there is a real possibility of attracting 10 applicants to match with 10 willing faculty mentors.

The SJVACS typically supports the cost of 1 student (\$2500) and will do so again this year.

### IPG Grant Submissions

IPG Grant Submissions cannot be submitted until after June 30. We have 3 months to consider applications. Last year we supported we supported Science Spectacular with a \$3000 grant. Patsy believes we could fund something else as well as Science Spectacular this year. There does not appear to be any clause precluding funding the same activity two years in a row; in fact, the form has a section for sustainability. We are not in a position to apply today, but the executive committee should be considering potential events to support for applications.

### Errata

The national ACS is advocating, but not funding e-voting. One group charges around

~ \$30 per vote for secure, anonymous e-voting for organizations. Unless we were to find a secure system for free, we will stick with mail in ballots at "forever pricing".

### Science Day in Indianapolis at the 2013

#### Fall National Meeting

We have been invited to set up a hands on event for Science day. This would likely be Saturday Sept 7 before the meeting (8 – 12). The theme is Chemistry in Motion. There was a variety of discussion as to potential activities, but no hard commitment.

### Darryl Beach Memorial

There was discussion of whether and how the SJVACS could honor the recently deceased HS educator Darryl Beach. His obituary was carried in C&E News. Scholarships were the first thought, but they can be expensive if intended to carry out in perpetuity. The concept of awarding a chemistry "Darryl Beach Teacher of the Year" award was floated. This seems apt as it recognizes others in the area in which Darryl worked and excelled. Roger will procure or compile a list of high school chemistry teachers in the counties covered by the SJVACS and contacts for potential nominators (Superintendents? Principals?) The logistics of sustaining such an award will be reviewed with this more complete information (number of potential people eligible, etc.). This would also be a publicity opportunity for SJVACS.

### Potential Meetings:

Al Hazari (of Tennessee) sent a card offering presentations to local sections on a variety of chemical education topics. The topics would fit well with the Chem Olympiad celebration meeting typically held in late May. The ACS no longer offers the speakers tours, but offers subsidies of up to \$400 / year bringing in speakers. Organizing a regional tour of several contiguous sections can reduce the travel costs, but requires coordination. Matt offered to explore the possibility of coordinating presentations with the Kalamazoo and Fort Wayne Sections.

Matt has information for tours of the South Bend Waste Treatment Plant. It was suggested we set up a tour for a June meeting before the weather gets too hot.

### Potential Candidate for Chair Elect

Matt suggested Patsy float the idea with the Ethos "Science 2 Go" bus driver. Monkica Felten, head of Serim R&D, was also mentioned as a potential candidate.

Scholarship Information has been published on the web site and applications are open until the end of July. Andy intends to publish the scholarship information in the next edition of the Filter Paper.

Roger Fleming  
Secretary

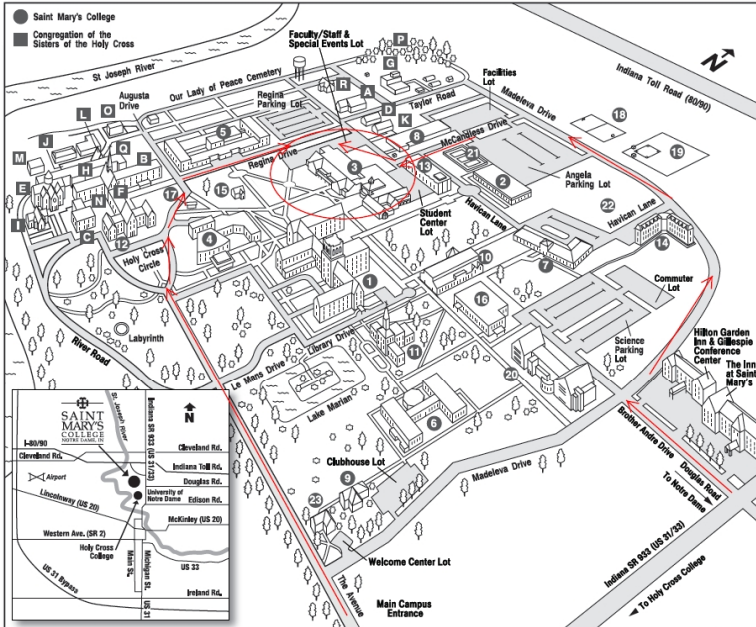
## 2013-2014 SJV-ACS Scholarship

To all Saint Joseph Valley ACS members dependents as well as any High School Chemistry Olympiad or SEED student participants within the local SJV-ACS boundaries, the SJV-ACS is accepting scholarship applications for the 2013-2014 school year. Please see the attached scholarship application or go online to download the application. The last date for accepting applications is June 29<sup>th</sup> 2013.



# SJV-ACS May Dinner Meeting Directions

St. Mary's College Campus is located to the West of US933 with two entrances one off of Douglas and the main entrance off of The Avenue.



**COLLEGE LOCATIONS**

- Admission Office ..... 1
- Administrative Offices ..... 1
- Alumnae Relations Office ..... 1
- Angela Athletic Facility ..... 2
- Bookstore ..... 3
- Box Office ..... 4
- Campus Ministry ..... 5
- Career Crossing Office ..... 20
- Carroll Auditorium ..... 6
- Center for Academic Innovation ..... 20
- Center for Spirituality ..... 20
- Center for Women's Intercultural Leadership ..... 20
- Central Receiving ..... 8
- Clubhouse ..... 9
- Cyber Cafe ..... 3
- Cushwa-Leighton Library ..... 10
- Dalloway's Coffee House ..... 9
- Development Office ..... 4
- Document Center ..... 3
- Early Childhood Development Center ..... 7
- Facilities Building ..... 8
- Financial Aid ..... 1
- Haggard College Center ..... 11
- Hammes Gallery ..... 4
- Havican Hall ..... 7
- Holy Cross Hall (residence) ..... 12
- Human Resources ..... 8
- Information Technology ..... 11
- Le Mans Hall (residence) ..... 1
- Library ..... 10
- Little Theatre/Art Gallery ..... 4
- Madelera Hall ..... 6
- Mail Services ..... 8
- McCandless Hall (residence) ..... 13
- Marketing Communications ..... 11
- Museum Center for the Arts ..... 4
- Noble Family Dining Hall ..... 3**
- O'Laughlin Auditorium ..... 4
- Office for Civic and Social Engagement ..... 3
- Office of Special Events ..... 4
- Opus Hall (student apartments) ..... 14
- Post Office ..... 12
- Purchasing ..... 8
- President's Office ..... 1
- Regina Hall (residence) ..... 5
- Registrar ..... 1
- Riedinger Alumnae House ..... 15
- Science Hall ..... 16
- Security Headquarters ..... 17
- Shahen Bookstore ..... 3
- Sister Marie Rosette Gallery ..... 4
- Soccer Field ..... 18
- Softball Diamond ..... 19
- Spea Unica Hall ..... 20
- Student Center/Noble Family Dining Hall ..... 3
- Student Involvement and Multicultural Services ..... 3
- Tennis Courts ..... 21
- Vander Venet Theatre ..... 3
- Volleyball Courts ..... 22
- Welcome Center ..... 23

Directions to campus: From the 80/90 Toll Road take exit 77 (South Bend/Notre Dame) and turn right (south) onto Indiana SR 933 (US 31/35). The first light at The Inn at Saint Mary's is the north campus entrance (turn right onto Brother Andre Drive/Douglas Road). If you continue straight on SR 933, the next light is the main campus entrance (turn right onto The Avenue).

**CONGREGATION LOCATIONS**

- Andre House ..... A
- Augusta Hall ..... B
- Bertrand Hall ..... C
- Bethany Convent ..... D
- Church of Our Lady of Loretto ..... E
- Center Building ..... F
- Central Utilities Plant ..... G
- Convent ..... H
- Guest House ..... I
- Holy Family Park ..... J
- House of Shalem ..... K
- Lillie O'Grady Center ..... L
- Loretto Convent ..... M
- Loures Hall ..... N
- Mary's Solitude ..... O
- Nature Trail ..... P
- Rosary Hall ..... Q
- St. Bridget's Convent ..... R



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Mail Completed Application to  
Andy Edelbrock  
Bayer Corporation  
430 S Beiger St M6200  
Mishawaka, IN 46544  
(574) 256-3443

**Saint Joseph Valley– ACS**  
**Alfred Free-Russ Biting**  
**\$500 Memorial Scholarship**

**2013-2014 School Year Application Deadline June 29<sup>th</sup>, 2013**

**SJV-ACS Member Information**

Membership ID \_\_\_\_\_

Date of Application \_\_\_\_\_

Members Name \_\_\_\_\_

Chemistry Olympiad & SEED Participants Only

Members Address \_\_\_\_\_

High School Represented \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Chemistry Olympiad Score \_\_\_\_\_

SEED Student Mentor \_\_\_\_\_

Essay- Impact of Chemistry on Life and Reason for Pursuing a  
Career in the Chemical Field

**Applicant Information (ACS Dependent, SEED or Chemistry Olympiad)**

Student Name \_\_\_\_\_

College or University \_\_\_\_\_

Student Address \_\_\_\_\_

School Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Students Age \_\_\_\_\_

Major \_\_\_\_\_

Renewal Form Yes  No

Year (Freshman-Senior) \_\_\_\_\_

**Required Documentation Checklist**

Transcript

Proof of Declared Major in Chemistry or Chemical Engineering (Junior-Senior)

Copy FASFA

Essay (Junior Year only) on why you choose Chemistry or Chemical Engineering

Essay (SEED Olympiad)

Proof of Dependency (College Application, Birth Certificate, etc)

(If You are Reapplying for a continuation of a scholarship from the previous year, please follow the guidelines on the back)

(Do Not Fill in Last Section)

**SJV-ACS Executive Committee Area**

Application Postmark Date \_\_\_\_\_

Verification of Membership ID \_\_\_\_\_

Verification of Dependency \_\_\_\_\_

Verification of Transcript GPA \_\_\_\_\_

Science/Math GPA \_\_\_\_\_

Verification of School and Major \_\_\_\_\_

Committee Recommendation \_\_\_\_\_



**ACS**  
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## Saint Joseph Valley– ACS Alfred Free-Russ Biting \$500 Memorial Scholarship

### 2013-2014 Application Guidelines and Requirements

#### ACS Member Requirements

##### Recipient must

1. be a child, grandchild or dependent of a member of the Saint Joseph Valley Section of the American Chemical Society
2. maintain a minimum average GPA of 3.00 for a minimum of the last three semesters in science and math courses
3. be a high school senior or college student of good standing and planning or attending an accredited college or university in the United States at the time of receipt of the scholarship and plan on pursuing a scientific career in a chemical related field

##### Member must

1. be on the current roster of St. Joseph Valley Section of the American Chemical Society
2. submit evidence in the form of a college application or other evidence that the child is a dependent or grandchild of the member
3. submit evidence of other scholarships or grants currently used to support the applicant's college tuition, fees, and books

#### SEED or Chemistry Olympiad Participant Requirements

##### Recipient must

1. be a senior in High School within the geographical boundaries of the Saint Joseph Valley Local Section of the ACS and participated on their High School Chemistry Olympiad Team or on an ACS SEED sponsored project
2. maintain a minimum average GPA of 3.00 for a minimum of the last three semesters in science and math courses
3. be a high school senior of good standing and planning on attending an accredited college or university in the United States at the time of receipt of the scholarship and plan on pursuing a scientific career in a chemical related field
4. Submit a maximum 250 word Essay on How Chemistry Impacts Your Life or the Reason You Wish to Pursue a Degree in the Chemical Field

May be Renewable for up to 4 Years if GPA requirement is documented- Applicant must also submit at the Junior and Senior Year

1. submit evidence of being a declared chemistry or chemical engineering major at an accredited college or university that offers a B.S. or B.A. in chemistry or chemical engineering
2. demonstrate that they have declared a major in chemistry or chemical engineering
3. submit a one page description of their reasons for declaring a chemistry or chemical engineering major and any proposed post graduation plans in chemistry or chemical engineering

#### General Scholarship Requirements Applicable to All Applicants

Saint Joseph Valley-American Chemical Society Reserves the Right to Change or Amend this Program at any Time, at Their Discretion

##### Current Selection process:

The applications will be reviewed by a subcommittee of three members of the executive committee. The recipients will be chosen by a vote of the majority of the subcommittee members. Preference will be given to ACS member's dependents or grandchildren over SEED and Chemistry Olympiad participants. 1 -2 new scholarships may be given out per year and up to 4 renewable scholarships may be given with a total of not more than 5 new or renewable \$500 scholarships per year. Preference will also be given to previous applicants of the scholarship who are currently juniors or seniors who have demonstrated a continued interest in pursuing a degree in Chemistry or Chemical Engineering as long as they continue to meet the scholarship requirements. If there is a tie for a new scholarships, then the entire executive committee will vote on the three top choices of the subcommittee. Since a preference is given to Junior and Seniors, recipients who have received a scholarship but were not renewed in the Sophomore year are still encouraged to reapply the following years as long as they still meet the requirements.

##### Application process:

This year's applications will be accepted until June 29<sup>th</sup>, 2013. The selection of the recipient or recipients will be announced by August 31<sup>st</sup> 2013. The scholarship money will be sent to the school of choice for processing and it is the responsibility of the recipient to obtain and submit the next years form for renewal. Applicants receiving a scholarship can reapply for renewal all four years whether they were granted a renewal the previous year or not. Application forms or information is available by contacting Andy Edelbrock at 574-256-3443 or Andy.Edelbrock@bayer.com or any current member of the St Joseph Valley American Chemical Society or visit us on our website at <http://stjoevalley.sites.acs.org/>