the Catalyst

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June 2020
Volume 105, No. 7

June Meeting
Robert E. Hormann, PhD, PMP

HIGHLIGHTS

A D V A N C E N O T I C E

SEPTEMBER MEETING
Wednesday, September 9, 2020

Joint meeting of the ACS Philadelphia Section, the Chemical Consultants Network and Philly YCC
Speaker: Dr. Thomas M. Connelly, Jr., Chief Executive Officer, American Chemical Society

See the September 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

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Advertising: Victor Tortorelli, vtortorelli@ursinus.edu

Comments From the Chair

Joe Martino III

UPDATE ON RESPONSE TO COVID-19

During our April and May Board of Directors Teleconferences, we discussed our current response to the COVID-19 pandemic regarding our Section events. Moving forward for the remainder of 2020, our events will be planned for the contingency of continued virtualization if government restrictions require it.

As I write this, the Commonwealth of Pennsylvania has moved 37 counties in the "Yellow" phase of re-opening, requiring aggressive COVID-19 mitigation protocols, which includes allowing gatherings of 25 people or less. The State of New Jersey, which encompasses Section territory in Burlington and Camden counties, continues to be under a stay-at-home order.

For now, Section events remain virtualized. However, in anticipation of a future move from stay-at-home to aggressive mitigation protocols, I will be calling the Executive Committee to order again to discuss what a Section event would look like under these conditions and if it is prudent for the Section to begin to hold events under these conditions, continue with our virtualized events until restrictions have been loosened more, or to have hybrid in-person/virtual events.

As I mentioned in my May column, please continue to monitor our website (https://www.phillyacs.org), the monthly email that you receive, as well as our LinkedIn group for the latest, up-to-date information. Please also continue to read *the Catalyst*. I'll be using this column to break down and explain the decision making of the Board of Directors, our Executive Committee and any executive decisions that I need to make on behalf of the Section to address this ever-changing health crisis and its impact on the Section.

STUDENT SCHOLASTIC ACHIEVEMENT AWARD WINNERS

As a result of our cancelled April meeting, the Section was not permitted to honor our Student Scholastic Achievement Award Winners in the traditional, in-person manner in which the Section is accustomed. To compensate for this, you will see in this month's edition of *the Catalyst* profiles of the students that we are honoring this year. As I mentioned in April's column, we traditionally ask our student award winners three questions: What is your name? What school did you attend? What do you plan to do after graduation? We continue this tradition in this edition of *the Catalyst*. Our student award winners have graciously answered these questions and we publish their responses here. Congratulations to our students for their accomplishments and we extend our gratitude to them for their graciousness with responding to our requests as well as their understanding as the Section adapts to a difficult time in our history.

ANNIVERSARIES!

In June, we traditionally honor our 50-, 60- and 70-year members. As I mentioned in last month's column and due to the COVID-19 pandemic, we unfortunately had to cancel this event. I want to take this opportunity to congratulate these members in their service to the Society. Currently, the Section is working with these anniversary members to honor them, and you will be seeing their traditional profiles in the September edition of *the Catalyst*.

A SWITCH ON THINGS

It is known in industrial chemistry that a product which has an application in one area can be found to have an application in another area. There is frequent switching of applications in chemistry. This month's talk by Dr. Robert Hormann explains such an application switch, where science applied to insecticide research was translated to gene therapy. What is also fascinating is that the gene therapy application involves a gene switch! I'll leave the details to Dr. Hormann's abstract which you'll find in this edition of *the Catalyst*, but I hope that you'll switch on your computer (sorry, couldn't help the pun) and watch this fascinating technical talk!

THE REST OF 2020

Provided that COVID-19 cooperates with us, here's what we're planning: In August, the Section will be holding another networking-type event at a local winery. Please be on the lookout for this event in our email blasts and our website as well as our LinkedIn group for more details, as the next edition of *the Catalyst* will be published in September. Speaking of September, we will be hosting Dr. Thomas Connelly, the CEO of ACS on September 9th in association with our Topical Group, the Chemical Consultants Network, and Philly YCC. In the Fall, we plan to revisit the Edgar Fahs Smith Memorial Lecture which was originally scheduled for March of this year. In October, we will honor the ACS Philadelphia Section award winner in addition to the Excellence in Pre-College Teaching and Excellence in Undergraduate Teaching in the Chemical Sciences Awards. Finally, in November, Nobel Laureate Dr. Peter Agre joins us at the Science History Institute for the 2020 Ullyot Public Affairs Lecture. As the Section has demonstrated so far, we will offer events virtually if restrictions are placed before us, and we will inform you of what we will do every step of the way.

SOME CLOSING THOUGHTS

At this point, the Section will go on its traditional Summer break. I would like to thank our Officers, Members of the Board of Directors, Committee Chairs and Topical Group Chairs for their cooperation, professionalism and support of the Section and its efforts during this very unusual and difficult time. I would also like to thank you, our membership, for your patience, understanding and support as we navigate together during this novel and complicated point in Section history.

As always, my door is open to your questions, comments and concerns. Please feel free to email me at philaacs@gmail.com. We are also open to volunteers, too, so if there is something of interest or if you have an idea where you think you can contribute to growing the Section, please let me know.

Summer is here! My hope is that you have a restful, peaceful and enjoyable Summer that is productive in your work and fun with your family and friends. Stay well and safe, and we'll catch up in September!

NEWS ATOMS—*Alan Warren*

DEATHS

Dietmar Fuchs, March 4, 2020 at age 83. No further details available.

Tomoko Ohnishi, retired professor of biochemistry and biophysics, March 17th at 88. Born and educated in Japan, she joined the University of Pennsylvania in 1967 as a visiting assistant professor and postdoctoral fellow within the Johnson Research Foundation and under the guidance of Britton Chance. She continued in Penn's Perelman School of Medicine to become full professor in the department of biochemistry and biophysics in 1996. Ohnishi was an expert in electron paramagnetic resonance spectroscopy. She was still active as a faculty member until the time of death.

Arthur J. Raymond, retired industrial chemist, April 8th at 90. He was employed by Wyandotte Chemical, where he worked on classified government projects, and then moved to Sun Oil Company in 1965. After retirement he continued to engage in consulting. He was active in scouting and the Catholic Youth Organization.

Takashi Yonetani, emeritus professor of biochemistry and biophysics, April 13th at 89. Born and educated in Japan, he came to Penn as a predoctoral fellow to work with Britton Chance in the Johnson Foundation, and spent postdoctoral time with Nobel scientist Hugo Theorell at Sweden's Karolinska Institute.

Yonetani joined Penn in 1964 as assistant professor of physical biochemistry in the Perelman School of Medicine, becoming associate and then full professor. He served a year as acting chair of the new department of biochemistry and biophysics when it was established in 1976. He specialized in the study of redox proteins and hemoglobin, retiring in 2019.

Ying Kao Lee, retired industrial chemist, April 13th at 87. Born in Shanghai, he was educated in England and the United States. He joined DuPont in 1965 and developed a car paint additive that prevented fading. He also developed coatings for microelectronics and later helped form business ties between DuPont and China. He was named a Distinguished Scientist at DuPont and received the firm's Lavoisier medal for technology achievement. Lee retired in 2000.

Edward R. Appelbaum, retired biochemist and molecular biologist, April 15th at 72. He was a staff fellow at the National Institutes of Health and then joined Agrigenetics as a senior scientist in 1982. In 1989 he moved to GlaxoSmithKline where he led research in therapies based on gene expression and recombinant proteins.

He joined Centocor/Johnson & Johnson in 2004 to develop a manufacturing process for a therapeutic antibody. Appelbaum returned to GlaxoSmith Kline in 2010 and served as a research director until retiring in 2016.

Larry F. Nonemaker, retired industrial chemist, April 21st at 83. He was employed by DuPont and spent 12 years in the finishes business, 12 years in marketing and administration, and 12 years in information management and technology. He was also a director of the Helen Kate Furness Library, and served as a director of the Atlantic Credit Union and Citadel Federal Credit Union.

Henry G. Schouten, retired chemical engineer, April 27th at 97. Born in Maastricht, Holland, he worked for a paint and ink company before immigrating to the United States in 1948 to work in the research department of C.K. Williams. The following year he moved to the product development department of Trojan Powder where he worked in process research and development of resins.

In 1956 Schouten joined the chemical development department of Wyeth Laboratories where he was involved in process development of tranquilizers, hypotensive drugs, synthetic penicillin, and synthetic steroids, retiring in 1986.

JUNE MEETING

THE PHILADELPHIA SECTION, AMERICAN CHEMICAL SOCIETY

PRESENTS

Robert E. Hormann, PhD, PMP

A Gene Switch Story

June 11, 2020

7:00 PM — 8:00 PM

Talk to be presented through Cisco Webex.

To access the talk, please go to https://meetingsamer4.webex.com/meet/philaacs. The website will be open starting at 6:45 PM.

ACS Philadelphia Section Board of Directors Meeting

Date: June 18, 2020 -- please note that this *is not* the same date as the Section Meeting
Time: 6:00 PM to 7:00 PM
This Board of Directors meeting will be held via Cisco Webex and is open to the public. To access the meeting, please use the following information:

By Internet:
Link: https://bit.ly/2X5K7Md
Meeting Number: 126 805 7165
Password: June2020BoDMtg

By Phone:
Phone Number: 1-408-418-9388
Meeting Number: 126 805 7165
Password: 58632020

SPEAKER'S ABSTRACT AND BIOGRAPHY

Robert E. Hormann, PhD, PMP

A Gene Switch Story

Abstract: The insect molting hormone, 20-hydroxyecdysone, was first isolated by Peter Karlson in 1955. Entomologists speculated that synthetic substances that modulate ecdysone function and growth regulation might make effective insect control agents. This goal was realized in the 1980s at Rohm & Haas by serendipitous chemical discovery, phenotypic observation, and ultimately, understanding of ecdysone receptor function. This foundational science led to the commercialization of three highly selective and environmentally-friendly insecticides. In turn, the now established technological foundation enabled the development of the Rheoswitch® Therapeutic System (RTS®), a transcriptional control system based on the ecdysone receptor. RTS® is currently being developed for the regulation of human gene therapy. The Rheoswitch® gene regulation system is an example of savvy synthetic biology, a modern mode of medicinal chemistry, agro-pharma crossover, and a very forward-looking approach to gene therapy. The development of the switch is also a technological archetype that illustrates important sociological patterns in the scientific enterprise.

Biography: Bob Hormann received his PhD in chemistry from the University of Chicago, working with Phil Eaton in the area of non-natural products. As an N.I.H. postdoctoral fellow, he subsequently joined the lab of Duilio Arigoni at the Swiss Federal Institute of Technology (E.T.H.), where he developed the first method to assign the absolute configuration of isotopically-labeled tert-butyl groups. Bob returned to the US and joined Rohm and Haas Company, performing research in biocides and crop protection. He continued with the gene switch spin-out RheoGene which later merged with Intrexon, a synthetic biology firm. Bob has also consulted in the biopharma industry and currently undertakes technology development at the Penn Center for Innovation. Bob is the inventor of veledimex, the first clinical transcriptional activator for gene therapy.

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.

ACS Local Section Philadelphia

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 made important contributions to the field of chemistry and thereby aided the public appreciate of the profession." (ACS Philadelphia Section Bylaw X, §1.) Any member of the ACS Philadelphia Section may be nominated. Recent awardees include Michelle Francl (Bryn Mawr College), Donna M. Huryn (University of Pennsylvania), Anthony W. Addison (Drexel University) and Marsha I. Lester (University of Pennsylvania).

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, re-nominations 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 **August 15, 2020** to the Chair of the Awards Committee at the Section Office address above.

2020 Scholastic Achievement Award Winners

Amanda R. Zane (Arcadia University)

"After graduation, I am planning to attend Washington University in St. Louis, where I will focus on obtaining a degree in Chemical Engineering. I want to concentrate on aerosol science and nanoparticles."

Amy Stringer (Arcadia University)

" . . . I am finishing undergrad this semester and am enrolled in an accelerated Masters of Forensic Science program at Arcadia University. I'll be graduating with an MS in 2021 and this summer will be applying to medical school for entry in the fall of 2021."

Yelin Jung (Bryn Mawr College)

"My plan after graduation is working at Merck as a discovery chemist intern!"

Destiny Hallak (Chestnut Hill College)

"Currently, I am looking into laboratories or institutions to apply to as a research assistant or as a chemist in general. Within the next year, I plan to take my GREs and apply to graduate school to get my Master's in either Forensic Science or Chemistry with a focus in Analytical Chemistry."

Juliana Hunt (Drexel University)

"After graduation this June, I plan to return to Drexel University to complete my additional year of eligibility on the Women's Rowing team while earning a master's degree. I am extremely grateful for every one of my chemistry professors and classmates at Drexel, especially the experiences and memories I have made within the tight-knit, energetic, and hardworking Department of Chemistry."

Colin S. Burden (Eastern University)

"I am planning on taking a position as a Strategy Analyst at W.R. Grace and Co, a global specialty chemicals company based in Columbia, MD. I have interned there over the past two summers, and I am currently in the process of finding a full-time role in the company where I would help on different business projects. I am hoping to serve as a helpful bridge between the technical and commercial branches of the company."

Samuel McCalpin (Haverford College)

"I will be taking the summer off and starting a PhD program in chemistry at the University of Michigan in the fall."

Jessica C. McHugh (Immaculata University)

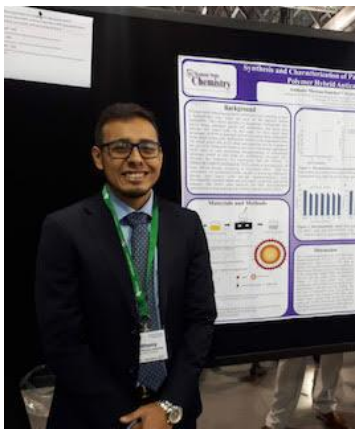
" . . . I don't have a set in stone plan but have been talking to a few companies and labs about positions with them. My goal is to get into a research lab and help with disease research!"

Catherine B. Edgington (La Salle University)

"I will be attending OSU for grad school in the fall. I am going for my PhD in Biochemistry."

Anthony Moreno-Sanchez (La Salle University)

"My plans for after graduation are to take a gap year and work within a research laboratory. During this gap year I also intend to apply to neuroscience PhD programs."



Salsabill Subah (Rutgers University – Camden)

"After graduation, I plan to pursue a career to expand my knowledge with chemistry and hopefully gain some marketing experience. However, I do plan on going back to school to fulfill my passion about being in the healthcare industry."

Erica Litle (Saint Joseph's University)

"After graduation, I plan to apply to the Peace Corps and hope to volunteer my time in Africa with a focus in agriculture. After returning from service, I plan to apply to law school and pursue a career in patent law."

Rajiv Potluri (Swarthmore College)

"I will be working at the Zon Lab at Harvard Medical School for two years before applying to medical school."

Alexandra Davidson (Chemistry, Temple University)

"I am heading to Drexel University School of Medicine in the fall of 2020. I cannot wait!"

Nguyen Thao Van (Biochemistry, Temple University)

"After graduation, I plan to take a gap year to prepare and apply to medical school."

Anna Schmitt (University of Pennsylvania)

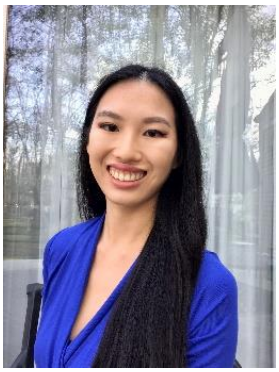
"I will be working as an analyst at Perella Weinberg Partners."

James Kwon (VIPER – Chemical Engineering, University of Pennsylvania)

"I will be joining Cornerstone Research as an Analyst following graduation with plans to attend grad school later on."

Anushri Nimbvikar (Biochemistry, University of the Sciences)

"I plan on using this summer to spend time with my loved ones before starting medical school in August to pursue an MD. As a medical student, I will continue to do research alongside my academic responsibilities, as I am a firm believer in learning through doing. In the future, I plan to complete a residency in a primary care specialty and be an advocate for educating and contributing to the health systems of underserved populations."



Kaitlyn Cohen (Ursinus College)

"After graduation, I will be pursuing my PhD in Inorganic Chemistry at Princeton University**."**

Broderick Johnson (Ursinus College)

After graduation, I will be pursuing my PhD in organic chemistry at Northwestern University.

Charlotte Montgomery (Villanova University)

"After graduation, I will be attending the University of North Carolina at Chapel Hill to pursue my PhD in chemistry on the inorganic track."

Teresa Lee (West Chester University)

"Next year I will be attending Princeton University to pursue my PhD in chemistry."

Also Recognized: Rebecca Weaner (West Chester University) and Steven Weaner (West Chester University).

CHEMICAL CONSULTANTS NETWORK ZOOM MEETING

JUNE 10, 2020

CONSIDERING CONSULTING? OPEN FORUM – SHARE EXPERIENCES, WISDOM, & NETWORK

DATE & TIME: Wednesday, June 10, 2020, 6:30 PM

Click here to register

Location: online via Zoom! (registration required, see below)

Program: We will informally exchange questions and experiences relating to our activities as independent chemical/life sciences consultants or our interests in becoming one. We will meet as a large group to share experiences, then breakouts for areas of interest.

This gathering has been one of our most popular and enjoyable events, so don't miss it.

Reserve your spot at http://chemconsultants.org/event-3503676
You will find a link on the website to register and get the Zoom meeting link.

This session is **FREE**. Please register by **Monday, June 8th, 2020**.

Feel free to use your video in the meeting (not required), dress is casual.

Potential Roundtable topics: becoming a consultant, the experience (and joy) of consulting, issues and opportunities in consulting, how to… (find clients, do the work, get paid, …)

Breakouts: by industry segment or your areas of interest

Here is an example of the things you may learn by joining us:
Presentation: Quick Start Guide to Becoming a Consultant (Sept 2018)

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
- Join! **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**

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DELAWARE VALLEY ENZYMOLOGY CLUB / DE & Phila. ACS ENZYMOLOGY TOPICAL GROUP

Dear Colleagues,

the next meeting of the Delaware Valley Enzymology Club will be on **Tuesday, June 16th**. Our speaker will be **Dr. Chris Barbieri** from Bristol Myers Squibb.

The title of his presentation is:

Identifying of Inhibitors of Dicer Processing of Specific Pre-miRNA Motifs Associated with Cardiovascular Disease

Abstract: Small non-coding RNA molecules such as microRNAs (miRNA) play key roles in the regulation of cellular processes. The human genome contains over 2500 miRNA, and many of these have been characterized as biomarkers of disease, including pathogenic cardiac remodeling associated with heart failure. Although treatment regimens for chronic heart failure are established, they focus on slowing disease progression and on palliative care. We seek to understand whether altering the processing of miRNA sequences associated with cardiac dysregulation can provide disease modifying treatments for heart failure. The cleavage of the hairpin from duplex pre-miRNA to generate the two ~22 nucleotide mature miRNA strands by the RNase III enzyme Dicer, the final enzymatic step in miRNA processing, provides a node in the miRNA maturation process susceptible to modulation by small molecule drugs. In an effort to identify novel modulators of specific miRNA sequences processed by Dicer, we developed a quantitative and scalable assay enabling enzymatic characterization of pre-miRNA processing. We have used this assay for biochemical characterization of Dicer processing of pre-miR-25 to miR-25, a miRNA associated with expression of essential proteins for cardiac contractile function. Furthermore, this method was extended to be applicable to any pre-miRNA and was used in a small molecule screening campaign to find miR-25-specific inhibitors.

For reservations or further information, contact Charu Chaudhry preferably by e-mail at dvenzymec@gmail.com.

Sincerely,
Charu Chaudhry

Thanks to the Philadelphia ACS for financial support!

DIRECTORY OF SERVICES

CAREER DEVELOPMENT

Being a part of one of our teams can help you develop organizational 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.

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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
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- ✓ Publications
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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.

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