the Catalyst



Official publication of the Philadelphia Section, ACS http://phillyacs.org

February 2020 Volume 105, No. 2



February Meeting
Dr. Britt Dahlberg
Science History Institute

HIGHLIGHTS

Comments From the Chair 21

News Atoms 22

Nominations for Section And Teaching Excellence Awards 25-27

PAGESTM

Mini-Conferences 29

Calendar of

Activities 32

ADVANCE NOTICE

MARCH MEETING Thursday, March 12, 2020

Reception at 5:00 PM, Lecture at 6:00 PM https://edgarfahssmith2020.eventbrite.com

THE EDGAR FAHS SMITH MEMORIAL LECTURE

Barbara Imperiali, PhD
Class of 1922 Professor of Biology and Chemistry and MacVicar Faculty Fellow
Massachusetts Institute of Technology

Protein Glycosylation Pathways and Processes

Chemistry Building, University of Pennsylvania 34th and Spruce Streets
Philadelphia, PA

See the MARCH issue of *the Catalyst* for details, call the Section Office at (215) 382-1589 or email PhilaACS@gmail.com.

the Catalyst

ACS Philadelphia Section
Founded April 15, 1899

STAFF

EDITOR-IN-CHIEF

Robin S. Davis

EDITORS

News Atoms: Alan Warren Proof Editors: Anthony Addison

Georgia Arbuckle-Keil Kendra Luther Corrie Kuniyoshi Marge Matthews Alan Warren

ADVERTISING MANAGER

Victor Tortorelli

COMMUNICATIONS COMMITTEE

Chair: Lee Hoffman
Anthony W. Addison
Georgia Arbuckle-Keil
Matthew Bodek
Robin S. Davis
Alan Heldon
Corrie Kuniyoshi
Kendra Luther
Marge Matthews
Liliana Suárez
Victor Tortorelli

Alan Warren

CONTENTS

March Advance Notice	19
Comments From the Chair	21
News Atoms	22
Jump Start Your Career	22
February Meeting	23
Speaker's Biography	24
Nominations Invited for Section Award	25
Call for Nominations in Pre-College Teaching	26
Call for Nominations in Undergraduate Teaching	27
Volunteering for ACS National Meeting	28
ACS Career Consultants	28
PAGES™ Mini-Conferences	29
Chemical Consultants Network Meeting	30
Directory of Services	31
2020 Calendar of Activities	32

Published monthly except July, August and December by the Philadelphia Section of the American Chemical Society. All views expressed are those of the editors and contributors and do not necessarily represent the official position of the Philadelphia Section of the American Chemical Society. Editorial matters should be sent to the attention of the Editor-in-Chief c/o the Philadelphia Section ACS, Department of Chemistry, University of Pennsylvania, 231 South 34th Street, Philadelphia, PA 19104-6323 or PhilaACS@gmail.com.

Advertising: Victor Tortorelli, vtortorelli@ursinus.edu

the Catalyst

Comments From the Chair



Joe Martino III

In his volume of short stories, *Everything Is Different*, Hungarian author Frigyes Karinthy writes:

"We should select any person from the 1.5 billion inhabitants of the Earth – anyone, anywhere at all. He bet us that, using no more than *five* individuals, one of whom is a personal acquaintance, he could contact the selected individual using nothing except the network of personal acquaintances."

It is from this statement that the concept of "six degrees of separation" was born. Followers of pop culture would be familiar with the "Six Degrees from Kevin Bacon" game. Professionals use Karinthy's concept in their careers with the LinkedIn web platform.

Indeed, the world is a small place. So is the chemical profession. For those of us who have become established in our careers, did you ever notice when you attend an ACS National Meeting that you will ultimately find someone that you know, or haven't reached out to in years? This is where networking is most effective.

In the Philadelphia area, chemists not only have the ACS Philadelphia Section to connect with fellow chemists, but also groups such as the ChemPharma Professional Association, the American Institute of Chemical Engineers (AIChE) and the Society of Tribologists and Lubrication Engineers (STLE). For February, the local sections and chapters of these four groups will join forces to host a networking event at Conshohocken Brewing Company in King of Prussia. We will not only network, but we will hear a talk by Dr. Britt Dahlberg of the Science History Institute. Britt has a background in anthropology and has done extensive research on issues surrounding asbestos exposure in nearby Ambler, PA. For this research, Britt has interacted with chemical and safety professionals, so she brings to this talk the perspective of someone on the outside looking into our profession. Such an outside perspective is of value to chemists and their networking, especially for chemists who are required to convey highly technical chemical concepts to those who may not be deeply familiar with them.

Moving on to March, we will have our annual Edgar Fahs Smith Memorial Lecture in cooperation with the Chemistry Department of the University of Pennsylvania on March 12th featuring Professor Barbara Imperiali of MIT. We will then host our Student Scholastic Achievement Awards as well as our Excellence in High School and Excellence in Undergraduate Teaching Awards on April 21st at Rutgers-Camden. Our Career Services Committee will be hosting a fascinating career-oriented event in May.

Please come join us and say hello! Feel free to reach out to me at PhilaACS@gmail.com with your thoughts and ideas, and I hope to meet you soon!

In the meantime, enjoy your February!



NEWS ATOMS—Alan Warren

At the ACS spring meeting in Philadelphia, two Penn professors will receive ACS awards. **Abraham Nitzan**, will be honored with the ACS theoretical chemistry award, sponsored by the Division of Physical Chemistry. **Daniel J. Mindiola** is recipient of the F. Albert Cotton award in synthetic organic chemistry, sponsored by the F. Albert Cotton endowment fund.

DEATHS

Martin "Marty" DeBerardinis, retired chemist, November 19, 2019 at 91. He was employed by the Pennsylvania Industrial Chemical Corp. and then went to Hercules Corporation where he served as chemist, sales representative and marketing executive.

Charles G. Rudershausen, retired R&D chemical engineer, December 16th at 75. He joined DuPont in 1952 and worked in several fields including explosives, polymer intermediates, fabrics and finishes, and Nylon. He was research manager at a number of DuPont laboratories and also a patent agent, retiring at the Experimental Station in 1993. He was past chairman of the South Jersey Section of ACS.

Betsy R. Robin, retired chemistry teacher, December 28th at 79. She taught chemistry and science in high schools in Montgomery and Chester counties.

Jump Start Your Career

At the ACS National Meeting in Philadelphia, several opportunities are available to grow your career.

<u>Personalized Career Advice</u> https://www.acs.org/content/acs/en/careers/personal-career-consulting.html Including mock interviews and résumé reviews at Career Navigator Live! from ACS Career Consultants

<u>Leadership Development</u> https://www.acs.org/content/acs/en/careers/leadership.html Courses that give you the leadership skills necessary to excel in your career

<u>Professional Education</u> <u>https://proed.acs.org/content/proed/en.html</u> Stay competitive and move ahead in your career with professional development and technical training courses

<u>Career Pathways Workshops</u> https://www.acs.org/content/acs/en/careers/career-services/career-pathways.html Workshops that provide career guidance to up-and-coming and professional scientists as they navigate their futures.

To find the complete schedule of these opportunities, please visit our <u>National Meeting Career Development</u> site. (https://www.acs.org/content/acs/en/meetings/national-meeting/events/career-development.html)



February 20, 2020 Joint Meeting 6-9 PM

(Snow date Feb 27th)









Register Feb2020JointMtg.eventbrite.com

FEATURING
Britt Dahlberg PhD
Science History Institute

6:00 PM — 9:00 PM
Conshohocken Brewing Company
3100 Horizon Drive
King of Prussia, PA 19406

To register, please visit https://Feb2020JointMtg.eventbrite.com

Agenda: This event will be an evening of networking among the members of ACS, ChemPharma, AIChE and STLE. It will also feature a talk by anthropologist Britt Dahlberg of the Science History Institute covering her work on asbestos exposure in Ambler, Pennsylvania along with her experiences in interacting with scientific professionals during the course of this research.

Ticket Price: \$30.00 for regular admission, \$15.00 for students.

The 717th Board of Directors Meeting of the ACS Philadelphia Section will meet prior to the event from **4:45 PM to 5:45 PM** in the Conference Room of Conshohocken Brewing Company. All ACS Philadelphia Section Board of Directors meetings are open to the public and are available through teleconferencing. To attend the Board of Directors meeting by teleconference, please use the following access information

Dial-in number (US): (605) 472-5573 Access code: 714653, then press #

International dial-in numbers: https://fccdl.in/i/philaacs

Online meeting ID: philaacs

Join the online meeting: https://join.freeconferencecall.com/philaacs



SPEAKER'S BIOGRAPHY

Dr. Britt Dahlberg

Director, Center for Applied History Science History Institute

Britt Dahlberg (PhD, Anthropology) is director of the <u>Center for Applied History</u>, where she leads a multidisciplinary public research program exploring the social practice and impact of science, health care, and technology. She and her team explore and develop new modes of public engagement that grow out of methods and materials from history and anthropology, in order to foster inquiry and dialogue on science in society.

Dahlberg's research and writing center on the anthropology of science and health care, with a focus on environmental risk, race, class, and the making of public space in the contemporary United States. In previous projects she has also explored diagnosis, categorization, mental health, and aging.

Her current book project and articles explore the role of environmental risk assessment in shifting understandings of people, places, and the relationships between them. The project is based on ethnographic research and oral histories from 2009 to 2014, when residents, developers, and government scientists converged around a Pennsylvania community park built atop asbestos waste to assess potential risks and plan future designs of the town. The book explores intersections of community memory, attachments to place, health, and risk assessment, and shows how different ways of seeing and measuring place alter ways of imagining neighborhoods and the people who live there, with broader stakes for social and spatial exclusion.

Dahlberg's interests inform both her research and reflections on method, through which she explores terms of participation in research, community engagement, and citizen science. She leads discussions and training on research praxis, and teaches research methods and grant design as an associated faculty member at the Johns Hopkins School of Public Health.

Dahlberg's work has been supported by grants from the National Science Foundation, ACLS/Mellon Foundation, Wenner Gren Foundation, American Philosophical Society, Environmental Protection Agency, Robert Wood Johnson Foundation, and National Institutes of Environmental Health, among others.





CALL FOR NOMINATIONS 2020 ACS PHILADELPHIA SECTION AWARD

Notice is hereby given that the ACS Philadelphia Section invites its members as well as Regional and Topical Groups to nominate candidates for the 2020 ACS Philadelphia Section Award.

This Award shall be presented "to one member of the Section, or in exceptional circumstances to two members of the Section jointly, who by conspicuous scientific achievement has/have made important contributions to the field of chemistry and thereby aided the public appreciation of the profession." (ACS Philadelphia Section Bylaw X, §1.) Any member of the ACS Philadelphia Section may be nominated. Recent awardees include Donna M. Huryn (University of Pennsylvania), Anthony W. Addison (Drexel University), Marsha I. Lester (University of Pennsylvania), and Michelle Francl (Bryn Mawr College).

INSTRUCTIONS FOR SUBMITTING NOMINATION

- 1) Nominators should provide a CV of the nominee showing education; employment and/or academic history; a list of publications, presentations and patents; and a record of other accomplishments pertinent to consideration for this award.
- 2) One or two seconding letters (at least one of which should be from a person in an organization other than that of the nominee) should be requested in support of the nomination.
- 3) Nominators and seconders should be identified with addresses, e-mail and telephone numbers so that they can be contacted, if necessary, for additional information.
- 4) Unsuccessful nominees from previous years may be renominated. In fairness to the nominee, however, renominations must be accompanied by an updating of the nominee's biographical data and a list of accomplishments in order to make the nomination competitive. Unsuccessful nominees who have been considered three years in a row should not be renominated for the fourth year in succession without prior consultation by the nominator with the Chair of the Awards Committee

Nomination forms are available from the Section office at:

ACS Philadelphia Section
Department of Chemistry
University of Pennsylvania
Philadelphia, PA 19104-6323
(215) 382-1589; e-mail PhilaACS@gmail.com

The completed packet of nomination materials may be e-mailed to PhilaACS@gmail.com or mailed by **April 1, 2020** to the Chair of the Awards Committee at the Section Office address above.





CALL FOR NOMINATIONS 2020 ACS PHILADELPHIA SECTION AWARDS FOR EXCELLENCE IN PRE-COLLEGE TEACHING

Notice is hereby given that the ACS Philadelphia Section invites its members to nominate candidates for the 2020 ACS Philadelphia Section Awards for Excellence in Pre-College Teaching.

The Awards honor two outstanding science teachers. One Award will be given to a full-time educator involved in teaching science in grades K-8. The second Award will be given to a full-time educator at the secondary level (grades 9-12) who teaches chemistry. Nominees must teach in the geographic territory of the ACS Philadelphia Section (Philadelphia, Bucks, Chester, Delaware and Montgomery Counties in Pennsylvania, and Burlington and Camden counties in New Jersey).

PLEASE NOTE! Nominations for 2020 will now be accepted until March 1, 2020.

INSTRUCTIONS FOR SUBMITTING NOMINATIONS

- 1) A **Nominator Recommendation** of not more than 750 words submitted by the nominator according to the guidelines outlined on the Recommendation Form.
- 2) A **current** *curriculum vitae* **or resume** that includes a list of the nominee's honors, professional activities, and additional evidence of service to the profession. This must be limited to no more than two pages and the activities listed must have occurred within the past five years.
- 3) A **statement by the nominees** of not more than 500 words that describes the nominee's teaching philosophy or commitment to the profession.
- 4) At **least one, but not more than three, letters of support.** One letter, of no more than 400 words must be from the teacher's current principal or supervisor. Additional letters of support, of no more than 400 words, may be sent by colleagues, members of the ACS who are familiar with the nominee's achievements, or former students and parents of former students.
- 5) The total nomination package should not exceed 30 pages.

The nomination package may be e-mailed or sent to:

ACS Philadelphia Section Department of Chemistry University of Pennsylvania Philadelphia, PA 19104-6323

(215) 382-1589; e-mail PhilaACS@gmail.com

The Award Recipient will be honored at our April 2020 Section meeting with a plaque and an honorarium.





CALL FOR NOMINATIONS 2020 ACS PHILADELPHIA SECTION AWARD FOR EXCELLENCE IN UNDERGRADUATE TEACHING IN THE CHEMICAL SCIENCES

Notice is hereby given that the ACS Philadelphia Section invites its members to nominate candidates for the 2020 ACS Philadelphia Section Award for Excellence in Undergraduate Teaching in the Chemical Sciences.

This award will honor an outstanding, full-time educator involved in teaching an undergraduate course in the chemical sciences (i.e., chemistry, biochemistry). Nominees must teach in an institution that is within the geographical territory of the ACS Philadelphia Section (Philadelphia, Bucks, Chester, Delaware and Montgomery counties in Pennsylvania, and Burlington and Camden counties in New Jersey).

Nominations for 2020 will now be accepted until March 1, 2020.

Nominations should consist of the following:

- 1) A letter of nomination.
- 2) The nominee's resume.
- 3) Two letters of recommendation.
- 4) The total nomination package should not exceed 30 pages.

The nomination package may be e-mailed or sent to the Chair of the Awards Committee at:

ACS Philadelphia Section
Department of Chemistry
University of Pennsylvania
Philadelphia, PA 19104-6323
(215) 382-1589; e-mail PhilaACS@gmail.com

The Award Recipient will be honored at our April 2020 Section meeting with a plaque and an honorarium.



Volunteering for 259th ACS National Meeting in Philadelphia, Spring 2020

Philadelphia will be the site of the 259th ACS National Meeting in Spring 2020-- "*Macromolec-ular Chemistry: the Second Century*" (March 22 – March 26, 2020). The Local Sections wants to show some Philly "LOVE" so that each attendee has a great experience.

We are seeking more volunteers. Examples of some open opportunities to serve:

- a) coordinate items for give-away at the Host Section booth;
- b) serve as liaison for the Committee on Community Activities to assist in a community outreach event on Saturday March 21, 2020;
- c) coordinate staffing the host welcome booth at the Convention Center.

Please contact Sharon L. Haynie, PhD (<u>SLHaynie55@gmail.com</u>) if you have questions or are interested in volunteering.

ACS CAREER CONSULTANTS

Would you like to speak to a local ACS Career Consultant? The Philadelphia Section career consultants can provide one-on-one career advice, resume reviews, or mock interviews. Please send an email request to acsphillycareerservices@gmail.com to set up an appointment.



You are invited to be a volunteer at

The Philadelphia Area Girls Enjoying ScienceTM Mini-Conferences for 6th Grade Girls

Help inspire girls' interest in science and mathematics.

When: Saturday, April 18, 2020

9:00 AM - 1:30 PM

Chestnut Hill College Where:

> 9601 Germantown Avenue Philadelphia, PA 19118



Volunteers are needed to bring an experiment to share with three small groups of girls (4 – 7 students each). Experiment leaders must have a bachelors' degree in a

science. Students are encouraged to be part of the fun and help these experiment leaders.



The Chemists Celebrate Earth Week (CCEW) 2020 theme is "Protecting Our Planet Through Chemistry", focusing on the chemistry of metals. It would be great if you could share an experiment exploring this topic with the girls.

As a result of PA legislation, all adult volunteers having direct contact with children will need at least two criminal background checks. There is no cost for these checks if you are a long-time PA resident.

Women Chemists Committee (ACS WCC), the Philadelphia Chapter of the Association for Women in Science (AWIS), and the American Association of University Women (AAUW) Makefield Area Branch, PA, Inc., the Science History Institute, VWR Scientific,





















CHEMICAL CONSULTANTS NETWORK FEBRUARY 12, 2020 MEETING

INSECTICIDE DISCOVERY AND TRANSITION TO A HUMAN GENE SWITCH

Keith D. Wing, PhD Principal, Keith D. Wing Consulting LLC

DATE & TIME: Wednesday, February 12, 2020, McKenzie Brew House, Glen Mills, PA Networking and Appetizers, 5:30 PM; Talk and Business Session, 6:45 PM

Click here to register

Abstract: Modern production agriculture feeds and clothes the world, and is dependent on synthetic small molecule insecticides. Market and regulatory requirements drive novel insecticide discovery toward increasing potency to pests, but greater safety to nontarget organisms and the environment, in a single profitable new molecule. The speaker will describe a few personal case histories of commercialized insecticide discoveries achieved with industrial teammates, and their impact on agriculture and resistance management. Finally, an interesting case will be described wherein a hormonally active class of novel insecticides was transitioned to a gene switch technology, with interesting implications for human therapeutics including cancer treatment. Cross connections between scientific fields and implications for a consulting business will also be discussed.

Biography: Keith Wing received his BA from UCLA, PhD in 1981 from UC Riverside and Davis, and did post-doctoral work at UC Berkeley. He was a discovery biochemist/team leader at Rohm and Haas Ag Products from 1983-1990, DuPont Crop Protection 1990-2004, and DuPont Central Research 2004-2011. He has been Principal of Keith D. Wing Consulting, LLC 2012-present (agricultural and renewable chemicals). He holds numerous patents and publications including three in the journal *Science*, has been a longstanding member of the American Chemical Society, was the 2015 ACS AGRO International Award winner and is active in science nonprofit boards including CCN.

Location: McKenzie Brew House, 451 Wilmington-West Chester Pike, Glen Mills, PA. DIRECTIONS

Reservation: Click here to register to attend the event. Fee, including appetizers and non-alcoholic beverages, is \$25 by reservation/cancellation deadline: noon Monday, February 10, 2020.

CONSULTANTS - OPPORTUNITY HERE! PLEASE VISIT http://www.chemconsultants.org/

Are You Getting the Benefits of CCN Membership or Event Participation?

THE CHEMICAL CONSULTANTS NETWORK PROVIDES VALUABLE TOOLS FOR MEMBERS BEYOND THE MEETINGS AND NETWORKING. CHECK OUT OUR:

- Valuable past presentations Consultants' Directory Blogs Resources
- <u>Join!</u> Most valuable post your consulting practice information and have greater visibility!
- If you'd like to speak with one of our members, come to a CCN meeting

DIRECTORY OF SERVICES

CAREER DEVELOPMENT

Being a part of one of our teams can help you develop organiza tional and meeting skills as well as help you to network with people from the largest area companies. Public Relations, such as sending out meeting notices and press releases, can help you to develop a network and help you get noticed!

All committees are looking for new members and several are looking for "take charge" chairs. Some, like the Teller's Committee, involve minimal work-one night per year and pizza provided. Others, like positions on Communications or Social Committees, involve one or two hours per month.

Comittee details can be found at:

www.membership.acs.org/p/philadelphia

or by calling the Philadelphia Section Office (215) 382-1589.

Custom Synthesis of Chemicals

Gram to Commercial Production On-time Delivery, Quality & Competitive Price

TYGER Scientific Inc.

324 Stokes Ave. Ewing, NJ 08638 Phone: 888-329-8990

Email: sales@tygersci.com

SURPRISE

our editor by calling and saying you appreciate the quality and content of our newsletter. Our editor works hard to maintain a publication of interest to our membership. Oh, and by the way you could also give credit to our advertisers who financially support us.

VOLUNTEER

Committees seeking team members

- Career Services
- Chemical Health & Safety
- **Diversity**
- Industrial Relations
- Legislative Liaison
- Liaison
- Membership
- Planning Public Relations
- Social
- Student Affiliate Mentor
- Awards
- Continuing Education
- **Natnl Chemistry Week**
- Program
- **Publications**
- Tellers
- Web Page
- Younger Chemists Women Chemists

Contact the Section Office at PhilaACS@gmail.com or (215) 382-1589

Put "Volunteer" in the subject line or leave a message including contact information.



Micron Analytical Services

COMPLETE MATERIALS CHARACTERIZATION MORPHOLOGY CHEMISTRY STRUCTURE

SEM/EDXA • EPA/WDXA • XRD XRF • ESCA • AUGER • FTIR • DSC/TGA

Registered with FDA • DEA

GMP/GLP Compliant

3815 Lancaster Pike Wilmington DE. 19805 E-Mail micronanalytical@compuserve.com Voice 302-998-1184, Fax 302-998-1836 Web Page: www.micronanalytical.com

ADVERTISING INDEX

ACS	31
Micron Inc.	31
Robertson Microlit Labs	31
Tyger Scientific, Inc.	31



Robertson Microlit Laboratories

Where speed and accuracy are elemental

Elemental CHN, S, X, Analysis (same day service) Metals by ICP-OES, ICP-MS, A/A FTIR, UV/VIS Spectroscopy Ion Chromatography

GC-MS **Polarimetry** DSC, TGA, melting point KF Aquametry, Titrimetry

1705 U.S. Highway 46 · Suite 1D · Ledgewood, NJ 07852 · 973.966.6668 · F 973.966.0136 www.robertson-microlit.com • email: results@robertson-microlit.com

Rapid Results • Quality • Accuracy • Competitive Pricing

Advertising: vtortorelli@ursinus.edu



PHILADELPHIA SECTION, ACS CURRENT CALENDAR OF ACTIVITIES

Date and Time	Event	Location/Information		
Monday, February 10	Delaware Valley Mass Spectrometry Dis-	154 Mendel Hall		
6 PM Social Hour	cussion Group Meeting: The Expanding	Villanova University		
7 PM Talk	Role of Mass Spectrometry in Small Mol-	800 Lancaster Avenue		
	ecule Drug Discovery by Roland Annan,	Villanova, PA 19085		
	GlaxoSmithKline	https://science.widener.edu/svb/msdg/		
Wednesday, February 12	Chemical Consultants Network: Insecti-	McKenzie Brew House		
5:30 PM Networking	cide Discovery and Transition to a Hu-	451 Wilmington-West Chester Pike		
6:45 PM Talk & Business Ses-	man Gene Switch by Keith D. Wing,	Glen Mills, PA		
sion	Keith D. Wing Consulting, LLC	http://chemconsultants.org/		
Thursday, February 20	Joint meeting of the ACS Philadelphia	Conshohocken Brewing Company		
6 – 9 PM	Section, ChemPharmaProfessional	3100 Horizon Drive		
	Association, AIChE Delaware Valley	King of Prussia, PA 19406		
	Section and STLE Philadelphia Sec-	See the Catalyst for details		
	tion: Topic TBD by Dr. Britt Dahlberg,	https://www.eventbrite.com/e/acs-chempharma-aiche-stle-joint-		
	Science History Institute	meeting-tickets-86832270659		
Thursday, February 27	Philadelphia Organic Chemists' Club:	Chemistry Building - University of Pennsylvania		
6:30 PM Social Hour	Innovative Strategies toward Complex	34 th and Spruce Streets		
7:30 PM Lecture	Molecule Synthesis: Development of a	Philadelphia, PA 19104		
	Fully Biocatalytic Manufacturing Route	http://www.pocclub.org/		
	for Islatravir by Dr. Niki R. Patel, Merck			
Thursday, March 12	The Edgar Fahs Smith Memorial Lec-	University of Pennsylvania Chemistry Building		
5:00 PM Reception	ture: Protein Glycosylation Pathways	231 South 34th Street		
6:00 PM Lecture	and Processes by Dr. Barbara Imperi-	Philadelphia, PA 19104		
7:30 PM Dinner	ali, Massachusetts Institute of Technol-	https://edgarfahssmith2020.eventbrite.com		
	ogy			
Please check the individual websites for additional updated information				
All content submissions are due on the 15th day of the month prior to publication				