American Chemical Society
Susquehanna Valley Section

MARCH 2022 NEWSLETTER

The four hundred and sixty first meeting of the Susquehanna Valley Section of the American Chemical Society will be held on Wednesday, March 9th, 2022 in the Natural Sciences Center, Room 324, on the campus of Susquehanna University in Selinsgrove, PA. The meeting will begin at 7:00 PM and will be preceded by a dinner at BJ's at 5:30pm. The speaker will be Dr. Michael Parra of Susquehanna University.

"The influence of histone diversity on chromatin dynamics in the yeast *Saccharomyces cerevisiae*"

Dr. Michael Parra
Assistant Professor of Chemistry
Department of Chemistry
Susquehanna University
Selinsgrove, PA

In eukaryotic genomes, DNA is packaged with a group of proteins called histones to form chromatin. The basic repeating subunit of chromatin, the nucleosome core particle (NCP), is made up of two copies each of the canonical histones H2A, H2B, H3, and H4. Though compaction allows large amounts of DNA to fit into the relatively small space of the nucleus, it establishes a physical barrier to the DNA template. One mechanism used by cells to disjoin DNA from histones is the incorporation of histone variants (that are functionally and structurally distinct from the canonical histones) into the nucleosome core particle. My research group is interested in the histone H2A variant H2A.Z. H2A.Z has roles in DNA-templated processes such as DNA replication, DNA damage response, and translation. The antifungal drug Rapamycin targets and binds to the target of rapamycin (TOR) signal protein inactivating the signal pathway. The phenotypic effect of inactivation is a disruption of protein translation, nutrient uptake, and cell cycle progression. Sensitivity to rapamycin is often a consequence of defects in one of these processes. In a recent study, we found that H2A.Z deletion leads to rapamycin sensitivity. In another study, we were curious how the cell differentiates H2A from H2A.Z. The two histones share ~65% identity and are deposited by the same enzymes. Misplacement of H2A.Z or H2A can have dire consequences for the cell, often times leading to cell death. We sought to determine which residues were used in differentiating the two histones from one another.

BIOGRAPHY OF DR. PARRA:

Dr. Michael Parra has been a faculty member in the Department of Chemistry at Susquehanna University since 2017. He earned his B.S., M.S. in Biochemistry and his Ph.D. from Washington State University. After graduation, he spent nine months as a postdoctoral fellow in the College of Pharmacy at Washington State University. Following this, he was a Postdoctoral Fellow in the Department of Biochemistry and Biophysics at the University of North Carolina at Chapel Hill. Following his postdoctoral studies, Dr. Parra was a faculty member in the department of Natural Sciences at Heritage University in Toppenish Washington for 5 years. Dr. Parra's experience is predominantly within the areas of chromatin and regulation of DNA-templated processes. Specifically, he is interested in understanding how chromatin

regulates DNA replication and DNA damage response. Dr. Parra utilizes the model organism Saccharomyces cerevisiae in his studies.

DINNER:

The lecture will be preceded by dinner at 5:30 PM at BJ's Steak and Rib House located at 17 North Market Street, Selinsgrove, Pennsylvania. RSVP to Bill Dougherty at doughertyw@susqu.edu or 570-372-4255 by 4:00 P.M. on Monday, March 7, 2022. Dinner will be ordered from the menu. Menu and directions to BJ's can be found at bjsmstreet.com.

DIRECTIONS TO SUSQUEHANNA UNIVERSITY:

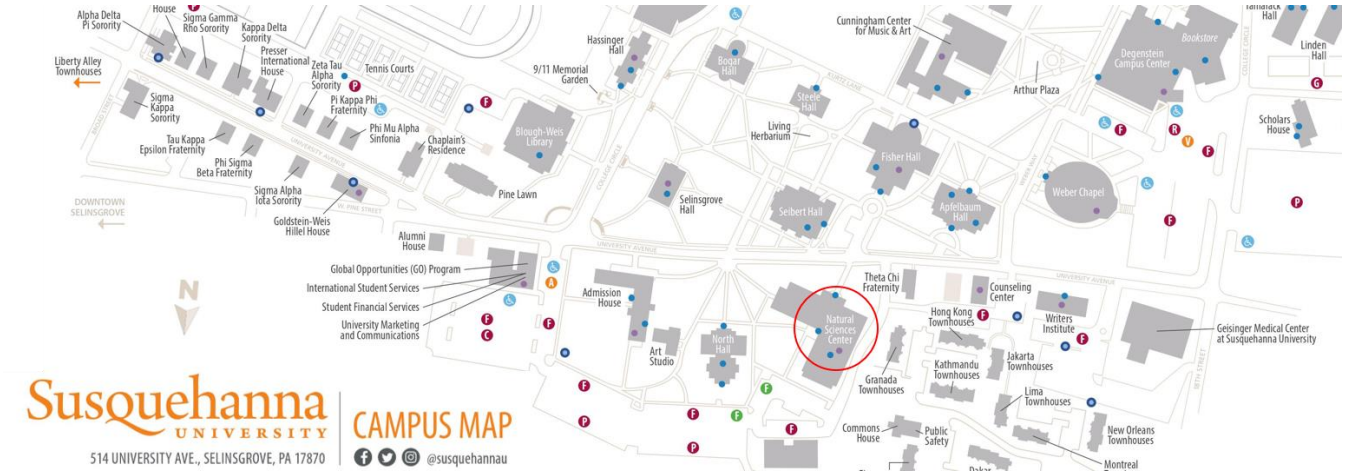
Address: 560 University Avenue, Selinsgrove, PA 17870

From Route I-80 West:
Take the Danville exit, 224. Take route 54 east to Route 11 south towards Selinsgrove. Continue left on Route 11/15 south (continue as directed below from Route 11/15).

From Route I-80 East:
Take the Lewisburg exit, 210A. Take Route 15 south towards Selinsgrove. Turn right onto Route 11/15 south (continue as directed below from Route 11/15).

From Route 11/15:
Follow Route 11/15 south until it becomes Market Street. Turn right onto West Pine Street. West Pine Street becomes University Avenue. Follow the campus map to visitor parking.

A full campus map can be found at Susquehanna University Campus Map. The Natural Sciences Center is designated with the circle on the map below:



DIRECTIONS TO BJ'S:

Address: 17 N Market St, Selinsgrove, PA 17870
Restaurant is on the left on Market St just before Pine St. There is parking behind the restaurant.

SECTION NEWS:

MARM 2022:

Save The Date:

The 50th Mid Atlantic Regional Meeting (MARM) will be held June 1-4, 2022. The meeting is hosted by the Trenton Local Section of the American Chemical Society. Check their website, marm2022.tcnj.edu, for more information.

THE 2020 MEETING OF THE PENNSYLVANIA ACADEMY OF SCIENCE:

The 97th annual PAS meeting will be held on March 25-27 at DeSales University. There will be oral and poster sessions broadly encompassing all fields of science, as well as student presentation awards, graduate school and career panels. See their website, pennsci.org, to register and for additional details.

Established 1924
Pennsylvania
Academy of Science

LOCAL STEM COMPETITIONS:

A list of all STEM competitions for high school students is posted on our website. If you have any questions about the contests or have suggestions for others, please contact either the person indicated on the site or the section webmaster, Ron Supkowski at ronaldsupkowski@kings.edu or 570-208-5900 x5733

JOSEPH PRIESTLEY HOUSE:

Sunday, March 13th, is the opening day of the current season at the Joseph Priestley House in Northumberland. The visitor center is open from 1 - 4 PM and will feature costumed guides and live chemistry shows. For more information, call the house at 570-473-9474

OPEN POSITIONS IN THE LOCAL SECTION:

Do you want to use your talents to help other chemists in the Susquehanna Valley section? Listed below are examples of positions that need to be filled by willing individuals along with websites that give organizing ideas: Current committee chairs can be seen at the local section website.

- WCC (Woman Chemists Committee) Chair
  Help attract, retain, develop, promote, and advocate for women to positively impact diversity, equity and inclusion in the Society and the profession
- Project SEED (Summer Experiences for the Economically Disadvantaged) Coordinator
  Coordinators are responsible for establishing programs, identifying mentors, recruiting students, fundraising, and organizing activities such as field trips

- CH&S (Chemical Health and Safety) Committee Chair
  Help provide authoritative technical resources and mentorship in chemical health and safety for all
- SCC (Senior Chemists Committee) Chair
  Help improve communication among senior chemists, increase the number of senior chemists' groups and the level of their engagement within local sections, and encourage the involvement of senior chemists in programs focused on K-12 education, undergraduate networking, and mentoring
- CCEW (Chemists Celebrate Earth Week) Coordinator
  Help promote the positive role that chemistry plays in the protecting our planet (recyclable plastics, cleaner-burning fuels, phosphate-free detergents, environmental monitoring, and green chemistry initiatives).

If you are interested, contact the section Chair (Allison Saunders, asaunders@lycoming.edu), Secretary (Ronald Supkowski, ronaldsupkowski@kings.edu) or any member of the Susquehanna Valley Section leadership team (executive committee, committee chairs, liaisons).

NATIONAL ACS NEWS:

COVID-19
ACS is committed to helping combat the global COVID-19 pandemic with initiatives and free resources. Learn More at their website acs.org/content/acs/en/covid-19

ACS LEGISLATIVE ACTION NETWORK:
Legislation that may impact the chemical enterprise comes before Congress on a regular basis, and the ACS is committed to keeping its members informed and encouraging them to weigh in on high-priority issues. To see the position of the ACS on many legislative issues visit the ACS LAN website:
www.acs.org/content/acs/en/policy.html

To find out how to become more active in ACS advocacy activities, see the website:
www.acs.org/content/acs/en/policy/memberadvocacy/advocacy-tools.html

To join ACS' grassroots legislative advocacy network, ACT4CHEMISTRY, which will allow you to stay up to date on policy issues and contact legislators on behalf of chemistry and chemists, go to their website, follow the Act4Chemistry Twitter account, or email advocacy@acs.org.

Act4Chemistry Advocacy Issues. To take action go to the website
acs.org/content/acs/en/policy/memberadvocacy/issues.html#/takeaction

Ask the Senate to confirm science nominees for key positions & consider a chemist for the Chemical Safety Board
In 2021, the Biden Administration nominated three chemists to three important parts of government. Dr. Geri Richmond has been nominated as the Department of Energy's (DOE's) Under Secretary for Science and Energy. Dr. Asmeret Berhe has been nominated as the Director of the DOE Office of Science. Additionally, Dr. Laurie Locascio has been nominated to lead the Department of Commerce's National Institutes of Standards and Technology (NIST). ACS asks the Senate to vote on their nominations. ACS is also asking Congress to encourage the nomination of someone with experience

and a background in chemistry for the remaining vacancy on the U.S. Chemical Safety and Hazard Investigation Board

Ask Congress to include ACS's priorities in wider U.S. innovation legislation package
ACS is encouraging the inclusion of dedicated support for sustainable chemistry and authorization of new helium conservation measures into the wider Science and Innovation package Congress is aiming to pass. Language supporting sustainable chemistry and the conservation of the critical material helium has passed the House. Inclusion in the final package that could become law will depend on action by scientists like you to ensure Members are aware of the importance of supporting sustainable chemistry and conserving nonrenewable helium.

Ask Congress to support the Research Investment to Spark the Economy (RISE) Act
We encourage you to ask that your members of Congress cosponsor and support the Research Investment to Spark the Economy (RISE) Act, H.R. 869 and S. 289. These bipartisan bills would authorize supplemental funding for a variety of research agencies.

Support the Chemical Safety Board
The CSB is an independent federal agency that saves companies, universities, and local communities billions of dollars and countless lives by helping them prevent catastrophic incidents. Despite its great value, the administration has called for $9.4 million for FY 2019 to be allocated to CSB, specifically for its elimination. Join us in asking appropriators and other members of Congress for their continued support of the CSB and its mission to protect workers and the public.

Keep Science Funding Strong
Congress and the White House are working to complete the appropriations process for fiscal year 2021. Join us in asking appropriators for a strong and predictable boost in federal funding for scientific research.

Congressional Chemistry Caucus
The Caucus' mission is to educate Members of Congress, their staff, and the public on the benefits of chemistry in today's society and its economic impact on our country. If you do not see your Representative or Senators represented in the Chemistry Caucus ask them to join.

JOIN THE ACS:

If you know of anyone who would benefit from being a member of the American Chemical Society, please direct them to the membership website:
www.acs.org/content/acs/en/membership.html

NATIONAL MEETINGS:

Spring 2022 ACS National Meeting
The spring 2022 national meeting, "Bonding Through Chemistry" will be held In-Person and Virtual. The meeting will be held March 20-24, and the in-person event will take place in San Diego, CA. See the website for more information.

Fall 2022 ACS National Meeting

The fall 2022 national meeting, "Sustainability in a Changing World" will a hybrid event. The meeting will be held August 21-25, and the in-person event will take place in Chicago, IL. Abstracts are now being accepted; submission deadline is March 14. See the website for more information.

2022 Green Chemistry & Engineering Conference

The 26th annual Green Chemistry & Engineering Conference will be held June 6-8, 2022 at the Hyatt Regency in Reston, VA. The 2022 theme will be *Thinking in Systems: Designing for Sustainable Use*. Hosted by the American Chemical Society's Green Chemistry Institute (ACS GCI), the GC&E Conference is the longest-running global conference dedicated to green chemistry and engineering. A virtual component will be available to connect the local event with the global community of scientists, students, educators and leaders interested in advancing science and solutions to global sustainability challenges. For more information on submissions and registration, please see the website.

BCCE 2022

The 27th Biennial Conference on Chemical Education will be held at Purdue University in West Lafayette, Indiana from July 31 – August 4. See the website for more details.