

SEPTEMBER 2017 NEWSLETTER

The four hundred and thirty ninth meeting of the American Chemical Society, Susquehanna Valley Section will be held on Wednesday, September 13, 2017 at 7:30 pm in room 304 (Gallery Theatre) in the Elaine Langone Center (LANG) on the Bucknell University campus in Lewisburg, PA. The speaker will be E. James Petersson, Ph. D., Associate Professor of Chemistry, University of Pennsylvania. The talk will be preceded by a reception at 5:00 pm in LANG 241 AB and a dinner at 6:00 pm, in LANG 241 CD.

"Synthetic Protein Chemistry for the Study of Neurodegenerative Disease"

Dr. E. James Petersson Associate Professor Department of Chemistry University of Pennsylvania



Protein motion underlies both proper function and disease in biological systems. Many signaling and transport proteins require complex rearrangements for function, and some proteins, such as amyloids, misfold into toxic conformations. Studying these protein motions not only aids our understanding of diverse biological phenomena, it also contributes to an important fundamental problem in biochemistry: understanding how motions propagate from one end of a protein to another. The Petersson laboratory is developing tools to address questions of how dynamic proteins mediate communication and how the cellular environment catalyzes protein misfolding, from detailed in vitro folding studies to modeling protein motion in living cells. These tools include novel chromophores, which we synthesize and incorporate into proteins through unnatural amino acid mutagenesis and synthetic protein ligation. This approach has provided insight into the role of alpha-synuclein aggregation in Parkinson's Disease and informs strategies for diagnosis and treatment.

BIOGRAPHY OF DR. PETERSSON:

E. James Petersson was educated at Dartmouth College, where he worked in the laboratory of David Lemal, investigating the effects of fluorination on strained, cyclic systems. He then studied the physical organic chemistry of neurotransmitter/receptor interactions under Dennis Dougherty at the California Institute of Technology as an NIH Predoctoral Fellow. After obtaining his Ph.D. in 2005, he worked as an NIH Postdoctoral Fellow at Yale University with Alanna Schepartz, working toward the synthesis of protein-like molecules composed of building blocks other than α-amino acids. He was appointed as Assistant Professor in the Department of Chemistry at the University of Pennsylvania in 2008 and in the Biochemistry and Molecular Biophysics group in the Perelman School of Medicine in 2013. In 2015, he was promoted to the rank of Associate Professor. Prof. Petersson's research focuses on the development of new methods for protein labeling with synthetic amino acids, and their application to studying protein folding and stability. This includes studying the molecular basis for the pathology of Parkinson's Disease, and generating stabilized peptides to be used as injectable therapeutics or imaging agents. His research has been recognized by several awards, including a Sloan Fellowship, an NSF CAREER award, recognition as a Searle Scholar, the Award for Early Excellence in Physical Organic Chemistry, and a Thieme Chemistry Journal Award. He has also served as a member of the ACS Biological Division Advisory Council, the 2016 NSF Committee of Visitors, and is currently an Editor of Science of Synthesis and an Advisory Board member for the Royal Society's Open Science initiative.

DINNER: The lecture will be preceded by dinner at 6:00 PM in LANG 241. Dinner will be buffet style, including a vegetarian option and desert. The cost will be \$15.00 per person. Those wishing to reserve a spot for dinner should contact Linda Godfrey by email (lgodfrey@bucknell.edu) by 3 pm Friday September 8. Payment for dinner may be in advance (check to Bucknell University Chemistry Department) or at the dinner.

DIRECTIONS TO BUCKNELL UNIVERSITY:

East of Lewisburg:

- 1. Interstate 80 West to Exit 210A
- 2. Route 15 South
- 3. At 11th traffic light (the first light after crossing Route 45 (Market Street)), turn left onto Moore Avenue. (Look for the Bucknell Athletic Stadium on the left.)

South of Lewisburg:

- 1. Take Routes 11&15 North
- 2. When Routes 11 & 15 split, stay on Route 15 (Tedd's Landing is on your right; KMart on your left)
- 3. Approx. 7 miles after Selinsgrove / Shamokin Dam, you'll come to a stop light. Bucknell is on your right. (Look for the Bucknell Athletic Stadium on right.)

West of Lewisburg:

- 1. Interstate 80 East to Exit 210A
- 2. Route 15 South
- 3. At 11th traffic light (the first light after crossing Route 45 (Market Street)), turn left onto Moore Avenue. (Look for the Bucknell Athletic Stadium on the left.)

North of Lewisburg:

- 1. Take Route 15 south
- 2. Once past Interstate 80, turn left on Moore Avenue at the 11th traffic light (the first light after crossing Route 45 (Market Street)). (Look for the Bucknell Athletic Stadium on the left.)

Once on campus: Follow the campus map below to the visitor parking designated with a **P**.



Online campus maps can be found at http://www.bucknell.edu/script/communication/map/

SECTION NEWS:

2018 LOCAL SECTION ELECTIONS:

Nominations are due for the position of Chair-elect. If interested, please contact Dr. Ron Supkowski at <u>ronaldsupkowski@kings.edu</u> or 570-208-5900x5733.

2017 LOCAL SECTION AWARDS

50-Year ACS members

DR. WAYNE FELTY
DR. PAUL HARADEM
MR. JAMES POECHMANN

60-Year ACS members

DR. RAYMOND BORKOWSKI
MR. DELBERT CRAGLE
DR. OWEN FAUT
MS. JANET KOHLER

Joseph Priestley Service Award

DR. GENEIVE HENRY

Susquehanna University

David H. Frederick Memorial Awards in High School Chemistry

Exam A Winners **Exam B Winners**

Mifflinburg Area High School NICHOLAS JACOBSON Lewisburg Area High School ZANE PATTERSON

Teacher - Mr. Brian Landis Teacher - Ms. Angela Gockley

EVAN STUTZMAN Hughesville High School CALLISTA DYER Milton Area High School Teacher - Mr. John Tamblin

Teacher - Ms. Faye Hinson-Santos

JACK LEIGHTCAP Abington Heights High School TYLER LEESER Milton Area High School

Teacher - Ms. Carolyn Siwak Teacher - Ms. Faye Hinson-Santos

Marian Catholic High School **BRADY WHILDIN** Teacher - Mr. Robert Valente

ISABELLA SALCI Hanover Area Jr/Sr High School

Teacher - Dr. Jocelyn Holodick-Reed

Exam A Runners-Up Exam B Runners-Up

Old Forge High School Shikellamy High School PATRICK MCCOOL CHRISTOPHER TIMBLIN Teacher - Mrs. Adrianna Rupprecht Teacher - Ms. Yvonne Monahan

Jersey Shore Area High School ABIGAIL WATSON JUSTIN KELLER Sunbury Christian Academy Teacher - Ms. Heather Keller

Teacher - Mr. Alex Hunter

EMMA NAGLE Jersey Shore Area High School MEGAN DILLON Scranton Preparatory School Teacher - Mr. William Ferguson Teacher - Mrs. Jane Nagurney

SEAN BUSH Williamsport Area High School ROBERT BUTWIN Wyoming Area High School

Teacher - Mr. Andrew Paulhamus Teacher - Mr. Gordon Williams

Williamsport Area High School Danville Senior High School DAMIEN REESE ABIGAIL RAUP Teacher - Mr. Andrew Paulhamus Teacher - Ms. Deborah Slattery

DOMINIC HORN Williamsport Area High School

Teacher - Mr. Chase Smith

CHRISTOPHER BOWER South Williamsport Area Jr/Sr High School

Teacher - Mr. Matthew Eisley

RHIANNON NEWCOMER South Williamsport Area Jr/Sr High School

Teacher - Mr. Matthew Eisley

NATALIE ZEGLEN Honesdale High School

Teacher - Ms. Michelle Tonkin

JOSHUA KLINGER Selinsgrove High School

Teacher - Ms. Tracy Hepner

EVAN LONG Bloomsburg Area High School

Teacher - Mr. Todd Davis

FREDRICK MEJIA MMI Preparatory School

JONATHAN ROSS

ABIGAIL PAUL

Teacher - Mr. Todd Ronc

Chemistry Olympiad Competitors

Teacher - Ms. Carolyn Siwak SPENCER GILBERT Abington Heights High School

Abington Heights High School

Teacher - Ms. Carolyn Siwak

MMI Preparatory School

Teacher - Mr. Todd Runco

DOMENICK VENDER Honesdale High School

Teacher - Ms. Michelle Tonkin

ANDREW MURPHY Honesdale High School

Teacher - Ms. Michelle Tonkin

BENJAMIN LIN Lewisburg High School

Teacher - Ms. Angela Gockley

College Award Winners

TYLER BEHRENT Bloomsburg University

OLIVIA FRY

ROSS PIRNIE **Bucknell University** King's College RYAN ACOCELLA

SERENA SMOKER Lycoming College ALEXANDRA WAGNER Misericordia University

COREY GALLIS Scranton University

MEGAN WRIGHT Susquehanna University

JARRET COLVIN Wilkes University DAVID HONTZ

2017 - 2018 LOCAL SECTION MEETING SCHEDULE:

13-Sept-2017: Bucknell University 14-Feb-2018: King's College

4-Oct-2017: Wilkes University 14-March-2018: Susquehanna University

FIRST Wednesday of October

8-Nov-2017: Lycoming College 11-April-2018: Marywood University

Jan 2018: Executive Board Meeting May-2018: Awards Banquet

NATIONAL CHEMISTRY WEEK: October 22 –28, 2017



The Susquehanna Valley Section is once again collecting posters for this year's event. If you know of a student in K-12 who would like to participate please contact Patrick Martino at patrick.martino@bucknell.edu. The deadline for submissions is Friday. November 3. For further details, see the website:

NATIONAL ACS NEWS:

ACT4CHEMISTRY:

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. One of the main ways the ACS does this is through Act4Chemistry. To learn more please visit their <u>website</u> or email <u>advocacy@acs.org</u>.

NATIONAL MEETINGS:

The 2018 spring national meeting will be held in New Orleans, LA from March 18 - 22. See the website for details.

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

Please send any comments about the monthly newsletter to Ron Supkowski, Section Secretary King's College 131 N River St Wilkes-Barre PA 18711 ronaldsupkowski@kings.edu