



# American Chemical Society Susquehanna Valley Section

## MARCH 2016 NEWSLETTER

The four hundred and twenty ninth meeting of the Susquehanna Valley Section of the American Chemical Society will be held on *Wednesday, March 16<sup>th</sup>*, 2016 (which is the third Wednesday of March, not the typical second Wednesday) in Room 321 in the Natural Sciences Center 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 Steak and Rib House at 5:30pm. The speaker will be Dr. Christine Phillips-Piro of Franklin & Marshall College in Lancaster, PA.

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***“Is it Easy Being Green?:  
Probing and Tuning the Green Fluorescent Protein using  
Unnatural Amino Acids”***

Dr. Christine Phillips-Piro  
Department of Chemistry  
Franklin & Marshall College  
Lancaster, PA

The use of unnatural amino acids (UAAs) to probe protein structure and function is becoming more common. However, few structural studies have been completed on proteins containing UAAs. The Piro Lab is interested in the incorporation of UAAs into a number of protein systems to probe the structure or alter the function of these proteins and pairing these studies with structures from X-ray crystallographic analysis. Recent work on the Green Fluorescent Protein (GFP) containing UAAs to probe the structure or tune the photophysical properties of GFP will be presented. Using spectroscopic reporter UAAs such as p-cyano-L-phenylalanine allowed for a site-specific understanding of local solvation environments in GFP. The fluorescent properties of GFP were also tuned by incorporating UAAs in the chromophore of GFP. All of these studies have been paired with X-ray crystallographic work to allow for a clear structure-data comparison and rich analysis of the use of UAAs in protein systems.

Christine Phillips-Piro is an Assistant Professor of Chemistry at Franklin & Marshall College in Lancaster, PA. She earned her A.B. in Chemistry and Math at Vassar College, Ph.D. in Biological Chemistry at MIT with Profs. Cathy Drennan and Colin Stultz, and conducted postdoctoral studies at U.C. Berkeley with Prof. Michael Marletta. Her current research focuses on the use of unnatural amino acids to both monitor protein structure and tune protein function with an emphasis on utilizing X-ray crystallography for structural studies whenever possible. This research has produced fruitful collaborations at F&M with colleagues Scott Brewer and Ed Fenlon, and led to peer-reviewed publications with F&M undergraduate student co-authors. Christine is passionate about mentoring undergraduates in the research laboratory as well as in the classroom, where she teaches General Chemistry and Biochemistry.

## 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](mailto:doughertyw@susqu.edu) or 570-372-4255 by 4:00 P.M. on Monday, March 14, 2016. Dinner will be ordered from the menu. Menu and directions to BJ's Steak and Rib House can be found at [www.bjsribs.com](http://www.bjsribs.com).

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## DIRECTIONS TO SUSQUEHANNA UNIVERSITY:

Address: 514 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).

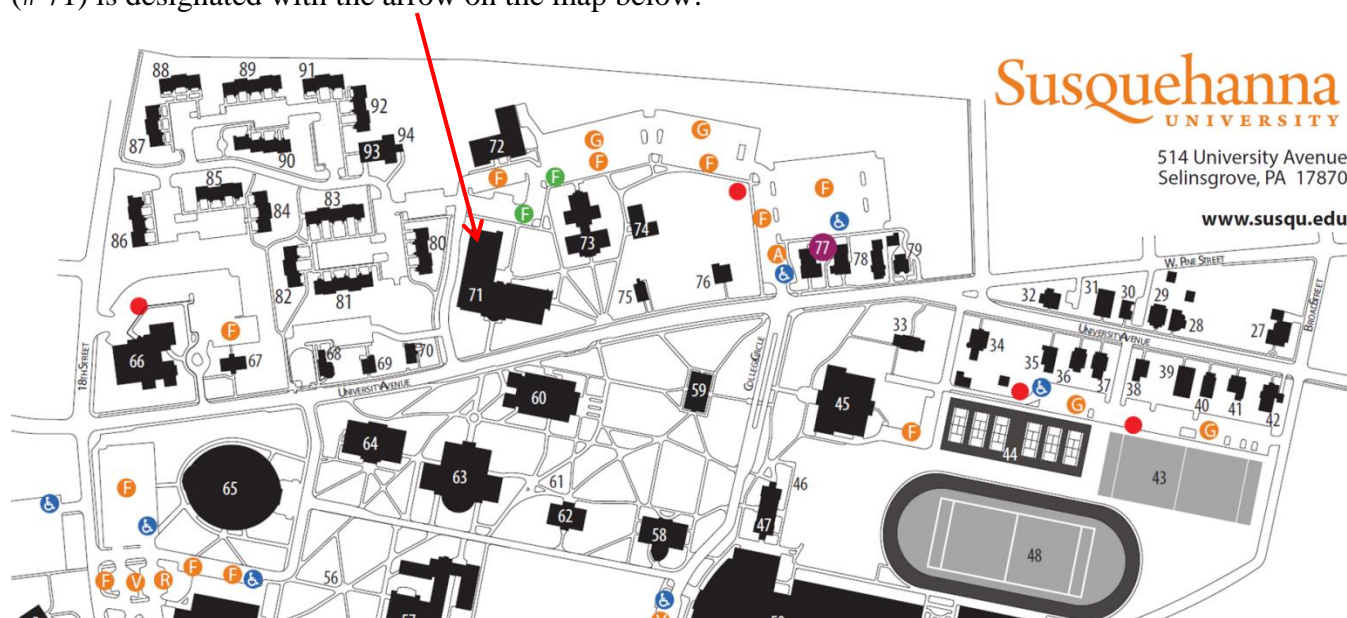
From Route I-80 East:

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:

Route 11/15 south becomes Market Street. Turn right onto W. 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 (# 71) is designated with the arrow on the map below:



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## SECTION NEWS:

### 2016 SUSQUEHANNA VALLEY SECTION CHEMISTRY HIGH SCHOOL EXAM:

The annual exams, hosted by the Susquehanna Valley Section of the ACS, will be held Saturday, April 23. Students from across the section are nominated by their teachers to take this exam. Students with high scores in our different districts receive a David H. Frederick Memorial Award in High School

Chemistry at our Awards Banquet on Wednesday, May 4 at the [Pine Barn Inn](#) in Danville, PA. See the [website](#) for details.

#### 2016 CHEMISTRY OLYMPIAD:



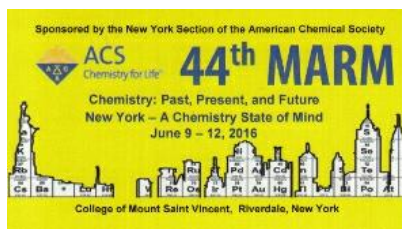
U.S. National Chemistry Olympiad

The local 2016 U.S. National Chemistry Olympiad (USNCO) will be held on April 23 at Marywood University. If you know of a truly outstanding chemistry student please submit his or her name to our screening committee by the end of March. See the [website](#) for more details.

#### JOSEPH PRIESTLEY HOUSE:

Sunday, March 13, 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 or go to: [www.josephpriestleyhouse.org/event/commonwealth-charter-day-and-priestleys-birthday/](http://www.josephpriestleyhouse.org/event/commonwealth-charter-day-and-priestleys-birthday/)

#### MARM 2016:



A call for abstracts has been issued by MARM 2016. The deadline for abstract submission is March 28. Use the following link for submission: <https://marm2016.abstractcentral.com/login>. The 44<sup>th</sup> MARM is scheduled for June 9-12, 2016 and is being hosted by the New York Section of the American Chemical Society. It will be held at the College of Mount Saint Vincent, Riverdale, NY. Many of the sessions have been planned and listed; see their [website](#) for more details.

#### LOCAL ACADEMIC TALKS:



Bucknell University announces their spring 2016 Chemistry Department Seminar Series. The schedule through April is listed below:

**March 2 Dr. Daniel Weix, University of Rochester**  
“No More Nucleophiles: Cross-Electrophile Coupling”

**March 9 Dr. Miriam Freedman, Penn State University**  
“Phase Separation in Organic Aerosol Particles”

**March 23 Brandon Nelson & Josh Goheen** ~ Bucknell graduate students  
BN: “Stereoselective Alkene Reductions toward the Synthesis of Allo Bile Acids”  
JG: “Structural Models of Fe/Mn Active Sites in Heterodinuclear Metalloproteins”

**March 30 Dr. Codrina Popescu, Colgate University**  
“How do we know that electrons and nuclei communicate? Analyzing molecules with Mössbauer spectroscopy to reveal iron’s catalytic power”

**April 6 Sarah Bradley & Conor Flynn** ~ Bucknell graduate students  
SB: “Stability of the colloidal phase of abandoned mine drainage in Shamokin, PA”  
CF: “Measurement of carbon dioxide vibrational self-quenching rates”

**April 13 & 20** Chem 371 Student Presentations

**April 27 Tyler Fulton, Bucknell University ~ BS/MS Student**  
“The Development of Copper Mediated 1,4-Conjugate Addition  
Reactions towards Complex Molecule Synthesis”

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## **NATIONAL ACS NEWS:**

### **ACT4CHEMISTRY:**

Legislation that may impact the chemical enterprise comes before Congress on a regular basis, and ACS is committed to keeping its members informed and encouraging them to weigh in on high-priority issues. One of the main ways the ACS does this is through Act4Chemistry. To learn more please visit their [website](#) or email [advocacy@acs.org](mailto:advocacy@acs.org).

### **NATIONAL MEETINGS:**

The 2016 spring national meeting will be held in San Diego, California from March 13-17. See the [website](#) for details and registration instructions.

The 2016 fall national meeting will be held in Philadelphia, Pennsylvania from August 21-25. Call for papers deadlines are posted. See the [website](#) for details.

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Susquehanna Valley Section Web Page: <http://departments.kings.edu/SusquehannaValleyACS>

Please send any comments about the monthly newsletter to Ron Supkowski, Section Secretary  
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