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2019 KNHCL KACS Newsletter Special Edition.pdf

# Newsletter for the Kalamazoo Local Section of the American Chemical Society

January 15<sup>th</sup>, 2019

Vol. 9 – Issue 1

## 2019 KACS Executive Officers

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# ACS Volunteer Local Meeting / Event Attendee Conduct Policy

One of the key strengths of the ACS has been the enduring and varied contributions made by its thousands of dedicated volunteers.

Another unassailable strength of the ACS is its local meetings and events program. ACS local meetings/events offer scientific professionals a legitimate platform to present, publish, discuss, and exhibit research discoveries and technologies in chemistry and its related disciplines in a local setting. Furthermore, ACS local meetings/events facilitate networking opportunities, career development and placement, and provide organizations with opportunities to exhibit products and services to targeted audiences.

The Society's Congressional Charter explicitly lists among its objectives "the improvement of the qualifications and usefulness of chemists through high standards of professional ethics, education and attainments..." The ACS expects its volunteers and local meeting/event attendees to display the highest qualities of personal and professional integrity in all aspects of their ACS-related activities. Indeed, every chemical professional has obligations to the public, to volunteer and staff colleagues, and to science.

Accordingly, and to foster a positive environment built upon a foundation of trust, respect, open communications, and ethical behavior, the Committee on Local Section Activities (LSAC) recommends this Conduct Policy. It applies to ACS Volunteers, i.e., it applies to individuals conducting the business and affairs of the ACS without compensation for that conduct. It also applies to attendees at ACS local meetings/events and is consistent with the policy issued by the ACS Board of Directors for volunteers at ACS National Meetings. Volunteers and meeting/event attendees should at all times abide by this Conduct Policy. Specifically:

1. Volunteers should understand and support ACS's vision and mission.
2. Volunteers and local meeting/event attendees should contribute to a collegial, inclusive, positive, and respectful environment for their fellow volunteers and attendees, as well as for other stakeholders, including meeting vendors and ACS staff, when present.
3. Volunteers and local meeting/event attendees must avoid taking any inappropriate actions based on race, gender, age, religion, ethnicity, nationality, sexual orientation, gender expression, gender identity, marital status, political affiliation, presence of

disabilities, or educational background. They should show consistent respect to colleagues, regardless of the level of their formal education and whether they are from industry, government or academia, or other scientific and engineering disciplines.

4. Volunteers and local meeting/event attendees should interact with others in a cooperative and respectful manner. Volunteers and local meeting/event attendees should refrain from using insulting, harassing, or otherwise offensive language in their ACS interactions. Disruptive, harassing, or inappropriate behavior toward other volunteers, stakeholders, or staff is unacceptable. Personal boundaries set by others must be observed. Harassment of any kind, including but not limited to unwelcome sexual advances, requests for sexual favors, and other verbal or physical harassment will not be tolerated.
5. Volunteers must obey all applicable laws and regulations of the relevant government authorities while acting on behalf of the ACS. Likewise, local meeting/event attendees must obey all applicable laws and regulations of the relevant government authorities while attending ACS meetings or events. Volunteers and local meeting/event attendees alike should also ensure that they comply with all applicable safety guidelines relating to public chemistry demonstrations.
6. Volunteers and local meeting/event attendees should only use ACS's trademarks, insignia, name, logos, and other intellectual property in compliance with ACS regulations and directives as may be issued from time to time.
7. Attendees who participate electronically, either fully or in part, in local meetings and events are expected to comply with this Conduct Policy.
8. Violations of this Conduct Policy should be reported promptly to the local section officials, who may in turn report violations to the ACS Secretary and General Counsel or to the Chair of the ACS Board of Directors. In cases of alleged persistent and/or serious violations of this Conduct Policy, the Board shall review the evidence and shall take such actions as may be appropriate, including but not limited to requiring volunteers to leave their volunteer position(s); precluding volunteers from serving in Society volunteer roles in the future; requiring local meeting attendees to leave the meeting; and, precluding meeting attendees from attending future ACS meetings. ACS, through its Board of Directors, reserves the right to pursue additional measures as it may determine are appropriate.

Adopted by the Board of Directors 22MAR2015



# Communication Tip: Effectively Communicating the Science and Benefit of Chemistry

## Welcome to the ACS Chemistry Café!

This ACS outreach and communication feature provides tips and tools to help us communicate effectively and engage with scientists and non-scientists alike about our work, research, studies or activities. The goal is to help us tell our story about science and, in the process, put a human face on chemistry.



### ***First Tip: Speak Simply About Your Science***

Everyday conversations are great opportunities to shape others' perceptions of who chemists are and what chemists do. And there's **no better spokesperson for chemistry than you!**

- ***What do you do?*** Answer the question "What do you do?" in a way that anyone can understand and appreciate
- ***Communicate with others about your research.*** Focus on the "why," not the "how" of what you do. Learn to tell the benefits of what you do rather than technical details
- ***Identify real conversation starters.*** Develop your own simple and quick explanation of your work that anyone can appreciate
- ***Share why you're proud to be a chemist.*** Tell others how chemistry improves people's lives and why you're proud to be a chemist
- ***Make everyday connections to chemistry.*** Help non-scientists understand how chemistry connects to their daily lives and current events

## KACS Project SEED Investing in the Future of Chemistry



In 2018, ACS celebrated the 50<sup>th</sup> anniversary of Project SEED, which provides summer research experiences in chemistry for high school students from low income households. This has been a powerful program. Over 11,000 students have participated and [ACS assessments](#) show that it has been very influential in shaping the academic and career pathways of those students. The Kalamazoo local section has sponsored 75 student projects in the last 25 years. Three of these participants were highlighted in a three part mini-series, culminating in the next article. We especially encourage you to check the [ACS Project SEED website](#) for some short, inspiring videos that explain how the program has changed student lives.

Under typical funding arrangements, each Project SEED fellowship costs our local section about \$1750-\$2000 per year to ensure that students receive compensation equal to State of Michigan minimum wage. ACS provides \$1250 or \$1500 per year to match our local contributions for year one and year two fellows, respectively. We are presently budgeted to sponsor two students for Project SEED in Summer 2019. Any additional projects will require additional funds from sponsoring institutions or local section funds.

ACS is gratefully receiving donations to the national program on their website but we are asking all members to consider a direct donation to our local program, which will ensure that funds have maximum value to students in our section. Any donation of any amount will be appreciated and 100% of donated funds will go directly toward student compensation. Project mentors and their institutions receive no payment for their participation in Project SEED.

If you are interested in making a donation to Kalamazoo ACS for Project SEED, please send an email to Doug Williams, our local section Project SEED coordinator, at [dwilliams@kalsec.com](mailto:dwilliams@kalsec.com). KACS will provide gift receipt acknowledgement and send updates to you on the progress of the program throughout the year of your donation to help you follow the impact of your contribution. Thank you for your consideration. Proposals for Summer 2019 Project SEED projects are due Jan 31. If you or your institution would like to submit a proposal to host a student project next summer, please see our call for projects.

# Project SEED 50<sup>th</sup> Anniversary: Meet DeShawna (Stevenson) Ladd

## Article Three of a Three-Article Mini Series “The Faces of Project Seed”

This article is the third in a series celebrating the 50<sup>th</sup> anniversary of the ACS program Project SEED. Project SEED was established in 1968 to provide lab experience opportunities for high school students who historically lack exposure to scientific careers. More information on Project SEED is available on the ACS website at:

<https://www.acs.org/content/acs/en/education/students/highschool/seed/about.html>.

To celebrate the 50<sup>th</sup> anniversary of the program, KACS is catching up with Kalamazoo Project SEED alumni, who are sharing with us memories of their experiences with the program and its effect on their careers.

Here we caught up with Kalamazoo Project SEED alumnus, Mrs. DeShawna (Stevenson) Ladd, whose career shines as an outstanding example of putting to work the Project SEED experience in an approach that goes beyond that of traditional chemistry applications.

After graduating from Kalamazoo Central High School, Mrs. Ladd (Ms. Stevenson at that time) earned a Bachelor of Arts degree in Psychology from Michigan State University.

After MSU, she has applied her psychology degree in a truly impressive fashion, working at various times as an Environmental Services Associate at Bronson Methodist Hospital, a Community Support Specialist at Summit Pointe, a Student Services Coordinator at Office Team, a Correspondence Research Specialist at Spherion, a Behavior Technician at Centria Healthcare, a Resident Coordinator at KPEP, a Substitute Teacher at EDUStaff, LLC, and a Behavioral Health PCA at Borgess Health.



In addition, in 2017, Mrs. Ladd started her own jewelry company, Celestial Intentions, of which she is owner and designer. Here are some of the questions and responses from our catch-up time with Mrs. Ladd.



KACS: Can you please tell us a little about how you originally learned about Project SEED in Kalamazoo, and what were your 2003 and 2004 Project SEED projects?

*Mrs. Ladd: "I learned about Project SEED in my 11th Grade Chemistry class.*

*Our teacher presented it to us towards the end of the year as an opportunity to gain more experience in the sciences.*

*In 2003, I worked in Dr. Reinhold's lab on the 'Effects of Carnosic Acid in Nickel Toxicity'. In 2004, I worked in Dr. Stapleton's lab on the 'Effects of Cadmium on Proteins in*

*Liver Cells in Culture'."*

KACS: What would you say was the best part of your Project SEED experience?

*Mrs. Ladd: "The best part of my Project SEED experience was experiencing college, before college! I learned so much about BioChemistry, Chemistry, and life while I participated in this program. It matured me for the better before I went off to college."*

KACS: And the worst part?

*Mrs. Ladd: "After the first week or two of the program in 2003, Dr. Reinhold was out of town. While he was gone I continued my research according to the instructions left for me. (Well at least I thought.) Upon his return, he asked to see the cell cultures I had been working on. As he looked at the petri dishes under the microscope, he noticed none of them had cells! I had wasted at least a gallon of media thinking they had cells in them! It was an embarrassing learning experience!"*

KACS: Would you say that participation in Project SEED influenced your decision to attend MSU after high school? And at MSU you majored in psychology, not a traditional chemistry program. Even so, would you say that participation in Project SEED helped you in any way with successfully obtaining your MSU degree?

*Mrs. Ladd: "Project SEED did not exactly influence my choice to attend Michigan State University. My original major was Engineering, however I wasn't the best with math, and realized that wasn't the studies for me! I switched to Psychology because I was always intrigued by how the mind works. Participating in Project SEED also got me get my first work-study job on campus. I was a Lab Aide in the Biological Sciences Department.*

*Having the work-study opportunity helped out a lot in paying to get my degree! Participating in Project SEED helped a lot with things I encountered while at MSU. I learned how to better conduct myself in the classroom and on campus from Project SEED. My time in Project SEED showed me how to push myself academically*



KACS: After MSU, your career involved working in the social services and education areas. Even though those are not necessarily chemistry-involving areas, did your experience with Project SEED help you in anyway?

*Mrs. Ladd: "Yes. I 'learned' people better during my time in Project SEED. I was a very shy teenager, in High School, on a college campus doing research with college students and professors. I was forced out of this shell I was in at the time. Project SEED gave me more confidence in engaging, and working with all kinds of people."*

KACS: And now as owner and designer of Celestial Intentions, working with materials like metals and stone, do you find your chemistry background helpful in any way?



*Mrs. Ladd: "Absolutely! I make jewelry using copper, and healing stones. Copper is a conductor of energy. It is said to help the body repair tissues, oxygenate the blood, increase vitality, ease pain, and stimulate the brain, among many others. When the copper is wrapped around the healing stones, it amplifies the energy of the stone. Increasing the healing capabilities and overall benefit of the wearer."*

KACS: Looking back in 2018, to your 2003-2004 Project SEED experiences, would you recommend participation in Project SEED to today's high school chemistry students?

*Mrs. Ladd: "I would definitely recommend participation in Project SEED to today's students!!! It is a wonderful, once in a lifetime opportunity that very few students get! It is an awesome learning experience. One preparing you not only for college, but the future!"*

KACS: And finally, any recommendations or words of advice to today's and future Project SEED participants for getting the most out of their Project SEED experience?

*Mrs. Ladd: "Don't be afraid to ask questions! The more you ask, the more you will benefit. Get to know your professors, and students you're in the lab with. You can make some lifelong connections. Take it seriously! It's an honor to be selected to participate in this program. Please don't take the experience for granted!"*

Our brief discussion with Mrs. Ladd provided yet another excellent validation of the value of KACS' and area high school students' participation in Project SEED.

Thanks DeShawna, for helping us with this 50<sup>th</sup> anniversary celebration project.

# Great Lakes Regional Meeting Articles



Dear Colleague,

The programming committee for the 2019 Great Lakes Regional Meeting of the American Chemical Society would like to personally invite you, your colleagues, and your students to contribute to the call for abstracts. The meeting will be held at the Sheraton Hotel in Lisle, IL on May 1-4, 2019.

Details, including names and contact information for program and session chairs, can be found on the meeting website at <https://www.2019acsgrlm.org/>. The final program summary will be published in C&EN in the Spring of 2019; the online program will be available on March 11th, 2019.

The theme of the meeting is ***Chemistry Connections: Careers, Education, and Sustainability***, and the program will feature technical sessions from areas including Inorganic Chemistry, Electrochemistry, Chemical Education, Materials Chemistry, Organic Chemistry, Medicinal Chemistry, Consumer Chemistry, Analytical Chemistry, and Bio-related Chemistries. Symposia sessions within these areas will highlight advances in the field of chemistry as they pertain to the 46 topic-specific sessions being offered. In addition to the technical symposia sessions, a general poster session and 9 different technical workshops will be offered. The workshops will cover topics related to Sustainability in Education, High School Chemistry Education, Safety, Careers, ACS Student Chapter Success, Social Media and Technology in Chemistry, Building Connections Between ACS, and Industry, and utilizing the IONiC VIPER in Teaching. The meeting will also feature 2016 Nobel Laureate Sir Fraser Stoddart as the plenary speaker, as well as several social events and an awards ceremony.

ACS's Meeting Abstracts Programming System (MAPS) is currently open for submissions. Please visit either the symposium website or MAPS at [maps.acs.org](https://maps.acs.org), to submit an abstract. Abstracts are due February 4th, 2019.

Sincerely,

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Do you have questions, comments, or would like to contribute to this newsletter?  
Send an email to Mike Weslosky, Communication Chair at [ACSkzoo@gmail.com](mailto:ACSkzoo@gmail.com)

Visit our website [www.kalamazooacs.org](http://www.kalamazooacs.org)



# Newsletter for the Kalamazoo Local Section of the American Chemical Society



February 24<sup>th</sup>, 2019

Volume 9 – Issue 2

## 2019 KACS Executive Officers

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# Words from our new KACS Chairman, Dr. Lucas Chadwick

As a long-time ACS fan-boy I am honored to be the 2019 chair of the Kalamazoo Section. We all have an information flood of epic proportions bombarding us almost every waking minute. While the “street value” of high-quality information is at an all-time low (due to an historic oversupply of low-quality information), ACS hasn’t flinched and continues to crank out some of the top journals and most reliable information in the world. It is particularly satisfying in these times to be affiliated with an organization synonymous with world-class technical content, and amazing career resources and assistance are also major attractions of ACS membership. It is truly remarkable how KACS’ volunteers have kept this organization running. To be welcomed onto this amazing team is humbling.

Chemical education has long been a core objective of KACS. In its heyday, the KACS Education Committee was an organization in and of itself, with dozens of members actively engaged in various initiatives and subcommittees. Fast forward to today, the KACS Education Committee needs to be revitalized! If we don’t have an educator heading up the education committee by the time chair-elect Hershel Jude takes over, I will have failed him. I love to hear any and all ideas on how to make KACS relevant and useful to chemical educators in our area and how best to sustain KACS’ roots in chemical education.

The KACS website has a fresh look, [check it out!](<https://kalamazooacs.org/>) Please share your ideas how to make [kalamazooacs.org](https://kalamazooacs.org/) a primary resource for all-things-chemistry in Kalamazoo.

As this icy winter continues, I look forward to spring, and wish everyone a very productive 2019. If you can only make it out for one KACS event this year, I’d recommend the Kalamazoo National Historical Chemical Landmark dedication, <https://kalamazooacs.org/event/2019/05/16/chemistry-landmark-dedication.html>> (it’s kind of a big deal) but I hope to see you at one of the many exciting 2019 KACS events listed below (and encourage you to check: <https://kalamazooacs.org/events/> for updates and finalized event info).

- KACS Periodic Table Celebration, Feb 26<sup>th</sup>, 6-9pm, Boatyard Brewing
- Chemists Celebrate Earth Week: Celery Flats Interpretive Center April 13<sup>th</sup> (11 am-3 pm) and/or Bronson Park April 20 (noon-5 pm)
- Kalamazoo marathon water stop May 5<sup>th</sup>
- Kalamazoo NHCL dedication event, May 16<sup>th</sup>-17<sup>th</sup>  
<https://kalamazooacs.org/event/2019/05/16/chemistry-landmark-dedication.html>
- Speed Networking Event TBD September

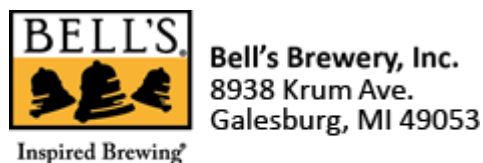
- Chem Day at the Museum TBD October
- Recycled poster event TBD November

Thank you for your valuable attention and for supporting KACS.

Sincerely,  
Lucas R. Chadwick, Ph.D.

[Ichadwick@bellsbeer.com](mailto:Ichadwick@bellsbeer.com)

Senior Scientist



Bottling Innovation Since 1985™

## Call for input to our professional organization, the American Chemical Society

- What do you think are the most important challenges for ACS and our members?
- What ideas do you have that could improve ACS for the good of our members and for society at large?

Our 2019 ACS president, Bonnie Charpentier, would very much appreciate the thoughts of our KACS membership about how to best meet the challenges we face as chemists, and what we believe are the most important priorities for ACS to address - your input may be a new idea, an encouragement, or a concern. You may contact her at [charpentierbon@yahoo.com](mailto:charpentierbon@yahoo.com)

At the Orlando ACS Council Meeting on April 3, 2019, the council will take time to consider the matter of "ACS Relevance to Current and Future Members: Challenges and Opportunities". There are likely many ways to improve the ACS value proposition. As your councilor, I have been asked to bring **your input**, as a local section member, on that topic to the floor during that open discussion. Please send me an e-mail, with any ideas you may want to express, **by Wednesday, March 27**.

Thank you,  
Lydia E. M. Hines ([lemhwgh@gmail.com](mailto:lemhwgh@gmail.com))

## Report: “Digging for Gold” and the KACS Sci-Mix Poster Session at Bell’s Eccentric Café

By Elke Schoffers (KACS Publicity and WMU Chemistry) and Lydia E. M. Hines (KACS);  
Photos by Kathryn Docherty (KD, WMU – Biological Sciences) and Elke Schoffers (ES)

On Nov. 13, 2018, the Kalamazoo section of the American Chemical Society (KACS) hosted its 8<sup>th</sup> annual poster session titled "Sustainable Science - Recycle a Poster" at Bell's Eccentric Café in downtown Kalamazoo. This is a public event made possible through a generous grant from Zoetis, and this year it attracted over 100 attendees of whom approximately 58% were ACS members.

The keynote speaker was Dr. Katie Whalen, Principal Scientist and Team Lead Biotechnology & Food Protection R&D at Kalsec, Inc., who presented a very engaging talk entitled “Digging for Gold in Your Own Backyard: Novel Enzymes for Use in Flavors & Fragrances” during which she informed on how one proceeds to discover novel enzyme “needles” in a haystack that grows by 5 million every month.

In addition to the keynote speech, there was a poster session with 23 posters, 70% of which had students identified as major contributors to the research. Attendees enjoyed hot appetizers and beer from 5 to 9 PM while listening to the keynote speech, mingling, and reviewing the displays. Posters highlighted work from Zoetis, Bell’s Brewery, Kalamazoo College and Western Michigan University (WMU), among others.

Students who submitted a poster abstract by an announced early deadline had the opportunity to win a \$50 cash prize. This year’s winners were Zach Whitacre, Nicole Burke and Troy deHagen. They (***italicized***) presented the following posters:

- “From Agriculture to Prairie: Microbial Restoration Efforts”

**Zachary Whitacre**, Jacob Evans, Mitchell Patalon, and Kathryn Docherty\*  
Department of Biological Sciences, Western Michigan University, Kalamazoo, MI

- “The effects of climate change-related forest disturbance on terpene concentrations of white pine (*Pinus strobus*) and red pine (*Pinus resinosa*)”

**Troy deHagen**, Dr. Steven Bertman, Dr. Dave Karowe\* Department of Biological Sciences,  
Western Michigan University, Kalamazoo, MI

- “Profiling of Alkylresorcinol Content in Whole Grains Using LC-MS”

**Nicole L. Burke**\*, Russell W. LaClair  
Global Chemistry Department, W.K. Kellogg Institute for Food and Nutrition Research, Battle Creek, MI

The KACS Executive Committee is grateful for the financial support that Zoetis has provided since the event's debut to help defray the expenses associated with it and the help by many volunteers.



Cash Prize Winners: Zach Whitacre, Nicole Burke and Troy deHagen (left to right, KD)



The poster session was a good opportunity to mingle and discuss science. (KD)





Many volunteers helped to make this and other KACS events possible. Shown are ACS officers and event organizers and helpers. (KD)

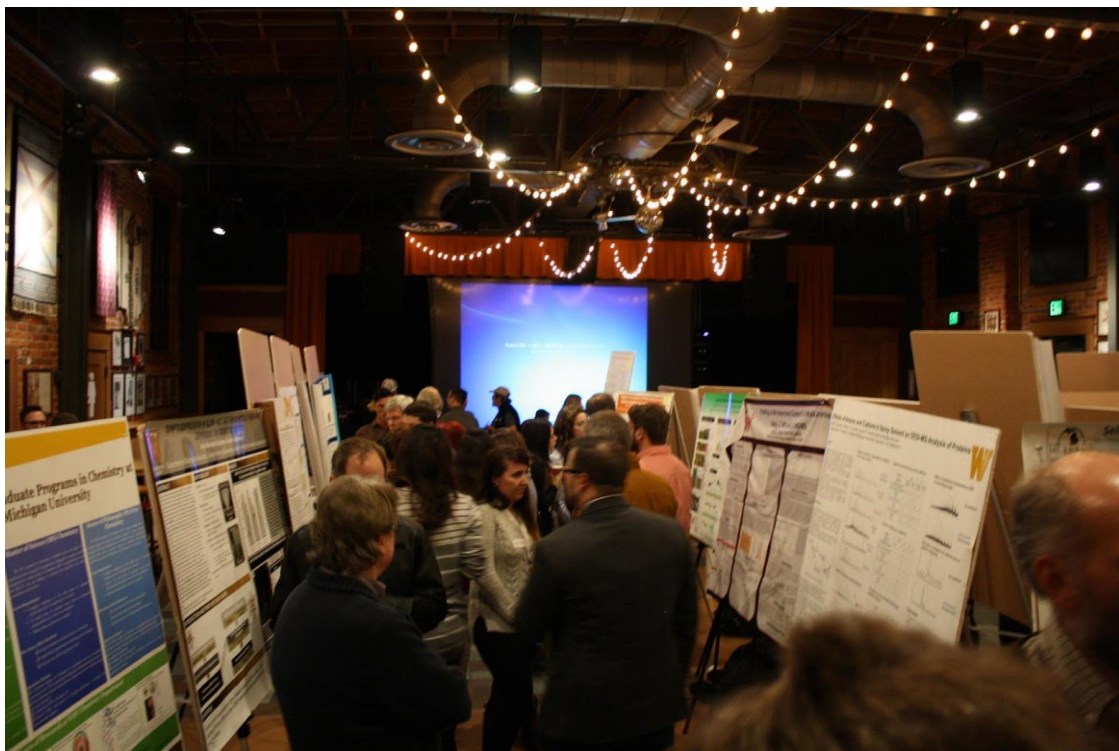


Stephen Secrest gave an overview of 2018 KACS activities (ES).





The Back Room of Bell's Eccentric Café was a nice venue for the keynote speech and poster session (ES).

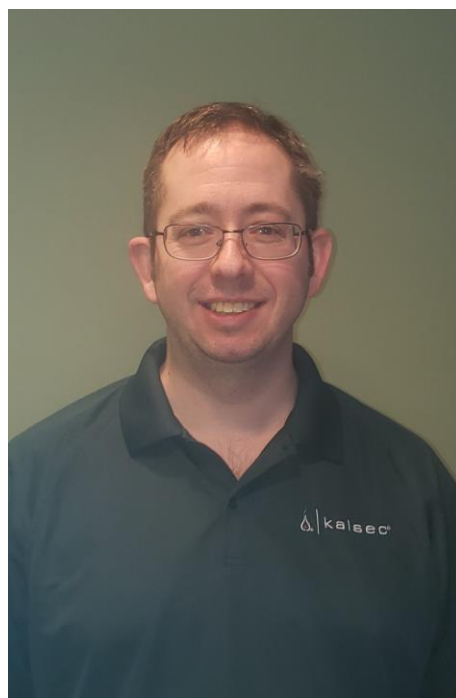


The event was a good opportunity to mingle and discuss science (ES).

## Meet Hershel Jude – KACS Chair Elect

I grew up in Eastern Kentucky and received a B.A. in chemistry from Berea College in Berea, Kentucky where I served as president of the Berea College Student ACS chapter. I earned a M.S. and Ph.D. in Chemistry from the University of Cincinnati with Professor William B. Connick, where my research focused on the synthesis and characterization of two-electron platinum reagents. After graduate school, I spent two years as a post-doctoral associate at the University of Utah with Professor Peter J. Stang and three years as a Post-Doctoral fellow at Los Alamos National Lab with Dr. Reginaldo Rocha. While in Professor Stang's group, my research focused on the development and characterization of two- and three-dimensional supramolecular assemblies and while working with Dr. Rocha I developed ruthenium polypyridyl catalysts for the oxidation of water. In 2008, I moved to Kalamazoo, Michigan and joined Kalsec as a lead scientist where I currently focus on developing new hop products and processes for the brewing industry.

I live in Kalamazoo township with my wife and two children (10 and 7). In my free time, I enjoy bowling, camping, biking and reading. I am very passionate about the ACS and what it offers its members, particularly the education and career components. My adventures with the ACS started with my first oral presentation late on Thursday afternoon at a national meeting in Washington, D.C. That 20-minute talk, which lasted 10 minutes due to being nervous and speaking so fast, was a great learning experience. An interview at the 2008 National Meeting in New Orleans led to me relocating to Kalamazoo. My first experience with an ACS local section was the KACS [Sustainable Science - Recycle a Poster](#) event at Bell's Eccentric Café and I have since volunteered several times at the Chemistry Day at the Museum event and participated in many other KACS events. I would love to hear from KACS members about their experiences with KACS and the types of events and activities they would enjoy attending.

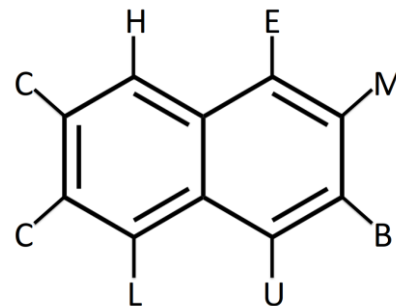






# WMU

## Chemistry Club



The WMU Chem Club will participate with the Western Michigan Section by contributing the element Br (for Broncos) to the "World's Largest Periodic Table" to be presented on October 19, 2019, at Grand Valley State University in celebration of IYPT.





## Tips on how to advocate for our science with elected public officials:

- Contact the legislator's scheduler to arrange an appointment. Introduce yourself as a constituent, and explain the purpose of the meeting. It's easier to meet elected officials in their local district offices.
- Set a meeting date. Aim to meet for 15-30 minutes. If your legislator isn't available, try an appropriate staff person.
- Prepare. Research the legislator's opinions and his or her current and past positions on your issue. Bring simple, direct information that can be left behind.
- Anticipate questions and be ready with answers.
- If meeting in a group, assign someone to lead, and define everyone's role beforehand.
- Confirm your appointment the day before and arrive early.
- Explain your issue. Emphasize the issue's impact on the district.
- If the legislator has a history of supporting your issue, acknowledge that and thank him/her, but be ready to quickly move to the "new" aspect you wish to discuss. Be clear about what you are asking.
- If the legislator disagrees with you, be prepared to debate, but do not become overly argumentative or political.
- Emphasize the positives of your viewpoint. End the meeting on a positive note.
- Thank the legislator. Determine next steps.
- Send a follow-up thank you letter. Include any additional information you offered to provide.

# Report: ACS Leadership Institute

By: Hershel Jude

As the 2019 Chair Elect of the Kalamazoo Local Section of the American Chemical Society, I attended the ACS Leadership Institute (LI) from January 25<sup>th</sup> to 27<sup>th</sup>, 2019 in Atlanta, Georgia. In order to train ACS members and elected officials to become better and more effective leaders, the American Chemical Society hosts the LI in January of each year. Participants gain an understanding of the essential elements of effective leadership and an opportunity to interact with other local section leaders, technical division officers and ACS governance. Leadership development courses help participants develop core skills important in ACS leadership roles as well as in the workplace. In 2019, over 400 chemists participated in the Leadership Institute.

As we all know, traveling out of West Michigan in January can be tricky. The trip started with a 4 am text informing me that my Kalamazoo to Chicago flight was cancelled due to weather. After rescheduling my flight and an interesting snowy drive to Grand Rapids, I arrived at the Leadership institute only 4 hours after it started! The Institute offered 16 courses to participants, of which we could choose two to attend. I chose Fostering Innovation and Collaborating Across Boundaries. In addition, all participants attending as part of their local section leadership team attended specialized sessions and a Planning Successful Activities course. The courses were hands on with a lot of activities to help participants understand the concepts being taught and there were many opportunities to share event ideas with other attendees. As Lydia Hines reported last year in the April 2018 KACS newsletter, we were regularly reminded about writing reports of our activities as they occur through the year and placing them in FORMS in preparation for the Annual Report submission. Also stressed upon at LI is the need for members to recruit new members. In 2011 there were 164,000 ACS members and in 2018 that number had dropped to 151,000. In 2019, as part of the member get a member campaign the ACS is offering a special commemorative periodic table of the elements blanket in recognition of 2019 being declared the International Year of the Periodic Table.

The leadership institute was a very productive, busy and enjoyable two-day event filled with lots of opportunities to learn and network. While these sessions were geared specifically to the ACS, most if not all of the information gained is directly applicable to being a productive member of any organization and well worth attending. Being able to attend the LI is a valuable benefit of volunteering our time and serving our professional society. We are looking for dedicated members to run for the KACS chair-elect seat for 2019, and maybe I will be reading your report from the LI next year!

Questions? Comments? or would like to contribute to this newsletter?

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Send an email to Mike Weslosky, Communication Chair at [communications@kalamazooacs.org](mailto:communications@kalamazooacs.org)

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or



# Newsletter for the Kalamazoo Local Section of the American Chemical Society



March 29<sup>th</sup>, 2019

Volume 9 – Issue 3

## 2019 KACS Executive Officers

### Chairperson

Dr. Lucas Chadwick

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### Past-Chairperson

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*Marvelous Metals at the Kalamazoo Valley Museum*

## National Historic Landmark Event

We have a prestigious ACS event taking place right here in Kalamazoo in the upcoming months. Please see the following link to learn more about the two events that are open to the public. These events celebrate a dedication towards steroid chemistry and the related advancements in chemistry that took place right here in Kalamazoo.

<https://kalamazooacs.org/event/2019/05/16/chemistry-landmark-dedication.html>

We encourage you to buy tickets to attend the dinner and hear the panel of great speakers.

## Chemists Celebrate Earth Week

The WMU Chem Club will be hosting the Celery Flats Table on the April 13<sup>th</sup> Earth day Event.

We have an invitation to volunteer at our Bronson Park table on Earth Day, April 20<sup>th</sup>. The event will Take place from noon to 5pm and will accompany our KACS Chair Luke Chadwick. More information to come once our Councilor Lydia Hines receives more information.

# KACS Hosting 15 mile Water Stop for Kalamazoo Marathon

Our Kalamazoo ACS Local Section is again running the 15 mile water stop for this year's Kalamazoo Marathon, Sunday, 5 May. We had a great crew last year for this event (thanks all), and are looking forward to a fun time again this year. This is our call for volunteers.

Below are some details and photos from last year, which will for the most part apply again this year.



**Please reply to message to let me know if you can help this year, no experience necessary. Your help will very much be appreciated by the marathoners.**

## **Water Stop Location:**

On Oakland, near the corner of Oakland and Whites, in front of Christy's Consignment Shop (by Water Street Coffee), near the course 15 mile marker.

## **Schedule:**

7:30am-8:00am, set up tables (3 tables to be arranged as water-GuBrew-water alternated), make the GuBrew (40tabs/jug of water, takes a while to dissolve), set up our KACS props



**8:00-9:00am**

fill cups half full (I've been told that one layer of filled cups per table is enough for this stop, and we've been requested to have our three tables arranged water - GuBrew - water), pass out volunteer t-shirts, eat provided breakfast.

**9:00am-1:30pm**

pass water and GuBrew cups to runners, and cheer them on, YouTube video shows how to pass the water: <https://www.youtube.com/watch?v=81blqZ4hn0Y&t=190s>



**11:00am-12:00noon**

start cleaning up discarded cups thrown in the street (course comes south-bound down Oakland and turns left onto Whites, so thrown cups will be on both Oakland and Whites, we will put out trash cans, but not everyone uses them)

(I'll bring a snow shovel and leaf rake to help gather up the thrown cups, if anyone else can bring those, that could help).

**11:30am-12:30pm**

finish breaking down and cleaning up the site

This stop will have porta-potties available, but we don't have to do anything with those.



## Meritorious Service Award Nominees Needed

Our KACS recognizes **long-term meritorious service to our section** at our Awards Program (you may see the list of awardees to date on our website [kalamazooacs.org/about/section-award-recipient.html](http://kalamazooacs.org/about/section-award-recipient.html)).

If you have suggestion(s) of such a candidate, please send his/her name along with your rationale for the nomination to our Awards Committee chair, Lydia E.M. Hines, by **April 12**. Thank you.

## GLRM Reminder

Be on the look out for a reminder about the Great Lakes Regional Meeting **May 1-4** in Lisle, IL, at the Sheraton Hotel. [2019acsgrm.org](http://2019acsgrm.org) is the website for registration and program information.

## Congratulations to Michael P. Curtis ACS Technical Achievement Award for Organic Chemistry

Congratulations are in order to **Michael P. Curtis**, of Zoetis, a KACS member who was named one of thirteen winners of the ACS Organic Division's 2018 "Technical Achievement in Organic Chemistry Award"; this award recognizes outstanding contributions to the field of organic chemistry from bachelor's or master's chemists pursuing careers in industry or government.



## Awards Gathering Announcement

Our annual KACS Awards Gathering is May 6<sup>th</sup>. This is a prestigious time for the Kalamazoo ACS chapter where about 50 awards will be presented to deserving students, faculty and staff in the Kalamazoo region.

## Marvelous Metals at the Kalamazoo Valley Museum

Announcing the National Chemistry Week (NCW) event! Our annual **Chemistry Day at the Kalamazoo Valley Museum** is going to take place from 12-4pm on Saturday, October 12<sup>th</sup>.

The theme this year is *Marvelous Metals*.

Anyone interested in sharing a “hands-on” chemistry activity with the ~1000 children and adults who visit during that event, please contact Lydia Hines or Hershel Jude for project review and to get signed up for a table.

Questions? Comments? or would like to contribute to this newsletter?

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# Newsletter for the Kalamazoo Local Section of the American Chemical Society

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May 31<sup>st</sup>, 2019

Volume 9 – Issue 5

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## 2019 KACS Executive Officers

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46<sup>th</sup> Annual Awards Gathering KACS  
Celebration 2019

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Harry Potter Chemistry Assemblies at  
Haverhill and Amberly Elementary

*Page 9:*  
Save the Date: Marvelous Metals  
National Chemistry Week in October

## Section Recognition

At the 2019 Great Lakes Regional Meeting Awards Dinner our KACS section received our second P3 (Partners for Progress and Prosperity) Award! This time for the Speed-Networking Event which Past-chair Stephen Secreast initiated. In Stephen's first year as section chair in 2017, he established a collaboration between KACS, the Kalamazoo College Chemistry Department and the Kalamazoo College office of Career and Professional Development. The award consists of a plaque for each of the three program collaborators, as well as a Medal and a \$333 award for each; representing the 2 Kalamazoo College Departments and the KACS were Dr. Jeff Bartz and Dr. Lydia Hines, respectively.



From left to right: Susan Shih (Awards Committee Chair, 2019 Great Lakes regional Meeting), Dr. Jeff Bartz (Chemistry Department, Kalamazoo College), Dr. Lydia Hines (Councilor, KACS Section).



# KACS Refreshment Station

Section members participated at a half-way “refreshment station” on Oakland Drive for Marathoners on Sunday, May 5, 2019.



## 46<sup>th</sup> Annual Awards Gathering KACS Celebration 2019

May 5, 2019 was a pleasant day in Kalamazoo in many ways, one of which was the annual gathering of KACS members along with students and parents/friends in the chemistry building at Western Michigan University (WMU) for the presentation of awards to long-time ACS members, deserving students and teachers as well as to other KACS members in our local section area (Kalamazoo, Allegan and Van Buren counties). It was an amiable group of approximately 80 gathered for the hors d'oeuvres in the lobby graced by a large Periodic table whose internationally-recognized 150<sup>th</sup> anniversary is this year. Awards were presented immediately after this light supper to one graduating senior from WMU and one from Kalamazoo College, each nominated as outstanding by the respective school's chemistry department faculty, and to Mr. Jon Taylor, chemistry teacher from Portage Central High School who, according to his students, is "the best teacher they have had in their lives". To receive his 50-year membership certificate from the American Chemical Society was Dr. Wade Adams, and to receive the Volunteer service award from the ACS Committee on Community Activities was Dr. Thomas A. Runge who spear-headed the writing of the successful application for the National Historical Chemical Landmark presented in 2019 to our community in recognition of the 1950-1990 Kalamazoo Steroid Chemistry Work done at The Upjohn Company. Following those recognitions came the presentation of certificates and prizes to 6 outstanding chemistry students nominated by their HS teachers, as well as to 20 students with exemplary scores on a 2-tiered examination given by our section's Education Committee. All present seemed to be very appreciative of the examination program and the recognition it offers; it was conceived and implemented by Dr. Adams, our 50-year member, when he was chair of our Section in 1982! The following pictures of the three groups of students show the pleasure experienced by all those present...



Honorable mention awardees from the competitive exam



Top 8 awardees from the competitive exam





Outstanding Chemistry Students as nominated by their high school teachers



# Harry Potter Chemistry Assemblies at Haverhill and Amberly Elementary Schools

Western Michigan University Ph.D student Kristi Tullis (CGSA President) and M.S. student Jashaun Bottoms (CGSA secretary) brought chemistry to life by making potions and casting spells while students pondered whether magic or chemistry was happening! floo powder, troll boogies, polyjuice potion, truth serum, and the Weasley's fireworks show were all created. The students were all involved helping cast spells such as Incendio! Wingardium Leviosa!, Accio!, Reducto!, and Lumus! 12 engaging experiments were done over three assemblies and a whole lot of science was discussed about why things happened and how it worked. Thanks to many staff volunteers helping get the "dragon's egg" out of the bottle and for holding fire in their hands.







# National Chemistry Week: Join us for this Community Favorite!

Our annual **Chemistry Day at the Kalamazoo Valley Museum** is going to take place from 12:00–16:00 on **Saturday, October 12, 2019**.

This year's theme is *Marvelous Metals*.

Anyone interested in sharing a hands-on chemistry activity with the ~1000 children and adults who visit during that event, please contact [Lydia Hines](#) or [Hershel Jude](#).



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# Newsletter for the Kalamazoo Local Section of the American Chemical Society

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August 16, 2019

Volume 9 – Issue 5

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## *Issue Highlights...*

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Project SEED students presenting their work at K-College (end of August)

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Register Now for the ACS Outreach Program

### *Page 5:*

Reminder that 2019 is the International Year of the Periodic Table

# Project SEED Students Present! You are invited—Please Attend at Kalamazoo College



Yanari Raines (L) and Riannat Sanusi (R) – Kalamazoo Local Section Project SEED Fellows – Summer 2019

## Introducing our 2019 Project SEED Fellows

Dear Local Section Members, I am delighted to introduce you to our current Project SEED Fellows. Project SEED provides summer research experiences in chemistry for high school students from low income households. This has been a powerful program. Over 11,000 students have participated, and ACS Assessments show that it has had a strong impact on the academic and career pathways of those students. The Kalamazoo local section has sponsored 75 student projects in the last 25 years. Each Project SEED fellowship costs our local section about \$2000 after matching funds from ACS. Your donations to national or local section Project SEED programs are vital to the success of the program. Donations to our local section funds are allocated entirely for local student stipends. Please contact me at [dwilliams@kalsec.com](mailto:dwilliams@kalsec.com) if you would like to learn more about supporting us.

You have an opportunity to meet both of our Project SEED fellows in person and hear about their work at a summer research symposium in the Kalamazoo College Dow Science Center from 11 AM – 2 PM on Friday, Aug 23. Please join us if you are interested and available.

Doug Williams (Kalamazoo ACS Project SEED Coordinator)

### **Yanari Raines** (by Yanari)

I am a rising senior at Kalamazoo Central High School and I will be graduating in June of 2020. My current interests and hobbies are running both cross country and track, starting my internship through my law enforcement EFE, and volunteering. My current plans after high school, however, are to start my path to becoming a United States Marine. I will be attending an NROTC college in the South and training to become an officer in the summer. And even though my career path does not correlate directly with chemistry I still have the chance to major in any subject I want. Therefore, after being a part of Project SEED I will definitely consider majoring in the sciences. I learned about this opportunity through my high school chemistry teacher, Dr. Chartanay Bonner. At first, I was not sure about applying because I didn't have much science experience (only biology and honors chemistry), but soon that became the exact reason why I wanted to. My Project SEED mentor is Dr. Kelly Teske (WMU Chemistry) and our project is focused on developing analogues of 2-4-diphenylquinazoline. However, our goal is to manipulate this small molecule to globally upregulate tumor suppressive miRNA in breast cancer. What I appreciate about this project so far is how hands on it is compared to high school classes, the challenge it brings with its advanced information, and the one on one teaching. I am the only Project SEED fellow at WMU this year but I think it is helpful to schedule periodic meetings with other Project SEED fellows throughout the summer. Even though we have different projects I can say from experience that we struggle the same. We both know it's one thing to be the youngest student in a lab, but to know next to nothing about organic chemistry is even harder. To future Project SEED fellows, I recommend that you stay focused, open minded, and positive. But you also have to be patient, (especially if you ever run a preparative chromatography column 😊). Just understand that organic chemistry is probably one of the hardest subjects you will ever encounter, so ask questions! And remember, no one expects you to come in as a chemical genius, but I promise with time you will fit right in.

### **Riannat Sanusi** (by Doug Williams)

Riannat is a rising junior at Kalamazoo Central High School, who plans to graduate in June 2021. She came to the US about four years ago with her family from Nigeria, where her mom ran her own food business and Riannat began to learn some agricultural science. Riannat continues to be interested in math and science and plans to take advanced chemistry this fall. She is not sure of her study plans beyond high school but is presently hoping to attend Univ. of Michigan or Michigan State Univ. Riannat was also a member of the KCHS Mock Trial Team that won its 21<sup>st</sup> Michigan

State Championship and competed in May in Athens, GA at the Nationals. Riannat learned about Project SEED from her high school chemistry teacher, Dr. Chartanay Bonner. Her Project SEED mentor is Dr. Dwight Williams (Kalamazoo Chemistry). She is working on the synthesis of novel non-nitrogenous serotonin receptor ligands based upon the 2-(2-phenylethyl)chromone scaffold. Her work builds upon the work of previous Project SEED students Victor Plascencia (2017) and Daniel Calco (2018) in the Dr. Williams group at K-College.

## Outreach Training Program Webinar Series

### Register Now for the Outreach Training Program Webinar Series!



The [Outreach Training Program \(OTP\)](#) is designed to help ACS Members improve their science outreach skills and fully maximize Society resources for planning hands-on science events. In-person workshops will be offered at two regional meetings (NERM and SERMACS). If you can't attend the training in person, register now for the seven-webinar series offered through the [ACS Learning Management System](#).

The program includes sessions on the history of ACS Outreach, safety in outreach settings, event planning and fundraising, communicating through hands-on activities, marketing and partnerships, leading volunteers, and monitoring success. Attendees will learn to successfully plan and execute hands-on science outreach events, as well as have an opportunity to network and build a community with others who are passionate about science outreach and ACS. For more information, click below to register, visit the [OTP web page](#) or contact [outreach@acs.org](mailto:outreach@acs.org).



# Celebrate IYPT!

This year marks the 150th anniversary of Mendeleev's development of the first periodic table of the elements, making 2019 the International Year of the Periodic Table!


<https://www.iypt2019.org/>

Visit the ACS periodic table page:

<https://www.acs.org/content/acs/en/education/whatischemistry/periodictable.html>

For a list of events and resources, including the World's Largest Periodic Table event out on 19 October at Grand Valley State University:

[https://www.facebook.com/events/2261489874120479/?active\\_tab=ab](https://www.facebook.com/events/2261489874120479/?active_tab=ab)



## Celebrating the International Year of the Periodic Table

hydrogen 1 <b>H</b> 1.008																	helium 2 <b>He</b> 4.003	
lithium 3 <b>Li</b> 6.941	beryllium 4 <b>Be</b> 9.012											boron 5 <b>B</b> 10.811	carbon 6 <b>C</b> 12.011	nitrogen 7 <b>N</b> 14.007	oxygen 8 <b>O</b> 15.999	fluorine 9 <b>F</b> 18.998	neon 10 <b>Ne</b> 20.180	
sodium 11 <b>Na</b> 22.990	magnesium 12 <b>Mg</b> 24.305											aluminum 13 <b>Al</b> 26.982	silicon 14 <b>Si</b> 28.086	phosphorus 15 <b>P</b> 30.974	sulfur 16 <b>S</b> 32.065	chlorine 17 <b>Cl</b> 35.453	argon 18 <b>Ar</b> 39.948	
potassium 19 <b>K</b> 39.098	calcium 20 <b>Ca</b> 40.078	scandium 21 <b>Sc</b> 44.956	titanium 22 <b>Ti</b> 47.88	vanadium 23 <b>V</b> 50.942	chromium 24 <b>Cr</b> 51.996	manganese 25 <b>Mn</b> 54.938	iron 26 <b>Fe</b> 55.845	cobalt 27 <b>Co</b> 58.933	nickel 28 <b>Ni</b> 58.693	copper 29 <b>Cu</b> 63.546	zinc 30 <b>Zn</b> 65.39	gallium 31 <b>Ga</b> 69.723	germanium 32 <b>Ge</b> 72.61	arsenic 33 <b>As</b> 74.922	selecnium 34 <b>Se</b> 78.96	bromine 35 <b>Br</b> 79.904	krypton 36 <b>Kr</b> 83.80	
rubidium 37 <b>Rb</b> 84.468	strontium 38 <b>Sr</b> 87.62	yttrium 39 <b>Y</b> 88.906	zirconium 40 <b>Zr</b> 91.224	niobium 41 <b>Nb</b> 92.906	molybdenum 42 <b>Mo</b> 95.94	technetium 43 <b>Tc</b> 98.907	ruthenium 44 <b>Ru</b> 101.07	rhodium 45 <b>Rh</b> 102.905	palladium 46 <b>Pd</b> 106.42	silver 47 <b>Ag</b> 107.868	cadmium 48 <b>Cd</b> 112.411	indium 49 <b>In</b> 114.818	tin 50 <b>Sn</b> 118.71	antimony 51 <b>Sb</b> 121.760	tellurium 52 <b>Te</b> 127.6	iodine 53 <b>I</b> 126.904	xenon 54 <b>Xe</b> 131.29	
cesium 55 <b>Cs</b> 132.905	barium 56 <b>Ba</b> 137.327	57-71		hafnium 72 <b>Hf</b> 178.49	tantalum 73 <b>Ta</b> 180.948	wolfram 74 <b>W</b> 183.85	reuterium 75 <b>Re</b> 186.207	osmium 76 <b>Os</b> 190.23	iridium 77 <b>Ir</b> 192.22	platinum 78 <b>Pt</b> 195.08	gold 79 <b>Au</b> 196.967	mercury 80 <b>Hg</b> 200.59	thallium 81 <b>Tl</b> 204.383	lead 82 <b>Pb</b> 207.2	bismuth 83 <b>Bi</b> 208.980	polonium 84 <b>Po</b> 209	astatine 85 <b>At</b> 209	radon 86 <b>Rn</b> 222.018
francium 87 <b>Fr</b> 223.020	radium 88 <b>Ra</b> 226.025	88-103		rutherfordium 104 <b>Rf</b> [261]	bohrium 105 <b>Db</b> [262]	seaborgium 106 <b>Sg</b> [266]	bohrium 107 <b>Bh</b> [264]	hassium 108 <b>Hs</b> [269]	meitnerium 109 <b>Mt</b> [268]	darmstadtium 110 <b>Ds</b> [269]	roentgenium 111 <b>Rg</b> [272]	copernicium 112 <b>Cn</b> [277]	unbinilium 113 <b>Uut</b> Unknown	flerovium 114 <b>Fl</b> [289]	unseptennium 115 <b>Uup</b> unknown	livermorium 116 <b>Uuq</b> [298]	tennessium 117 <b>Uus</b> unknown	oganeson 118 <b>Uuo</b> unknown
lanthanum 57 <b>La</b> 138.905	cerium 58 <b>Ce</b> 140.115	praseodymium 59 <b>Pr</b> 140.908	neodymium 60 <b>Nd</b> 144.24	promethium 61 <b>Pm</b> [145]	samarium 62 <b>Sm</b> 150.36	europium 63 <b>Eu</b> 151.964	gadolinium 64 <b>Gd</b> 157.25	terbium 65 <b>Tb</b> 158.925	dyprosium 66 <b>Dy</b> 162.50	holmium 67 <b>Ho</b> 164.930	erbium 68 <b>Er</b> 167.26	thulium 69 <b>Tm</b> 168.934	ytterbium 70 <b>Yb</b> 173.054	lutetium 71 <b>Lu</b> 174.967				
actinium 89 <b>Ac</b> 227.028	thorium 90 <b>Th</b> 232.038	protactinium 91 <b>Pa</b> 231.036	uranium 92 <b>U</b> 238.029	neptunium 93 <b>Np</b> 237.048	plutonium 94 <b>Pu</b> 244.064	americium 95 <b>Am</b> 243.061	curium 96 <b>Cm</b> 247.070	berkelium 97 <b>Bk</b> 247.070	californium 98 <b>Cf</b> 251.080	einsteinium 99 <b>Es</b> [254]	fermium 100 <b>Fm</b> 257.093	mendelevium 101 <b>Md</b> 258.1	nobelium 102 <b>No</b> 259.101	lawrencium 103 <b>Lr</b> [262]				

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# Newsletter for the Kalamazoo Local Section of the American Chemical Society



September 27, 2019

Volume 9 – Issue 6

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Seeking Nominations for KACS Secretary

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October 21<sup>st</sup> Chemistry Night at One Well

### Page 7:

WMU Chem Club Update

# Celebrate National Chemistry Week 2019 Chemistry Day at the Museum

## 33<sup>rd</sup> Chemistry Day at the Museum

Hands-on activities and resources for all ages!

**Saturday, October 12 • noon — 4 p.m.**

**Kalamazoo Valley Museum**

**230 N. Rose St., Kalamazoo**

**FREE!**

Co-sponsored by the  
Kalamazoo Section of the American Chemical Society  
([Kalamazooacs.org](http://Kalamazooacs.org))  
and the Kalamazoo Valley Museum ([kalamazoomuseum.org](http://kalamazoomuseum.org))

This year's **Chemistry Day at the Museum** is scheduled for **Saturday, October 12th, from noon to 4 pm at the Kalamazoo Valley Museum**. This is the Kalamazoo Section of the American Chemical Society (KACS) community outreach event for National Chemistry Week (museum notice attached). This very popular public event typically attracts 600 to 1000 people and **we need volunteers to run Demos** that are appropriate for young children (K through 8<sup>th</sup> grade). Please let me or Lydia Hines ([lemhwgh@gmail.com](mailto:lemhwgh@gmail.com)) know as soon as possible if you are willing to participate in this event. Visitors to the event are always excited to see new demos. We also have a list of activities that have been presented in the past if you are looking for ideas to present.

The 2019 National Chemistry Week theme is "Marvelous Metals" but all age and location appropriate activities which introduce children to science concepts are welcome. A major goal of events like these is to introduce our visitors to scientific concepts and therefore all presenters need to model appropriate lab safety (safety glasses and/or lab coats, shields, etc.) even if using commonly-available materials (chemicals) and visitors need to be alerted to the importance of safety even if materials being used in a hands-on demonstration may be "items found in the kitchen"; the one PPE item they **MUST** wear is safety goggles, which we provide on entry.

With enough advance notice the Kalamazoo Valley Museum assists with purchasing common supplies (things that can be bought at Walmart, Meijer's, Amazon, etc.) for demos, but specialty items must be provided by the presenters (glassware, chemicals, etc.)



Please share this article with others that might have an interest in assisting or attending this very popular KACS outreach event. We appreciate your consideration to volunteer your time in support of this event. This event is free of charge and open to the public, so please consider attending even if you are not able to help with presenting a demo this year.

## Save the Date: Bells Poster Event

**The KALAMAZOO Section of the American Chemical Society presents**

### **From Lipid Probes to Tuberculosis Drugs: Two Decades of Chemical Biology Research**

**by Prof. Benjamin Swarts**

**Associate Professor at the Department of Chemistry &  
Biochemistry at Central Michigan University**

**Bell's Eccentric Café (Back Room)  
355 E Kalamazoo Ave, Kalamazoo, MI 49007**

- Complimentary hors d'oeuvres
- Free and open to the public

Chemistry plays essential roles in understanding biology and creating new ways to combat human diseases. Ben Swarts, an Associate Professor at Central Michigan University, will discuss how chemical biology—the use of synthetic small molecules to study and manipulate biological systems—has been used in his research to explore novel approaches to diagnosing and treating the devastating bacterial disease tuberculosis. This story spans nearly two decades, ranging from Ben's early experiences as an undergraduate chemistry major, through his time studying as a postdoc in South Africa, and to his current work as a chemistry professor and director of a biosafety level 3 (BSL-3) tuberculosis research facility. It is hoped that this talk will illustrate how a passion for chemistry and a bit of serendipity can crystallize into an exciting, fruitful, and sometimes unpredictable career in the chemical sciences.



Inspired Brewing®



# Sci-Mix Poster Session on Tuesday, Nov 12, 2019

**5-7 pm Poster Setup, Registration, Reception**

**6:45 pm KACS Announcements**

**7:00 pm Keynote Speaker: Prof. Benjamin Swarts**

**8 pm Prize Announcement**

**8-9 pm Poster Session, Network with Scientists and Speaker**

**Current ACS members, poster presenters and Zoetis employees are eligible for two complimentary drink tickets (if 21 years and older)**

*Funding provided through a generous grant by*

The Zoetis logo is written in a lowercase, orange, sans-serif font. The letter 'z' is stylized with a curved underline that extends under the 'o'.

**Celebrate IYPT!**

This year marks the 150th anniversary of Mendeleev's development of the first periodic table of the elements, making 2019 the International Year of the Periodic Table!

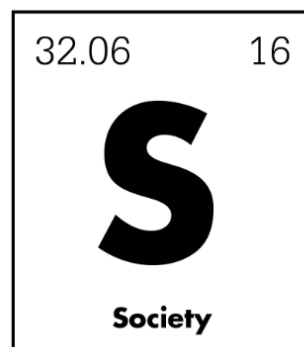
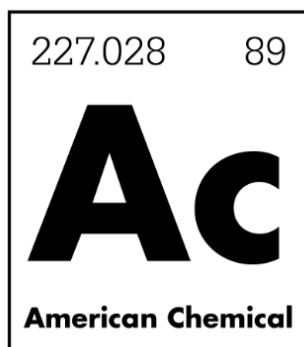
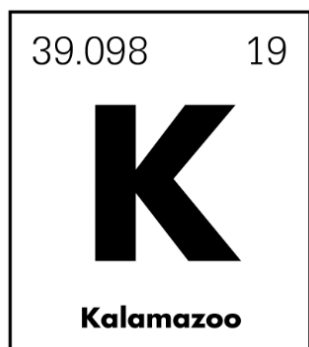
<https://www.iypt2019.org/>

Visit the ACS periodic table page:

<https://www.acs.org/content/acs/en/education/whatischemistry/periodictable.html>

For a list of events and resources, including the World's Largest Periodic Table event out on 19 October at Grand Valley State University:

[https://www.facebook.com/events/2261489874120479/?active\\_tab=ab](https://www.facebook.com/events/2261489874120479/?active_tab=ab)





# Celebrating the International Year of the Periodic Table

hydrogen 1 <b>H</b> 1.008																	helium 2 <b>He</b> 4.003	
lithium 3 <b>Li</b> 6.941	beryllium 4 <b>Be</b> 9.012											boron 5 <b>B</b> 10.811	carbon 6 <b>C</b> 12.011	nitrogen 7 <b>N</b> 14.007	oxygen 8 <b>O</b> 15.999	fluorine 9 <b>F</b> 18.998	neon 10 <b>Ne</b> 20.180	
sodium 11 <b>Na</b> 22.990	magnesium 12 <b>Mg</b> 24.305											aluminum 13 <b>Al</b> 26.982	silicon 14 <b>Si</b> 28.086	phosphorus 15 <b>P</b> 30.974	sulfur 16 <b>S</b> 32.065	chlorine 17 <b>Cl</b> 35.453	argon 18 <b>Ar</b> 39.948	
potassium 19 <b>K</b> 39.098	calcium 20 <b>Ca</b> 40.078	scandium 21 <b>Sc</b> 44.956	titanium 22 <b>Ti</b> 47.88	vanadium 23 <b>V</b> 50.942	chromium 24 <b>Cr</b> 51.996	manganese 25 <b>Mn</b> 54.938	iron 26 <b>Fe</b> 55.845	cobalt 27 <b>Co</b> 58.933	nickel 28 <b>Ni</b> 58.693	copper 29 <b>Cu</b> 63.546	zinc 30 <b>Zn</b> 65.38	gallium 31 <b>Ga</b> 69.723	germanium 32 <b>Ge</b> 72.64	arsenic 33 <b>As</b> 74.922	selecnium 34 <b>Se</b> 78.972	bromine 35 <b>Br</b> 79.904	krypton 36 <b>Kr</b> 83.80	
rubidium 37 <b>Rb</b> 84.468	strontium 38 <b>Sr</b> 87.62	yttrium 39 <b>Y</b> 88.906	zirconium 40 <b>Zr</b> 91.224	niobium 41 <b>Nb</b> 92.906	molybdenum 42 <b>Mo</b> 95.94	technetium 43 <b>Tc</b> 98.907	ruthenium 44 <b>Ru</b> 101.07	rhodium 45 <b>Rh</b> 102.906	paladium 46 <b>Pd</b> 106.42	silver 47 <b>Ag</b> 107.868	cadmium 48 <b>Cd</b> 112.411	indium 49 <b>In</b> 114.818	tin 50 <b>Sn</b> 118.71	antimony 51 <b>Sb</b> 121.760	tellurium 52 <b>Te</b> 127.6	iodine 53 <b>I</b> 126.904	xenon 54 <b>Xe</b> 131.29	
cesium 55 <b>Cs</b> 132.905	barium 56 <b>Ba</b> 137.327	57-71		hafnium 72 <b>Hf</b> 178.49	tantalum 73 <b>Ta</b> 180.948	tungsten 74 <b>W</b> 183.85	rhenium 75 <b>Re</b> 186.207	osmium 76 <b>Os</b> 190.23	iridium 77 <b>Ir</b> 192.22	platinum 78 <b>Pt</b> 195.08	gold 79 <b>Au</b> 196.967	mercury 80 <b>Hg</b> 200.59	thallium 81 <b>Tl</b> 204.383	lead 82 <b>Pb</b> 207.2	bismuth 83 <b>Bi</b> 208.980	polonium 84 <b>Po</b> 209	astatine 85 <b>At</b> 210	radon 86 <b>Rn</b> 222
francium 87 <b>Fr</b> 223	radium 88 <b>Ra</b> 226	88-103		rutherfordium 104 <b>Rf</b> 261	dubnium 105 <b>Db</b> 262	seaborgium 106 <b>Sg</b> 263	bohrium 107 <b>Bh</b> 264	hassium 108 <b>Hs</b> 269	meitnerium 109 <b>Mt</b> 268	darmstadtium 110 <b>Ds</b> 269	roentgenium 111 <b>Rg</b> 272	copernicium 112 <b>Cn</b> 277	ununtrium 113 <b>Uut</b> Unknown	flerovium 114 <b>Fl</b> 289	unqupentium 115 <b>Uup</b> Unknown	livermorium 116 <b>Uuh</b> 298	tennessium 117 <b>Uus</b> Unknown	oganeson 118 <b>Uuo</b> Unknown
lanthanum 57 <b>La</b> 138.905	cerium 58 <b>Ce</b> 140.12	praseodymium 59 <b>Pr</b> 140.908	neodymium 60 <b>Nd</b> 144.24	promethium 61 <b>Pm</b> 144.913	samarium 62 <b>Sm</b> 150.36	europium 63 <b>Eu</b> 151.964	gadolinium 64 <b>Gd</b> 157.25	terbium 65 <b>Tb</b> 158.925	dyprosium 66 <b>Dy</b> 162.50	holmium 67 <b>Ho</b> 164.930	erbium 68 <b>Er</b> 167.26	thulium 69 <b>Tm</b> 168.934	ytterbium 70 <b>Yb</b> 173.04	lutetium 71 <b>Lu</b> 174.967				
actinium 89 <b>Ac</b> 227.028	thorium 90 <b>Th</b> 232.038	protactinium 91 <b>Pa</b> 231.036	uranium 92 <b>U</b> 238.029	neptunium 93 <b>Np</b> 237.048	plutonium 94 <b>Pu</b> 244.064	americium 95 <b>Am</b> 243.061	curium 96 <b>Cm</b> 247.070	berkelium 97 <b>Bk</b> 247.070	californium 98 <b>Cf</b> 251.108	einsteinium 99 <b>Es</b> 252	fermium 100 <b>Fm</b> 257	mendeleevium 101 <b>Md</b> 258	nobelium 102 <b>No</b> 259	lawrencium 103 <b>Lr</b> 262				

## Nominations for KACS Secretary

KACS is seeking nominations for the position of Secretary. Please send nominations to Dr. Kelly Teske at [kelly.teske@wmich.edu](mailto:kelly.teske@wmich.edu)

## Chemistry Night at One Well

### October 21 – Mark Your Calendar to Celebrate IYPT at One Well Brewing!

*KACS is collaborating with One Well Brewing (4213 Portage St., Kalamazoo, MI 49001) in the first of our events to celebrate the International Year of the Periodic Table (now 150 years old). Please mark your calendar for the evening of Monday, Oct 21. Times and program details will be coming in our next newsletter and Facebook page. This will be a dine to donate event in which a share of our food and drink purchases will be donated by One Well to support our local Project SEED fund. Thank you to One Well.*





## WMU Chem Club Update

This fall, we have big plans for the WMU Chem Club! We will be participating in Chemistry Day at the Museum in October and performing demonstrations for students from Portage Northern when they visit campus in October. We are also working to coordinate additional events including Science Night at Lake Center Elementary, a demo day at Prairie Ridge Elementary, and maybe an event with the Boy Scouts. In addition, we have several meetings planned to increase student exposure to research and industry. And of course, we'll have plenty of social events as well. We are off to a great start this year and are looking forward to an amazing semester!

Best,

Megan Callaghan  
WMU Chem Club President

Questions? Comments? or would like to contribute to this newsletter?

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Send an email to Mike Weslosky, Communication Chair at  
[communications@kalamazooacs.org](mailto:communications@kalamazooacs.org)

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Visit our website [www.kalamazooacs.org](http://www.kalamazooacs.org)

or



# Newsletter for the Kalamazoo Local Section of the American Chemical Society

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October 30, 2019

Volume 9 – Issue 7

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## 2019 KACS Executive Officers

### Chairperson

Dr. Lucas Chadwick

[lchadwick@bellsbeer.com](mailto:lchadwick@bellsbeer.com)

### Past-Chairperson

Steve Secreast

[pastchair@kalamazooacs.org](mailto:pastchair@kalamazooacs.org)

### Chairperson-Elect

Dr. Hershel Jude

[hjude@kalsec.com](mailto:hjude@kalsec.com)

### Secretary

Dr. Kelly Teske

[kelly.teske@wmich.edu](mailto:kelly.teske@wmich.edu)

### Treasurer

Dr. William Schinzer

### Councilor

Dr. Lydia E. M. Hines

[lemhwgh@gmail.com](mailto:lemhwgh@gmail.com)

### Alternate Councilor

Dr. Doug Williams, Kalsec, Inc.

[dwilliams@kalsec.com](mailto:dwilliams@kalsec.com)

## Issue Highlights...

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Congratulations to KACS Member Charissa Oliphant for winning a KVCC 2019 Faculty Instruction Award

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Celebrate IYPT!

### Page 5:

Annual Chemistry Day at the Museum Review and Highlights

### Page 6:

Project SEED Fundraising Event Review

## Congratulations to KACS Member Charissa Oliphant for winning a KVCC 2019 Faculty Instruction Award

The KVCC 2019 Instructional Award recipients were announced in the September 2019 edition of KV Focus, the Kalamazoo Valley Community College newsletter. The awards are designed to reward those instructors at Kalamazoo Valley who actively encourage students' intellectual curiosity, engage them in the enterprise of learning, and have a lifelong impact. Current students, faculty and staff may nominate for the recognition.

Congratulations go out to 2019 Award recipient, KVCC Chemistry Instructor and KACS member, Charissa Oliphant.

A student said this about Charissa: "Mrs. O. has been a phenomenal instructor. I was not excited about having to take chemistry and she has made the class so accessible and as easy to understand as possible. She actively works to make sure her students are informed about all the opportunities available to them for both learning and professional development. She is extremely patient with questions and is always willing to spare the extra time to help a student having trouble with a problem or concept".

Another nominator said, "Mrs. Oliphant helped create my love for chemistry. She is a great instructor and really cares about her students. She is very organized and puts her students in a position to succeed. Chemistry isn't the easiest class, but she was always willing to help and ensure her students were prepared. I would recommend her to anyone taking chemistry. She is a great instructor who explains everything clearly and is so helpful".

In addition to teaching chemistry at KVCC, Charissa has been a long-term active member of KACS. She received the Local Section Award for Meritorious Service in 2014. Her service continues today with her participation in KACS events like the Speed Networking Event for local college students, where she has been serving as a mentor.

Great work, very well done Charissa. You are a KACS hero.

# Save the Date: Bells Poster Event

The **KALAMAZOO** Section of the American Chemical Society presents

## **From Lipid Probes to Tuberculosis Drugs: Two Decades of Chemical Biology Research**

by **Prof. Benjamin Swarts**

**Associate Professor at the Department of Chemistry &  
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**Current ACS members, poster presenters and Zoetis employees are eligible for two complimentary drink tickets (if 21 years and older)**

Undergraduate and graduate students are encouraged to participate. Your poster can either be newly prepared or a “recycled” poster. **Poster presenters who submit their abstract (150-200 words) by Monday, Nov. 4 can win a 50\$ cash prize!** Non-prize eligible presentations will still be accepted until Friday, **Nov. 8**. To reserve an easel, presenters should email the following information to [kelly.teske@wmich.edu](mailto:kelly.teske@wmich.edu).

- the poster **title**
- **author list** with the presenter underlined and an asterisk (\*) for the lead PI
- **institution** information
- an **abstract** to enter the prize drawing



*Funding provided through a generous grant by*

## KACS Combines IYPT Celebrations with Project SEED Fundraising



We are off and running with our IYPT celebrations in the Kalamazoo Local Section. About 30 ACS members and supporters joined us at One Well Brewing on Mon, Oct 21 for a Dine to Donate event to raise funds for Project SEED. We raised over \$50 for Project SEED and had a great time. Check out our local IYPT events page [here](#) and mark your calendar for our next appearance at [Bell's Eccentric Café Back Room on Nov 12](#). Hopefully, you will have a chance to meet our Summer 2019 Project SEED fellows as they present their research results during the poster session. If you

would like to make a direct donation to our local Project SEED fund, please go our [NEW KACS Project SEED webpage](#) and follow the link to PayPal. Thanks, and see you around the table ... periodically.

# Celebrate IYPT!

This year marks the 150th anniversary of Mendeleev's development of the first periodic table of the elements, making 2019 the International Year of the Periodic Table!

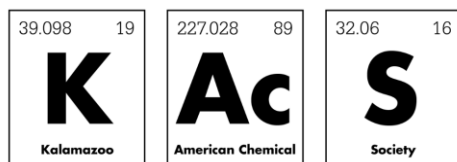
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For a list of events and resources:

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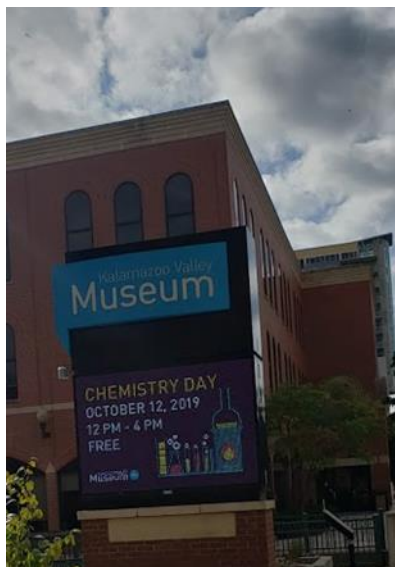




**Celebrating the International Year of the Periodic Table**

Hydrogen 1 H 1.008																	Helium 2 He 4.003						
Lithium 3 Li 6.941	Beryllium 4 Be 9.012																	Boron 5 B 10.811	Carbon 6 C 12.011	Nitrogen 7 N 14.007	Oxygen 8 O 15.999	Fluorine 9 F 18.998	Neon 10 Ne 20.180
Sodium 11 Na 22.990	Magnesium 12 Mg 24.305																	Aluminum 13 Al 26.982	Silicon 14 Si 28.086	Phosphorus 15 P 30.974	Sulfur 16 S 32.065	Chlorine 17 Cl 35.453	Argon 18 Ar 39.948
Potassium 19 K 39.098	Calcium 20 Ca 40.078	Scandium 21 Sc 44.956	Titanium 22 Ti 47.88	Vanadium 23 V 50.942	Chromium 24 Cr 51.996	Manganese 25 Mn 54.938	Iron 26 Fe 55.845	Cobalt 27 Co 58.933	Nickel 28 Ni 58.693	Copper 29 Cu 63.546	Zinc 30 Zn 65.38	Gallium 31 Ga 69.723	Germanium 32 Ge 72.61	Arsenic 33 As 74.922	Selenium 34 Se 78.96	Bromine 35 Br 79.904	Krypton 36 Kr 83.80						
Rubidium 37 Rb 85.468	Sr 38 Sr 87.62	Yttrium 39 Y 88.906	Zirconium 40 Zr 91.224	Niobium 41 Nb 92.906	Molybdenum 42 Mo 95.94	Technetium 43 Tc 98.906	Ruthenium 44 Ru 101.07	Rhodium 45 Rh 101.07	Palladium 46 Pd 106.42	Silver 47 Ag 107.868	Cadmium 48 Cd 112.411	Indium 49 In 114.818	Tin 50 Sn 118.710	Antimony 51 Sb 121.757	Te 52 Te 127.6	Iodine 53 I 126.905	Xenon 54 Xe 131.29						
Cesium 55 Cs 132.905	Barium 56 Ba 137.327	57-71		Hafnium 72 Hf 178.49	Tantalum 73 Ta 180.948	Tungsten 74 W 183.85	Rhenium 75 Re 186.207	Osmium 76 Os 190.23	Iridium 77 Ir 192.22	Platinum 78 Pt 195.084	Gold 79 Au 196.967	Mercury 80 Hg 200.59	Thallium 81 Tl 204.387	Lead 82 Pb 207.2	Bismuth 83 Bi 208.980	Po 84 Po 209	Astatine 85 At 210	Rn 86 Rn 222					
Francium 87 Fr 223	Radium 88 Ra 226	88-103		Rutherfordium 104 Rf 261	Dubnium 105 Db 262	Seaborgium 106 Sg 263	Bh 107 Bh 264	Hassium 108 Hs 265	Mt 109 Mt 266	Darmstadtium 110 Ds 268	Roentgenium 111 Rg 269	Cn 112 Cn 271	Uut 113 Uut 272	Fl 114 Fl 274	Uup 115 Uup 276	Uuh 116 Uuh 278	Uus 117 Uus 280	Uuo 118 Uuo 284					
Praseodymium 57 Pr 138.905	Ce 58 Ce 140.12	Praseodymium 59 Pr 140.908	Nd 60 Nd 144.24	Promethium 61 Pm 144.913	Sm 62 Sm 150.36	Europium 63 Eu 151.965	Gd 64 Gd 157.25	Tb 65 Tb 158.925	Dy 66 Dy 162.50	Ho 67 Ho 164.930	Er 68 Er 167.26	Tm 69 Tm 168.934	Yb 70 Yb 173.04	Lu 71 Lu 174.967									
Actinium 89 Ac 227	Th 90 Th 232	Protactinium 91 Pa 231	U 92 U 238	Np 93 Np 237	Pu 94 Pu 244	Am 95 Am 243	Cm 96 Cm 247	Bk 97 Bk 247	Cf 98 Cf 251	Es 99 Es 252	Fm 100 Fm 257	Md 101 Md 258	No 102 No 259	Lr 103 Lr 262									

# Annual Chemistry Day at the Museum

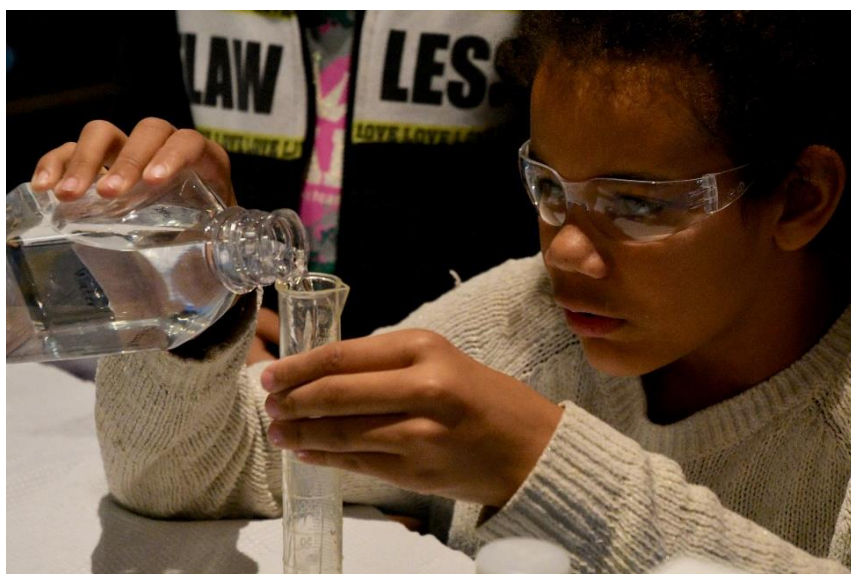


On October 12<sup>th</sup>, 2018 the 33<sup>rd</sup> Annual Chemistry Day at the Kalamazoo Valley Museum drew **550** patrons for an early celebration of National Chemistry Week. Approximately **60** volunteers presented **15** hands-on activities to the attendees. The theme of 2019's National Chemistry Week is marvelous metals, and volunteers did a great job showcasing the theme with activities including a penny demo that heated a zinc coated penny to form brass, shiny pennies, using metals to clean up oil spills, magnets, metal detectors, and iron in cereal. At another table,



members shared the significance of Kalamazoo's designation earlier this year as a National Historic Chemical Landmark for the development of steroid medicines at the Upjohn Company. KACS Volunteers from the Air Zoo, Kalamazoo Valley Museum, Pfizer, Perrigo, Kalsec, Kalexsyn, Western Michigan University, and Kalamazoo College, graciously volunteered their time to share these and other activities with the Kalamazoo community. A big THANK YOU to everyone that worked so hard to make this event a huge success. It is hard to describe the joy one experiences seeing the smile on young children's faces as they begin to understand the concepts behind these demonstrations. Hopefully some of these

curious young attendees will remember this positive event when deciding a college major 5 to 10 years from now and choose the chemical sciences. Anyone willing to present a demo at the Museum Day event in early November 2020 send me an email ([hjude@kalsec.com](mailto:hjude@kalsec.com)) and I will stay in touch as next year's event approaches. The theme of 2020's National Chemistry week is Sticking with Chemistry (Glues and Adhesives).



Questions? Comments? or would like to contribute to this newsletter?

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Send an email to Mike Weslosky, Communication Chair at [communications@kalamazooacs.org](mailto:communications@kalamazooacs.org)

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Visit our website [www.kalamazooacs.org](http://www.kalamazooacs.org)

or





# KACS Newsletter Special Edition: Kalamazoo National Historic Chemical Landmark Dedication Event

## Part 1: Introduction:

As reported in KACS Newsletters last year, we're excited that ACS is awarding National Historic Chemical Landmark (NHCL) designation to the 1950-1990 steroid chemistry work of Kalamazoo scientists.

Information about this designation is available in our 2018 news release:

[https://www.prweb.com/releases/kalamazoo\\_valley\\_museum\\_to\\_display\\_american\\_chemical\\_society\\_s\\_national\\_historical\\_landmark\\_plaque/prweb15794300.htm](https://www.prweb.com/releases/kalamazoo_valley_museum_to_display_american_chemical_society_s_national_historical_landmark_plaque/prweb15794300.htm).

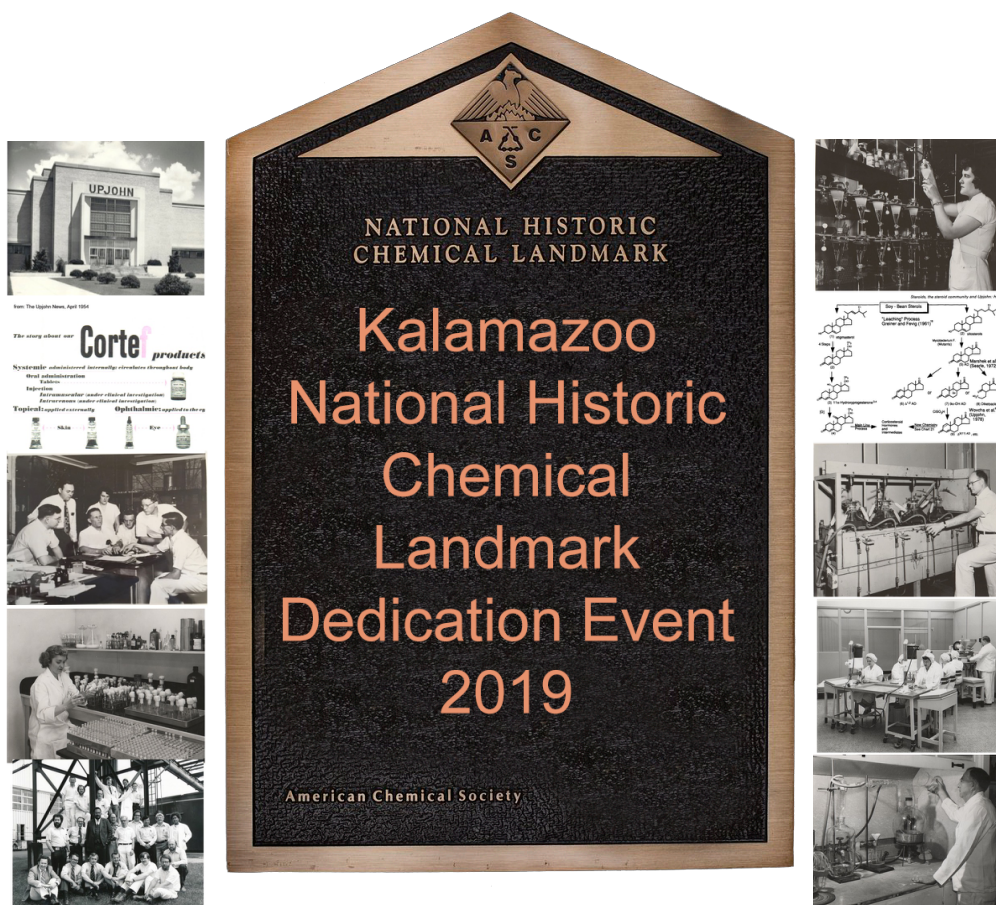
And information about the ACS NHCL program is available on the ACS website:

<https://www.acs.org/content/acs/en/education/whatischemistry/landmarks.html>.

To celebrate this achievement, the Kalamazoo NHCL Organizing Committee has been planning a Kalamazoo NHCL Dedication Event for April-May 2019. The committee has been hard at work putting together a quality event program. Details of the program are shown on the KACS Event webpage here:

<https://www.kalamazooacs.org/event/2019/05/16/chemistry-landmark-dedication.html>.

This KACS newsletter special edition was prepared as a program guide.



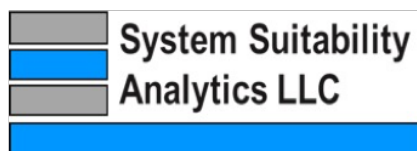


**Part 2: Thank You Sponsors:**

Many thanks go to our sponsors, whose generous contributions are making the Kalamazoo National Historic Chemical Landmark Dedication Event possible.

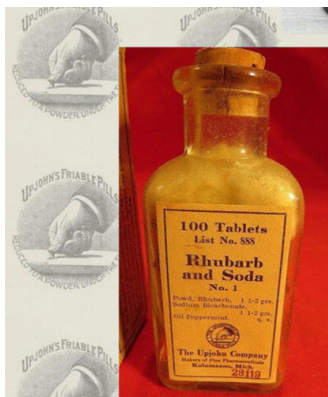


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Kalamazoo VALLEY™  
community college

## **Part 3: Kick-Off Events**



**14 April 2019, 1:30pm**  
**Jeremy Winkworth**  
**Most Unusual Products of the Upjohn Company**  
**Kalamazoo Valley Museum**

Jeremy is a former Upjohn Company scientist, and webmaster of the historical Upjohn website [www.upjohn.net](http://www.upjohn.net). A great deal of the historical steroid chemistry information that was researched for our Kalamazoo NHCL submission came from Jeremy's website. Jeremy's presentation is part of the KV Museum's Sunday Series. More information is available on the museum's website: <https://kvm.kvcc.edu/theater/sunhistoryseries.html>.

**18 April 2019**  
**The Story of Steroids**  
**Pfizer Portage Manufacturing Site**

Dr. John Manski, Director, Process & Product Technology, is organizing a mini-symposium for Pfizer colleagues presenting the past, present and future of steroid chemistry in



Kalamazoo. John is an original member of our NHCL Organizing Committee. Building on the historic steroid chemistry work of Upjohn Company scientists, Kalamazoo Pfizer scientists continue today making breakthrough discoveries. Because of the proprietary nature of the work that will be presented, this symposium will not be open to the public, but all Pfizer colleagues are highly encouraged to attend. Please contact John Manski for more information.



**16 May 2019, 1-3pm**  
**Open House**  
**Bridge Organics Co.**  
**311 W. Washington St., Vicksburg, MI 49097**

Our good friends at Bridge Organics are celebrating the NHCL Dedication by throwing an open house. Stop by their facility in Vicksburg to see the latest in chemistry R&D going on in Kalamazoo. And take the opportunity to meet and speak with some of the chemists who were involved in the landmark historic steroid work. For more information, contact Bridge by phone at: (269)649-4300 or via their website at: <http://bridgeorganics.com>.

## Part 4: Landmark Dedication Reception and Dinner

16 May 2019, 6-10pm

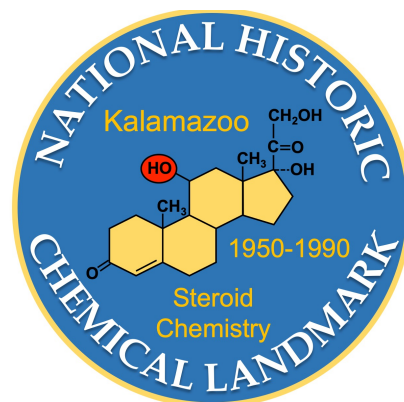
Recognizing the 1950-1990 Kalamazoo Steroid Chemistry Work

Kalamazoo Radisson Hotel, 100 W. Michigan Ave., Kalamazoo, MI 49007

Arcadia Ballroom

What's the first thing our NHCL Organizing Committee decided that we should do to celebrate the Kalamazoo Landmark designation? Throw a party. With opportunity to get together with friends, family and former colleagues of the Kalamazoo chemistry community, to recognize and honor this achievement.

This May 16<sup>th</sup> dinner and reception at the Radisson is that party. We will be having a buffet dinner and cash bar. And we're excited with the special guests that have agreed to make presentations.



Mr. Don Parfet:

The evening will be MC'ed/hosted by Mr. Don Parfet. Don, founder and general partner of The Apjohn Group LLC, retired Upjohn Company officer and great grandson of Upjohn Company founder, William E. Upjohn, is an original member of our NHCL Organizing Committee. In fact, he's been an enthusiastic supporter of this initiative since the very beginning, pre-Organizing Committee, and has been a major driving force for the initiative's success. We are very fortunate that he is willing and able to be the Master of Ceremonies for this event.

Dr. Peter Dorhout:

We're also fortunate to have coming to Kalamazoo, representing the ACS National Office, Dr. Peter Dorhout. Peter is the ACS Immediate Past President, having been President of the organization in 2018. Peter is also Vice President for Research at Kansas State University. He will be speaking to us about ACS and the ACS National Historic Chemical Landmark Program.





Dr. Edward J. Hessler:

We're extremely pleased that Dr. Edward J. Hessler has agreed to attend and speak about the Kalamazoo steroid chemistry work. Ed, currently President of Bridge Organics, was Vice President and General Manager of The Upjohn Company's Fine Chemicals Division in 1990. As a synthetic chemist at The Upjohn Company, he was directly involved in the steroid chemistry work in the 1980's, including synthesis of corticosteroids from 17-keto steroids. With his first-hand experience and knowledge, Ed is the perfect choice for helping us remember the landmark steroid chemistry.

Dr. Eric Matteson:

When we submitted the NHCL application in 2017, ACS asked if there were any related significant anniversaries that would be occurring about the time of our 2019 planned dedication event. The one that stood out is that 2019 is the 70<sup>th</sup> anniversary of the 1949 Mayo Clinic studies that demonstrated cortisone was a safe and effective medicine, for treating inflammatory diseases like rheumatoid arthritis. It was that medical breakthrough that sent The Upjohn Company in earnest, down the path of steroid chemistry discovery and product development. Given that anniversary, our Organizing Committee thought it would be great to have our keynote presentation come from someone familiar with the Mayo Clinic work.

Enter Dr. Eric Matteson, M.D., of the Mayo Clinic College of Medicine, Division of Rheumatology and Department of Health Sciences Research. Upon finding that Eric is co-author of a very interesting paper entitled: Rheumatology Practice at Mayo Clinic: The First 40 Years – 1920 to 1960 (*Mayo Clin Proc.*, 85(4), e17-e30, April 2010), which discusses the Mayo cortisone work of the late 1940's, we reached out to him regarding potentially being our keynote speaker. To our great pleasure, turns out Eric did a residency in Kalamazoo early in his career, and he immediately agreed.



Eric's keynote presentation will be: The Discovery and First Use of Cortisone for Rheumatoid Arthritis at Mayo Clinic. We look forward to seeing him here in the Zoo in May.



## Words of Congratulations:

A number of local chemistry community dignitaries have also kindly agreed to offer some words of congratulations at the dinner/reception, including:

Dr. Catherine Knupp, President of R&D, Zoetis,  
Mr. Ronald Perry, Kalamazoo Site Leader, Pfizer,  
Dr. Robert Gadwood, CEO and CSO, Kalexsyn,  
Mr. Bill McElhone, Director, Kalamazoo Valley Museum, and  
Dr. Tony Taraszka, retired VP, Control Division, The Upjohn Company.



The involvement of so many Kalamazoo chemistry community leaders will truly help make this a special event.

And did we mention the buffet dinner and cash bar? This event provides a great opportunity for some socializing, catching up with friends and colleagues, and making new acquaintances. Attendees will also receive special commemorative mementos.

All this for only \$20 per person (includes dinner, cash bar not included).

**Tickets may be purchased via a PayPal link on the Kalamazoo ACS webpage:**

**<https://www.kalamazooacs.org/event/2019/05/16/chemistry-landmark-dedication.html>. We highly recommend purchasing tickets to this event soon.**

Seating is limited, ticket sales have been brisk, and we need to provide the Radisson a headcount in advance, so will not be able to sell tickets at the door.

A note for those who have already purchased tickets. Your emailed receipt from PayPal serves as your ticket. If you did not save that email, no worries. We will have a list of ticket purchasers for checking in attendees at the Radisson Arcadia Ballroom entrance.



## **Part 5: Landmark Dedication Chemistry Symposium and Ceremony:**

**17 May 2019, 7:30am-4pm**

**Chemistry in Kalamazoo - Yesterday, Today and Tomorrow**

**Kalamazoo Valley Museum, 230 N. Rose St., Kalamazoo, MI 49007**

**1<sup>st</sup> floor Atrium & Mary Jane Stryker Auditorium**

When the Organizing Committee started planning the local dedication event early in 2018, we knew right from the start that it would be a great opportunity to showcase not only Kalamazoo chemistry history, but also some of the excellent chemistry work going on in Kalamazoo today and looking into the future.

We saw a one-day symposium at the Kalamazoo Valley Museum, free and open to the public, with multiple speakers from the Kalamazoo chemistry community as a very special way to help celebrate the National Historic Chemical Landmark Dedication. Our proposal was met with great support.

The theme of the symposium is Chemistry in Kalamazoo – Yesterday, Today and Tomorrow. The morning session will focus on “yesterday”, with presentations covering different aspects of the Kalamazoo 1950-1990 steroid chemistry work. The afternoon session will focus on “today and tomorrow”, with presentations highlighting current and future chemistry work going on in various Kalamazoo industrial and academic organizations. In between the two sessions will be the formal Kalamazoo National Historic Chemical Landmark dedication.

Dr. Thomas Runge

Symposium Organizer and Moderator:

Tom has been involved in the Landmark initiative right from the beginning, helping write our Landmark proposal, providing a letter of support, and recruiting others to write support letters. He has co-lead the NHCL Organizing Committee. And was named the 2019 Kalamazoo ACS Local Section Volunteer of the Year. He is a well-respected chemist and group leader from the Upjohn-Pfizer Chemistry Divisions, who now has his own consulting firm. Tom has put together a high-quality program, with speakers from local chemistry industry and academia.



Symposium Morning Session, 7:30 – 11:00 am

The theme of the morning session is “Chemistry in Kalamazoo - Yesterday”, with speakers focusing on the 1950-1990 steroid chemistry work being honored with the ACS Landmark designation. This session truly has an all-star line-up of speakers.

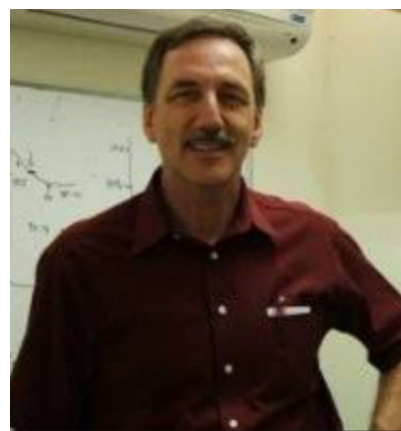


Dr. John McCall:

We are very fortunate that John is willing and able to participate in this symposium, speaking about the historic steroid medicinal chemistry. John was a part of the Upjohn Medicinal Chemistry group in the 1980's responsible for developing next generation steroid medicines. He went on to positions of increasing responsibility with Pharmacia and Pfizer before starting his own consulting firm. John holds 54 US patents and has over 60 technical publications.

Dr. J. Greg Reid:

We're also fortunate that Greg can participate. Greg worked in Chemical Development at Upjohn, then co-founded American Advanced Organics, before moving on to his current position, Principal Consultant at ChemDev Solutions. Greg's expertise in solving important technical problems in chemical processes makes him who we want to speak about the historic steroid process chemistry.



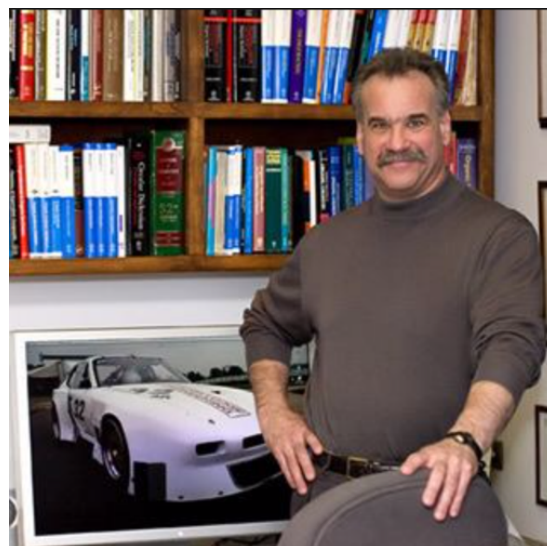
Dr. William Kovats:

We're also happy that we were able to convince Bill to speak about the historic steroid process engineering. Bill was a chemical engineer in the Upjohn Fine Chemicals group, and most recently just retired from his position as Director, Process & Product Technology at the Pfizer Kalamazoo (Portage) Site. Bill has been involved in this landmark initiative from the start, helping prepare our submission to ACS. Check out Bill in 1990 helping install the hydrocortisone sculpture outside Building 91 at the Portage site.



Prof. Scott E. Denmark:

From the very beginning of planning this symposium, we knew who we wanted as the keynote speaker. And we're very pleased that Scott accepted our request. Scott, who is a Fellow with the American Chemical Society, the Royal Society of Chemistry and the American Academy of Arts and Sciences, has a long, connected history with the steroid chemistry work being recognized. He worked as a consultant for Upjohn during the 1980's making valuable contributions to synthesis of new steroid medicines. He got involved in this landmark initiative right from the start, writing a letter of support for our nomination package. The importance of steroid chemistry to the field of organic chemistry in general is discussed in Scott's recent paper: Organic Synthesis: Wherefrom and Whither? (Some Very Personal Reflections) (*Isr. J. Chem*, 58, 61-72, 2018). We look forward to Scott's presentation entitled: The Gleanings and Impact of Steroid Research on Chemistry and Society.



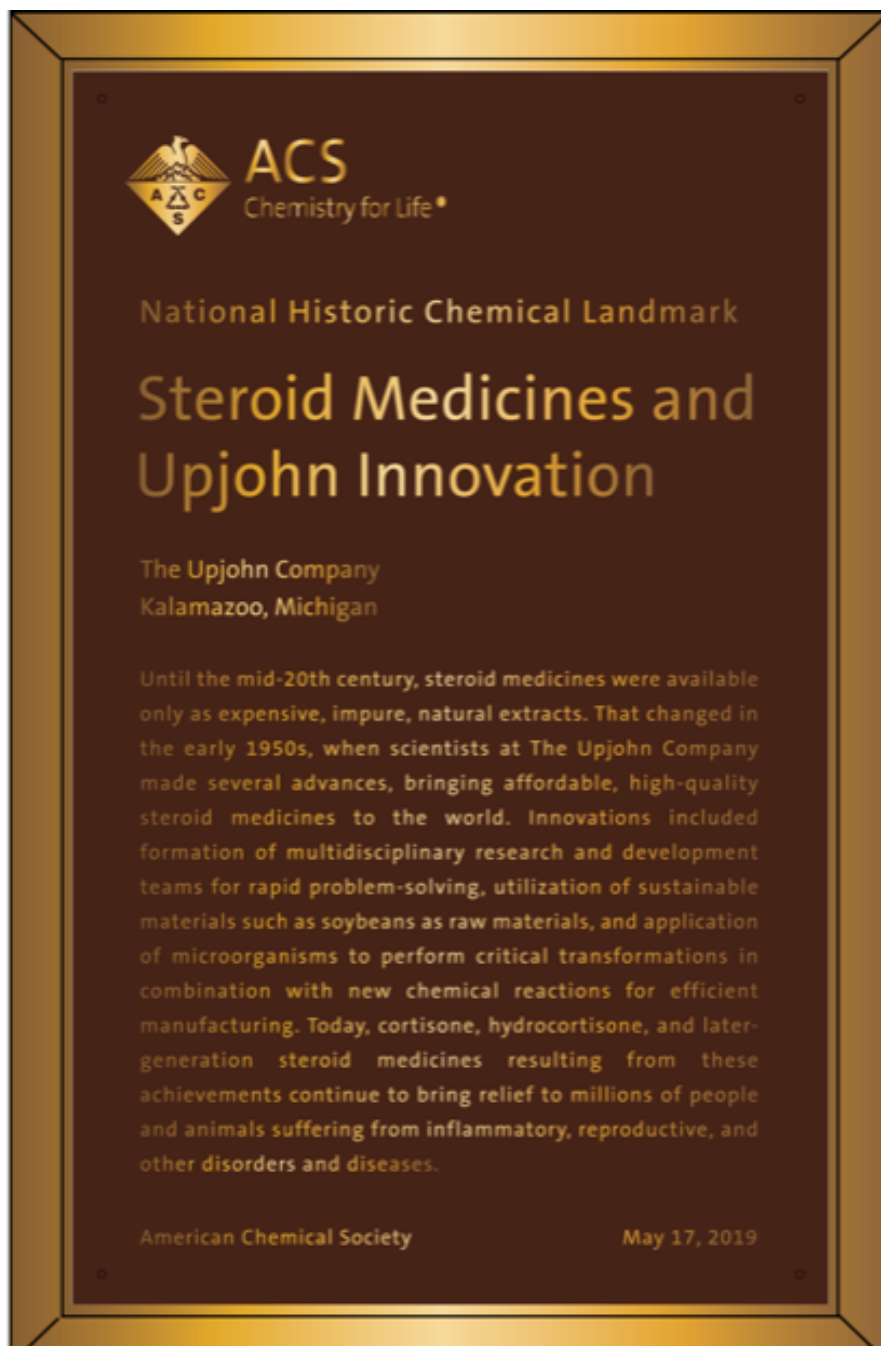
Dr. Frederick J. Antosz, Dr. Tom Miller, Dr. Verlan VanRheenen, Dr. Jay Campbell, Doris Scheffel Symonds:

Among the innovations being recognized with this historic chemical landmark designation is the formation of multidisciplinary research and development teams for rapid problem-solving. We will be finishing out the symposium morning session hearing from five scientists who were involved in those teams in the 1970's and 1980's. This panel discussion on analyst, chemist, microbiologist, engineer & business team culture, courtesy of Fred, Tom, Verlan, Jay and Doris, is entitled: Steroid Stories.



Official National Historic Chemical Landmark Dedication, 11:00 – noon

Between the symposium morning and afternoon sessions will be the formal National Historic Chemical Landmark dedication ceremony, with dignitaries from the American Chemical Society and the Kalamazoo Valley Museum on hand. And as special guests, Mayor Bobby Hopewell of Kalamazoo and Mayor Patricia Randall of Portage. The dedication will take place in the museum atrium, and will involve presentation of the NHCL bronze plaque to the museum for permanent display. This ceremony is open to the public, and it would be outstanding to have a crowd on hand.





Symposium Afternoon Session, 1:00 – 4:00 pm

The theme for the symposium afternoon session is “Chemistry in Kalamazoo - Today and Tomorrow”. With speakers showcasing current and future Kalamazoo chemistry work.

Dr. Carl Deering,  
Pfizer:

Carl is Senior Manager, Process & Product Technology and Senior Research Advisor, at the Pfizer Kalamazoo (Portage) site. Among his wealth of chemistry research experience has been involvement with recent and current steroid chemistry development in Kalamazoo, such as Enviero™, Pfizer’s new green chemistry progesterone.



Kristi Tullis,  
Western Michigan University:

Kristi is a chemistry graduate student at WMU, where she is President of the Chemistry Graduate Student Association. Earlier this year, Kristi was a presenter at the Emerging Researchers National Conference in STEM, in Washington, D.C.

Dr. Timothy Stuk,  
Zoetis:

Tim is a Research Fellow in the Pharmaceutical Sciences Chemistry Department of Zoetis R&D. Tim, a recognized leader in the area of pharmaceutical chemistry research and development, is co-author and co-inventor of numerous chemistry-related technical papers and patents.







Bridget Lorenz Lemberg,  
Forensic Fluids Laboratories:

Bridget is Founder, Laboratory Director and Forensic Toxicologist at Forensic Fluids Laboratories, which specializes in oral fluid drug testing. She is a pioneer and recognized authority in the application of LC/MS/MS for oral fluid sample matrix testing, with numerous published papers on the subject.

Prof. Dwight Williams,  
Kalamazoo College:

Dwight is the Roger F. and Harriet G. Varney Assistant Professor of Chemistry at Kalamazoo College. He is a very popular research advisor and author of numerous papers on natural product and green chemistry applications, his main research interests. Dwight is also a very active member of the Kalamazoo ACS Local Section having graciously served as a Project SEED student mentor annually.



Dr. Donald Berdahl,  
Kalsec:

Don is Executive Vice President of Research Strategy and Chief Technical Officer at Kalsec. He is a well-published, recognized leader in the area of lipid oxidation and antioxidants, and is co-inventor for numerous patents related to food preservation.

Dr. Brian Eklov,  
Kalexsyn:

Brian is the Director of Chemistry for Kalexsyn. His chemical expertise includes organic chemistry structure elucidation. He is a recognized leader in the area of NMR applications. He has also been involved in collaborations targeting development of academic discoveries into marketable reagents. Brian was also just named Chair Emeritus of the Kalamazoo ACS local section, an honorary position created by local section Chairs, Past-Chairs and Chair-Elects, in appreciation of his mentorship.



The afternoon session will be rounded out by a speaker from Bridge Organics, yet to be named. Then we're thinking we should all head over to a local establishment, also yet to be named, for socializing and networking.

Never before has there been this opportunity to learn about, in one day, the diverse and exciting chemistry research, development and application going on right here in Kalamazoo.

We see this May 17th Kalamazoo Chemistry Symposium being of interest to everyone in Kalamazoo, not only chemists, and hope for a good turn-out. The symposium is free and open to the public. A specially designed pin will be available for all attendees to commemorate the event.

## Part 6: Kalamazoo National Historic Chemical Landmark Organizing Committee:

The journey to gaining National Historic Chemical Landmark recognition for Kalamazoo steroid chemistry work, began in the spring of 2017 when two events coincided unexpectedly.

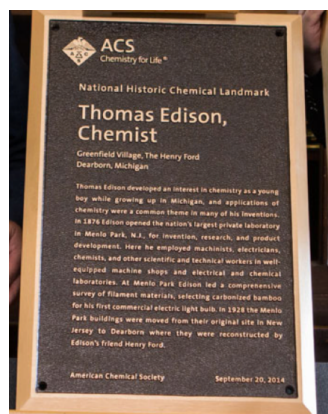
First, was the discovery of a paper published in 1992 in the scientific journal *Steroids* (volume 57, pages 593-616), entitled - *Steroids, the steroid community, and Upjohn in perspective: a profile of innovation*. This well-written article by Dr. John A. Hogg, who retired in 1981 from The Upjohn Company as Director of Experimental Sciences and Therapeutics, reads like a novel explaining in detail the truly innovative, world-class chemistry that was discovered and developed in Kalamazoo from the 1950s to the 1990s.

### Steroids, the steroid community, and Upjohn in perspective: a profile of innovation

John A. Hogg\*

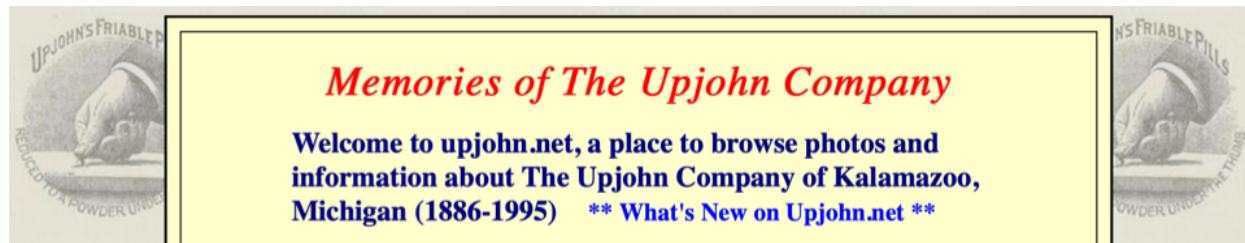
Experimental Sciences and Therapeutics, The Upjohn Company, Kalamazoo, Michigan, USA

The announcement in 1949 at the Mayo Clinic of the dramatic effect of cortisone in alleviating the symptoms of rheumatoid arthritis triggered a competitive worldwide research and development effort directed toward a single goal, the practical synthesis of the rare corticosteroids. The confluence of an extraordinary coalescence of multiple events and circumstances in the growth of the Upjohn Company with the Mayo discovery, inclusive of a pioneering role in the steroid field, conspired to create an environment ripe for innovation. The breakthrough, which gave Upjohn an early competitive edge, followed with startling swiftness. A common mold of the genus *Rhizopus* was found to introduce enzymatically an 11 $\alpha$ -hydroxyl group directly into the female hormone progesterone, which had just been synthesized from the soybean sterol stigmasterol—a one-step solution to the known multistep alternatives for 11 $\alpha$ -oxygenation. Retrospective analysis of this event in perspective with other key developments before and after at Upjohn and in the steroid community reveals a striking profile of ongoing innovation. A parallel scenario in kind was repeated at Upjohn a quarter century later. The sister soybean sterol sitosterol was radically degraded microbiologically and concurrently oxygenated in ring C to produce 9 $\alpha$ -hydroxyandrostenedione, an alternative key intermediate for corticoid synthesis. New chemical processes, highly integrated with existing processes, assured the continuation of Upjohn's leading role in steroid hormone production. (*Steroids* 57:593-616, 1992)



Then second, while viewing the Thomas Edison Menlo Park Lab exhibit at the Henry Ford museum, the ACS National Historic Chemical Landmark bronze plaque there honoring Edison's work was spotted, and curiosity drove learning more about the ACS Historic Landmark program.

These two events happening together created the realization that the Kalamazoo steroid chemistry work should be part of the National Historic Chemical Landmark program. From there, the summer of 2017 was spent researching the past work, putting together a proposal. Much of the proposal content came from John Hogg's review article, and the wealth of historic Upjohn information made available by Jeremy Winkworth on the website [www.upjohn.net](http://www.upjohn.net). The success of the application was due in large part to them documenting and making available that history.



Also very helpful, were letters of support provided by Dr. Edwin Vedejs (University of Michigan) and Dr. Scott E. Denmark (University of Illinois at Urbana-Champaign). The Kalamazoo Valley Museum offering to be the public landmark sponsor was also key. As was support provided by The Apjohn Group.

The application was submitted by the Kalamazoo ACS Local Section in July 2017, and it flew through the ACS National review process with first-round approval coming in November 2017 (providing a testament to the recognized importance of the work). We spent 2018 expanding our planning committee and working with ACS and the Kalamazoo chemistry community, to put together a worthy dedication event and commemorative materials. Now here in 2019, we are very proud to see this National Historic Chemical Landmark dedication recognizing the work of Kalamazoo scientists. We think that all of Kalamazoo should be proud.

Kalamazoo NHCL Planning Committee:

Luke Chadwick (Kalamazoo ACS)  
Linda Depta (Kalamazoo Valley Community College)  
Lydia Hines (Kalamazoo ACS)  
Annette Hoppenworth (Kalamazoo Valley Museum)  
Lexie Kobb (Kalamazoo Valley Museum)  
John Manski (Pfizer, Kalamazoo)  
Bill McElhone (Kalamazoo Valley Museum)  
Don Parfet (Apjohn Group)  
Tomasz Respondek (Zoetis, Kalamazoo)  
Sophie Rovner (ACS National Historic Chemical Landmark Committee)  
Tom Runge (Kalamazoo ACS)  
Steve Seceast (Kalamazoo ACS)  
Ed Thomas (Apjohn Group)  
Mike Walsh (Kalamazoo College)