



PSNA News

Phytochemical Society of North America
Sociedad Fitoquímica de América del Norte
Société Phytochimique de L'Amérique du Nord

Volume 57, Number 1

Summer 2019

President's Message



Dear Members

Since our last annual conference in Mexico, one year has almost gone. I hope that you have had a wonderful and productive year.

Our 58th annual conference at East Tennessee State University is about 3-week away. Remember, many of us made an appointment to exchange our past year's research progresses and news this annual event. Have you registered? If not, please hurry up! It is the best time to meet old friends and make new friends. It is the best time to come together to work for a better future PSNA.

We had many good things in our PSNA in the past 11 months. By this week, our Facebook members

increased to 84. Awesome! This is so great! More importantly, members have been active to post news and share research activities. Please join our Phytochemical Society of North America group at Facebook. Recently released Journal Citation Reports showed that the impact factor of Phytochemistry Review journal was higher than 4.0 in 2018. This has our PSNA's efforts! Thanks to Dr. Reinhard Jetter, our Editor-in-Chief, for his great efforts. All our committees were active to plan future events to strengthen the PSNA. Our future meeting committee voted our 59th annual meeting and planed our 60th annual meeting. Our membership committee has been working hard to increase our member enrollment. Our website and Newsletter committee created a great website

for update our news. Our award committee always had difficult time to vote award recipients because of competitive candidates. Special Thanks go to Dr. David Gang for leading a great award committee for many years. In particular, our Young Member Committee are functional and their efforts brings a lot of new energies to the PSNA. Many things will be shown in the 58th annual conference on July 20 -24, 2019. Please come to learn more.

Special Thanks go to Professors Cecilia McIntosh and Dharendra Kumar for every single hard effort to organize the 58th annual meeting. Members are excited to look forward to attending this meeting and expect a productive experience. If you have not registered, please hurry up!

Look forward to meeting you in the 58th annual meeting!

Best Wishes
Deyu Xie
President



In this issue:

2019 Meeting in Johnson City, Tennessee
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The web PDF version can be downloaded from the website: www.pсна-online.org.

PSNA News
Fall 2017



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Past PSNA Presidents

The Phytochemical Society of North America

The Phytochemical Society of North America (PSNA) is a nonprofit scientific organization whose membership is open to anyone with an interest in phytochemistry and the role of plant substances in related fields. Annual membership dues are U.S. \$60 for regular members and \$30 for student members. Annual meetings featuring symposium topics of current interest and contributed papers by conference participants are held throughout the United States, Canada, and Mexico. PSNA meetings provide participants with exposure to the cutting-edge research of prominent international scientists, but are still small enough to offer informality and intimacy that are conducive to the exchange of ideas. This newsletter is circulated to members to keep them informed of upcoming meetings and developments within the society, and to provide a forum for the exchange of information and ideas. If you would like additional information about the PSNA, or if you have material that you would like included in the newsletter, please contact the PSNA Secretary or visit our website at www.pсна-online.org. Annual dues and changes of address should be sent to the PSNA Treasurer. Also check the PSNA website for regular updates.

The PSNA is an all volunteer organization which depends on its membership to run the organization. We appreciate the time and effort these volunteers are putting in to keep the organization up and running. As a member, please consider volunteering to serve on one of these committees. The PSNA can always use more help!

PSNA EXECUTIVES

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58th Annual Meeting of the Phytochemical Society of North America July 20-24 Johnson City, Tennessee



UPDATE ON TRAVEL & AIRPORT INFORMATION:

Local Airport
Tri-Cities Airport
(Airport code TRI)
2525 Highway 75, Suite 301
Blountville, TN 37617

Transportation to and from airport: Carnegie has a shuttle that is up to \$45.00 one way, to schedule transportation with Carnegie please call them directly.

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Additional options: rental cars, Uber or Lyft
<https://triflight.com/passengerguide/car-rental/>



UPDATE ON LODGING AND DINING

The block of rooms for the Carnegie Hotel is full. You may still contact them directly to ask availability and to ask for best rate they can give. Be sure to tell them you are attending the conference. Also, if you let them know early in the day, they will shuttle you to nearby restaurants (5 mile radius) for dinners. Several restaurants are within walking distance from the hotel. Hors d'oeuvres will be served at the welcome reception and the poster sessions; the banquet is on Tuesday evening.

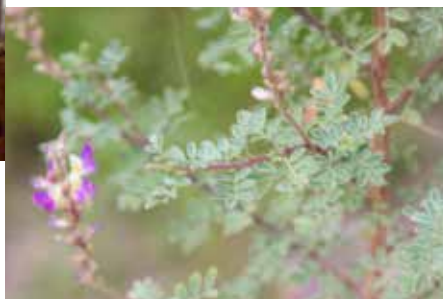
There are several other hotels nearby, some of which also offer shuttle service.

MEETING PROGRAM

Schedule and invited symposium speakers: (other oral presentations also at each session)

Saturday, July 20, 2019

2 – 9:00 pm **Registration** at entry to Old Soldier's Ballroom, Carnegie Hotel
4-6:00 pm **Executive Committee Meeting** (Reeves Room)
6-7:00pm **Awards Committee Pre-meeting** (Reeves Room)
6-9:00pm **Welcome Reception**, Old Soldier's Ballroom (Set up posters in Wilder Room)



Sunday, July 21, 2019

Symposium I. Natural Product Metabolism: Pathway Discovery and Regulation

Mike Phillips, University of Toronto, Mississauga, Canada: *Understanding the Control of Plant Metabolism Using Stable Isotopes*

Symposium II. Natural Product Enzymology: Bridging the Gap between Bioinformatics and Biochemical Function

Isabel Desgagne-Penix, University of Quebec at Trois Rivier, Canada: *Cracking the Amaryllidaceae Alkaloid Biosynthetic Code*

Poster Session I. Those with odd # posters asked to please stay by their posters. (Wilder Room)

Monday, July 22, 2019

Symposium III. Secondary Metabolites of Bryophytes, Ferns, and Lycophytes: Enormous Diversity from Primitive Plants

Yoshinori Asakawa, Tokushima Bunri University, Japan: *Liverworts: A Good Source of Biologically Active Ent-Sesqui- and Diterpenoids*

Symposium IV. Advances in Phytochemical Tools and Applications
Marianela Rodriguez, BASF, USA: *Phytochemicals and Natural Products: Innovations, Challenges and Applications*

Young Members Luncheon – Discussion topic: *Improving Writing Skills – How to Get a Scientific Paper Accepted for Publication*

Symposium V. Chemical Ecology: Interactions of Plants with Other Organisms

Sybille Unsicker, Max Planck Institute for Chemical Ecology, Germany: *The Chemical Ecology of Tripartite Interactions between Insects, Fungi and Poplar Trees*

PSNA Members Meeting – all conference participants should attend (Old Soldiers Ballroom)

Poster Session II. Those with even # posters asked to please stay by their posters. (Wilder Room)

Tuesday, July 23, 2019

Discussion: *Report on Outcomes of the Plant Summit: Implications for PSNA*

David Stern, Boyce Thompson Institute, USA

Symposium VI. Signaling in Development, Stress, and Defense
Jean Greenberg, University of Chicago, Chicago, USA: *Understanding Plant Immunity by Tracking Sites of Action of Immune Components*

Symposium VII. Translational Phytochemistry: Commercialization of Discoveries

Ryan Philippe, Manus Bio, Cambridge, MA 02138, USA: *Commercial Bioproduction of Plant Natural Products: The Manus Bio Approach.*

Arthur Neish New Investigators Symposium

Ruthie Angelovici, University of Missouri, USA: *Uncovering the Metabolic and Genetic Regulation of Free and Bound Amino Acids in Seeds*

D.K. Kosma, University of Nevada Reno, USA: *Plant Bandages: Identification of Transcriptional Regulators of the Plant Wound Healing Process*

Patrick J. Horn, East Carolina University, USA: *Peroxiredoxin Q Activates and Unusual Fatty Acid Desaturase Through Redox Regulation in Arabidopsis thaliana*

Banquet and Award Ceremony – Old Soldiers Ballroom

Wednesday, July 24, 2019

Symposium VIII. Natural Products in Agriculture: Harnessing the Potential of Secondary Metabolites to Improve Crop Function

Martha Vaughan, USDA ARS NCAUR, Peoria IL 61604, USA: *Metabolomics of Crop Resilience*

Symposium IX. Natural Products in Medicine: Drug Development and Discovery

Victoria Palau, East Tennessee State University, USA: *Differential Anti-Neoplastic Activity of Flavonoids Derived from Andean Plants with Ethnobotanical Importance*

Explore Northeast Tennessee (on your own)

PSNA Election 2019

The PSNA holds an election each year for a new President-Elect, who will hold a three-year term as President-Elect, President, and Past-President. The nomination committee is made up of the PSNA Advisory Committee, which seeks candidates that have a demonstrated commitment to the organization and who would be willing to actively carry out the duties and obligations of running the PSNA. This year the nominating committee has selected a single candidate for president, Dr. Dorothea Tholl of Virginia Tech University, who has an outstanding record of participating in the PSNA, and who will be running against any write-in PSNA member candidates that the electorate would provide. The election opens the last week of June and all members should have received a invitation to vote! Please participate and show your support for the ongoing efforts of the PSNA!



Profile Dr. Dorothea Tholl
(tholl@vt.edu)

Dorothea Tholl is a tenured professor in the Department of Biological Sciences at the Virginia Polytechnic Institute and State University (Virginia Tech). As a first-generation college student in her family, Dr. Tholl received a diploma in Biology (1992) and a Ph.D. in Pharmaceu-



tical Biology (1996) with Honors from the Technical University of Braunschweig, Germany. Her Ph.D. studies with Thomas Hartmann were focused on gene discovery related to pyrrolizidine alkaloid biosynthesis. From 1997-2005 she was a postdoctoral fellow and junior group leader at the Max Planck Institute for Chemical Ecology, where she held a 2-year joint appointment with the University of Michigan before she became Assistant Professor at Virginia Tech. The Tholl Lab studies the formation and biological functions of volatile specialized metabolites in organism-environment interactions. Current research is focused on the metabolism and function of terpenoids in plants roots and the rhizosphere with potential applications in improving stress resilience and the aroma of root crops. Further interests include the engineering of insect pheromones in plants to develop novel integrated pest management strategies. Dr. Tholl has served as co-chair of the 2016 Gordon Conference of Plant Volatiles. She is currently a member of the editorial board of “The Plant Journal” and the “Journal of Chemical Ecology”, and serves as an associate editor for “Frontiers in Plant Science” and as advisory board member of “New Phytologist”. She has over 60 publications including several in PNAS, Plant Cell, Plant Journal, and Plant Physiology.

A PSNA member since 2000, Tholl received the Arthur C. Neish Young Investigator Award of the society in 2007. She has presented her research at several PSNA meetings and serves as a member of the PSNA advisory board since 2015. She is currently a candidate to serve as President of PSNA for the 2020-2021 period. Tholl states: “Following in the footsteps of those who preceded me, one of my primary goals as president will be to continue to grow a

diverse PSNA membership across North America. In particular, I am excited to improve the participation of younger members in the society and strengthen PSNA as a forum and voice for the importance of phytochemistry in a sustainable bio-based economy”.

Testimonials from the PSNA-Elsevier Phytochemistry Young Investigator Awards

An Appreciation from Dr. Hiroshi Maeda

I am writing this letter to express my appreciation to the Phytochemical Society of North America (PSNA) society and Elsevier for giving me the prestigious award of the PSNA-Elsevier Phytochemistry Young Investigator Award back in 2016. The award helped me tremendously in multiple ways at both personal and professional levels over the last three years since I received the award.

First, the award significantly enhanced recognition of our work among colleagues, not only in the field of phytochemistry but among more broader plant biochemistry and biology community. Also, the presentation of our work at the following 2017 PSNA meeting and the publication of our invited review article “Tyrosine biosynthesis, metabolism, and catabolism in plants” in the journal, *Phytochemistry*, provided me precious opportunities to effectively disseminate the work conducted in my laboratory. These recognitions gave me critical support and confidence to continue our science, which was especially important to me at the time of starting up my research group. The broader recognition among the scientific community also helped enhancing our visibility in my own department and institution, University of

Wisconsin-Madison, through various highlights and news of receiving this award. Thanks to the timing and the target of the award to “beginning investigators”, the broader recognitions both on and off campus helped the tenure evaluation process.

The research support, which came with the award, also provided a great opportunity for us to initiate a new direction of research that combines biochemistry and evolutionary biology. Using this research fund, we were able to obtain key preliminary results to eventually receive a major grant from the U.S. National Science Foundation. Without the support from the PSNA-Elsevier Phytochemistry Young Investigator Award, we were not able to make this ambitious transition and to develop our unique expertise in the interdisciplinary research area of plant biochemistry and evolution.

Given my precious experience in receiving the PSNA-Elsevier Phytochemistry Young Investigator Award, I sincerely hope that the PSNA can continue this competition in partnership with the Elsevier Phytochemistry in years to come. Without any doubt the awards will provide great opportunities for future young investigators to be recognized by the society and community, explore new research area, and eventually to lead and promote the advancement of phytochemical research.

Best regards,

Hiroshi Maeda, Ph.D.
Associate Professor
University of Wisconsin-Madison

An Appreciation from Dr. Phillipp Zerbe

"I have been deeply grateful to receive the 2018 Elsevier-PSNA award, since it has not only supported my personal career progress but also directly promoted research progress and visibility of my laboratory. The award supported a new research project toward understanding how plant metabolites exert antimicrobial activity at the molecular level. For example, with funds from this award, we could establish a refined assay system that allows us to precisely analyze the contribution of different structural features of plant metabolites to antimicrobial activity and pathogen specificity. A manuscript reporting these new insights is currently in preparation with co-authorships for two graduate and three undergraduate students that were involved in the work. In addition, the generated data have contributed to federal grant proposals on understanding the mode-of-action of antimicrobial plant natural products that are currently under review. Thanks to the success of the project supported by the Elsevier-PSNA award, the graduate student (Katherine Murphy) who is leading this project was the winner of the UC Davis GradSlam competition and was selected as a speaker for the international iBiology Young Scientist Seminars Competition, providing excellent opportunities to distribute our work to abroad audience. Based on this experience, I strongly believe that young scientist awards such as the Elsevier-PSNA award are an important component of promoting the work of junior group leaders but also their students and trainees."

Best, Philipp
Dr. Philipp Zerbe
Assistant Professor
Department of Plant Biology
University of California-Davis

Future Meeting Committee

Dorothea Tholl (Chair),
Sangeeta Dhaubhadel (Vice Chair),
Philipp Zerbe (member),
Denisse Atenea de Loera Carrera (member)

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Dhirenda Kumar (Chair),
Daniel Owens (member)

Young Members Committee

Lloyd Sumner (Chair),
Armando Alcazar (Co-Chair OSU),
Cody Bekkering (member, UC-D),
Lucas Busta (member, UN-L)

Awards & Recognition Committee

Björn Hamberger (Chair),
Argelia Lorence (member),
Deyu Xie (member)

Website Updates and Newsletter

Mark Berhow
(berhowma@comcast.net)
Mark Lange (lange-m@wsu.edu)



Job Listings

<http://www.psna-online.org/jobs.html>

PSNA Newsletters Back Issue Catalog

Recently Dr. John Romeo, a Past PSNA President and a Life Time Member of the PSNA, sent his collection of back issues of the *PSNA Newsletter* dating back to 1976 to the current editor. These have now been scanned to PDF digital format and have recently been posted on the PSNA website. This expands our collection of back issues that had only gone back to 2000 or so.

This is a unique collection that catalogs the events and proceedings of the PSNA meetings as well as providing some interesting articles on the state of phytochemical research over the years. If you get a chance go to the PSNA website and click the publications link, download some of the newsletter sets and enjoy!

Dr. Romeo: all you need do to become a member is to send \$8 to Dick Mansell (see p 9) together with an outline of your phytochem. interests. We'll be happy to send you! CW

PHYTOCHEMICAL SOCIETY OF NORTH AMERICA

NEWSLETTER JANUARY 1976 HAPPY NEW YEAR ONE AND ALL !!!

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The newsletter proposed for December circulation was replaced by a brief note from the Treasurer because of the Canadian mail strike. Now that the postal operations are more or less back to normal, we can expand on the information which made an interim sheet mandatory.

Canada (accommodate us on campuses of UBC)

58th Annual Meeting

Phytochemical Society of North America

20-24th July, 2019, Johnson City, TN 37614

<http://www.pсна-online.org>

SYMPOSIUMS:

- Natural Product Metabolism: Pathway Discovery and Regulation
- Secondary Metabolism of Bryophytes, Ferns, and Lycophytes: Enormous Diversity from Primitive Plants
- Natural Product Enzymology: Bridging the Gap between Bioinformatics and Biochemical Function
- Advances in Phytochemical Tools and Applications
- Chemical Ecology: Interactions of Plants with Other Organisms
- Signaling in Development, Stress, and Defense
- Translational Phytochemistry: Commercialization of Discoveries
- Natural Products in Agriculture: Harnessing the Potential of Secondary Metabolites to Improve Crop Function
- Natural Products in Medicine: Drug Development and Discovery



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