

# THE OCTAGON

## Lehigh Valley ACS November Section Meeting Thursday, November 9th, 5:00-9:00pm *Remembering Ned Heindel*



### Welcome !

ACS Local Section  
Lehigh Valley**Thursday, November 9<sup>th</sup>, 2023**

*The Gander Room at Goosemen,  
102 West 4<sup>th</sup> Street, Bethlehem, PA*  
5:00-6:00 – Social/Appys/Cash Bar  
6:00-7:00 – Buffet Dinner

**Lehigh University, Neville 2**

7:15-7:30 - LVACS business meeting  
7:30-8:00 - Remembrances of Ned  
8:00-9:00 – Lecture: Christophe  
Guillon, Azevan Pharmaceuticals Inc.

LEHIGH  
UNIVERSITY**Lehigh University (venue & schedule details above)****REGISTER** for social/dinner by **Sunday, November 5<sup>th</sup>**

Price (\$20/\$15 students/retirees) one free drink (sponsored) + cash bar

***Inaugural Ned Heindel Memorial Lecture***

“Design and Development of Vasopressin V1a Antagonists  
Derived from a Unique Azetidinone Platform”

**Speaker: Christophe Guillon, Principal Research Scientist,  
Azevan Pharmaceuticals Inc.**



*The November 9th Section Meeting will be devoted to reminiscences of Ned Heindel's career and the inaugural Heindel Memorial Lecture at Lehigh University. LVACS continues to mourn his passing on June 27th, 2023, at age 85. He is greatly missed. Morning Call [obituary](#).*

Please note: The 2nd floor Gander Room is not accessible by elevator.

Metered Parking in Bethlehem Parking Authority's [New Street Garage](#), Lehigh's [Farrington Garage](#) outside of the gated area or street parking on Packer Avenue.

Share this page on your SM: <https://lvacs.org/november-2023-section-meeting>

MEETING CONTACT: Steve Boyer ([sboyer11@esu.edu](mailto:sboyer11@esu.edu))Post this [flyer](#) everywhere!



## LVACS Events Calendar

**November 2023**



### Section Meeting

Thursday, November 9th, 5:00-9:00pm

Lehigh University

Remembering Ned Heindel

Inaugural Ned Heindel Memorial Lecture

“Design and Development of Vasopressin V1a Antagonists  
Derived from a Unique Azetidinone Platform”

Speaker: [Christophe Guillon](#), Azevan Pharmaceuticals Inc.

[REGISTER](#)

CONTACT: Steve Boyer ([sboyer11@esu.edu](mailto:sboyer11@esu.edu))

**HAPPY HOLIDAYS FROM LVACS!**



**January 2024**

### Section Meeting (Hybrid)

Thursday, January 25th

Moravian University

AI in Chemistry: the use of ChatGPT and the Wolfram Plug-In

Speaker: Jason Sonnenberg, Wolfram Alpha

CONTACT: Stephen Dunham, ([dunhams2@moravian.edu](mailto:dunhams2@moravian.edu))

**MORAVIAN  
UNIVERSITY**

February, March and April 2024 events will be announced soon!

Stay tuned to [www.lvacs.org](http://www.lvacs.org) for all the latest!

The format of our website, [www.lvacs.org](http://www.lvacs.org), is undergoing some refreshment! Look for new features such as the live LVACS Google calendar now residing on the Meetings-and-Events page: all events should be accessible including links to further information and registration. More to come this fall.

**LVACS is now on Instagram!** So, look us up at <https://www.instagram.com/lehighvalleyacs/>  
Our team leader is Abby Stocker, a senior chemistry major at DeSales University and LVACS at-large Executive Committee member. Thanks, Abby!



Nanotechnology (QDs) won Nobel Gold this fall why not celebrate with some nano Au?



## Also In This Issue...

3. Inaugural Ned Heindel Memorial Lecture Abstract and Speaker biography.

4-5. LVACS NCW Events Round-up.

6. October 12<sup>th</sup> Section Meeting at Albright: Report.

7. LVACS HS Teaching and Foundation in Chemistry Award Presentations.

8. Students enjoy the October 18<sup>th</sup> Graduate School & REU Fair.

9. ACS Elections: New President elect Dorothy Phillips visited the Lehigh Valley in 2016.

10-11. Career Pages: ACS Resources for Students and New Faculty.

12. 2023 Executive Committee.

Octagon CONTACT: Nigel Sanders, LVACS secretary and newsletter editor, [nigel53.sanders@gmail.com](mailto:nigel53.sanders@gmail.com)

# Inaugural Ned Heindel Memorial Lecture

To honor the memory of the late Ned Heindel, emeritus professor of chemistry, Lehigh University, former ACS President (1994) and long-time supporter of the Lehigh Valley local section, we announce the first of an annual lecture series. Further information about the series will be released at the November meeting.

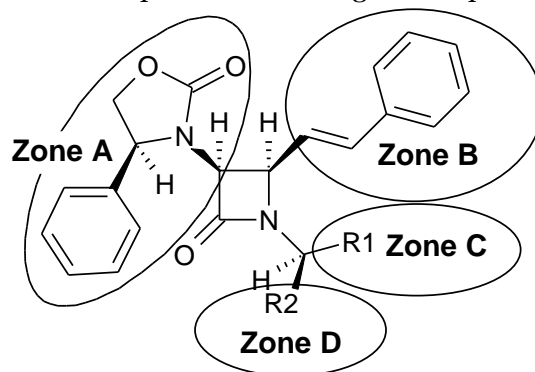


## “Design and Development of Vasopressin V1a Antagonists Derived from a Unique Azetidinone Platform”

Christophe Guillon, Principal Research Scientist, Azevan Pharmaceuticals Inc.

### Abstract:

Vasopressin (AVP), which is released as a neurotransmitter in the brain and a neurohormone in the blood stream, plays a significant role in disorders ranging from anxiety/depression to impulsive aggression through congestive heart failure and more. These diverse effects are mediated through the action of AVP at specific receptor subtypes termed V1a, V1b, and V2. For medicinal chemists, the design of candidate pharmaceuticals that show selectivity to one of the vasopressin receptors represents an attractive therapeutic objective. Azevan Pharmaceuticals initiated a human V1a antagonist program to synthesize a selective antagonist with  $IC_{50} < 10$  nm that is orally bioavailable, penetrates the blood brain barrier, and through ADMET and preclinical testing, is a candidate for human clinical evaluation. These objectives were achieved through design, synthesis, and testing of compounds derived from a unique azetidinone platform where four sensitive topological regions of activity were identified. Structure-activity relationships in V1a binding will be presented.



We will highlight the synthetic approaches to a few subsets of compounds. The flexible and versatile strategy employed allowed us to generate more than 800 analogs which in turn led to the identification of multiple hits. From those hits, 2 lead compounds (SRX246 and SRX251) emerged that will be discussed in more detail. We will conclude by describing where those two drug candidates stand in the drug development process.

### Brief Biography of Christophe Guillon:

When I first joined Dr Heindel's research group at Lehigh University, I became involved with two distinct research projects. Both involved the preparation of synthetic targets as potential drugs. The first covered the preparation of psoralen compounds for PUVA (Psoralen + UVA) treatment and the second the synthesis of guanidine and triazole derivatives as NOS inhibitors with potential usefulness to treat inflammation, a problem associated with a number of disease states. Through collaboration with other chemists but also biologists, we developed a series of novel compounds for which we published scientific articles but also filed and were granted several patents. My current research endeavors are both with Azevan Pharmaceuticals Incorporated and Lehigh University. Azevan is developing novel therapeutics for stress, mood, and behavioral disorders. Our lead clinical candidates are first-in-class orally active, small molecule, GPCR-targeted drugs which specifically target a vasopressin receptor. They represent a unique mechanism of action to address stress-related disorders such as self-abuse treatment, aggression/rage control, anxiety/PTSD (post-traumatic stress disorder), depression and intermittent explosive disorder (IED). [For more details see Christophe Guillon's [CV](#)]



## NCW 2023: EVENTS ROUND-UP!

THE  HEALING  POWER  
OF CHEMISTRY 

October 15–21 | 2023 | #NationalChemistryWeek



National Chemistry Week 2023 (NCW; October 15-21) was celebrated in the Lehigh Valley with section-wide events at [Da Vinci Science Center](#) and at the [Allentown Public Library](#) as part of the [PA Migrant Education Program's annual "Lights on Afterschool."](#) On Saturday, October 21st, LVACS members Guido Pez, Kurt Stork, LVACS Secretary Nigel Sanders and LVACS NCW Coordinator and Chair-elect Philip Elias demonstrated *The Healing Power of Chemistry* at Da Vinci Science Center with about 50 visiting young scientists and their parents with Build-a-Better-Bandage, Warm Up to Some Cool Reactions and Red Cabbage Indicator. Then, on the following Monday, October 23rd, which just happened to be Mole Day (!), Philip and Nigel introduced the  $H_2O_2$  decomposition to 25 students in the MEP from a wide range of countries. Take a look at the links above: this could be YOU with the magic chemistry wand next year!

National  
Chemistry  
Week  
2023

October 21, 2023

Da Vinci Science Center

ACS Local Section  
Lehigh ValleyDA VINCI  
SCIENCE  
CENTER™

Open for Exciting Possibilities™





ACS  
Chemistry for Life®

NEWSLETTER OF THE LEHIGH VALLEY SECTION  
OF THE AMERICAN CHEMICAL SOCIETY

NOVEMBER 2023  
VOL. 106, NO. 9

# NCW 2023: EVENTS ROUND-UP!

## THE HEALING POWER OF CHEMISTRY



October 15-21 | 2023 | #NationalChemistryWeek



### National Chemistry Week 2023



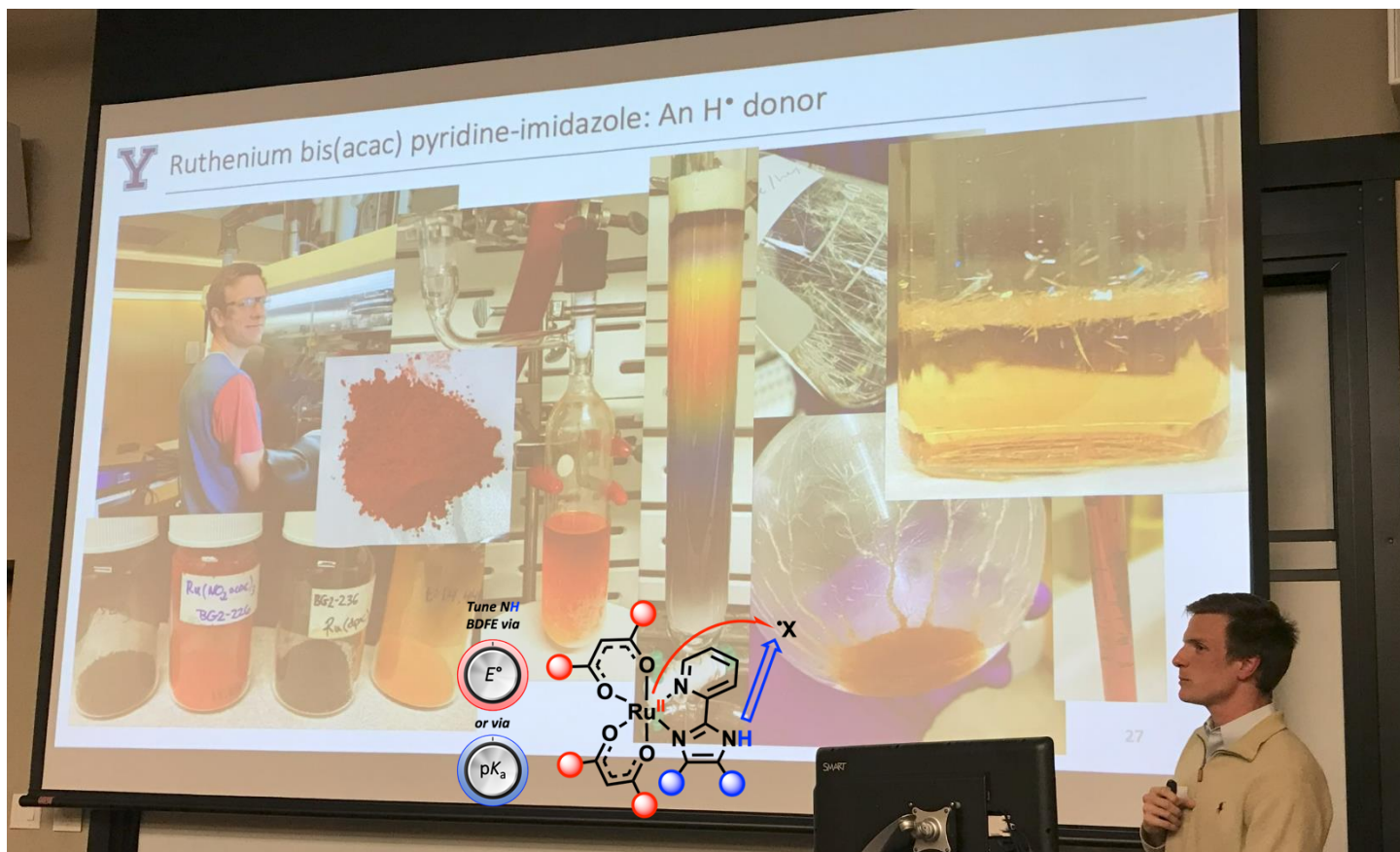
October 23rd  
It's Mole Day  
at the  
Allentown  
Public  
Library!



Pennsylvania is the only state in the nation to have state funding for migrant education. The PA Migrant Education Program (MEP) works to ensure that all migrant students achieve challenging academic standards.  
<https://www.education.pa.gov/K-12/Migrant%20Education/Pages/default.aspx>



## OCTOBER SECTION MEETING AT ALBRIGHT COLLEGE BROUGHT OUT THE COOL COLORS OF FALL AND INORGANIC CHEMISTRY!



Our October 12th Section Meeting at Albright College featured Benjamin Groff of Yale University speaking on the topic of "Steering the selectivity of hydrogen atom transfer (HAT) reactions: bond strengths and polar effects." Ben very nicely positioned [his work](#)\* in the context of our usual notions of pKa and the reduction potential, E, of the H-X bond being cleaved and their joint effects on the kinetic barrier to the HAT reaction. He also gave the numerous student attendees some insight into his own student research journey and what he loves about his current work in inorganic chemistry: all the beautiful colors! Relive the event through a [slideshow](#).

Ben [benjamin.groff@yale.edu](mailto:benjamin.groff@yale.edu) has roots in the Lehigh Valley area having been born and raised in Lancaster, PA. He then attended the University of Virginia, where he majored in mathematics and chemistry. During his time there, he worked in the lab of Prof. Rebecca Pompano, researching immune response in lymph node tissue. Interested in pursuing research further, Ben began a PhD program at Yale after graduating in 2018. He is currently in his 5th year, studying inorganic chemistry in the lab of Prof. James Mayer. Ben is studying the kinetics and thermodynamics of multi-site concerted proton-electron transfer (MS-CPET) reactions in ruthenium(II) complexes.

\* Benjamin D. Groff, Mauricio Cattaneo, Scott C. Coste, Chloe A. Pressley, Brandon Q. Mercado and James M. Mayer, Yale University, 2023.



## Lehigh Valley Section Awards Conferred for Excellence in High School Teaching and Foundation in Chemistry

At the October Section Meeting we also got a chance to celebrate two more of our 2023 LVACS awardees: our High School Teacher-of-the-Year, Audrey Smeltzer and our Foundation in Chemistry scholarship winner, Elizabeth Sterner: congratulations to you both! We were also fortunate to be able to host their guests at dinner. Relive the event through a [slideshow](#).



LVACS Awards Chair John Freeman (far left) and LVACS treasurer Sherman Cox (far right) greet Foundation in Chemistry winner Elizabeth Sterner and her parents and Excellence in High School Teaching awardee Audrey Smeltzer and her fiancée.



# LVACS YCC FALL CAREER EVENT REPORT

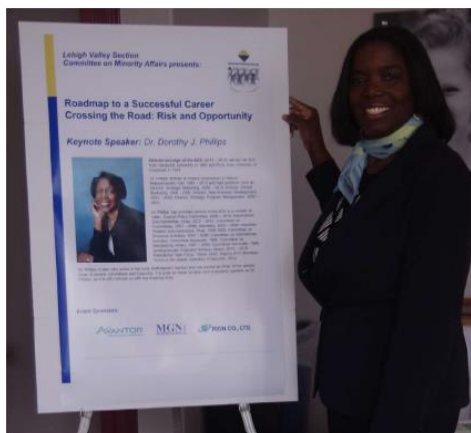
On Wednesday, October 18<sup>th</sup>, 20 students from ESU, Muhlenberg, and Lehigh learned about opportunities in graduate school and through REU programs directly from faculty at 5 institutions. Here are some photos from LVACS YCC Chair Steve Boyer, [sboyer11@esu.edu](mailto:sboyer11@esu.edu).





## ACS Elections Flash-back: New President-elect Dorothy Phillips visited the Lehigh Valley in 2016

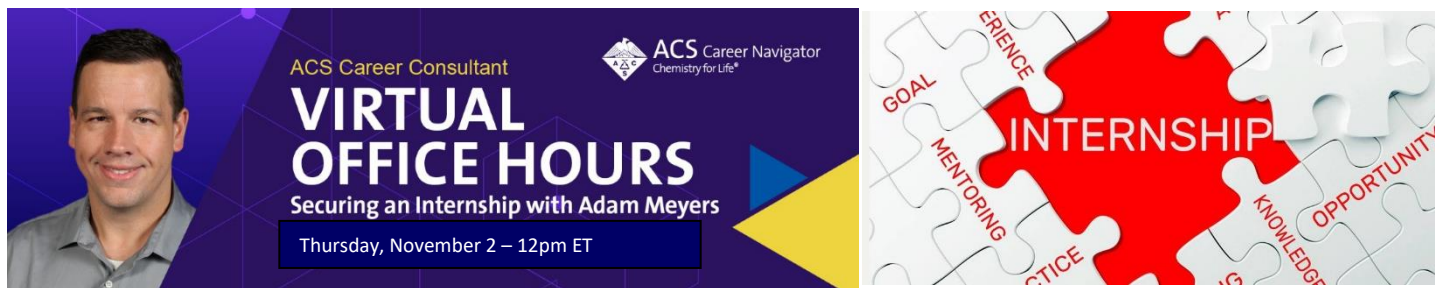
Dorothy Phillips, PhD., newly elected ACS President-elect for 2024, visited the Lehigh Valley Section to speak at a Committee on Minority Affairs luncheon and networking event held February 20<sup>th</sup> 2016 at Lehigh University and hosted by Celia Willams, 2016 LVACS Chair-elect and CMA Chair. Dr. Phillips, director-at-large of the ACS at the time, and retired chemist from Waters Corporation, presented *Roadmap to a Successful Career - Crossing the Road: Risk and Opportunity*. She shared her story about the roads she crossed on her courageous journey, her early education during the 1950's and 1960's in the segregated school system in Nashville, Tennessee and being the first African American woman to achieve an undergraduate degree from Vanderbilt University. During the event, the attendees interacted with the speakers during the question-answer session. Thanks to Lorena Tribe for reminding us of this historic event and our congratulations to Dorothy for achieving this latest honor! [Credit: Celia Willams, article in the March 2016 Octagon Newsletter, p.5]



## LEHIGH VALLEY ACS CAREER PAGE

Check out the Career page on our website [lvacs.org/careers](http://lvacs.org/careers) for a wealth of information on the services provided by LVACS to chemists at all stages of their careers. Online courses, 1-on-1 consulting, professional development grants and the [ACS Career Navigator™](#) package are some of the benefits offered to ACS members to assist in planning and executing your career. Greglynn Gibbs, our local section ACS Career Consultant, would be happy to assist any member seeking more information at [greglgibbs@gmail.com](mailto:greglgibbs@gmail.com)

### ACS Virtual Office Hour – Finding & Securing an Internship



Chemistry students: It's about to be intern hiring season - are you prepared? Join ACS Virtual Office Hours on **Thursday, November 2 at 12pm, ET** for expert tips to land that internship! This FREE virtual career guidance session "[Finding and Securing an Internship](#)" is open to ACS members AND non-members, and will feature a presentation led by ACS Career Consultant Adam Myers. You will also get personalized career advice and network in small groups led by ACS Career Consultants. [Register](#) now to reserve your seat!

### ACS New Faculty Workshop

**Next workshop: May 29 - June 1, 2024,  
in Washington, D.C.**

The [New Faculty Workshops](#) focus on sharing and developing essential skills that faculty need to successfully navigate the early years of their research and teaching careers. There is a strong emphasis on implementing active learning strategies in the classroom.

Since 2012, more than 680 chemistry faculty have attended the New Faculty Workshops.

*"Facilitating the ACS NFW is giving back and sharing with a new cadre of faculty my experiences and methods I gathered as an attendee (Fall 2019). Most of the active teaching and learning techniques I implement in my courses were ideas gathered from the workshop and have served to create a conducive learning environment for our diverse student body. The experiences shared by the (Fall 2019) facilitators were eye-opening and instrumental in navigating my early years as a faculty. These, and the diversity nuggets received, are my raison d'etre of facilitating ACS NFW."*

Dr. René Fuanta, NFW Alum, Associate Professor at East Stroudsburg University

Applications available March 1 - April 15, 2024

If you have questions about your eligibility or the application process, please contact us at [nfw@acs.org](mailto:nfw@acs.org).



## ACS Career Resources for Students: Here to Help You Succeed!



*Image credit: Shutterstock/Halfpoint*

ACS has **many and varied resources** dedicated to helping students at all levels of education grow and succeed. The following online resources can help students plan and get started on a career in the chemical sciences. Check them out, and share with the students in your life!

**Careers & the Chemical Sciences:** Explore more than 40 careers in chemistry, academia, government, and nonprofits. Read about the real-life experiences of more than 100 chemists, and get valuable information to help you prepare to enter the job market.

**Internships, REUs, and Co-ops:** The **ACS Get Experience Database** includes research opportunities, internships, and co-ops that provide real-world experience for students who want to pursue a career in the chemical sciences. These opportunities are available globally in private companies, academic institutions, government agencies, and nonprofit associations. For international undergraduate students, the job listings also include multi-national organizations that have internships in many countries around the world.

**ACS Career Consultants:** Not sure where to start on your career search or if you're presenting yourself as well as you could on your résumé or LinkedIn profile? **Career Consultants** provides guidance on skills and opportunities, career plans, résumé review, your online profile, and more.

**ChemIDP Career Planning Tool:** ChemIDP is an Individual Development Plan designed specifically for graduate students and postdoctoral scholars in the chemical sciences. Through immersive, self-paced activities, users explore potential careers, determine specific skills needed for success, and develop plans to achieve professional goals. **ChemIDP** tracks user progress and input, providing tips and strategies to complete goals and guide career exploration.

Also, check out these magazines for additional resources: **inChemistry Magazine** is for undergraduate student members, offering insights on career planning, graduate school, developing professional skills, and academic achievement. **Graduate & Postdoctoral Chemist Magazine** features in-depth advice on developing critical professional skills, career planning, scientific training, and wellness, along with an extensive collection of awards, fellowships, grants, and experiential opportunities.

Visit [www.acs.org/education](http://www.acs.org/education) for all the resources that are available to both students and educators alike. The **ACS Career Navigator**, **C&EN Jobs**, and the **ACS Institute** also are helpful tools for career guidance and support. ACS is here to help students succeed, every step of the way!

LEHIGH VALLEY SECTION OF THE AMERICAN CHEMICAL SOCIETY  
2023 EXECUTIVE COMMITTEEOFFICERS

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[sboyer11@esu.edu](mailto:sboyer11@esu.edu)



Chair Elect:  
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At-large members:  
John Freeman  
Abigail Stocker



The Octagon Newsletter is published by the Lehigh Valley Section of the American Chemical Society to provide information to section members and the public about activities and programs which support the section mission "To elevate the chemical sciences in the Lehigh Valley section for the benefit of our members and our community." Send all queries to the editor at: [nigel53.sanders@gmail.com](mailto:nigel53.sanders@gmail.com)

