The Accelerator
INDIANA SECTION OF THE AMERICAN CHEMICAL SOCIETY
APRIL, 2017

2017 Chair's Corner *by Tom Xiao*

Greetings, Indiana Local Section ACS members,

It has truly been a great honor and privilege to take the torch from Linda, our immediate past chair, to lead this extremely successful and vibrant organization this year with our local section executive committee, event chairs and many past, current and future leaders and volunteers. A huge thank you goes to Linda for 2016, an amazing year for our local section under her extraordinary leadership! A big applause shall go to Chris, our very own local section member and leader, for winning the election as the National District II Director. This was truly a highlight for our local section and has already helped enhance our visibility at the national level for 2017 and beyond.

We'll continue to put chemistry in the spotlight by promoting chemistry through our community outreach events. Our amazing YCC team has already pulled off incredibly successful kick-off event this year: Chemistry of Sports, on Feb. 21st at University of Indianapolis (UI). Our ACS and Lilly booth at "Passport to Hi-Tech" at Conner Prairie on March 18 was well-received again with more than 1000 visitors. The 2017 Indiana Section ACS USNCO Exam, held at Brebeuf on March 4, was also another big success with a total of 235 students taking the exam. Our newly developed partnership with NEF on "You Be the Chemist Challenge" has helped many schools participating in this program by motivating young students in the study of chemistry. With our flagship Project SEED and STEM welcoming another group of young chemists this year, plus several "Kids and Chemistry" activities at the Children's Museum of Indianapolis emerging in the coming weeks, our year of 2017 is off to a fantastic start!

To make 2017 another eventful and memorable year, additional events planned for 2017 include: "Think Like a Molecule" poster session at IUPUI, SEFI, Science Day at Ball State, March for Science/Earth Day, Women in STEM series, Awards Night at UI, our popular baseball night at Victory Field, a second 2023 National ACS Meeting Brainstorming Session, Chemistry of Music, Science on Tap series, Celebrate Science Indiana, National Chemistry Week's Science Day at the Children's Museum, Impress for Success for high school students, and our end-of-year volunteer recognition event. I strongly urge you to get involved in any of the activities that resonate with you. Dates are shown in the calendar at the end of this newsletter. CERM June 6 -10 is only a few-hours' drive from Indy. Please attend if you can! Our four ACS councilors will report on National meetings held April 2-6, 2017 in San Francisco and August 20-24, 2017 in Washington D.C.

I'd like to ask you all to join me in thanking all of our corporate sponsors including Monument Chemical, Eli Lilly and Company, and Dow Agro Science. Special kudos to all of the leaders before me for making Indiana Local Section such a flourishing place for our members and community. We have phenomenal members who are so very giving of their time and talents. I am grateful for this opportunity to serve the section in 2017. Together, we can accomplish much and make a meaningful impact on our community as a big, extended ACS family.

ARTICLES: MARCH 2017 EDITION	PAGE

Thank you to our 2017 Corporate Sponsors:

Dow AgroSciences Lilly Monument Chemical

The Executive Committee meets the second Tuesday of each month at 6:00 pm in the Kurek building at the Heritage facility located at 7901 West Morris Street. All Local Section members are encouraged to come and join us to learn about the programs and events our section sponsors. Meetings usually last for 2 hours. Dinner is provided before the meeting. Please let us know if you plan to attend so we have a headcount. You can contact our 2017 Chair, Tom Xiao, at xiao_tom@lilly.com. This is a great networking opportunity for those of you who are looking to get more involved!

2017 Executive Committee	
Chair	Tom Xiao
Chair-Elect	Lisa Bucholtz
Secretary	Tamiko Porter
Councilors	Robert Pribush, Brian Mathes, Robert Sammelson, Beth Lorsbach
Alternate Councilors	Amy DeBaillie, Sibel Selcuk, Tony Trullinger, Erin Dotlich
Past Chair	Linda Osborn
Treasurer	Paul Morgan
Member-at-Large	Maria Alvin-Gaston, Mark Pobanz, Anne Wilson
2023 NMLT Strategic Planning	Frederique Deiss
Art and Chemistry	Gregory Dale Smith
Awards	Katherine Stickney
Celebrate Science	Julie Holland
Chemists Celebrate Earth Day	Paul Ridenour
Education and Olympiad	Bob Pribush
Election	Mathew Gardlik
Grants	Ann Cutler
K12 Outreach	Erica Posthuma Adams
Kids in Chemistry	Brian Mathes
Membership Affairs Committee	Rebekah Dickenson, Jordan Knotts
National Chemistry Week	Belgin Canturk, Gregory Smith
Newsletter Design	Julie Holland, Andrea Moberly
Newsletter Editor	Julie Holland
Project Seed	Elmer Sanders
Project Seed Co-Chair	Josh Taylor
Public Relations	Kerrm Yau
Science Day	Ryan Jeske
Social Media	Erica Posthuma Adams
Trustees	David Mitchell, Dawn Brooks, Ann Hunt
Webmaster	Matt Gardlik
Women Chemists	Amy DeBaillie
Youth Committee Chair	Tejas Shah

Local Section Stance on the March for Science

by Julie Holland

The March for Science was discussed at the last Local Section Executive Committee meeting. Initially, the consensus of the group was **no** since ACS is a non-partisan, nonprofit organization. Marching as a political statement is against the charter. However, given that the National ACS is in support of the march, the Local Section has revised its vote to **yes**.

According to the website, the support of the ACS is contingent upon the following conditions:

- That the March adhere strictly to its established and publicly posted mission and principles, which closely mirror ACS' own vision, mission and goals
- That the March continues to be a nonpartisan celebration of science focused on its many positive contributions toward improving the human condition and addressing the world's most pressing challenges

https://www.acs.org/content/acs/en/pressroom/newsreleases/2017/march/march-for-science-statement.html

The mission of the March for Science is as follows:

'The March for Science champions robustly funded and publicly communicated science as a pillar of human freedom and prosperity. We unite as a diverse, nonpartisan group to call for science that upholds the common good and for political leaders and policy makers to enact evidence based policies in the public interest."

The Indianapolis March for Science begins at 10 am on April 22nd at the Indiana Statehouse. The march will wind through downtown Indy ending at Military Park where the Indianapolis Earth Day festival is taking place. For more information on the march, please go the website: https://www.marchforscience.com/

The Indiana Local Section Earth Day Celebration

By Paul Ridenour

Please join us on Saturday April 22, 2017 at Military Park in Indianapolis. The festival runs from 11 a.m. to 4 p.m. with activities for adults and children to enjoy. There will be over 120 exhibitors along with a children's tent, live music, food and drinks, and beer garden for those 21 and over.

The theme of the Indianapolis Earth Day festival is "Celebrating Our Pollinators" which ties into the national ACS theme "Chemistry Helps Feeds the World."

If you are walking in the March for Science Indianapolis, the march finishes at the Earth Day Indiana Festival shortly after it opens, so come and enjoy the fun. More information is available at www.earthdayindiana.org.

2017 Leadership Institute and the Midwest ACS Discussion Group

By Lisa Buchholz

The ACS Leadership Institute was held on January 27-29, 2017 in Dallas, TX. Lisa Buchholz and Brian Mathes were in attendance representing the Indiana Local Section. The weekend event focuses on networking, volunteer management and leadership. The event also provided a forum for local section leaders from Indiana, Wabash Valley, Indiana/Kentucky, Cincinnati, Dayton, and Akron to discuss section activities and mechanisms to create greater connectivity across local sections in Indiana and Ohio. One outcome was to create a **LinkedIn** discussion group entitled **Midwest ACS Discussion Group**. The intent of the discussion group is to provide a forum for local section members in the area to network and share event information. Please look for the discussion group to be available soon!

Be part of the FIRST Women in STEM Classroom Walk IN Event on Friday, April 14, 2017

by Larry Sernyk

If you are a woman STEM professional in Indiana, we're inviting you to help us break the stereotypes of what a scientist looks like.

Right now IPS K-6 grade teachers are registering to have women working in STEM fields here in Indiana visit their classrooms on Friday, April 14. This first-ever Women in STEM Classroom Walk IN event will have volunteers visit these classrooms in 60 minute increments from 8 a.m. – 4 p.m.

As women STEM professionals we ask you to sign up for one (or more) shifts below to visit an IPS classroom. We will provide you with a toolkit prior to the event so you can feel as confident in the classroom as you are in your professional setting.

Sign up here now: http://www.signupgenius.com/go/30e084aaba62fa2f94-volunteerwomen

This event is supported by the Women's March and March for Science Indianapolis organizations as we seek to empower the next generation of girls in science!

Thank you for being science advocates. Please contact me through the sign up link above if you have any questions.

Jenna Marston,
Event Organizer

Beyond Chemistry and STEM

by Linda Osborn and Larry Sernyk

In our last newsletter, we let you know about our Local Section teaming up with You Be The Chemist Challenge® (YBTC). Those that volunteered and were able to participate have really enjoyed the experience! Personally, after participating in the Indy North Challenge, I was blown away by the value of the program for the 39 5th – 8th graders who participated. However, I didn't realize the full outcome until Larry forwarded comments from a teacher that told the full story – showing the impact of the Challenge beyond Chemistry and STEM.

"I wanted to let you know how much I appreciate what you all do and just share what the mom of my student shared with me this morning.

As we know, middle school is a difficult time for some students. In particular, the student that came to the YBTC challenge this year has struggled with a sense of belonging and purpose. The mom of the student shared with me at the challenge this morning, through tear filled eyes, how this opportunity not only sparked a new found love of science in her child but instilled a purpose and a place for a child that otherwise has seen themselves as a misfit. This filled my heart with a greater appreciation for the YBTC challenge and all that you and this organization has done to reach out to this age of students.

I know the initial goal of YBTC may have been to encourage students to explore chemistry and gain an appreciation for STEM. However, I wanted to share how YBTC is so much more than that and how it is making a difference in the lives of the kids that participate.

I sincerely thank you from the bottom of my heart for giving us all this experience!

Michele Shultz
Lebanon Middle School"

Volunteer Christine Skaggs wrote: *"…Westlane Middle school liked the plasma ball the best and Chapel Hill liked the fake snow. There were several kids at Chapel Hill and so next year, I want to double or triple the number of experiments we do and up the reactions on them to really get them excited. Both instructors have our contact information and if things go well, we will continue helping. …I had a lot of help from my graduate school friends at IUPUI with that school. They were great."*

The State Challenge competition will be held April 29, 2017 at Pike High School. The National Challenge will be held on June 19, 2017 in Washington, DC.

Although not all teachers were able to get together with the volunteers, we thank Christine Skaggs, Maria Alvim-Gaston, Kurt Graper, Patricia Maldonado, Tom Xiao, Lisa Smith, Joe Mick, Randy Pryor and Jessie Howard for stepping up for this outreach. If you would like to volunteer at the State Challenge or next year, please contact Larry at jlsernyk@att.net.

Right: Volunteers Maria Alvim-Gaston and Kurt Graper register participants at the Indianapolis North Challenge.

For more information on the program:

https://www.chemed.org/programs/challenge/

Left: Potential future chemists at the Westlane Middle School are intrigued by Volunteer Christine Skaggs and YBTC Program Director Larry Sernyk performing experiments to pique the students' interest in Chemistry!

The Indiana Section of the ACS presents…

Indians Baseball Night Part XVI

Indians play Rochester RedWings
July 24nd 7 PM Game Time!!!! Victory Field $10

Chemistry/Baseball Trivia Giveaways!!!

Please RSVP to Brian Mathes at mathes@lilly.com
Or 277-7720 by July 17 th

SPECIAL PRICING FOR YCC and STUDENT MEMBERS $5 per ticket.

Two Sciences Coaches Share Experiences

by Tamiko Porter and Linda Osborn

Science Coaches is now a joint ACS and American Association of Chemistry Teachers (AACT) educational outreach initiative dedicated to enhancing science skills in students across the US. The program pairs chemists (coaches) with AACT teacher members in elementary, middle, and high schools. One really cool perk is that teachers in One-on-One partnerships receive a $500 donation from ACS to purchase lab equipment and classroom materials!

This past year, Tamiko Porter and Linda Osborn were accepted into the program at Pike High School and Brebeuf Preparatory HS, respectively.

Tamiko Porter met Marcella McClendon through an IUPUI colleague in 2015. Marcella and Tamiko have worked together in a number of ways including performing demos with their students at Celebrate Science Indiana and National Chemistry Week at the Children's Museum. Through the Science Coach program, Tamiko spent a day at Pike HS doing gas law demos with all of the Chemistry classes. Dry ice and liquid nitrogen were used to illustrate many of the relationships between the properties of gases. Afterward, Marcella reported that the Pike HS Chemistry team is going to make the demo day a regular event every year and will purchase the equipment and supplies to recreate the activities. On Friday, April 14th, Tamiko and IUPUI will take their turn as hosts for Marcella and her students. The students will take a tour of the campus and attend a science lecture.

In 2015, the Indiana Section sponsored an AACT event and had many great prizes that we raffled to Teachers of Chemistry. One of those prizes was a Science Coach experience complete with $500 for lab equipment and classroom materials! When Robin Esteb won this prize, her comment was *"Just don't let it be my husband*"! (Her husband is an ACS member.) Linda Osborn volunteered to be Robin's Science coach. Networking with Kimberly Steward, a tour was arranged for Robin's students at Dow AgroSciences! Robin wrote:

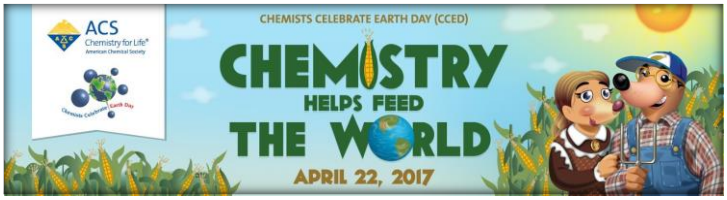
> *"The field trip was great!! My students asked a lot of great questions and the 3 tour guides were wonderful!! I would definitely do this tour again. All of my AP students were happy to get their "geek on" and see their teacher geek out as well. We toured a few labs, a green house, learned how the ideas flow through from conception to development, testing, and eventually to farm."*

On April 17th, we've arranged for a trio of chemists to entertain 180 chemistry students. Lisa Smith and Joe Mick will join Linda teaching stoichiometry, gas laws, bonding, and solutions using demos and experiments along with a power point explanation. Originating in 1900 by Tesla, a Plasma Ball will be

explained with current examples of how plasma is being used to power rockets to the moon and to convert waste to usable products. The grand finale will feature a triple demo of the decomposition reaction of hydrogen peroxide (with dish soap & food coloring added) using sodium iodide as the catalyst to yield the oozing of Elephant's toothpaste! Instead of just seeing it, however, they will learn the chemistry involved and what happens with different stoichiometry.

For more information on Science Coaching, please follow the link: https://www.acs.org/content/acs/en/education/outreach/science-coaches.html

If you are interested in becoming a Science Coach, please contact Linda Osborn at Linda.Osborn@hrglab.com.



Ball State University Student Affiliates of the American Chemical Society
Brings You:

Science Day!

Science Demonstrations from a Variety of Topics!
Exciting Hands-On Activities!
Free Planetarium Shows!

When: April 8

Where: Ball Gym located on Ball State's Campus

Time: 10 am - 3 pm

Parking and Admission is free and open to the public

For Questions Email SAACS@bsu.edu

BALL STATE UNIVERSITY

ACS Chemistry for Life

Passport to Hi-Tech - Encouraging Girls to Follow STEM Careers

Maria Alvim Gaston

Passport to Hi-Tech is a joint effort between Conner Prairie and Women & Hi Tech with financial support from Roche. The event took place at Conner Prairie's Welcome Center in Indianapolis, IN, on March 18th. The day-long event is the place for girls and boys to learn about careers in science, engineering, biology, chemistry, computers, and other STEM disciplines. It is a great opportunity for Kids age 7 -12 to journey around our increasingly technological world.

The exhibits included many branches of science including biology, chemistry, computer science, engineering, genetics and manufacturing. In addition, the booths were operated mostly by women experts in STEM who were ready to answer our curious-minded kids' questions.

The event offered the opportunity for kids to meet experts and professionals working with Indiana-based hi-tech companies. Help was offered to plan for their carrier future as they talk with representatives from Indiana's colleges and universities and discover how they can continue to develop skills with the help of area companies, organizations and workshops.

Each participant receives a passport and as they visit the different booths operated by women experts in STEM, they ask questions, assist with hands-on experiments, and learn about what it takes to work in these fields. They get a stamp or sticker in their passport for each booth they visit! After the passport is filled, they receive a treat bag and enter for a chance to win a raffle.

This year's final attendance was 1,011 guests and more than 400 exhibitors, program volunteers and their guests from various groups. To highlight a few fun moments at Saturday events, Eli Lilly educated and inspired the audience with their show "Chemistry is a Blast!" which is an initiative started by one of their scientists more than 20 years ago. The show was a mixture of science class and "SENSATION". At the end the participants were asked who wanted to become a scientist, and many hands were raised!

Kids got the chance to meet and hear Jocelyn Dunn, the scientist on the team that simulated an eight-month visit to Mars. Dunn lived in a dome habitat on Mauna Loa volcano in Hawaii for a mission called HI-SEAS (Hawaii Space Exploration Analog and Simulation), in isolation and confinement along with five others.

The American Chemical Society (ACS) had a station in collaboration with Eli Lilly and Company. Girls made slime using household ingredients, learned about how chemistry is part of our daily life, and were very surprised to learn that a baby diaper can absorb more than 7 cups of water. They had fun having their picture taken dressed up as scientists. There was not a dull moment at the ACS & Eli Lilly table, many questions were asked including questions about the chemistry of medicines and makeup and on how to become a woman scientist. As chair of this event, I was very grateful for the support of my booth-mates, Christine Skaggs, Ashur Rael, Ana Maria Gaston, Sarah White, and Elena Hoppmann. The ACS & Eli Lilly table was full of promising chemists at all times throughout the day.

2017 Indiana Section ACS USNCO Exam *by Bob Pribush*

Below are the overall results of the 2017 Indiana Section ACS USNCO Exam held at Brebeuf Jesuit Preparatory School on Saturday, March 4, 2017. There was a total of 235 students who took the exam (of 342 registered): 162 (of 226 registered) first year exam (average score 23/60) and 73 (of 116 registered) advanced exam (average score 33/60).

Students who scored high on the exam were contacted and invited to participate in the second phase of the USNCO competition, which is a written exam plus a practical laboratory exam, to be held at Butler University on Saturday, April 22, 2017. Please encourage your students to accept the offer if called. Our goal is to get Hoosier students to qualify for the three-week USNCO camp at the United States Air Force Academy from which the USNCO team will be chosen. We will work with your students to enhance their chances for success.

Results of this year's exam are shown on following pages. Sincerely,

Robert A. Pribush
Co-chair, Indiana Section ACS USNCO
3I7-989-6799
rpribush@butler.edu

Jianping Huang
Co-chair, Indiana Section ACS USNCO
317-433-1675
Huang_jianping@lilly.com

First Year Exam

1st place – $100 and plaque
Anthony Ou Carmel

2nd place – $100 and plaque
Jenny Zhao Park Tudor

3rd place – $100 and plaque
Jessica Zhang Carmel

Honorable mention – plaque

Srineeth Challa	Carmel	Jenny Cai	Park Tudor
Suhas Chundi	Carmel	Aaron Chai	Park Tudor
Akio Fujita	Carmel	Varun Chheda	Park Tudor
Satvik Kumar	Carmel	Matt Fu	Park Tudor
Pritham Sambathur	Carmel	Ethan Piper	Park Tudor
Yannik Singh	Carmel	Vahin Vuppalanchi	Park Tudor
Jeffery Tan	Carmel	Olivia Xu	Park Tudor
Harry Wang	Carmel	Visnu Iyer	Sycamore School
Jerry Wang	Carmel	Konwoo Kim	West Lafayette
Brian Zhang	Carmel		

Team Award – AACT membership and plaque

1st place Carmel
2nd place Park Tudor
3rd place Zionsville
4th place Chatard
5th place Plainfield

Advanced Exam

1st place (tie) – $100 and plaque
Alan Jiang Lawrence Central

2nd place (tie) – $100 and plaque
Parker Jou Carmel

2nd place (tie) – $100 and plaque
Allen Zhao Park Tudor

1st place (tie) – $100 and plaque
Andrew Wu Park Tudor

2nd place (tie) – $100 and plaque
Kevin Liu Carmel

Honorable mention – plaque
Anderson David Carmel
Pranav Sriram Carmel

Team Award – AACT membership and plaque

1st place Carmel
2nd place Zionsville
3rd place Indiana Academy
4th place Park Tudor
5th place Hamilton Southeastern

Perpetual Plaque Award

Brebeuf	Jacquelyn Knobelsdorf	Indiana Academy	Michael Hu
Brebeuf	Tanner Waltz	Park Tudor	Andrew Wu
Carmel	Parker Jou	Plainfield	Daniel Steely
Carmel	Kevin Liu	Providence Christo Rey	Cesar Mares
Chatard	Thomas Hirschfeld	Westfield	Sharon Hoffman
Fishers	Ritika Bhadouriya	Zionsville	Jeremy Chiang
Hamilton Southeastern	Ishaan Modi		

Students Who Qualified for the National USNCO Exam

Jacquelyn Knobelsdorf	Brebeuf
Parker Jou	Carmel
Kevin Liu	Carmel
*Brendan Yap	Carmel
*Allen Zhang	Carmel
Ishaan Modi	Hamilton Southeastern
Michael Hu	Indiana Academy
Andrew Quest	Indiana Academy
Alan Jiang	Lawrence Central
Andrew Wu	Park Tudor
Allan Zhao	Park Tudor
Sharon Hoffman	Westfield
Charlie Chiang	Zionsville
Jeremy Chiang	Zionsville

*Students automatically qualifying based on their scoring in the top 20 nationally in 2016.

Awards Banquet to Be Held May 9th

by Kathy Stickney

The annual Indiana Section American Chemical Society Awards Banquet will be held on Tuesday, May 9, at the University of Indianapolis Schwitzer Student Center, University of Indianapolis Hall A. At this event, we will recognize our 50- and 60-year ACS members along with student and school awardees from the March 2017 Indiana Local Section USNCO Exam.

The schedule for the evening is:
5:30 PM – doors open
6:00 PM – dinner
6:45 PM – keynote speaker
7:00 PM – awards presentation

The address for Schwitzer Student Center is 1400 Campus Drive, Indianapolis, IN 46227. A map of the University of Indianapolis campus and driving directions can be found at:
http://www.uindy.edu/map-and-directions.

The cost of the event will be $14 per person, payable at the door (free for students and high school teachers).

RSVP to Kathy Stickney by Thursday, May 4, at kstickney@uindy.edu or 317-788-3552.

ACS Chemistry for Life®

science@iupui

2017 Poster Session

Abstracts Due
April 6, 2017
11:59PM

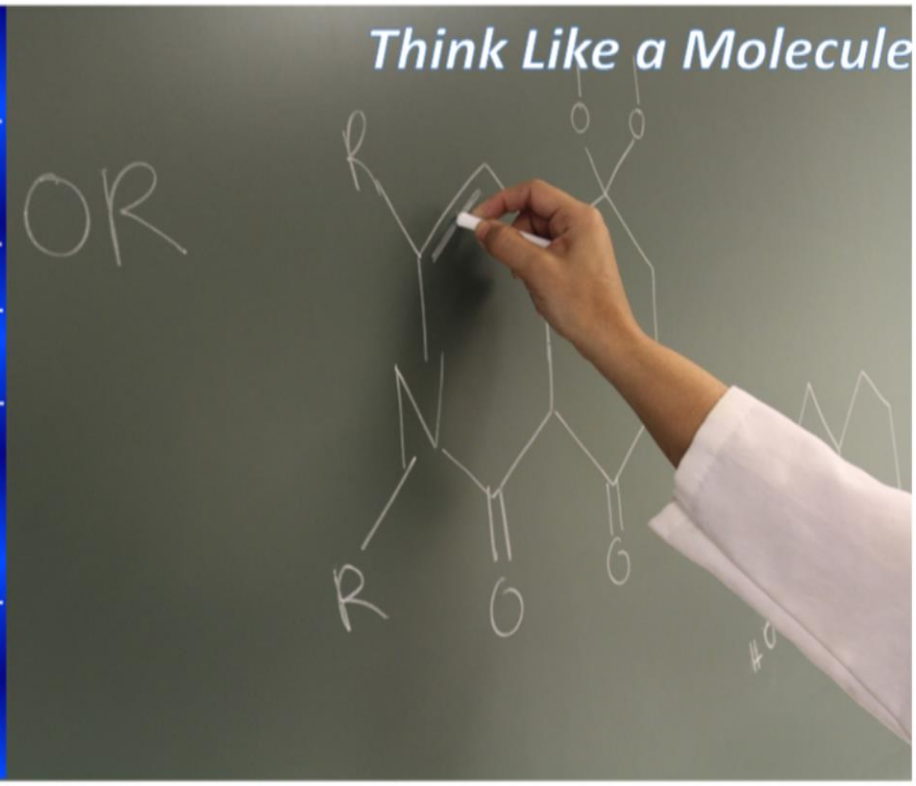
Theme:
"Think like a Molecule"

Many Prizes

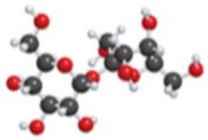
4:30PM – 5:00PM
Check-in & Set-up

5PM – 5:40PM
Keynote Speaker
William L. Scott PhD
IUPUI Chemistry Research Professor

5:45PM – 9PM
Poster Session, Reception, and Awards



Present your research at the **THINK LIKE A MOLECULE**



Poster Session

April 20, 2017

IUPUI University Library

755 W Michigan St., Indianapolis, IN 46202

Sponsored by the **American Chemical Society** *Indiana Section and* **IUPUI School of Science**

Link for presenters to submit Abstracts: https://easychair.org/conferences/?conf=tlm2017
Guests/Visitors (non-presenters) Only: https://tlm2017.eventbrite.com
Questions? Email: tnp@iupui.edu or call 317-274-6854

The Indy 2023 ACS NM Strategic Planning Committee

by Frédérique Deiss

Following the successful brainstorming session of September 22, 2016, you are invited to join the second session where we will continue to brainstorm and fine tune ideas in preparation of the 2023 National ACS Meeting in Indianapolis. The meeting will be held Monday April 24th 2017 at the University of Indianapolis, Schwitzer Student Center, Hall B (parking available). Please plan to arrive at 5:30pm. A light dinner will be served and a facilitated brainstorming/discussion session will occur between 6:00-9:00pm.

Contact Frédérique Deiss (fdeiss@iupui.edu) if you have any questions.

Seeking Nominations for Gladysmae Good - Chemistry Teacher of the Year Award

by Linda V. Osborn

This year, 2017, is the third year that we will be administering the Gladysmae Good – Chemistry Teacher of the Year award to a very special teacher of chemistry in our local schools. Congratulations to Erica Posthuma-Adams from University HS, our first recipient and Stacie Stoffregen (Greencastle Middle School) who won this award in 2016. This award recognizes, encourages, and stimulates outstanding teachers of high school chemistry in the Indiana Local Section and will be presented at our Awards Banquet at UIndy on May 9th.

The nominee must be actively engaged in the teaching of chemistry or a chemical science in a k-12 classroom in the Indiana Local Section. The nomination should clearly demonstrate as many of the following attributes as possible:

- The quality of the nominee's teaching; unusually effective methods of presentation should be emphasized
- The nominee's ability to challenge and inspire students
- Extracurricular work in chemistry or a chemical science by the nominee, including science fairs, science clubs, and activities that stimulate the interest of young people in chemistry and related sciences
- A willingness to keep up-to-date in the field, as evidenced by active engagement in professional organizations such as AACT, ACS, HASTI, NSTA, AMTA, or other such organizations. Enrollment in refresher courses and summer institutes, regular attendance at scientific meetings, participation in local, state, and national conferences, publishing in scientific or educational journals, and other means of self-improvement
- Commitment to the Local Section K-12 community through building relationships with other educators and volunteering at Local Section sponsored events
- Evidence of leadership and/or active involvement within the profession

Please send your nominations to linda.osborn@hrglab.com by the end of business of April 28th, 2017.

Chemistry Rocks! (Illustrated Poem - National Chemistry Week 2017)

By Linda V. Osborn

National Chemistry Week 2017 will cover topics related to the Chemistry Rocks! The Indiana Section of the ACS is once again sponsoring an illustrated poem contest for students in Kindergarten - 12th grade. If you know of any students that would like to participate, the details follow.

The contest entry deadline is September 20, 2017. Our prizes include 1st Place = $100, 2nd Place = $50, and 3rd Place = $25. All contestants get to display their Illustrated Poems at Celebrate Science Indiana on October 7th and November 4th at the Children's Museum of Indianapolis with the winners announced at these events.

Have your child or student write and illustrate a poem using the NCW theme, **"Chemistry Rocks!"** Your poem must be no longer than 40 words, and in the following styles to be considered (Haiku, Limerick, Ode, ABC poem, Free Verse, End Rhyme, Blank Verse. Entries are judged based on relevance to and incorporation of the theme, word choice and imagery, colorful artwork, adherence to poem style, originality and creativity, and overall presentation. Members of our executive committee that do not have a relative in the contest serve as judges.

Contest Rules:

- Poems must conform to a particular style. No poem may be longer than 40 words.
- The topic of the poem and the illustration must be related to the CCED 2017 theme, "Chemistry Rocks!"

• All entries must be original works without aid from others.
• Each poem must be submitted and illustrated on an unlined sheet of paper (of any type) not larger than 11" x 14". The illustration must be created by hand using crayons, watercolors, other types of paint colored pencils or markers. The text of the poem should be easy to read and may be printed with a computer, before the hand-drawn illustration is added, or the poem may be written on lined paper which is cut out and pasted onto the unlined paper with the illustration.
• Only one entry per student will be accepted.
• All entries must include an entry form.
• All illustrated poems and/or digital representations of the poems become the property of the American Chemical Society.
• Acceptance of prizes constitutes consent to use winners' names, likenesses and entries for editorial, advertising and publicity purposes.

Winners of the Indiana illustrated poem contest will advance to the ACS National illustrated poem contest! Click here to see the National winners from 2016!
https://www.acs.org/content/acs/en/education/outreach/ncw/ncw-illustrated-poem-contest/2016-winners.html?_ga=1.206325459.1322509793.1459802862

Please contact: Linda Osborn linda.osborn@hrglab.com (317-390-3188) with questions. Send official entries to Linda Osborn at 7901 W. Morris St. Indianapolis, IN 46231 so that it is received on or before September 20th.

Taste of Science Festival (Formerly Pint of Science)

By Julie Holland

Indianapolis is one of the 13 U.S. cities hosting the Taste of Science Festival. This festival welcomes area scientists to break free from the lab and gather in three participating breweries for lectures and audience participation with other scientists and non-scientists. This year's discussions include a wide range of topics including the impact of binge drinking, ocular disease, the use of video games in medicine, risky decision making in the young brain, weather events in response to climate change, and many others. The festival runs for 3 nights, April 24-26, with 1-2 topics per night per brewery.

The participating breweries include Black Acre (5632 E Washington St), Bier Brewery (5133 E 65th St), and Indiana City Brewery (24 Shelby St). For more information, go to: https://tasteofscience.org/

Year of Science at the Indiana State Museum

By Julie Holland

The Indiana State Museum is hosting a Year of Science from February 2017 to February 2018. Presented by Eli Lilly and sponsored by Rolls-Royce and Purdue Science, four different exhibits will run throughout the year. Exhibits are free with museum admission.

February 25-September 4	Ice Age Graveyards
March 11-May 29	Nature Unleashed: Inside Natural Disasters
July 22-January 15	Science at Play
October 21-February 11	The Power of Poison

Science at Play "draws from the Chemical Heritage Foundation's collection of more than 250 science kits and toys." It will be a very fun experience for children and adults alike!

For more information, go to: https://www.indianamuseum.org/exhibitions

YCC Program in a Box: Chemistry of Sports

By Tejas Shah

Chemistry is happening all around us on a daily basis with most of us not recognizing it. The moment you walk outside in your sneakers made of synthetic polymers, you are utilizing cutting edge chemistry to give you the most comfortable step and bounce. Although we might take this material for granted, it is essential to college and professional athletes to perform to the best of their ability.

On February 21st we hosted our second Program-in-Box webinar focused on Chemistry of Sports at University of Indianapolis, Health Pavilion. We had over 50 people attend this event to learn about how chemistry plays an integral role in athletic materials and in performance enhancing substance testing. The webinar included stories from four experts: Liying Jiang and David Cowan, Drug Control Centre (King's College London); Claire Ortiz, Ortiz Industry, Inc.; and Norman Wagner, STF Technologies LLC. These contributors shared how their research and development has affected the lives of amateur and professional athletes on a daily basis.

In addition, we had the privilege of hosting five student athletes from IUPUI and Olympic runner, Jesse Davis, from Indy Runners. They participated

in a question-answer session about how synthetic materials and drug testing affects them in their respective sports. A special thanks goes out to Kathy Stickney from University of Indianapolis, Linda Osborn from Heritage Research Group, and all other volunteers for making this event a great success! Look out for our next Young Chemist event coming this summer!

If you would like to volunteer to help with either an ACS or AACT booth at Celebrate Science Indiana, please contact Julie Holland: Julie.Holland@hrglab.com. Thank you!

An Update on Project Seed

by Julie Holland

Project Seed is an ACS sponsored program which affords local high school students an opportunity to learn and work in a scientific environment. At the last Executive Committee meeting, we were introduced to two young scientists who had the opportunity to intern at Eli Lilly. Malcolm Wiseman Jr. (Pike High School. Class of 2017) and Justice Vaughn (Cathedral High School, Class of 2018) both gave short speeches about their learning opportunities from the time they were able to spend in the lab.

Malcom was assigned to work under Dr. Dave Meyers and Justice worked under Dr. Pete Shi. Both worked on the evaluation of pharmaceutical powders using spectroscopy. Both students enjoyed the hand-on work that they were able to do in the lab as well as the valuable relationships they developed with their mentors. In addition, they enjoyed regular Tuesday meetings which focused on their future with workshops including topics such as resume writing and Friday luncheons where they met with a broad range of professionals from others in R&D to those conducting clinical trials and HR representatives.

Upon graduation, Malcolm will be attending college with a $5000 scholarship. Justice will be completing her senior year at United World College in Norway with all expenses paid. Their experience in Project Seed is helping them realize their dreams.

It was great to meet these two young individuals and hear how much the program has impacted their lives. Justice's mother was in attendance and after her daughter spoke to the group, her mother thanked ACS and Project Seed stating how much programs like this can help shape a child's future.

2017 SEFI: Abstracts from the Winners

by Kathy Stickney

The 29th Annual Hoosier Science and Engineering Fair was held on Saturday, April 1, 2017, at the IUPUI Campus Center. This event, organized by the Science Education Foundation of Indiana, Inc., showcased the winning science fair projects of regional science fairs from across the State of Indiana, for students in Grades 4 - 12. The Indiana Section ACS was on hand to judge senior-level projects for "The Best Use of Chemistry". Led by Katherine Stickney from the University of Indianapolis, the following awardees were named from the many exemplary projects. Congratulations to our winners and future scientists! The Indiana Section ACS would also like to extend a heartfelt thank you to the dedicated sponsors who mentored these bright young minds to the state-level competition.

1st Place: Intermolecular Forces Affecting Solutions, by Cheyenne Flood - Grade 12, from Terre Haute, IN (Sponsor: Anne Bauer)

Abstract: The purpose of the project is to test if intermolecular forces such as: hydrogen bonding, dipole-dipole, and London dispersion forces add mass to a drop size, that would then change the chemical reaction due equilibrium shifting therefore changing the rate that the reaction occurred due to changing the angle that the drop size is distributed. It is believed that intermolecular forces will have an effect on the mass of the droplet due to the angle increasing making the mass increase. If intermolecular forces did affect mass of the droplet, but not while the angle was increasing then it would be due to surface tension increasing as the angle decreased. For the experiment, the angle the solution was distributed was the independent variable and the changing mass was the dependent variable. The variables were set up using a pasture pipette to hold the substances, a 50 mL beaker to collect the substance, and a projector with a rubber band to hold he angle constant for a specific trial. In the data table, it shows that most of the substances exhibited a trend of increasing mass as the angle decreased. This is thought to be because of the intermolecular force adhesive forces working on the substance at an increased surface area. However, not all the substances followed the trend due to inconsistent measurements because of the volatile compound. The results found in the data table due not support the hypothesis because intermolecular forces increased the mass as the angle decreased. However, the null hypothesis did agree with the data due to mass increasing while the angle decreased.

2nd Place: **Which Food Best Helps People With Iron Deficiency Anemia? By Amin Rimawi, Grade 9, from Fishers, IN (Sponsor: Mia Sankari)**

Anemia, a condition where the red blood cell count or hemoglobin is lower or less than what is normal, has been taking lives ever since man existed. It was only discovered in 1854 that iron deficiency could be a cause. Global anemia prevalence has fallen since that time, but it still is relatively high, even to this day. It was measured at 43% in children, 38% in non-pregnant woman, and 29% in pregnant women, as of a 2011 study. There are many causes for anemia, although the most common cause is iron deficiency, usually responsible for 50% of anemic cases worldwide. Furthermore, iron deficiency is the most common nutritional deficiency worldwide. Without enough iron, your body will not be able to make enough red blood cells or will just produce shrunken red blood cells. The usual treatment is a change in diet, in which high iron foods are added. In my project, I want to find out which food has the highest amount of iron to help anemic people. To do this I will use the chemical reaction between iron and thiocyanate to do a quantitative measure of the iron in a sample. The overarching problem I am trying to solve is that currently, determining how much iron there is in a sample requires expensive machinery, which can cost thousands. Specifically, I want to target people who don't know

how much iron is in their food. For example, ethnic foods. If my method is successful, it will be much cheaper than using expensive machinery to measure iron amounts. Furthermore, the materials used are mostly common household items, save the chemicals. By making standards using iron iii chloride, my plan was to be able to mix the KSCN with the food sample (after being burned) and compare the color I got with the standards. However, my results were not what I expected. After burning the samples and mixing the KSCN solution, I got no color change in any of the 30 tests I completed. Furthermore, I changed my procedure multiple times to try and get some results, even trying a forced positive test, but to no avail. Overall, I think that the standard preparation of this project is still salvageable. The engineering goals of this project were to make a relatively cheap and affordable way to measure the amount of iron. The moral goal was to bring attention to the fact that iron deficiency anemia is very common (especially in Africa) and prove that money/research should be put into making an affordable way of measuring iron to help those who eat ethnic foods. I think my moral goal was a complete success, and with further refinement, my engineering goal could be as well.

3rd Place: **The Effect of Pollutant Bisphenol A on Cancer Cell Proliferation, by Zhiyue (Jenny) Wang, Grade 12, from West Lafayette, IN (Sponsor: Jane Schott)**

Bisphenol A (BPA), an environmental pollutant and ubiquitous endocrine disruptor, associates with reproductive dysfunctions, accelerated puberty, and infertility in animal models. Despite the considerable controversy over its tolerable intake, BPA has been increasingly associated with obesity, cancer, and childhood neurological disorders in humans. Because BPA has similar structure as estrogen and androgen, and both hormones can bind with their corresponding receptors to drive cell growth and survival, these observations raise the hypothesis that BPA might promote cancer cell proliferation through both the estrogen receptor (ER) and the androgen receptor (AR). To explore this hypothesis, I first tested the effect of BPA on cancer cell proliferation under physiological conditions. At low concentrations, which are close to the internal concentration of general human population, BPA was found to stimulate cell proliferation in cancer cells expressing either ER or AR. At the high concentrations, although BPA stimulated cell proliferation of ER-positive cancer cells, it inhibited the growth of AR-positive cancer cells. Little effects of BPA were found in cell proliferation of cancers without these hormone receptors, suggesting that BPA acts on cell proliferation through these two hormone receptors. To further understand the mechanism of BPA in cancer cell proliferation, I measured the gene expressions of cell proliferation-related biomarkers by reverse transcription polymerase chain reaction. The expressions of tested apoptosis inhibitors and cell-cycle driver were found to be up-regulated by BPA in ER-positive cancer cells while down-regulated by BPA in AR-positive cancer cells, indicating that BPA functions differently through ER and AR. To confirm the different roles of BPA in cell apoptosis of ER-positive cancer cells and AR-positive cancer cells, I treated cancer cells with BPA and counted the percentages of apoptotic cells by using a flow cytometer. BPA was found to inhibit cell apoptosis of ER-positive cancer cells, but stimulated cell apoptosis of AR-positive cancer cells. In conclusion, BPA acts differently in cancer cells expressing either ER or AR. In ER-positive cancer cells, both low-dose and high-dose BPA stimulated cancer cell proliferation by driving cell-cycle progression and protecting cells from apoptosis. In AR-positive cells, although high-dose BPA inhibited cell proliferation by promoting cell apoptosis, low-dose BPA stimulated cell proliferation through a different mechanism. More importantly, at the low dose similar to what was detected in human bodies, BPA stimulated cell proliferation of ER/AR-positive cancer cells. Although there is only a low concentration of BPA pollutant in the environment, this low dosage of BPA is already harmful to human health.

Calendar of Events	Date	Location
SEFI (Science and Engineering Fair)	Saturday, April 1	IUPUI Campus Center 420 University Blvd
252nd National ACS Meeting & Exp.	April 2-6	San Francisco, CA
Deadline for "Think Like a Molecule" abstracts	Thursday, April 6, 11:59 pm	
Science Day – Ball State	Saturday, April 8; 10 am-3 pm	Ball State University Ball Gym
Women in STEM Walk IN Event	Friday, April 14; 8 am-4 pm	Various
Think Like a Molecule Poster Session	Thursday, April 20; 5:00-9 pm	IUPUI Library 755 W. Michigan
Science on Tap "How to tell Water from Water"	Thursday, April 20	Metazoa brewing 140 S. College Ave
USNCO Second Phase Exam	Saturday, April 22	Butler University
March for Science	Saturday, April 22; 10 am-1 pm	Indianapolis State House
Earth Day Festival	Saturday, April 22; 11 am-4 pm	Military Park
Taste of Science Festival	April 24-26	Various Indianapolis Breweries
Brainstorming for 2023 National Meeting	Monday, April 24; 5:30 pm-9 pm	University of Indianapolis Schwitzer Student Center
Kids and Chemistry Events - ICM	Wednesday, April 26	Indianapolis Children's Museum
Gladysmae Good Award registration deadline	Friday, April 28	
Awards Night	Tuesday, May 9; 5:30 pm	University of Indianapolis Schwitzer Student Center
Science on Tap "Physics"	Thursday, May 18; 5:30 pm	Metazoa Brewing 140 S. College Ave
CERM (Central Regional Meeting)	June 6-10	Dearborn, MI
Science on Tap "Computer Science"	Thursday, May 15	Metazoa Brewing 140 S. College Ave
Project SEED Poster Session	Thursday, July 20	IUPUI
Baseball Night	Monday, July 24; 7 pm	Victory Field
252nd National ACS Meeting & Expo	Aug 20-24	Washington, DC
Deadline for Illustrated Poem Contest (NCW)	Wednesday, September 20	
Celebrate Science Indiana	Saturday, October 7	Indiana State Fairgrounds
Teacher Appreciation	Saturday, October 7	Indiana State Fairgrounds
Election	Monday, October 16	Electronic ballot
NCW – Chemistry Day	Saturday, November 4	Indianapolis Children's Museum
End of Year Celebration	Tuesday, December 12	

Events in purple are non-ACS sponsored

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VISION

Our vision is to engage our members and community to advance the broader chemistry enterprise for the benefit of Indiana and beyond.

MISSION

It is the Mission of the Indiana Local Section of the American Chemical Society to improve people's lives through the transforming power of chemistry.

Sunscreen Tips and Usage

With warm weather approaching, it's time to think about sunny days and outdoor activities. Both can be enjoyed while still protecting yourself. Clothing, hats, shade and sunglasses can help prevent sunburn and skin cancer. A good sunscreen will further reduce the changes of a burn; however, not all sunscreens are created equal. Here are some guidelines on selecting sunscreens for your maximum benefit:

- **Use a waterproof sunscreen with broad spectrum UVA and UVB protection and an SPF of ≥ 30. Apply 30 minutes prior to exposure**
  - **Avobenzone is a good chemical sunscreen, zinc oxide is a good mineral sunscreen**
  - **Avoid using sunscreen with Vitamin A (retinol or retinyl palmitate) which can cause burns and oxybenzone which is a synthetic estrogen**
- **Apply sunscreen under make-up, even if the make-up has SPF in it. You need 1 tsp of sunscreen to protect your face**
- **Regularly reapply every 90 minutes while you're in the sun and immediately after swimming or excessive sweating**
- **Don't forget to put sunscreen on your lips, eyelids, scalp, ears, feet and hands**
- **If you are concerned about the impact of sunscreen on aquatic life, opt for a mineral sunscreen**
- **Replace sunscreen that is expired. If no expiration is given, replace after 3 years**

Nearly twice as many men over the age of 50 are diagnosed with melanoma than women at the same age. This is most likely due to sunscreen use and reapplication. Please protect yourself!

For more information about skin cancer, please go to: **http://www.skincancer.org/skin-cancer-information/skin-cancer-facts**