



THE OCTAGON

845th LVACS Meeting:

Thursday, November 21 - Lehigh University

Joint Meeting
LVACS & Lehigh Nanotech Network

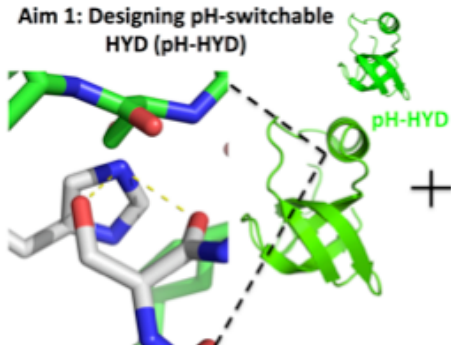
Program:

Design and Characterization of Novel Biosurfactants to Enhance Drug Bioavailability
Bryan W. Berger (Lehigh University) and Kevin Sledziewski (Particle Sciences)

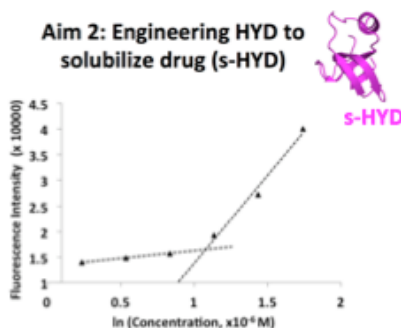
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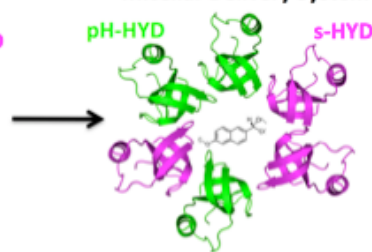
Aim 1: Designing pH-switchable
HYD (pH-HYD)



Aim 2: Engineering HYD to
solubilize drug (s-HYD)



Aim 3: Integrated, Mixed
Micellar Delivery System



Schedule of Events:

5:30	Social gathering/reception
6:00	Buffet dinner
7:00	Meeting and Presentation

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November meeting continued from page 1

Meeting Details

Menu:

A buffet dinner, California Cuisine, will feature Wild Mushroom and Barley Soup, California Spinach, Candied Walnuts, Oranges and Goat Cheese with Honey Mustard Vinaigrette, Shrimp and Scallop Sourdough Strata with Fresh Herbs and Roasted Garlic, Grilled Lemon Thyme Chicken with Artichoke, Prosciutto and Basil Sauce, White and Wild Rice Pilaf with Leeks, Corn and Peppers, Mixed Roasted Vegetables Romanesco, Assorted Rolls with Butter, and Fresh Mixed Fruit Tart.

Cost: ACS or Lehigh Nanotech Network (non students) - \$24.00, ACS student \$10.00.

Reservations: Please place your reservation using this link: <http://tinyurl.com/1declvacsaiche> before 4pm, Monday, November 18th.

Contact: JoAnn DeSalvatore by email (jmd207@lehigh.edu) or phone (610-758-3471) with any specific questions.

Directions:

All events (social reception, dinner and the meeting) will be held in the Wood Dining Room of Lehigh's Iacocca Hall. Driving directions to Iacocca Hall on Lehigh's Mountaintop campus can be found at <http://www4.lehigh.edu/about/luevents/drivingdirections/mountaintopdirections.aspx>

Program:

Design and Characterization of Novel Biosurfactants to Enhance Drug Bioavailability

Many promising candidate pharmaceuticals display exciting binding at simple targets in vitro or in vivo with small animals but fail utterly when subjected to human clinical trials. A common cause for marginal human efficacy is often a lack of sufficient solubility and poor bioavailability that, in many cases, can be improved by the use of additives (excipients) such as surfactants. However, many conventional, synthetic surfactants such as Tween 20 can cause adverse side effects such as anaphylaxis in IV suspensions or other formulations; thus, there is an interest in developing alternative, biocompatible surfactants to minimize these side effects. The Berger research group is interested in studying the biochemical and material properties of naturally-occurring, protein-based surfactants (biosurfactants), and using this information to design biosurfactants capable of enhancing drug bioavailability with improved biocompatibility.

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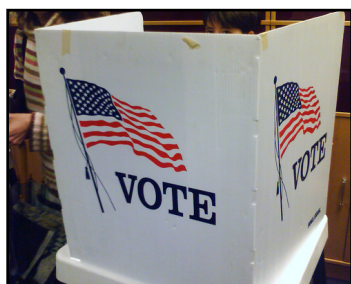
November program information continued from page 2

Guest Speakers:

Bryan W. Berger, Assistant Professor of Chemical Engineering, joined the Lehigh faculty in 2010, from a NIH postdoctoral fellowship at the University of Pennsylvania School of Medicine. Bryan earned his Ph.D. from University of Delaware in 2006, and a B.S. from University of Illinois at Urbana-Champaign in 1999, both in chemical engineering. He also spent 2 years at Abbott Laboratories in pharmaceutical manufacturing before pursuing his PhD at Delaware. In addition to his primary appointment in the Department of Chemical Engineering, Bryan is also affiliated with Lehigh's Bioengineering program.

Kevin Sledziewski, a Formulation Scientist at Particle Sciences (Bethlehem), is an industrial collaborator of Bryan's on such projects as protein-based surfactants as functional drug stabilizers. Kevin received a B.S. in Chemical Engineering from Lehigh University and is one of the success stories of the Lehigh Nanotechnology Network's summer industrial intern program. He participated in the program and worked at Particle Sciences then was subsequently offered a full time position. Particle Sciences is a Contract Research and Development company with extensive experience in pharmaceutical formulation development and characterization, and drug product development, especially in the area of complex dosage forms. Particle Sciences has expertise in nanotechnology-based drug delivery technologies and the proper infrastructure to develop and characterize formulations, scale-up processes and develop robust analytical methodology for pharmaceutical applications of these materials. Kevin will discuss the experimental techniques employed at Particle Sciences to characterize nanomaterials for use in enhancing drug bioavailability.

It's Election Time!



Election of 2014 LVACS officers is coming soon!

Please see facebook (Lehigh Valley Section of the American Chemical Society) and the website - LVACS.net for a list of candidates and biographical information. An email will be sent with a link for voting when the "polls" open!



LVACS Meeting Minutes

September 20, 2013 Albright

The meeting was called to order at 7:33PM. A thank you was extended to Albright for hosting the meeting.

The minutes from the May 2013 meeting were read; Lorena made the motion to except the minutes as printed. An Albright staff member 2nd it and the approval was unanimous.

The following announcements were made:

Other local meetings: Southeastern Pennsylvania Section of the American Chemical Society (SEPSACS) - Thursday, September 26, 2013 at Lebanon Valley College, Annville, PA. Carol Stein, Chemist Copperhead Chemical Company is the speaker - Nitroglycerin and Its "Impact"

Next meetings: October 31, 2013 - Cedar Crest College - Spooktacular Demo Showcase and Family night. Chemistry clubs are invited to present a Halloween themed demo. Foundation in Scholarship Winner will be presented.

November 21, 2013 - Lehigh University - Joint meeting with Lehigh Valley Nanotechnology. "Design and Characterization of Novel Biosurfactants to Enhance Drug Bioavailability," will be presented by Bryan Berger, Associate Professor of Chemical Engineering, Lehigh University.

Save the Dates - January - still being planned, February - Alvernia (HS Teacher night?), March - Muhlenburg, April 24th - DeSales (Student Poster Night and awards ceremony)

Past Events - Iron Pigs game in the summer was a good time.

Future Events - NCW October 20-26; LVACS is sponsoring a Poem contest to celebrate National Chemistry Week -Lorena talked about the contest and handed out flyers to encourage members to pass the word on to students. Dead line was Oct 21st <40 words. The winner will be displayed at the Nov. meeting at Lehigh. The poem will also go onto the National ACS contest.

October 8th @ 7pm @ Penn State Berks and CCC - Webinar Putting Your Best Foot Forward: Managing Your Paper and Online Resumes

Budget Updates - Carol Presented the meeting report form and gave a summary of the accounts balances. Checking account \$8,066.41 and Scholarship account \$1731.64

Committee Reports: Report from Councilors (Carol) from the National Meeting; In Jan. we will be switched from District 1 N.E. to District 3 MARM. Open to floor for others who attended the meeting

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Minutes continued from page 4

Awards: LVACS won two ChemLuminary awards and was a finalist for a third. Outstanding Leader Development Program Award-Winner; Best Student Member NCW Event-Winner; Best Activity or Program Stimulating Member Involvement - Finalist

Greglynn was recognized by ACS at the end of May as an Outstanding Member of our local section.

Elections: November Elections - Chair-Elect from Industry, Treasurer, Secretary

Other business: Inter chemist convention is 4/26/14, Albright will be hosting the Chem res. -judges needed (please help notes are not complete).

The meeting was closed at 8:15

Draft by Carol Stein

Congratulations!



We have a winner for the LVACS NCW Illustrated Poem Contest - Colleen Gieringer. Colleen is a 6th grade student from West Reading Elementary Center in Berks County. Her poem will be forwarded to DC for the national competition.



2013 LVACS OFFICERS

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Get the Word Out!

Are you volunteering in your community? Do you have any upcoming chemistry or science events planned?

Help is available to help get yourself, your volunteers and your event spotlighted at your college and/or in the local and regional news. Contact the LVACS Public Relations Chair, Greglynn Gibbs, gdw104@psu.edu.

Nothing says "Thank You" like well deserved recognition!

