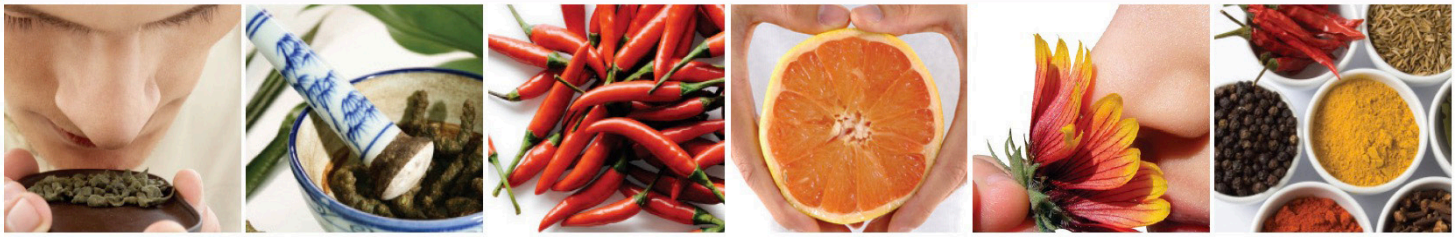


AChemS
Association for Chemoreception Sciences
ANNUAL Newsletter
2019 FOSTERING CHEMICAL SENSES RESEARCH AND UNDERSTANDING SMELL AND TASTE IN HEALTH AND DISEASE

MESSAGE FROM THE PRESIDENT

Minghong Ma, PhD
President, AChemS

I look forward to welcoming everyone to the 41st annual meeting, which will showcase recent scientific discoveries in chemical senses and beyond! In the past year, our society remains vigorous with sound financials, robust sponsorship and strong membership. The executive committee along with standing and ad hoc committees has worked hard to propose and implement new initiatives to bring improvements in many aspects. These include modified financial investment strategy, new online AChemS Education Corner, enhanced social media communications, "Chemical Senses Social" at the 2019 Society for Neuroscience meeting, inaugural childcare grants, and more. Here are some highlights and updates.

Annual Meeting
Nirupa Chaudhari, the program chair and her committee have worked tirelessly to put together a fantastic program for 2019! A new addition this year is a series of In-Focus symposia organized by Matthew Wachowiak and Patricia Dilorenzo. This whole-day event includes ~20 talks with a central theme on "Cracking the Chemosensory Code", which originally stems from the NSF-supported "Cracking the Olfactory Code" program. In addition, Thomas Bozza organizes the pre-meeting satellite symposium "Comparative Approaches to Chemosensory Function" featuring another 20 speakers. For updates on the conference, please follow this link https://achems.org/2019/program.php.

Don't miss out the opportunities to meet with representatives from NIH and NSF
As in previous years, Dr. Susan Sullivan and her NIDCD colleagues will present and discuss funding opportunities for new investigators in the Barry Davis Workshop.

In a separate workshop, Dr. Christopher Lynch (Director, Office of Nutrition Research, NIDDK) will talk about the Strategic Plan for NIH Nutrition Research, Dr. Coryse St. Hillaire-Clarke (Program Director, Sensory and Motor Disorders of Aging Program, NIA, NIH) will introduce aging related funding opportunities, and Dr. Edda (Floh) Theils will present NSF supports for chemosensory research.

ISOT 2020
The ISOT meeting will be held in June 19-24, 2020 at Portland Convention Center, Portland, Oregon. The program chair Jay Gottfried has sent out the Call for Symposia and the deadline for submitting a proposal is May 8, 2019. Make sure you check the website for updates! https://www.achems.org/ISOT/index.php

Dates and Venues for Future Meetings
You may have figured out why this year's meeting starts on Sunday (April 14) and ends on Wednesday (April 17), deviating from our usual Wed-Sun schedule. This is designed to avoid overlap with Good Friday and the start of Passover.

As our current contract with Hyatt Regency Coconut Point, Bonita Springs runs through 2021, our management team SPLtrak has looked into other venue options in Florida (Tampa/Clearwater, Miami Beach, Marco Island, St Petersburg, Sarasota, Fort Lauderdale and Orlando) for the 2022 meeting and beyond. After weighing all the factors (room rate, hotel size, access to beach, distance to airports, etc), the current venue stays on top of all the options, especially it has agreed to lock in the room rates within $10 for 6 years (regular room $239/night for 2022 to $249/night for 2027). The executive committee has approved to formalize the contract for three years (April 19-24, 2022; April 18-April 23, 2023, and April 16-21, 2024). We will be on a first option hold with guaranteed rates for 2025-2027, but in case we do not want to renew in 2025 and beyond, there will be no legalities or financial ties.

(Continued on page 2)

PRESIDENT'S MESSAGE (continued)

New This Year: AChemS Childcare Grant
A newly formed Ad Hoc committee on Childcare (chaired by Steve Munger) has worked with our management team SPLtrak to look into ways of helping our members with young children to attend the annual meeting. The committee's proposal of providing five childcare grants per year has been approved by the executive committee for five years starting FY 2019. Each grant is up to $500 in the form of expense reimbursement. Acceptable expenses include payment to a childcare facility or caregiver (in home city or on site) that exceeds normal arrangements and travel expenses (airfare & hotel) for a caregiver. Please contact info@achems.org for more details.

New This Year: ECRO Travel Grant
The executive committee has approved for two travel grants (each up to $2000) for junior AChemS members (student, postdoc, or regular within 10 years of terminal degrees) who work in the North America and will present as the primary author at the ECRO meeting.

Each year the announcement will go out on May 1st and applications are due by June 1st. The AChemS membership chair with senior and junior councilors will make final decisions based on scientific merit and financial need by June 20th.

Management Team SPLtrak
AChemS has been under the management of SPLtrak for more than two years and numerous improvements are evident from our website to meeting planning. We greatly appreciate the professional assistance provided by Melissa Szkodzinska, Adam Kohm and Jamie Price. Please say hello to them at the meeting!

Finally, I would like to express my deepest gratitude to all members for your time and effort devoted to our society (serving on committees, organizing events, volunteering in outreaching programs, mentoring young scientists, and participating in the annual meeting). It has been a great pleasure and honor for me to work with you and serving our community. Soon I will pass the torch to our incoming president Matt Wachowiak and I will be happy to assist him in any way I can in the coming year!

SECRETARY'S REPORT

Theresa White, PhD

The past year has seen changes to three main areas by which AChemS communicates with the outside world: the webpage, the Wikipedia page, and social media communication.

AChemS Webpage
The new AChemS webpage continues serve us well, and over the last year, it has been updated to improve the ease with which patients and educators can find resources related to chemosensory disorders. The Resources for the Public page has added links to the UF Health Smell Disorders Program and the University of Pennsylvania Taste and Smell Center. The page starts with a link called Information about Smell and Taste Disorders that links to the NIDCD page with information on smell and taste disorders (https://www.nidcd.nih.gov/health/taste-smell), which has a good over-view of chemosensory disorders. Our counsellors, Dan Wesson and Valentina Parma, added an "Education Corner" where instructors can find a set of simple demonstrations involving taste and smell. Although the idea was put forward to allow a listing of experts similar to Anne's List (https://anneslist.net/home/sensory-systems/olfaction/) that would enable searching through our data base by demographic factors in order to enable potential collaborators to increase diversity, careful scrutiny of the site reveals that we already gather that information. The executive office verified that members will be able to search by race or gender if they wish. We still need active input from our membership in areas such as Job Announcements, Members in the News, and Funding.

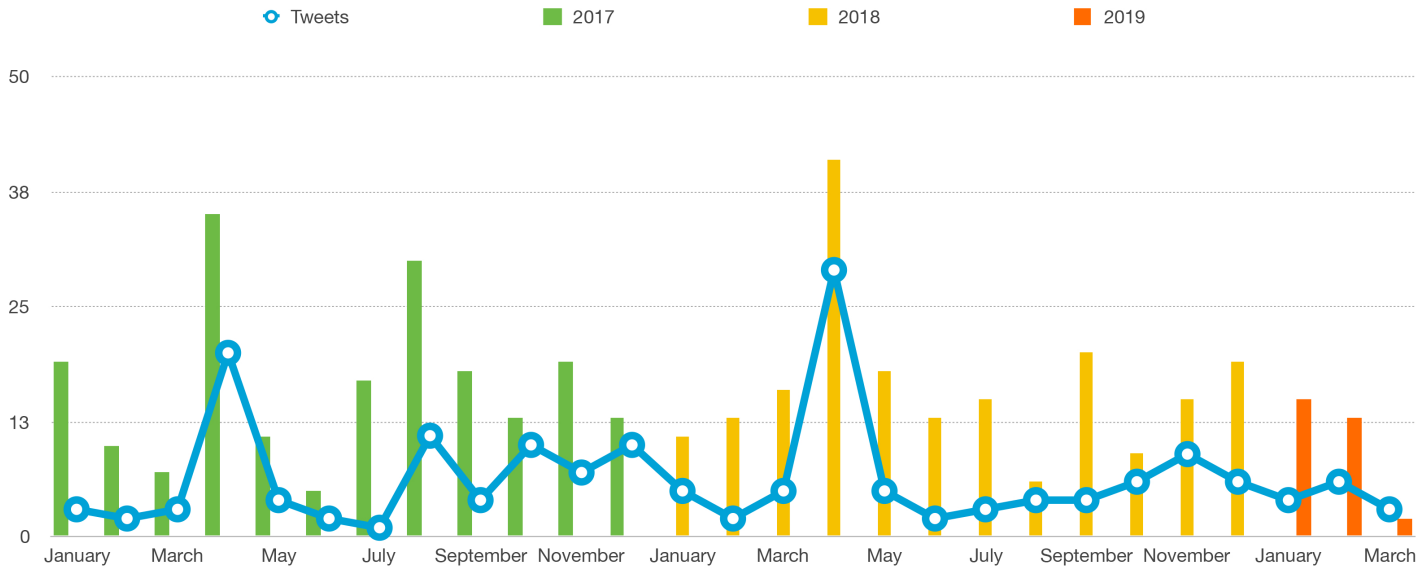
AChemS Wikipedia Page
Our Wikipedia page (https://en.wikipedia.org/wiki/Association_for_Chemoreception_Sciences) continues to expand and grow from the last time that it was taken back to a stub in July of 2017. Thanks to the assistance of former students without a conflict of interest, the warning labels have been removed from the entry. With help from Steve Munger and others, information has been added to the stub that allows a rough idea of the purpose of AChemS as an organization. Additional input would be more than welcome. Anyone who decides to edit the entry should be aware that changes need to be sufficiently supported by external references to satisfy a reviewer for the site. At this point, the entry seems fairly stable, but it still could use considerable editing to create a highly accurate public information source about our organization.

SECRETARY'S REPORT (continued)

AChemS Social Media Presence

The AChemS presence on Social Media (Twitter, Facebook) is maintained through the efforts of the executive office and myself, with content contribution from an adhoc committee that includes Laura Martin (who is the graduate rep) and Lindsey Czarnecki (who is the post-graduate rep), Tom Mast (Publicity), Paule Joseph, and Cedric Uytingco. The organization of the adhoc committee has been maintained, so that both internal (posting information relevant to the annual meeting, chemosensory event announcements, announcements about funding opportunities, Members in the News items, and alerts to new issues of Chemical Senses) and external (general public) communications can be maintained. The committee has produced two to three tweets of each communication type for every month. We would like to add more of a presence, perhaps focusing on recent publications from the previous year's award winners. The executive office has also been made an administrator on the AChemS informal Facebook page, so that there will be continuity over the years. Approval of public postings will be facilitated in that way as well.

Overall, each of these three methods of communication both maintains and raises AChemS public profile and interaction with the public. Any additional information with ideas as to how to communicate better should be sent to the secretary.



TREASURER'S REPORT

Chis Lemon, PhD

AChemS remained in good financial status last fiscal year, with in excess of $500k in assets on June 30, 2018. Our grant income was increased due to receipt of two major grants before the fiscal year cutoff. The value of our investment portfolio has increased by approximately $135k since inception of the accounts in 2011. The AChemS finance committee has developed a new strategy for investments and savings that will be slowly implemented beginning this year.

End of Year (June 30, 2018) Financials:
Meeting receipts: $254,735
Dues & contributions: $65,409
Grant income: $82,650
Investments: $13,916
Total revenue: $416,710

All Administrative Expenses: $121,579
Meeting Expenses: $246,003
Total Expenses: $367,583

Assets: $522,347

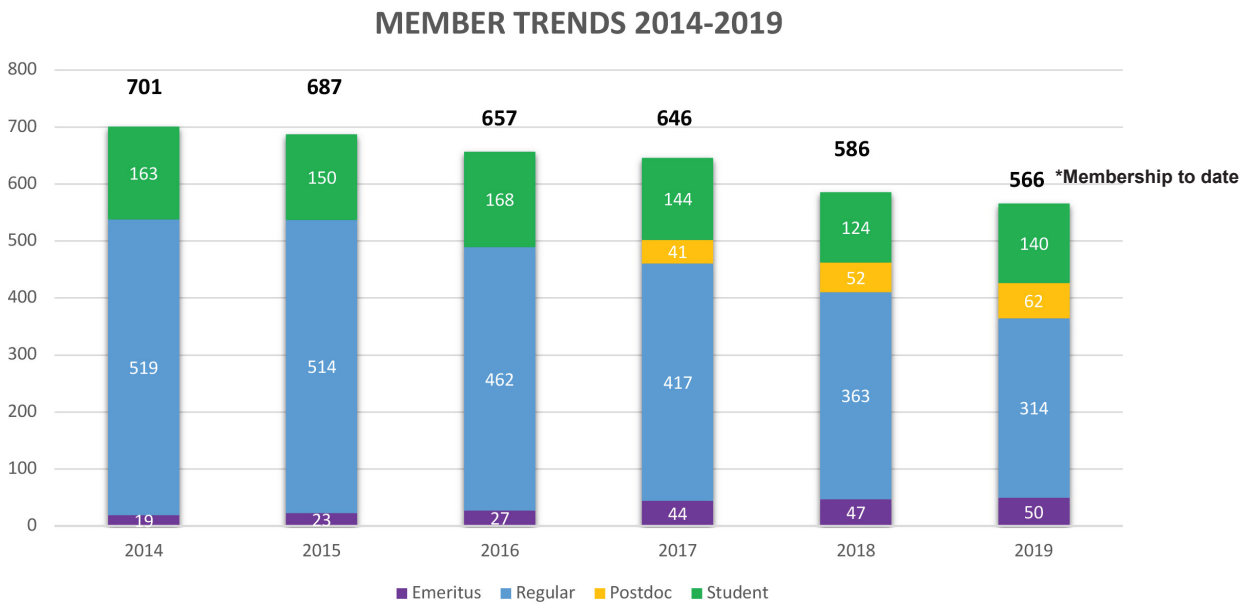
MEMBERSHIP REPORT

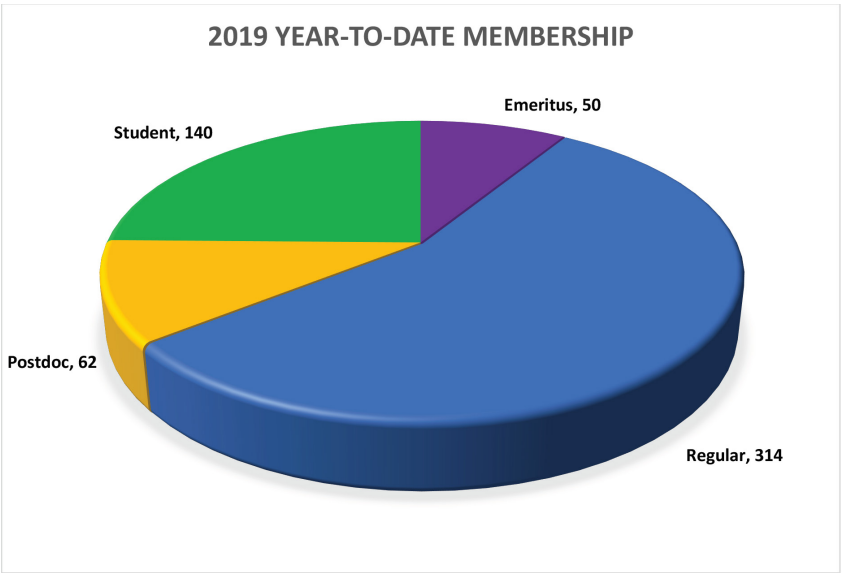
Alfredo Fontanini, PhD

As of mid March 2019, AChemS has 566 members. This number is in line with the one recorded in 2018 at the same time of the year. Based on prior years' experience, we expect additional members to sign up in the last days before the registration deadline.

Currently, our membership is composed of 315 Regular Members, 140 Students, 62 Postdocs, and 50 Emeriti. In absolute numbers, we have fewer Regular Members and more Student and Postdoc Members compared to last year at this time (360, 119 and 41 respectively for 2018). The number of Emeriti Members is comparable (47). The increase in Student and Postdoc membership is very encouraging, while the reduction of Regular membership remains a concern.

Overall, over the past few years we observed a trend toward a reduction of AChemS membership. Last year, under Kurt Illig chairpersonship, we began to directly email members at their renewal date and followed up with monthly reminders. This year we added an initiative that will hopefully energize current members and reach out to non-members. We applied and received approval to hold a Chemical Senses Social event at the Society for Neuroscience Meeting 2019 in Chicago, IL. While this Social is not directly linked or officially affiliated to AChemS (it is a SfN Social open to all the attendees), the application was prepared by a group of active AChemS members (Alfredo Fontanini, Leslie Kay, Minghong Ma, Steve Munger, Dan Wesson, Christina Zelano). By bringing together and stimulating conversations among chemosensory scientists at different stages of career, from different fields and societies, this Social will raise the awareness of AChemS and other societies or initiatives in the field of chemical senses.





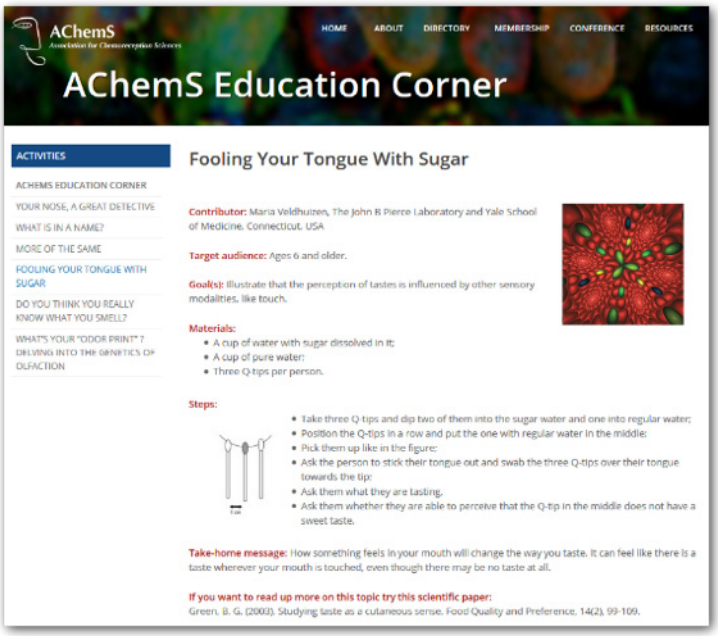
COUNCILOR'S REPORT

Daniel Wesson, PhD, *Senior Councilor* and Valentina Parma, PhD, *Junior Councilor*

This year, the Councilors went into overdrive as we sought to further enhance the AChemS experience – both for AChemS members and also for society. This includes a new competitive award to further foster meeting participation from members and a new online outreach initiative directed towards children and educators.

The latest award offered by AChemS is the Childcare Grant. AChemS received eight applications for financial assistance from active society members with childcare expenses which may limit their ability to participate in the annual meeting. AChemS is pleased to support all eight applicants with Childcare Grants.

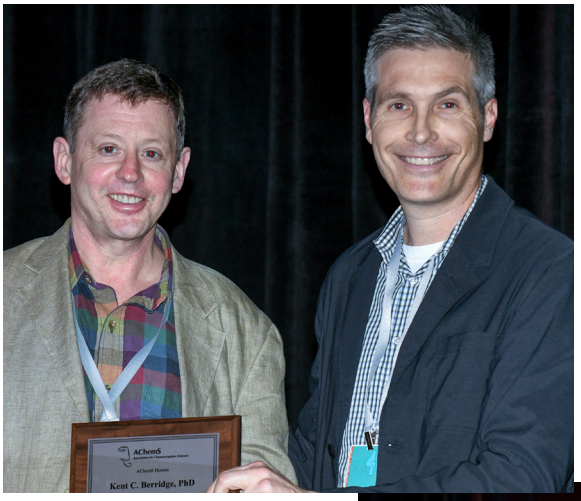
Speaking of funding and awards, AChemS is happy to provide support to five junior investigators with the Polak Postdoctoral Travel Awards. In addition, we will support meeting attendance for 41 domestic and international students with the Student Travel and Housing Awards. As in years before, Travel and Housing awardees provide important support at the meeting, including by helping to hang poster numbers, staffing the Welcome Banquet, performing registration and check-in for attendees, directing attendees to events and meeting locations, volunteering at our outreach event, and by documenting the meeting through videography and as Photo Squad members.



Additionally, AChemS is pleased to announce the roll-out of the online Education Corner. The Education Corner was published with the intention of providing accessible resources on the chemical senses to educators and children across the globe. At the Education Corner, children and teachers can identify interactive exercises which they can use to further their appreciation of the chemical senses. We greatly appreciate the time of our AChemS members in providing engaging and fun activities, including Géraldine Coppin, Pamela Dalton, Nicole Greenbaum, Thomas Hummel, Christopher Maute, Anne-Marie Mouly, Casey Trimmer, and Maria Veldhuizen. Please thank these individuals for expanding the footprint of AChemS when you see them. See the Education Corner for yourself: https://achems.org/web/resources-education.php. If you would like to volunteer by providing an additional exercise to be posted on the Education Corner please contact one of your AChemS councilors. Do not forget to spread the word to the public!

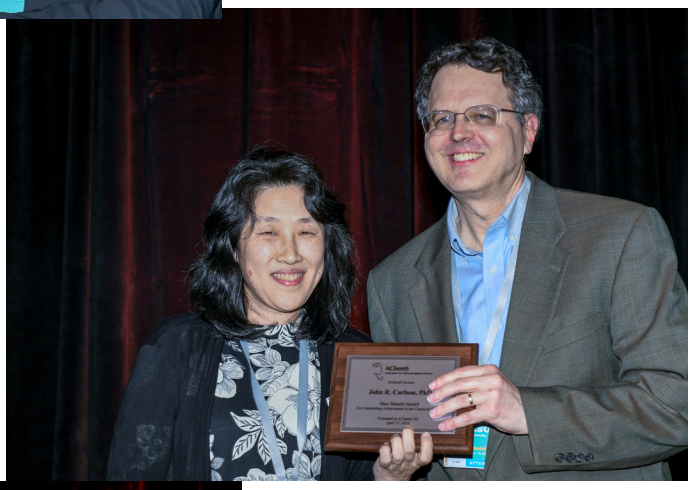
Another way we expand the impact of our society is by holding community outreach events. Last year, we partnered with the Immaginarium Science Center in Ft. Myers, FL (now officially named the "IMAG") to introduce elementary school students to the chemical senses. For the 2018 event, AChemS members including Kristi Apa, Renee Hartig, Paulina Morquecho Campos, Elbrich Postma, Andrew Riquier, Jordan Ross, Hillary Schiff, Suzanne Sollars, and Stephanie Staszko, generously volunteered to inspire the students with exhibits, displays, and demonstrations that revealed the importance of the chemical senses in everyday life. This year, with yet again the help of generous volunteers, AChemS will similarly engage in community outreach to 3rd grade students from a nearby school on April 16th, 2019 at the IMAG. We look forward to this year's demonstrations, which will be provided by volunteers Renee Hartig, Christopher Maute, Andrew Riquier, Bano Singh, Alissa Smethers, Karleigh Smith, and Suzanne Sollars. Thank you all for your involvement!

2018 AWARDS CEREMONY



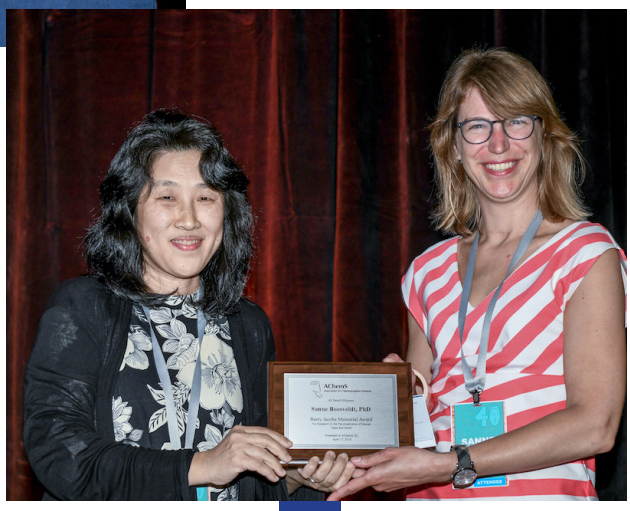
Givaudian Award

Max Mozell Award



Ajinomoto Award

Barry Jacobs Award



AChemS
Association for Chemoreception Sciences

2018 AChemS Travel Fellowships for Diversity Award Recipients

Nathalee Belser
Duke Medical Center

Louis Colling
Florida State University

Patrice Hubert
University of Connecticut

Keith Perkins
Rutgers University

Kathleen Phelps
University of Tennessee at Chattanooga

Kyndal Schade
University of Colorado Denver Anschutz Medical Campus

Sanaya Stocke
University of Louisville

Bradly Stone
Brandeis University

2018 Polak Postdoctoral Travel Award Recipients

Federica Genovese
Monell Chemical Senses Center

James Howard
Northwestern University

Jian-You Lin
Brandeis University

Hillary Schiff
Stony Brook University

Cedric Uytingco
University of Florida

AChemS
Association for Chemoreception Sciences

2018 AChemS Student Housing and Travel Award Recipients

Kristi Apa
Caitlin Baumer Harrison
Anna Sophie Breuer
Ke Chen
Julie Colvin
Debarghya Dutta Banik
Michael Farruggia
Mira Fitzek
Franziska Haag
Jisoo Han
Ilona Har Paz
Renee Hartig
Linnea Herzog
Molly Higgins
Kanghyun Kim
Kayla Lemons
Ruojun Liang
Laura Martin
Allison Matia
Laetitia Merle
Raena Mina
Andrew Moberly
Julia Mohrhardt
Paulina Morquecho Campos
Narendra Mukherjee
Maximilian Nagel
Elbrich Postma
Vicente Ramirez
Andrew Rinke
Louis Saites
Mary Schreck
Rolf Skyberg
Rachel Stanford
Susanne Stickel
Jennifer Sun
Cecilia Tremblay
Justin Virk
Raphael Wallroth
Wen Mai Wong
Chao Xie
Wexin Yu
Alexandra Zygowska

2018 Logo Contest Winner
Courtney Wilson

AChemS Young Investigator Award

2017 Don Tucker Award

Polak Young Investigator Award

2018 AWARD RECIPIENTS

John Carlson

Max Mozell Award Recipient

Research Focus: For many years my lab and I have been extremely curious about how the fly senses the chemical world around it. We began by designing simple paradigms of olfactory behavior and isolating mutants that were defective in them. We continued by identifying genes transcribed specifically in the antenna. We then used electrophysiology to elucidate basic principles of odor and taste coding in the fly. After the fly genome was sequenced, we found odor and taste receptor genes in the genome with a computational approach. To explore the molecular basis of odor coding we developed an in vivo expression system and used it to analyze the odor receptor repertoire of the fly. More recently we've been using optogenetics to explore the receptors, neurons, and circuits that drive sexual and feeding behaviors. A great reward of all this work has been the opportunity to apply it to other insects that transmit global disease to hundreds of millions of people or that do massive damage to the world's food supply.

Acknowledgements: I'm enormously grateful to the extraordinary group of students and postdocs who have worked in our lab. Their creativity, energy, and skill have been remarkable, and on top of that they've been a wonderfully good-natured bunch of people. I'd especially like to thank my ever-cheerful research assistant Zina Berman, who has basically run our lab for almost 30 years.

I'm very grateful to many colleagues who have been extremely helpful and charitable. I'm especially thankful to Charlie Greer, who has provided wise advice on so many occasions, and to Junhyong Kim, who played an enormous role in our work. I'd also like to thank the staff of my department, who have provided essential support for all that we do.

Finally, I'm deeply grateful to the NIDCD for supporting the great majority of what our lab has accomplished.

Austin Schwartz

Don Tucker Award Recipient

Research Focus: My dissertation research explores the link between olfaction and metabolism through inhibition of the voltage-gated potassium channel Kv1.3. Kv1.3 channels are highly expressed in mitral cells of the olfactory bulb (OB), where they are a target for metabolic molecules such as insulin, glucose, and GLP-1. Inhibition of the potassium channel by these factors is hypothesized to modulate whole-body metabolism. I have developed a novel nanoparticle drug vector consisting of fluorescent quantum dots (QD) conjugated to the Kv1.3 pore blocker margatoxin (MgTx). In order to produce this drug vector, I recombinantly xpressed margatoxin in E-coli with a polyhistidine tag on the N-terminus, which allowed for facile binding to the QDs. Using patch-clamp electrophysiology to probe cloned Kv1.3 expressed in human embryonic kidney (HEK) 293 cells and native Kv1.3 contained in mitral cell OB slices, I found that the QDMgTx drug vector had the same ability to inhibit the channel as the natural peptide blocker (MgTx). Likewise, the QDMgTx had a strong ability to label cells expressing Kv1.3. Currently, I am delivering QDMgTx to mice using cannulated osmotic minipumps that allow for targeted delivery to the OB. This allows me to measure changes in metabolism due to inhibition of Kv1.3 using a Comprehensive Lab Animal Monitoring System (CLAMS) as well as to explore the biodistribution of QDMgTx following delivery. By targeted delivery of nanoparticletethered drugs to the OB and understanding any non-specific interactions of QDMgTx, we can better elucidate the link between olfaction and metabolism.

Acknowledgements: I would like to thank my advisor, Dr. Debra Ann Fadool, for supporting me on this novel and interdisciplinary research. Without her support, I would not be where I am today. I
would also like to thank my collaborators, Hedi Mattoussi and Glenn King, who have contributed their nanoparticle and ion channel inhibitor experience as expert chemists to this research. I would also like acknowledge my fellow labmates from the Fadool Lab, who have helped me with various parts of my research throughout the years. Finally, all this work has been possible due to my funding sources: a NIH F31 from NIDCD, a NSF EAPSI Fellowship, a FSU Legacy Fellowship, and a Bryan Robinson Endowment from the Tallahassee Memorial Hospital.

Joel Mainland

AChemS Young Investigator Award Recipient

Research Focus: A fundamental problem in neuroscience is mapping the physical properties of a stimulus to perceptual characteristics. In vision, wavelength translates into color; in audition, frequency translates into pitch. By contrast, the mapping from chemical structure to olfactory percept is unknown. In other words, there is not a scientist or perfumer in the world who can view a novel molecular structure and predict how it will smell. My laboratory's goal is to develop a predictive model relating molecular structure and olfactory perception using a combined psychophysical and molecular approach.

Acknowledgements: I would like to thank AChemS for being an integral part of my development as a scientist, the NIH for financial support, and the Monell Chemical Senses Center for providing a rich and supportive environment. Thanks to my mentors, collaborators, and colleagues who have trained and guided me, particularly Noam Sobel, Hiro Matsunami, Leslie Vosshall, Danielle Reed, Robert Margolskee, and Rick Gerkin. Most importantly, I would like to thank the members of my lab for both creating a great work environment and for carrying out our research.

2018 AWARD RECIPIENTS (continued)

Yuki Oka

Ajinomoto Award Recipient

Research Focus: Homeostasis is a fundamental body function that maintains our internal state. Precise homeostatic regulation critically relies on the brain function to integrate peripheral sensory signals and internal information. The goal of our research is to understand the molecular and neural basis underlying appetite regulation. In particular, we currently focus on body fluid homeostasis, and investigate how the neural circuits in the brain and the taste system cooperate to optimize our appetite toward salt and water. By combining classical physiological approaches and recent circuit manipulation and optical recording tools, my laboratory use mice as a model organism to tackle three major questions. First, we ask how sensory information of salt and water is sensed on the tongue, and transmitted to the brain. Second, we investigate the mechanisms by which the brain detects internal dehydration and nutrient deficiency. We ultimately hope to unveil the neural logic underlying the processing and regulation of appetite. Third, we aim to understand how sensory valence toward is controlled by appetite circuits in the brain. These studies are aimed at understanding the basic mechanisms of chemosensation at peripheral and central levels. Hopefully, our research also provides insights into appetite-related disorders.

Acknowledgements: It is my great honor to be the 2018 Ajinomoto Award winner. I would like to thank the members of AChemS for providing support and intellectual interaction since my first participation in the meeting. I am particularly grateful to my mentors, Kazu Touhara for my graduate work, Charles Zuker and Nick Ryba for my postdoctoral studies. I would like to thank my students and postdoc in my laboratory for their creative thinking and hard-working. I also thank generous funding by NINDS, NIMH, the Searle Scholars Program, the Mallinckrodt Foundation, the Okawa Foundation, the McKnight Foundation and the Klingenstein-Simons Foundation.

Sanne Boesveldt

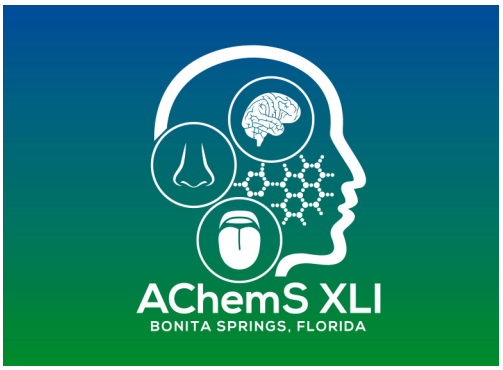
Barry Jacobs Award Recipient

Research Focus: Since the start of my PhD (2004, VU University Medical Center, Amsterdam, the Netherlands) I have been active in the field of olfaction. I have worked as a postdoctoral fellow at Monell Chemical Senses Center (USA), and expanded my research into eating behavior since 2010, when I started working at the division of Human Nutrition, Wageningen University, in the chair group Sensory Science and Eating Behavior. In 2011, I was awarded with a prestigious NWO-Veni grant, to investigate the behavioral and neurobiological mechanisms of odor-induced food cue reactivity. I was one of the first to demonstrate a sensory specific effect of odors on appetite, indicating that food odors may communicate information about the nutrient composition of foods. I am an active member of several chemosensory and nutritional organisations (AChemS, Pangborn), and co-founder of Women In Olfactory Science (WIOS), and the Netherlands Olfactory Science Exchange (NOSE). My research and group focusses on chemosensory signals, and how they interact with metabolic and cognitive factors, to decide If, What, and How much we eat. I combine behavioral, neurobiological and physiological measurements to unravel the key question of 'why do we (over)eat?'. Within this framework, I work on two major research lines: I) the influence of odors on appetite regulation; II) chemosensory changes in clinical populations. By gaining insight in the functionality of chemosensory signals for human eating behavior, in health and disease, we can contribute to changing current eating behavior towards healthier and more rewarding food patterns, and improve quality of life.

Acknowledgements: I am extremely happy, proud and grateful for being nominated and selected for the Barry Jacobs Memorial Award for Research in the Psychophysics of Human Taste and Smell. I would like thank my former supervisors and mentors, Henk Berendse (VUmc, NL), Johan Lundstrom (Monell Center, US) and Kees de Graaf (Wageningen University, NL), who, each in their own respective ways, have guided and shaped me into the scientist I am today. Also, a big thank you to Valerie Duffy who coordinated the nomination. Lastly, I would like to thank my students, my group, and all my colleagues inside and outside the chemosensory world for making this award possible. There's more to come!

PROGRAM CHAIR'S REPORT

Nirupa Chaudari, PhD, *Chair*



This year's meeting promises to have something for everyone. Your Program Committee worked diligently to select a broad range of member-proposed symposia that include research on insects to humans, receptors to cognition, and electrophysiology to semantics. Please check out the program, at https://achems.org/2019/program.php. The program again runs on "non-traditional days" this year in order to avoid holidays. This year's Givaudan Lecture will be given by Dr. Paul Rozin whose fascinating work on human innate and learned preferences about food and ingestion can guide much chemosensory research.

This year's Pre-Meeting is titled "Comparative Approaches to Chemosensory Function" and includes a survey of research on many different animal models and methods of analyses. In addition to 6 regular symposia, this year's program brings an all-day extended symposium titled "In-Focus: Cracking the Chemosensory Code". The event will feature AChemS members and non-member speakers with research on sensory circuits, coding and behavioral outcomes. Our In-Focus Symposium has drawn in new Program officials from NIH and NSF and they have agreed to give us some insights about new and ongoing funding initiatives. Another special event is a workshop with 3-4 stations set up to demonstrate several clinical tests that are used for taste and smell. You can be the guinea pig. Our Clinical symposium will look at aspects of olfactory plasticity and regeneration in the peripheral olfactory system; the Industry symposium is focused on chemesthesis, the oral sensations elicited by "spicy" ingredients. As before, there will be two symposia where we hear from our award winners – the more junior awardees (Polak) on Monday 15th, and our senior awardees on Wednesday. Journal Club this year will look at historic and current data on the turnover and cell renewal in taste buds. And finally, the dance party is back - by popular acclaim.

AWARDS COMMITTEE REPORT

Matt Wachowiak, PhD, *President-Elect and Chair*

The awards committee is composed of nine AChemS members (Barry Ache, Martha Bajec, Jessica Brann, David Gire, Robin Krimm, Dana Small, Joost Maier, Wayne Silver, Ann-Marie Torregrossa) and chaired by the President-Elect. This year as usual we had many excellent nominees. The awardees of the four career awards for 2019 are as follows.

The Max Mozell Award for Outstanding Achievement in the Chemical Senses: Barry G. Green, PhD., Fellow and Professor, The John B. Pierce Laboratory and Dept. of Surgery, Yale University School of Medicine

The Max Mozell Award for Outstanding Achievement in the Chemical Senses:

The Barry Jacobs Memorial Award for Research in the Psychophysics of Human Taste and Smell: Andreas Keller, PhD., Research Associate, The Rockefeller University and Adjunct Professor, Dept. of Philosophy, City College of New York

The Ajinomoto Award for Young Investigators in Gustation or Oral Chemosensation: Marco Tizzano, PhD, Assistant member, Monell Chemical Senses Center

The AChemS Young Investigator Award for Research in Olfaction or Nasal Chemosensation: Dan Wesson, Associate Professor, Dept. Pharmacology and Therapeutics, University of Florida School of Medicine.

These four will be acknowledged in the opening ceremonies on April 14th and they will present their work in the Award Symposium on April 17th. In the opening ceremonies, the 2018 Don Tucker Memorial Award winner Jennifer Sun and the undergraduate research award winner Sophie Breuer will also be acknowledged. During the 2019 annual meeting, finalists from the sixteen nominated graduate students will be considered for the Don Tucker Memorial Award and eight undergraduate students for the undergraduate research award. Their posters will be indicated in the meeting program. Please come to see the presentations from these talented junior scientists. The winners for student research awards will be acknowledged in the ISOT 2020 Awards Ceremony.

MENTORING/NETWORKING COMMITTEE REPORT

Jeremy McIntyre, PhD, *Chair*

Last year the Mentoring/Networking Committee tried a new format, with a special talk on new career directions in science. We heard two great talks by Dr. Maryam Zaringhalam and AChemS member Dr. Nicole Garneau about their journeys to careers in community science and communication. This year the Mentoring/Networking committee will hold a panel discussion with AChemS members on academic careers as laboratory PIs in different types of institutions, from 4:00pm-5:00pm on Tuesday, April 16th. Afterwards please join us for food, drink, and a chance to talk with others in your field, in a more casual surrounding. This is a great opportunity for advanced trainees to attend if you're looking to take the next step, looking for career advice, or just want to get to know your colleagues better. Lastly, for graduate students, there will be a happy hour on Sunday, April 14 from 9:00 PM – 11: 00 PM at the Mangroves Patio. The hotel has graciously agreed to extend their happy hour menus for our Graduate Students (although all others are welcome too). If there are any suggestions for next year's events, please direct them to the Mentoring/ Networking Committee either at the meeting, or via email (info@achems.org).

CHEMICAL SENSES REPORT

Wolfgang Meyerhof, *Editor-in-Chief*

Chemical Senses – February 2019

	2010	2011	2012	2013	2014	2015	2016	2017	2018
Impact factor	2.327	2.599	3.222	3.278	3.157	2.500	2.520	3.235	?
Original submissions#	218	161	147	141	163	175	165	152	164*
Avg. time from submission to 1st decision	27.62 days	29 days	35 days	33 days	34 days	34 days	33 days	32 days	33 days
Avg. time from submission to final decision	70 days	100 days	95 days	82 days	75 days	86 days	82 days	91 days	90 days
Accepted articles	96	77	62	65	64	72	75	68	64
Accept ratio	46%	48%	42%	46%	42%	43%	49%	47%	41%

*148 original articles, 10 review articles, 4 letter to the editor, 2 commentaries, 1 book review
#No. of submissions: Unites States > China > Germany > France > Japan > Canada > UK > Australia = India = Sweden > 24 other countries.

The Editorial board has been updated.

DIVERSITY COMMITTEE REPORT

Barbara Zielinski, *Chair*
Ricardo Araneda
Paul Breslin
Arie Mobley
Jeremy McIntyre

Congratulations 2019 Diversity Travel Fellowship Award Winners

Camilla Barrios-Camacho, *Tufts University*

Erika Calvo-Ochoa, *Western Michigan Univeristy*

Louis Colling, *Florida State University*

Yannick Dzowo, *University of Colorado,*

Teresa Findley, *University of Oregon*

Brigit High, University of Colorado

Kalene Jasso, *University of Florida*

Samuel Littich, *University of Colorado,*

Thomas Myers, *Eastern Michigan University*

Andrew Moran, *University of Utah*

INDUSTRIAL LIAISON COMMITTEE REPORT

Beverly Tepper, PhD, Chair
Bernadette Cortese,
Carter Green,
Chris Simons
Yu Wang

The 41st Annual Meeting is almost here. Many thanks to our sponsors and exhibitors for providing essential financial support that makes our annual meeting an exceptional learning experience and great opportunity to engage with students, fellow scientists and industry professionals. We are especially grateful to our award sponsors whose gifts recognize the exceptional research accomplishments of AChemS. Without this unwavering support, AChemS could not provide the outstanding programming that attendees have come to expect year after year.

Don't miss the Industry Symposium on April 15 (Mon), "Contribution of oral and nasal chemethesis to taste, aroma and flavor perception – from basic mechanisms to applications". Chemesthesis refers to chemically-derived sensations other than taste and smell that include irritation, cooling, tingling and astringency. Astringency is a complex sensation characterized by feelings of dryness, roughness, and tingling/biting on the oral surface. Astringency from polyphenol-rich foods such as tea, dark chocolate, wine, and red and purple fruits can limit consumer acceptance of these foods even though they deliver important health benefits. Likewise, most flavor and aroma compounds, especially those derived from aromatic herbs and spices, such as cinnamon, clove, and oregano not only impact health, but also exhibit a range of oral and nasal chemesthetic properties that can influence the perception of foods, fragrances and other products. Our current knowledge of chemesthesis lags well behind our understanding of other chemosensory systems. This symposium will examine the contributions of chemesthetic sensations to flavor perception and their potential interactions with taste and smell. Five speakers will address this topic from different perspectives including health/nutrition implications, psychophysical assessment and individual differences and underlying biological mechanisms. The final speaker, a research chef, will outline the real-world challenges to developing new products with chemesthetic properties.

My thanks to the Industrial Liaison Committee for their assistance with fundraising and the development of this year's exciting symposium.

CLINICAL RELATIONS COMMITTEE

Thomas Hummel, PhD, *Chair*

This year's clinical symposium committee (Co-chairs Thomas Hummel and Sanne Boesveldt) in coordination with the AChemS leadership features experts from outside and within the AChemS community. Importantly, most presenters are medical doctors who patients with smell and taste loss on a regular basis. This year's symposium is on "PLASTICITY IN THE OLFACTORY SYSTEM - THE CLINICAL PERSPECTIVE". The ability of the olfactory system to regenerate is the basis for the hope of an estimated 5% of the general population who have no sense of smell. The symposium will start with a presentation by Dr. Eric Holbrook from Boston is the Director of the Rhinology Division at Mass. Eye and Ear, is a rhinologist with more than 15 years of experience in the diagnosis, treatment, and management of problems involving the nose and sinuses. He will talk about plasticity in the olfactory function at the level of the olfactory epithelium. The next speaker will be associate professor of otolaryngology Dr. Brad Goldstein from the University of Miami; his research aims at understanding the contribution of stem cells to neurogenesis and tissue homeostasis in the olfactory system. He will talk about the role of olfactory basal cells in development of anosmia treatments. Next speaker will be the Head of the Department of Anatomy and Medical Imaging at the University of Auckland, New Zealand, Dr. Maurice Curtis. He runs a research laboratory focussed on the early brain changes in neurodegenerative diseases, particularly Parkinson's disease, and he will present his work on the human olfactory bulb with a focus on Parkinson's disease. His presentation is followed by Dr. Katherine Whitcroft, from the Ear Institute at the University College London. She will present her exciting recent work on central nervous changes in relation to decreasing and increasing olfactory function. The session will be concluded by a talk from Dr. Antje Welge-Luessen, Professor at the ENT Department of the University Hospital in Basel, Switzerland, who runs a Smell and Taste outpatients clinic since more than 15 years. She will talk about the spontaneous recovery of olfactory function and olfactory training. The Clinical Symposium Committee thanks the speakers in advance for their willingness to share their expertise. We also would like to thank AChemS for generous support of the travel of Dr. Whitcroft and Curtis to present at the meeting.

HISTORY/ARCHIVES COMMITTEE REPORT

Charlotte Mistretta, Chair
Robert Bradley
Richard Costanzo
David Hill
Claire Murphy
Steven St. John

Last year, for the 2018 meeting, AChemS 40th, a poster was made to review the inception of our Association and first meeting (1979) under the Leadership of Max M. Mozell, with management and program help from a Steering Committee (G. Beauchamp, R. Cagan, W. Cain, M. Frank, R. Gesteland, B. Halpern, F. Margolis, D. Mathews, C. Mistretta, M. Mozell, D. Smith). The poster stood in the reception area for AChemS 2018 and now has been included in the History/Archives Committee Folder under the Resources heading on the AChemS website. For AChemS 2019 a poster will again be in the reception area, this year to highlight the academic and career contributions of Lloyd M. Beidler, one of the founders of chemosensory sciences. The poster is in conjunction with the Fourth Annual Journal Club, for AChemS 2019, on Wednesday April 17. Junior and senior colleagues will present Beidler's classic paper on Turnover and Renewal of Cells in Taste Buds, Journal of Cell Biology 27:263-272, 1965. The poster on Beidler's career contributions will be posted in the Resources section on the website after the meeting.

The Committee also initiated a series of video interviews with AChemS members at the meeting in 2018. An interview was constructed and AChemS members interviewed colleagues who were: members of the Steering Committee; members instrumental, from the Gordon Conference 1978, in orchestrating the first AChemS meeting 1979; and/or members who had attended the Gordon Conference and each AChemS meeting from the first to the present. The interviews will be posted to the History/Archives Committee Folder under the Resources heading on the AChemS website. Our goal is to continue to collect video interviews of AChemS members, to build an archive of recollections about AChemS meetings and the chemosensory sciences.

We welcome labeled AChemS-related photographs from your collections for the working historical collection.

PROGRAM CHAIR ELECT/ ISOT 2020 REPORT

Jay Gottfried, PhD

AChemS XLI Polak Young Investigator Awards
As the ISOT 2020 Program Chair Elect, Jay Gottfried was responsible for overseeing the selection of the Polak Young Investigator Awardees at AChemS 2019. The decision committee included Linda Barlow, John Boughter, Julie Mennella, and Dana Small. Generously funded by: The Elsje Werner-Polak Memorial Fund on behalf of Ghislaine Polak and the late Ernest Polak, six young investigators were chosen, including three women and three men, three animal-based studies and three human-based studies, four olfactory topics and two gustatory topics, and five postdocs and one assistant professor. The Polak Award Lecture session will take place on Monday, April 15th, from 7:00 PM - 9:00 PM.

ISOT 2020
The 2020 International Symposium on Olfaction and Taste (ISOT) looms ever closer on the calendar. This meeting will take place June 20-24, 2020 (Saturday-Wednesday), in Portland, Oregon.

Here are some key dates:
Call for Symposia: Open Now; Deadline May 8, 2019
Call for Abstracts: Open Sept. 2019; Deadline Feb. 3, 2020
ISOT Meeting Registration: Open Sept. 2019; Early Bird Deadline April 3, 2020

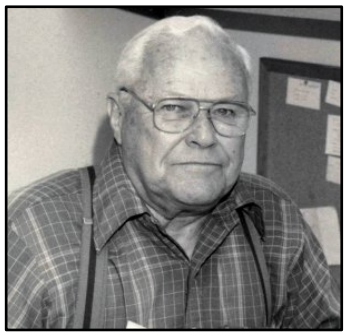
A call for ISOT 2020 symposium submissions went out in October 2018. These are being organized through an online submission system at https://www.achems.org/ISOT/downloads/ISOT%20call%20for%20Symposia.pdf

General ISOT questions can be directed to the executive office at info@isot2020.org.

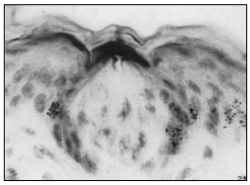
Journal Club 2019
Great Egret Room
Wednesday April 17
3:30 to
5:00 PM

Turnover and Renewal of Cells in Taste Buds

from **Lloyd M. Beidler's Classic Paper of 1965**
to **Taste Cell Dynamics Five Decades Later**



"The library is a good place to broaden one's approach to science. Since the library at Florida State did not have much of the older science literature, I decided in 1959 to use the excellent library at Woods Hole. I obtained a key to the library and the use of a desk for two weeks. Among the articles I read were several on cell life span and cell replacement in epithelial tissue. I also learned that in 1914 M. Heidenhain, the great histologist, thought taste cells may have a short life as do skin cells. Other histologists did not agree because few mitotic figures were found in taste buds when compared with basal cells in the tongue epithelium. However, I often wondered how taste cells can be surrounded by hundreds of different chemicals at various concentrations and not be injured. Perhaps Heidenhain was right, and new methods would prove or disprove the concept. Many students of skin replacement used the mitotic inhibitor, colchicine, to study cell replacement. Our initial studies with colchicine indicated that cells surrounding the taste bud underwent division and that the daughter cells could enter the taste buds. However, a chance engagement with Dr. H. Quastler of the Brookhaven Labs resulted in an offer to visit his laboratories and learn how to study cell turnover more quantitatively with tritiated thymidine. A graduate student, Ron Smallman, and I accepted his offer to learn quantitative methods for measuring cell turnover and replacement. We then learned, as a result of quantitative techniques, that rat taste cells are indeed replaced and that half of them are replaced within 9-10 days. Because the tagged population declines exponentially, one-quarter of the labeled population is still present after 18-20 days and one-eighth after 36-40 days."[1]



Brief Introduction to AChemS Journal Clubs (from the History Committee)
Charlotte Mistretta, University of Michigan MI — 3:30 PM

Informal Introduction to the Beidler Laboratory and Principal Scientific Contributions from LM Beidler
Robert M. Bradley, University of Michigan MI — 3:35 PM

The classic paper:
Beidler LM and RL Smallman, Renewal of Cells within Taste Buds, Journal of Cell Biology 27:263-272, 1965
Zachary Whiddon, PhD Student in Anatomical Sciences and Neurobiology, with Robin Krimm, University of Louisville KY — 3:50 PM

To the present:
Commentary and Comments: New Data on Taste Cell Dynamics
Linda Barlow, University of Colorado CO — 4:10 PM

Reminiscences and Comments:
The Beidler Laboratory: Comments from the Audience
Hosts: Steven St. John, Robert Bradley — 4:30 PM

Organized by the AChemS History Committee:
Robert Bradley, David Hill, Charlotte Mistretta, Claire Murphy, Steven St. John

[1] From Lloyd M. Beidler in The History of Neuroscience in Autobiography Vol 2, Ed by Larry R. Squire, Academic Press and The Society for Neuroscience 1998.

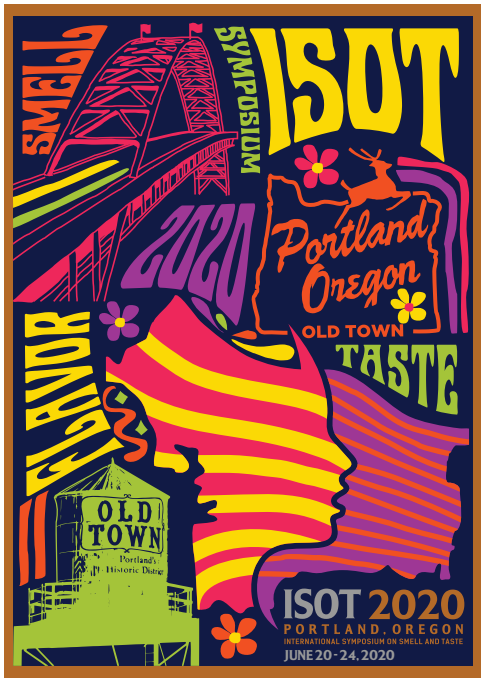
AChemS
Association for Chemoreception Sciences

2018 Annual Meeting

Hyatt Regency - Bonita Springs, FL

2018 Annual Meeting

Hyatt Regency - Bonita Springs, FL



ISOT 2020
PORTLAND, OREGON
INTERNATIONAL SYMPOSIUM ON OLFACTION AND TASTE

SAVE THE DATE

ISOT 2020 - Portland, Oregon
June 20-24, 2020