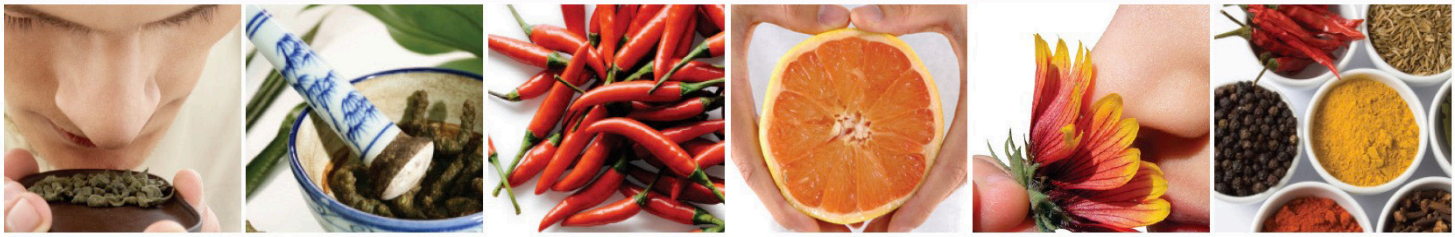


AChemS
Association for Chemoreception Sciences
ANNUAL Newsletter
2023 FOSTERING CHEMICAL SENSES RESEARCH AND UNDERSTANDING SMELL AND TASTE IN HEALTH AND DISEASE

MESSAGE FROM THE PRESIDENT

Danielle Reed
President, AChemS

Like many people, I am tired of COVID. I want to regain a sense of stability and my pre-COVID lifestyle, and I have been weighing the benefits of fully returning to my pre-COVID research program, splitting my time between programs, or pursuing COVID research exclusively. I suspect there is no correct answer, for me or for the other scientists faced with these choices. But regardless of the choices we make for our research programs, research takes money. To that end, the AChemS Federal Liaison Committee is working to increase NIH and NSF funding for taste and smell research. One of the pleasures of being AChemS President this year has been the enthusiasm of the members of this committee! Despite my particular bias, I think many people worldwide would agree that learning more about taste and smell loss and restoration is a research priority. We hope our efforts will soon bring new sources of funding.

A related pleasure has been witnessing the groundswell of support for universal smell testing – the idea that measuring the senses should be part of routine medical care. We cannot know if patients' taste or smell has returned to normal if we have no information about their ability before COVID! This information not only is crucial for tracking COVID recovery but also can help us diagnose neurodegenerative diseases – smell loss is one of their earliest symptoms. This issue is poignant for me: my husband, who started losing his sense of smell about ten years ago, has recently been diagnosed with Parkinson's disease. To learn more about universal smell testing, please attend the NIH-supported conference planned for November 6 and 7, 2023.

This year's top priority has been increasing the diversity of our scientific workforce, and one tool we can use is to fund trainee travel to AChemS. Last year we were able to support 26 applicants; this year we are supporting at least 37, and we hope to fund a record-breaking 45 applicants who have requested assistance. I am proud that we could raise funds from the Chan Zuckerberg Initiative, and I was delighted that our corporate partners and individual AChemS members also contributed. As another step toward increasing diversity, the Membership Committee spearheaded reduced-cost AChemS memberships to those who live in low-income countries. We are also mindful that trainees who do not fall into these underserved categories also deserve support, and we are working toward offering travel assistance to all trainees who request it next year.

Several natural disasters this year have directly impacted our AChemS members, starting with hurricane Ian, which severely damaged many buildings in Fort Myers, Florida, including our conference hotel. We were grateful that no one at the hotel was injured or killed and that the hotel staff recovered quickly and fully. I anticipate the staff will be able to restore all services by the time of our visit in April and that we will handle any remaining problems gracefully, with understanding of the difficult recovery process. The earthquakes in Turkey also affected some of our AChemS members – to learn more about the challenges they face and what is most needed now, please see the first-person account in this Newsletter.

These natural disasters, upcoming decisions on meeting venues, and implications of COVID have increased the need for long-range planning. To strengthen this process, we have an upcoming vote by the AChemS membership to convert the Strategic Planning Committee to a Standing Committee. This change will enable the committee to work more consistently to provide input on significant issues, including more effective long-range planning, so we can prosper in a changing environment. And I would like to take this moment, as we think about the challenges we continue to address, to recognize that this year we faced two difficult choices for our meeting: hybrid vs. in-person only, and level of COVID precautions. The Executive Committee considered several points of view and has decided on an entirely in-person meeting, with COVID vaccination required but mask optional. We acknowledge these choices

PRESIDENT'S MESSAGE (continued)

are not ideal for every AChemS member including those who are older, ill or caring for vulnerable family members.

The greatest pleasure of my tenure as AChemS President is yet to come: seeing my fellow scientists talk about science, in person, at the upcoming meeting in April 2023. Networking, mentoring, and the seminar series are blossoming at AChemS. I have benefited from being in a Mentoring Matrix with five other scientists, and I am looking forward to coding with other programmers at AChemS Codefest 2023! Our annual meeting this year holds many exciting opportunities to engage in all ways, with structured and unstructured time, and especially the opportunity to honor a luminary in the field of olfaction, Gordon Shepard. I am delighted that there will be time to listen, learn, talk, relax, and explore ideas with our members – the Program Committee has done an exemplary job of balancing the many competing priorities. There is much to look forward to at this year's meeting.

Now is a time of great opportunity, but it has also been a time of sorrow and difficulty. I want to acknowledge the challenges many members have faced, not only through the unavoidable problems of COVID and natural disasters but also in health, personal finances, and other challenges and losses. We are called to support one another as we serve our mission, and it is my hope that by meeting in person this year we will intensify our mentoring, learning, and networking with one another as we move our science forward! I can't wait to see you there!

EFFECTS OF THE EARTHQUAKES IN TURKEY

Marga Veldhuizen, PhD

On February 6 I woke up at 4:20 am because my wardrobe doors were banging. As I woke up more I also realized that the bed was moving, in fact the whole building was shearing and I only live on the second floor. It took me while to put things together, this was an earthquake. While it continued for close to two minutes I had no idea how bad this was and what to do next. My son was blissfully asleep. I looked out the window and listened for people leaving their houses. I heard no sounds of sirens outside and figured things were OK.

Fast forward one month and now I know this was a natural disaster of superlative proportions in many ways. Two earthquakes of extreme strength in different locations within a 12-hour timeframe. Superficial in depth, which caused 3-meter displacement on the very surface of the earth. Four cities were wiped from the surface of the earth, with so far a death count in both Turkey and Syria of around 50.000 and an unknown number of missing individuals.

You have seen the heartwarming rescue stories and amazingly, even after 12 days people were pulled alive from the rubble. But this just shows another superlative, the reality of the unknown number of people missing and dead under the rubble. As the weather was also very cold, there can only be such exceptional rescue cases if there are a still lot of people under collapsed buildings.

As Turkey has seen a lot of migration from east to west within the country over the past decades, pretty much every Turkish person lost family or friends and is directly affected by loss and grief. On top of that comes fear. What's next for the region? Twin earthquakes, thousands of aftershocks, is there more coming. Istanbul, build on another fault line, where 15 million people live, mostly in high rises that are not earthquake proof, is expected to be next.

I live in Mersin, a Mediterranean city with around 2 million inhabitants. All the buildings stand and the palm trees wave in the balmy wind as ever. Mersin is the closest big city that remained safe. The parks are full of little tents, where the "depremezede", the ones displaced by the earthquake live. They also live with family and friends, in containers and in dormitories. Estimates say around 400-500 K people came to this city and this is supported by around a 15% in water consumption.

How is life affected here? Most local government workers have been reassigned to work in the cultural centers that serve as distribution points for basic goods like clothing and food. Many people I know have dedicated themselves for weeks to collect goods and drive them east for those who are still waiting for their loved ones to be found or who have no means of transportation. The mobilization of volunteering and donations has been truly impressive to observe. But also... rents have increased and the ones that need help the most, for example Syrians that first fleed the war are now the ones predominantly living in little tents. It is hard to know how it is for those that still remain in the affected cities, because the attention in the news has decreased with new elections coming up and disasters in other countries, but even water is scarce from what I understand.

We have been and remain safe. Yet our lives are also upside down. My son's school has now moved twice in a month,

because the school buildings are old and need thorough inspections before they can be used again. I now have my escape bag waiting by the front door and have left the house with strong aftershocks. Teaching at universities is once again remote, because the dormitories are housing the displaced. Psychology students have been assigned to first aid counseling service. We cannot do studies because our biggest participant base is not here. Equipment is affected by unpredictable aftershocks. Besides, who can lie hooked up to a bunch of electrodes without a racing heart? This is all just to say that even for the luckiest, it is a major life event.

What can you do? Check in with your Turkish and Syrian coworkers, students and friends. Show them compassion and kindness. They carry a lot of pain. You can also donate: These are two reliable organizations that I like to refer people to:
https://ahbap.org/disasters-turkey
https://bridgetoturkiye.org/

MEMBERSHIP REPORT

Ann-Marie Torregrossa, PhD

As of March 7 2023, AChemS has 594 members including: 296 Regular members, 153 Student members, 74 Post-doctoral members, 9 Post-baccalaureate and 63 Emeritus members:

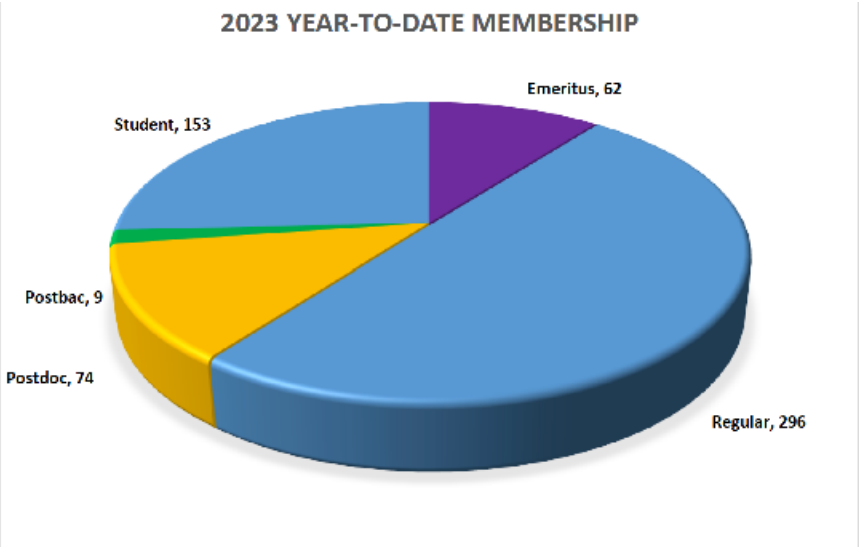


Figure 1: Current members by membership category.

Our membership has remained elevated from the overall decline seen across categories seen since 2018. As of the writing of this report our numbers appears lower than last year's numbers. I do not believe there is cause for concern at this point. The numbers reported in 2022 were reported at the time of early meeting registration and we expect an increase concurrent with 2023 early bird meeting registration deadline.

Year	Emeritus	Regular	PostDoc*	Student	PostBac*	Total membership
2014	19	519	N/A	163	N/A	701
2015	23	514	N/A	150	N/A	687
2016	27	462	N/A	168	N/A	657
2017	44	417	41	144	N/A	646
2018	47	363	52	124	N/A	586
2019	56	326	63	132	N/A	577
2020	53	297	61	120	N/A	531
2021	56	291	51	100	3	501
2022	60	325	74	179	8	646
2023	62	296	74	153	9	594

*PostDoc and PostBac were added as categories in 2017 and 2021 respectively

As a society we have optional fields on the membership form for gender and race. These fields are blank for more than 60% of our membership (61% blank for gender and 74% blank for race), which means our data on the gender and race distribution are sorely lacking. I would encourage our members to report their data in these fields so that we can get a good sense of our trajectories as we actively engage in efforts to increase diversity and gender distribution in the society.

As a new step in membership, this year the Executive Committee voted to modify membership costs to scholars from developing nations. Scholars from developing nations will be able to apply for membership with the student rate at any career stage. We hope that this will make our society more internationally accessible particularly for our virtual presence such as our Career networking series.

TREASURER'S REPORT

Julian Meeks, PhD

It has been an "interesting" year for AChemS financial positions. AChemS was fortunate to emerge from the pandemic without sustaining significant financial losses, and the position of financial safety allowed society leadership to approach the 2021-2022 Fiscal Year (including the 2022 meeting) with an open mind about what AChemS' next phase would look like.

The 2022 Annual Meeting represented an emergence from the virtual-only meetings of 2020 and 2021, and the 2022 meeting was converted to a hybrid meeting due to a surge in COVID-19 cases. This decision was made with the knowledge that it would incur additional expenses (in the range of $50,000). The joy of coming together after such a trial was an amazing success, but it did come with financial consequences.

In numbers (report date 3/1/2022 – 2/28/2023):

Annual Meeting Income:	$292,516.01
General Income:	$60,560.00
Grant Income*:	$65,000
GROSS PROFIT:	**$418,076.01**
* Includes pending deferred payment	
Administrative Expenses:	$117,935.74
Chemical Senses Journal:	$33,502.00
Annual Mtg Expenses & Awards:	$339,870.55
TOTAL EXPENSES:	**$491,308.29**
Investments/Other Income:	–$18,364.31
NET REVENUE:	**–$91,596.59**
Cash Reserves:	$207,860.57
Investment account:	$298,352.17
TOTAL ASSETS:	**$506,212.74**

Having a yearly budget shortfall of ~15% of assets is not unprecedented, especially in the context of across-the-board losses in financial markets (investments), but it was a source of concern to myself, Dr. John-Paul Baird, and Dr. Deborah Fadool on the Finance Committee. In a systematic review of the budget, with assistance from our colleagues at SPLTrak, we identified several areas of interest.

The costs associated with the hybrid format were noteworthy, and contributed to the decision (by the Program and Executive Committees) to make the 2023 Annual Meeting an in-person-only meeting. (If you are a proponent of the hybrid format, I encourage you to reach out to your peers and members of the 2024 Program Committee and Executive Committee to share your thoughts.) We additionally noted that sponsorships and philanthropic gifts were down, as were investments. As you are all aware, inflation has increased costs for goods and services. These are all predictable consequences of global financial uncertainty.

With the goal of bringing balance to projected future budgets, we suggested to the Executive Committee a combination of cost-reducing and revenue-raising actions, to take effect in 2024. The first was to return the Welcome Banquet to a ticketed event. This will ensure that the caterers will have an accurate head-count, and will reduce the overall cost (and unnecessary food waste!). The second was to implement a tiered increase in Meeting Registration Fees (by $50-100 depending on status). This recommendation was not made lightly – we value every dollar spent by our members to participate! However, registration fees have not been adjusted for more than 6 years and, given the rising costs, we concluded it was time to make an adjustment. It is worth stating that AChemS Annual Meeting registration fees, even after these increases, will remain well below academic societies of similar size! The Executive Committee approved these changes, which will be implemented in 2024.

As a final note, please understand that these recommendations were made in the spirit of financial responsibility. Maintaining a healthy "safety net" benefits all of us, and ensures that AChemS will be able to sustain itself across the years and decades of our careers. For those members with the capacity to do so, this is also an opportunity to consider AChemS mission, specific initiatives, and the costs associated with advancing them. Do you know of untapped potential sources of sponsorship or philanthropy? Are you in the position to raise funds for an initiative you care deeply about? In the end, we can only spend resources we have available, and more resources means more freedom to make AChemS the best it can be!

SECRETARY'S REPORT

Christina Zelano, PhD

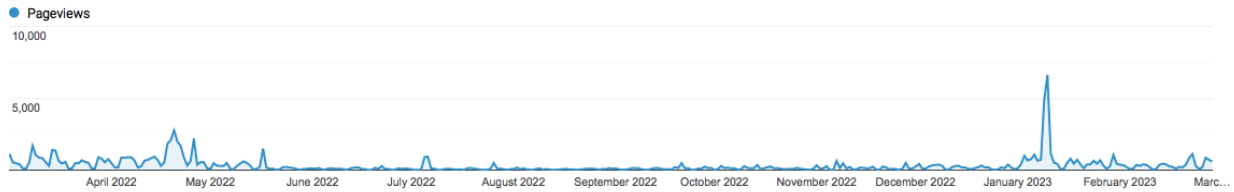
AChemS has several mechanisms in place to provide communication with members, prospective members, and the general public. These are summarized below.

The AChemS Newsletter

The newsletter is published annually and includes a summary of the society's annual activities.
An archive of previous newsletters can be found here: https://achems.org/web/resources-newsletter.php

AChemS Webpage

We have made efforts to improve the AChemS website based on elicited feedback from the Executive Committee. Improvements included the addition of a search bar on the main page and improved organization of the presentation of information. The AChemS webpage is updated regularly with news items and announcements, and it has received nearly 120,000 views in the past year. Website traffic is greatest around the dates of the annual meeting, with additional traffic in the time leading up to the meeting (see figure below). AChemS members are encouraged to contact info@achems.org with any updates or potential postings, including training and job opportunities. AChemS members are also encouraged to contact
info@achems.org with any feedback on website usability.



AChemS Monthly Highlights

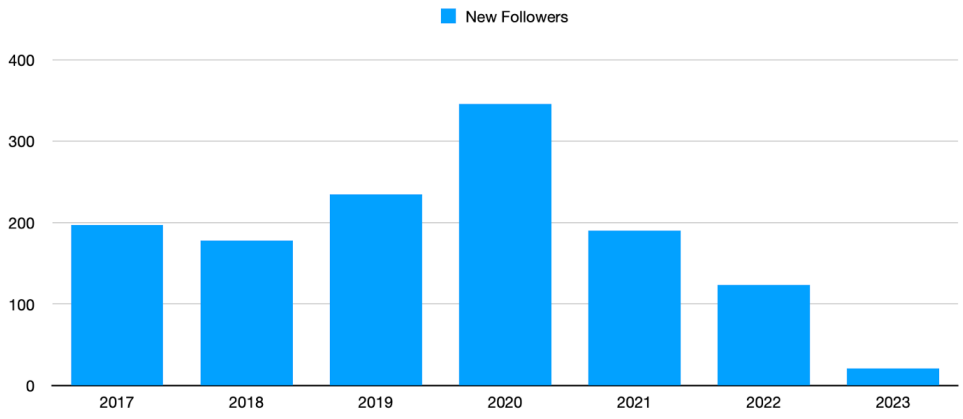
The Monthly Highlights newsletters are distributed to AChemS members through email, and include highlights of recent events, upcoming events, society deadlines, reports of fellow AChemS members featured in the news, and other important and timely information. AChemS members are strongly encouraged to use the Monthly Highlights email to help bring attention to recent news stories about themselves and their work. News stories in which a member or a member's work is featured or even just mentioned are appropriate for inclusion in the Monthly Highlights. If you have recent news coverage that you would like featured in the Monthly Highlights, please send a message to info@ achems.org for consideration to be included in the next Monthly Highlights.

AChemS Wikipedia Page

The AChemS Wikipedia page mainly targets non-AChemS members. This page serves as a one-stop content source wherein the public can learn about our Society. Basic content, including the origins of AChemS and some major events, are listed to orient visitors to the mission and history of AChemS. This page is important for our society to maintain. If you have any new or noteworthy items that you think should be included on the Wikipedia page, send an email to info@achems.org.

AChemS Social Media Presence

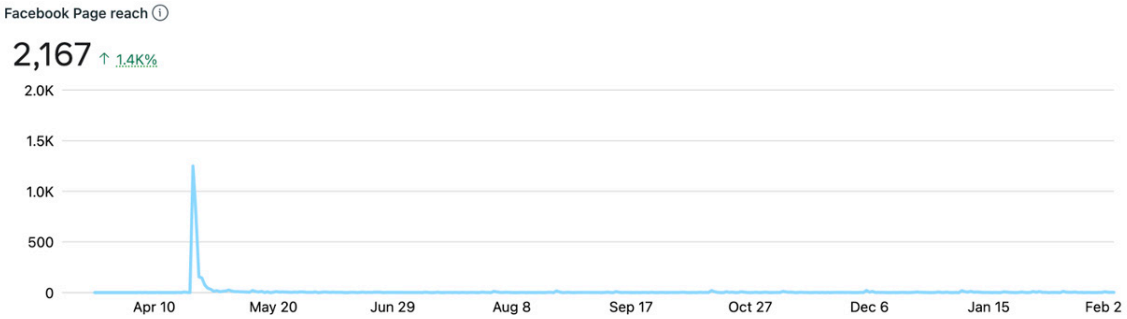
The new LinkedIn account that was created last year now has 96 followers. LinkedIn provides AChemS members opportunities for networking with entities not officially on Twitter or Facebook, including direct ways to engage with potential industry partners or employers. The AChemS presence on Facebook is maintained by SPLtrak. Updates to the Facebook page typically co-occur with the webpage and Twitter.

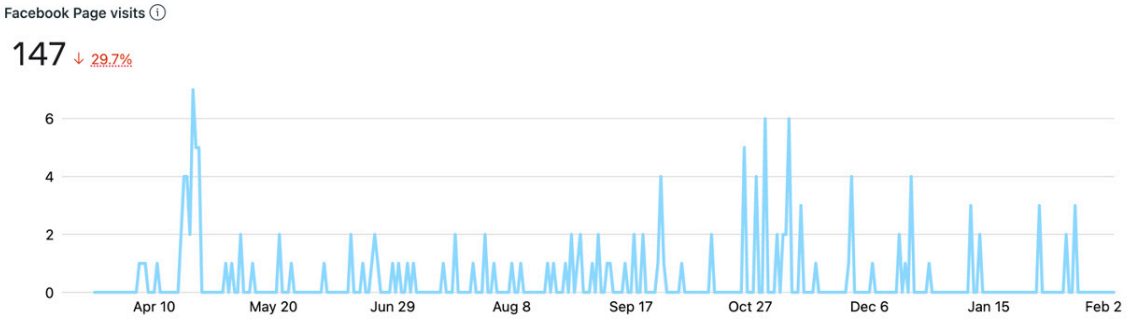


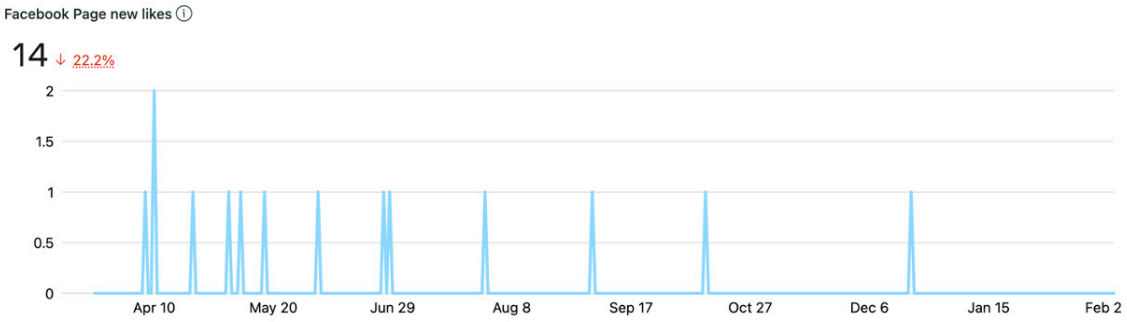
The AChemS presence on Twitter (@AchemsInfo) is maintained through the efforts of SPLtrak with some additional content contributed from the AChemS

SECRETARY'S REPORT (continued)

Social Media Committee, co-chaired by Matt Smear, and including members Putu Agus Khorisantono, Marga Veldhuizen, Jake Saunders, Claire Martin and Snigdha Mukerjee. Members and their terms can be found here (link). All members have agreed to the AChemS social media policy. AChemS uses Twitter to communicate important information to both members and the general public. For members, AChemS posts information relevant to the annual meeting, chemosensory event announcements, announcements about funding opportunities, alerts to new issues of Chemical Senses, and other pertinent information. For the general public, AChemS posts information of interest on smell and taste, such as Members in the News items. The @AChemsInfo Twitter presence is further heightened by our AChemS members who thoughtfully mention it and retweet. @AChemsInfo has 1,618 followers as of March 2023. Issues of concern regarding this social media account include recent reports of increasing instability of the Twitter platform, along with rapidly changing policies on platform safety and content moderation, account verification, advertising, and fee structures. New follower numbers for our Twitter account (see below) have declined coincident with new Twitter ownership and the issues noted above. This likely reflects changing dynamics of public use of the platform and may indicate a declining utility of Twitter for the Society. AChemS should remain particularly alert to these changes—especially the widely reported increase in and tolerance for hate speech on the platform—and how they may reflect on or affect the Society's participation. Input of these issues is welcome and encouraged, and should be directed to info@achems.org.







POSTDOC AND GRADUATE STUDENT REPRESENTATIVE REPORT

Rosario B. Jaime-Lara, PhD, Claire De March, PhD and Cecilia Bouaichi

The Post-Doctoral and Graduate Student Representatives were able to implement various events aimed at promoting better communication and a sense of community among peers within AChemS. Although 2022 still posed many Covid-related challenges, our efforts were motivated by discussions concerning the desire for students' and postdoctoral researchers' to share their ideas regarding the future of AChemS.

Highlighting Student and Postdoctoral Student Voices: Graduate Student and Postdoctoral Researcher Town Hall

Our first event of the year was a Graduate Student and Postdoctoral Researcher Town Hall Meeting, which was developed and implemented to initiate a genuine dialogue exchange of ideas, concerns, or recommendations exclusively emphasized on the perspective of graduate student and postdoctoral members. We felt that students and young researchers would appreciate the opportunity to present their ideas in the presence of their peers. We also hoped that bringing together graduate students and postdoctoral researchers would offer an opportunity to identify strategies and action items to improve upon the experience and increasing engagement of these two groups in AChemS. The event was held via Zoom and was advertised a few times on the AChemS email circulation. Despite having a small group of attendees, those that did attend were very enthusiastic and openly shared with us their thoughts about what they would like to see from AChemS in the future.

Suggestions and themes that emerged from the Town Hall included:

- Building an inclusive environment and Increasing diversity. Suggestions included further building and developing the diversity page on AChemS website (e.g., adding a link to diversity fellowship and building more robust resources and information) and increasing engagements with students, postdocs, and other potential members from underrepresented backgrounds through participating/engaging with organizations that serve minority communities.
- Building AChemS social media presence, including by highlighting member profiles and making it easier to find sub tabs and links on the main page.
- Increasing support, mentorship, and awareness of career options outside of academiaincluding:keeping scientists in industry engaged in AChemS and making resources (including information and job postings) more visible in social media and the annual conference
- Increasing visibility and access of funding opportunities- including the child-care grant and other student and postdoctoral research grants.

Engaging Graduate Students and Postdoctoral Students at the Annual Conference:

Following the Town Hall event, we have met to continue to discuss and build opportunities to engage graduate students and postdoctoral researchers. We devised a new concept for this upcoming AChemS Conference, directed at providing graduate students and postdoctoral researchers a space for meeting like-minded young professionals, networking, and simply having the opportunity to connect with individuals without forced conversation. We have scheduled three different opportunities to learn what AChemS is all about and meet other postdocs and graduate students at this upcoming conference (below). We hope these opportunities will offer a welcoming space for students and postdoctoral members, who may not yet have a network or would like to build a network, and the opportunity to build connections early in the conference:

Student and Postdoctoral Member Tables

- 1) Wednesday (April 19) - Student/Postdoctoral Member Table During the Welcome Banquet
- 2) Thursday (April 20) - Student/Postdoctoral Member Table During the Welcome Breakfast

Networking Ice-breaker Activity

- 3) Thursday (April 20) - Network Ice-Breaker Activity During the First Coffee Break

We also started a conversation and discussed with the Mentoring and Networking Committee, the potential of a new award for mentorship. We recommend that this possibility be discussed and considered in the future with the new Graduate Student and Postdoctoral Representatives. Among the ideas discussed, we talked about the need to highlight the importance of mentorship to both graduate and postdoctoral member development. However, if an award or funding was available for students and postdocs, then the awards should be utilized to fund graduate student and postdoctoral research.

Lastly, we recommend that a formal method of maintaining institutional memory be implemented to support students and postdoctoral members. We recently rediscovered the Slack channel prepared by last year's representatives. It would be wonderful if a QR code was created for advertisement at this upcoming meeting or simply circulated in an email with more information regarding this communication platform so more grad students/postdocs could be aware.

2022 AWARDS CEREMONY

Max Mozell Award

Ajinomoto Award

IFF Award

AChemS Young Investigator Award

AChemS
Association for Chemoreception Sciences

2022 AChemS Student Travel and Fellowships for Diversity Award Recipients

Elvis Freeman Acquah
Khushbu Agarwal
Nicholas Amado
Sabrina Anderson
*Verenice Ascencio Gutierrez
Andoni Asencor
Anna Athanassi
*Natasha Baas-Thomas
Lewis Bennett
Stephanie Brener
Jaelyn Darden
Amanda Dossat
Brigitte Farah
Veronica Flores
Bryan Fowler
Frances Friason
Adam Garcia
Thomas Gray
Evan Guerra
Emily Hanselman
Payton Harmon
Brigit High
Matej Hladis
Patrice Hubert
Stephanie Hunter
Jonas Yde Junge
Joshua Kogan
Louis Kolling
Kym Man
Andrew Moran
Keith Perkins
Meizhu Qi
Vicente Ramirez
Daniel Ramirez-Gordillo
Clara Salame
Victoria Switacz
Rodrigo Tomas
Ranhui Xi
Priscilla Yevoo
Zihao Zhang
Coline Zigrand

Polak Young Investigator Award

Tamar Licht	Laura E. Martin	Yuryanni Rodriguez	Trevor Sorrells	Agnieszka Sorokowska
Hebrew University	*Oregon State University*	*University of Miami*	*Rockefeller University*	*University of Wroclaw*

2022 AWARD RECIPIENTS

Christina Piarowski

Don Tucker Award Recipient

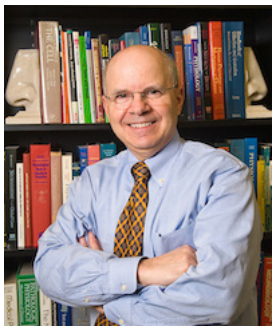
Research Focus: Cancer patients with metastatic renal cell carcinoma being treated with tyrosine kinase inhibitors (TKIs) often experience taste dysfunction, or dysgeusia. This is likely because rapid turnover of taste cells makes the taste system prone to disruption by certain drugs that inhibit signaling necessary for homeostasis. TKIs inhibit receptor tyrosine kinases such as MET, Ret, c-Kit, and PDGFRα, suggesting these receptors may play a role in regulating taste homeostasis. Through treating lingual organoids with several TKIs I found that markers of sweet-sensing taste cells are downregulated, while other taste cell types are left largely undisturbed. Based on the drugs I used, and the combination of different receptors inhibited, I have determined that either c-Kit, PDGFRα, or a combination of both, likely regulate sweet cell homeostasis. My project aims to determine how these receptors regulate sweet cell differentiation and/or maintenance while also uncovering a novel mechanism for TKI-induced dysgeusia.

Acknowledgements: I am extremely grateful for my mentors and colleagues at the University of Colorado Anschutz Medical Campus who support my training. Journal clubs and meetings through the Rocky Mountain Taste and Smell Center allow me to stay up-to-date on the field of chemical senses while continuously learning from highly experienced investigators. I would especially like to thank my thesis mentor Linda Barlow for stimulating discussions that challenge me to be a more rigorous scientist. Her input and direction have been invaluable in shaping my project, and I will continue to appreciate her mentorship throughout the rest of my training. The other members of my lab Jennifer, Trevor, and Sushan have not only helped me learn new techniques but have also supported me tremendously on a personal level. I am thankful for my amazing lab and look forward to the next 1-2 years of graduate school with them. Lastly, I would like to acknowledge the organoid and tissue modeling shared resource on the Anschutz Medical Campus for providing materials and support necessary for organoid culture, as well as the NIDCD for funding my work through an F31 National Research Service Award.

Rochelle Vayntrub

Undergraduate Research Award Recipient

2022 AWARD RECIPIENTS



Richard M. Costanzo

Max Mozell Award Recipient

Research Focus: I began my career in the chemical senses as a graduate student in Max Mozell's lab investigating olfactory nerve projections and spatial-temporal mapping. Later, my focus shifted to olfactory regeneration and repair. My early work, influenced by a collaboration with Pasquale Graziadei (1983), lead to the development of a novel method for sectioning the olfactory nerves in rodents. This method was used to study olfactory injury and recovery mechanisms and served as a model of olfactory loss suffered in head injury. Together with students, post-doctoral fellows, and visiting scientists from Japan, our lab studied the regeneration and rewiring of olfactory nerves following injury. With the goal of restoring olfactory function, we discovered that MMPs played a role in the time course of recovery, steroid treatments improved recovery and that, in cases of abnormal rewiring, odors can be relearned and odor discrimination can be restored. My interest in establishing a clinical research program began in 1986 with a study of patients who had olfactory loss due to traumatic head injury. Over nearly 4 decades our VCU Smell and Taste research program has evaluated thousands of patients and reported on the etiology and consequences of olfactory and gustatory impairment. Our most recent work has focused on documenting Covid-19-related smell loss and the development of an olfactory prothesis (a device similar to cochlear implant) that could someday help in restoring lost olfactory function.

Acknowledgements: I am honored to have been recognized by ACHEMS with this achievement award. So many people have played an important role in my career development that it is not possible to list them all here. I would however like to acknowledge Max Mozell, my thesis advisor, founder of ACHEMS and in whose honor this award was established. I would especially like to thank Michael Meredith; since our post doc years in the Pfaffman lab 4 decades ago, Mike has remained a special friend and colleague. Drs. Carl Pfaffman, Max Mozell, Bob O'Connell, Marion Frank, Pasquale Graziadei, Rodolfo Llinas, and Richard Axel all have been important role models and mentors. Among the many students and collaborators who have contributed to the science, a special thanks goes to Ed Morrison, Eric Holbrook, Jim Schwob, Dan Coelho, Evan Reiter, Masumi Ichikawa, Takaki Miwa, Masayoshi Kobayashi, Nancy Koster Kleene, Karen Yee, and Mark Richardson. Finally, I wish to acknowledge a lifetime of love and support from my wife LInda, and our two children, Dan and Rebecca.

Camille Ferdenzi

IFF Award Recipient

Research Focus: My research has been largely focused on the understanding of the principles that drive food intake as this is a prerequisite for the development of targeted interventions to promote healthy eating. My research aimed at unraveling the workings of the human gustatory system, the gateway to nutrient sensing, and I ask how taste perception is influenced by attention and learning from prior exposure and experience. I also investigate how the senses interact with each other and are integrated into a gestalt. More recently, my research focus shifted more toward olfaction. In my work, I combine electrophysiological with behavioral and psychophysical measurements. A significant part of my work has been involved with the development of stimulation techniques and psychophysical tests to allow achieving our goals.

Acknowledgements: Many people have been sources of inspiration and motivation along the way of my academic career and I can't possibly name them all. Today, I would like to thank Johan Lundström, Thomas Hummel, Johannes Frasnelli, and John Hayes for supporting my nomination for this prestigious award, and Richard Höchenberger who was instrumental in many projects that have led to the receipt of this award.

2022 AWARD RECIPIENTS (continued)

Aki Taruno

Ajinomoto Award Recipient

Research Focus: My lab studies the neural basis of gustation in the peripheral and central nervous systems by combining optical imaging, electrophysiological recording, optogenetic manipulation, single-cell analysis, and behavioral assays. My previous studies helped identify key components of peripheral taste transduction. They include the molecular mechanisms of how taste cells lacking synaptic vesicles release neurotransmitters and how sodium taste is processed within taste cells. These findings helped establish the existence of a novel chemical synapse termed channel synapse, and raised a number of fundamental questions that have guided my research directions. At this point we have a good understanding, at the molecular level, of how taste cells transduce sweet, umami, bitter, sour, and sodium tastes, however, how high salt taste, a major salt taste component together with sodium taste, is transduced remains poorly understood. The future identification of high salt taste receptors and transduction mechanisms is pivotal to elucidating and controlling human salty taste. Another prominent question is how does the brain process gustatory information to generate complex behaviors? Stemming from my own work—the discovery of the channel synapse provides a new paradigm to understand the mechanisms of neuronal chemical communication. But. How does the channel synapse benefit gustation? and Where else does it function outside the tongue?

Acknowledgements: I am extremely honored to receive this prestigious award from AChemS, for which I extend my gratitude to the award committee. Foremost, I am grateful to Kevin Foskett, my postdoc mentor, for his thoughtful and continued support. Since I started taste research in his lab, I have been blessed by generous support and friendship from colleagues within the AChemS community. It is truly a wonderful and welcoming society. I would like to offer a special thanks to Emily Liman, Sue Kinnamon, Robert Margolskee, Ichiro Matsumoto, Yuzo Ninomiya, Michael Tordoff, Nirupa Chaudhari, Stephen Roper, and Thomas Finger. I am also grateful for the support of funding agencies in Japan, namely JST and JSPS. Last but not least, the work would not be possible without past and current lab members, Kengo Nomura, Shogo Soma, Mark Sherwood, Tatsuro Murakami, Makiko Kashio, Hongxin Sun, and Motoki Okui.

Thorsten Kahnt

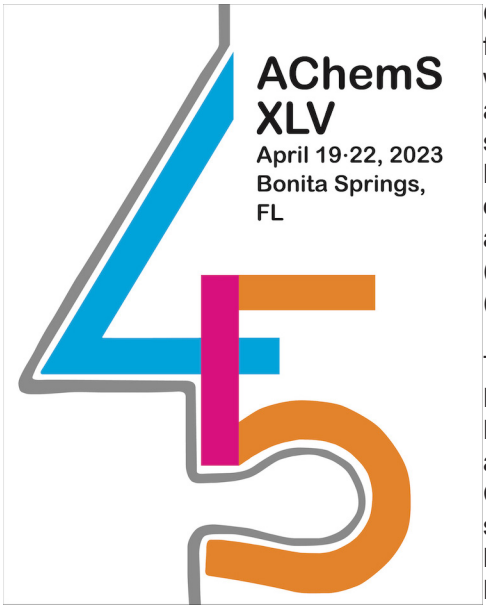
AChemS Young Investigator Award Recipient

Research Focus: Our research focuses on the neural circuits and computations that support reward-based learning and decision-making, with a particular emphasis on the role of olfaction in appetitive behaviors. We measure brain activity using high-resolution functional magnetic resonance imaging and use pattern-based analysis and other computational approaches to extract information from distributed activity patterns. In addition, we use transcranial magnetic stimulation to test the causal contribution of brain areas and distributed networks to neural computations and behavioral functions. Over the past several years, we have shown how the orbitofrontal cortex represents specific expectations about chemosensory rewards (i.e., food odors), how these specific expectations are learned via sensory prediction errors in the dopaminergic midbrain, and how this information is used to guide adaptive decision-making and inference. Additional work in the lab has mapped the human olfactory tract using structural imaging and is exploring mechanisms that support the state-dependent modulation of olfactory perception and decision-making.

Acknowledgements: I am very grateful to the chemosensory researchers who have welcomed me into the AChemS community. I specifically want to thank the AChemS Awards Committee for selecting me for this award, as well as my advisors and mentors -- John-Dylan Haynes, Philippe Tobler, Jay Gottfried, and Geoff Schoenbaum -- for providing me with invaluable training and support throughout the years. I owe my deepest gratitude to the terrific past and current members of my lab, who work incredibly hard, bring unique perspectives, and, importantly, make it a fun place to do research.

PROGRAM COMMITTEE REPORT

Yanina Pepino, PhD *Chair*



On your marks, get set — enjoy AChemS! It is hard to believe we are only a few weeks from the 45th AchemS meeting. The Program Committee has been working hard to select a broad range of member-proposed symposia that balance chemosensory modalities, approaches, and research models. The keynote speaker for this year, for the first ADM keynote lecture, will be Dr. Makedonka Mitreva, a Professor of Medicine and Genetics at Washington University School of Medicine in St. Louis. Dr. Mitreva is a leader in neglected tropical diseases and the human microbiome. Her presentation: "Improving global health through (meta)genomics studies of neglected parasites," will embark us on a trip around (the microbiomes of) the world.

This year's Pre-Meeting is in memory of Professor Gordon Murray Shepherd, M. D, D. Phil. (1933-2022), a founding member and former president of AchemS. Please join us in celebrating his life and achievements with trainees, colleagues, and friends worldwide who will present diverse topics on the chemical senses. Complementing and extending the Pre-Meeting, we will have a tribute symposium on Thursday: "Standing on the shoulder of giants," to also honor Dr. Donald Leopold (1947-2022) and Dr. James B. Snow (1932-2022), with remarks from Dr. Debara L. Tucci, the Director of the National Institute on Deafness and Other Communication Disorders (NIDCD).

In addition to five regular symposia, we will have the opportunity to hear oral presentations from some of the most exciting abstracts submitted to the conference. These will be presented in the regular format of oral sessions and during the data blitzs. We have also lined up some outstanding workshops: learn to code (or teach!) in Pyrfume Code-fest Orientation, meet the editors of Chemical Senses, start planning your first NIDCD grant with tips from Dr. Sullivan at the Barry Davis workshop, or get inspired to write your next grant for the NIH Brain initiative. Dr. John Ngai, the Director of NIH BRAIN Initiative, and Dr. Merav will provide an overview of various funding opportunities and guide potential NIDCD applicants. "Good Things, When Short, Are Twice As Good": Be ready to shrink your posters! In response to popular demand, we made poster sessions longer and will keep posters shown all day. This year's journal club will feature the classic work from Pasquale Graziadei on neurogenesis and integrate it with recent work on degeneration and regeneration of the olfactory system in COVID-19. As it has been a tradition for the last few editions, we will learn about the research from our award winners on Thursday and Friday PM symposiums.

Like in the old times: get ready to distend and network in a relaxing atmosphere. Recharge your batteries on the free afternoon of Friday because Saturday will be packed! Our clinical symposium will focus on age-related chemosensory dysfunction, and our industry symposium will be navigating sweetness and sugar reduction in the modern food system. Dr. Gloria Regisford, the Vincentian Professor of Biology at Prairie View A & M University (the first HBCU in Texas), will deliver our Diversity, Equity, Inclusion, and Belonging (DEIB) lecture, and we will have a buzzing presidential Symposium. In closing, we will celebrate AChemS' 45 birthday with cake and our acclaimed dance party. Safe travels; I cannot wait to see you all!

MENTORING/NETWORKING COMMITTEE REPORT

Valentina Parma, PhD *Chair*

The Mentoring/Networking Committee is dedicated to connecting AChemS members throughout the year, with the aim of promoting scientific exchange, innovation, and growth of our society. To achieve this goal, the committee leads the organization of two year-long initiatives: the Career Networking Seminar Series and the Matrix Mentoring Program.

The Career Networking Seminar Series, generously sponsored by Firmenich for the third year, pairs senior AChemS members with early-career members (from graduate students to junior faculty) with whom they do not have a prior connection. These pairs are then asked to deliver a joint talk that connects two different chemosensory research themes, highlighting similarities and differences. These monthly meetings offer a valuable networking opportunity for the speakers and provide the whole AChemS community with an opportunity for scientific exchange. Additionally, non-members are welcome to attend and learn more about AChemS. Over the past 12 seminars, an average of 93 people registered to attend since with 70% of registrants attending live or watching the recording on the AChemS site. As AChemS members, you can view the full calendar of future events, access the recordings of past seminars, and apply to present here (https://achems.org/web/seminars-calendar.php).

The Matrix Mentoring Program is a hybrid mentoring initiative that brings together a diverse group of colleagues, ranging from undergraduates to emeritus professors. Together, the group provides each other support and advice on topics such as science, career development, grant writing, life in academia and industry, and other topics that the group deems important. There is still time to sign up for this year's program until March 31, 2023, by completing a quick survey (https://fs10.formsite.com/spltrak/0csa95njjc/index). Attend the Career Networking Social event to launch the 2023 AChemS Matrix Mentoring Program and meet your mentoring matrix in person. The matrix will then meet virtually at least three other times between April 2023 and March 2024.

We welcome nominations for the Career Networking Seminar Series and suggestions for improving our initiatives. Please email info@achems.org with the subject "Suggestions for Mentoring/Networking Committee" to get involved.

I would also like to put in the spotlight a networking/training event that Joel Mainland is putting together: the AChemS Codefest. At last year's Codefest 35 attendees learned new data analysis and visualization techniques while working with the datasets at www.pyrfume.org. This year AChemS will host the second annual Codefest, which will focus on data from the National Health and Nutrition Examination Survey (NHANES). The goal is for you to apply your data analysis skills, learn from others, get feedback, explore others' work, and connect with the larger AChemS community. We will provide starter code, orient you to the available data, and provide a team of teachers. We welcome coders of all skill levels and from any chemosensory system to join (even last minute)! BYOL - Bring your own laptops.

On a personal note, this will be my last year as Chair of the committee. I am deeply grateful to Jeremy McIntyre for including me as a member of this committee, and to Linda Barlow, for entrusting me with this important role in the AChemS community. It has been a joy to work alongside my fellow subcommittee members in the Career Networking Seminar Series, Bob Datta and Patrick Pfister, to support the networking of early career members. I am also indebted to the work that Christine Byrd-Jacobs, Kara Fulton, Jess Kanwal, Elbrich Postma, and Shaina Short have done so far as members of this committee, and to Gemma Camara, Hojoon Lee, and Arianna Maffei for stepping up and serve in this next term. I look forward to seeing where the committee will go next and how the society will continue to grow through our collective efforts.

DIVERSITY, EQUITY, INCLUSION, AND BELONGING (DEIB)

Paul Breslin, PhD *Chair*

The Diversity Committee selected 45 Diversity Fellows for awards at this year's in-person AChemS meeting.

This is the most Fellows we have ever had (there were 26 Fellows last year), eight of whom are returning fellows and some for more than one year.

Please everyone - greet, introduce yourself, and extend a warm welcome to all returning and new members at this year's annual meeting.

This year's cohort of Diversity Fellows are supported by the National Institute on Deafness and Other Communication Disorders, the Chan Zuckerberg Initiative, Curion Insights, directed giving of generous individual AChemS members, and support of AChemS and the Executive Committee.

If you represent a corporation or are an individual who is looking to help support Diversity Fellowships, please contact me at Breslin@monell.org or Melissa Paa at info@achems.org or go to this link: https://achems.org/donate/ and select Diversity Fund.

Gloria Regisford

We will also have our second in-person "Distinguished Speaker for DEIB" this year at AChemS on Saturday April 22, 3:30 to 5:00.

I am delighted to announce that this year's speaker will be Dr. Gloria Regisford who is a Professor of Biology at Prairie View A & M University with a specialty in Reproductive Biology. Dr. Regisford has expertise in mentoring students who come from diverse backgrounds in STEM.

COUNCILORS REPORT

Paule Joseph, Senior Councilor and Ricardo Araneda, Junior Councilor

After great participation nationally, this year we are continuing our online outreach event. During COVID, we have used the online platform to reach out to communities that we may not normally be able to reach. In 2022 we partnered with STANA (Smell and Taste Association of North America https://thestana.org) to hold a listening session with patient members of the organization to discuss anosmia and parosmia. This year we would host a patient day with researchers to be held after the AChemS meeting. Additional information will be shared during the meeting with registration information. At the meeting we will publicize the event to encourage as many researchers as possible to join this important event.

AWARDS COMMITTEE REPORT

Paul Breslin *President-Elect and Committee Chair*

This year's Awards Committee includes Ricardo Araneda, Adam Dewan, Shawn Dotson, Monica Dus, Paule Joseph, Juyun Lim, Hong-Xiang Liu, Alissa Nolden, Kathrin Ohla, Sunil Sukumaran, and ad-hoc members including, Rosario B. Jaime-Lara, PhD, Claire De March, PhD and Cecilia Bouaichi with AChemS President-Elect, Paul Breslin serving as Chair.

This year, we were fortunate to have multiple excellent candidates nominated for each award. From among these nominees, the committee selected the following awardees for our more senior awards:

The *Max Mozell Award for Outstanding Achievement in the Chemical Senses*: **Alan C. Spector, PhD**, *Florida State University*

The *IFF AWARD for Research in the Psychophysics of Human Taste and Smell*: **Richard C. Gerkin, PhD,** *Arizona State University*

The *AJINOMOTO AWARD for Young Investigators in Gustation or Oral Chemosensation*: **Monica Dus, PhD,** T*he University of Michigan*

The *ACHEMS YOUNG INVESTIGATOR AWARD for Research in Olfaction or Nasal Chemosensation*: **Jonas K. Olofsson, PhD,** *Stockholm University*

The above four awardees will be recognized on Day 1 of our 2023 AChemS meeting during the ACHEMS WELCOME/ AWARDS CEREMONY (5 pm on Wed April 19th), and they will give an overview of their research during the CAREER AWARD LECTURES at 5:00 pm on Friday, April 21st.

During the WELCOME/AWARDS CEREMONY on Wednesday, April 19, we will also honor the 2022 winners of the Don Tucker Memorial Award, **Christina Piarowski**, the winner of the AChemS Award for Undergraduate Research, **Rochelle Vayntrub**, both for posters presented during AChemS 2022.

ELECTIONS COMMITTEE REPORT

Nirupa Chaudhari (Chair and Past President)
Linda Barlow
Debra Fadool
Shawn Dotson
Marco Tizzano

We thank those who nominated our colleagues for AChemS officers and thank all candidates for their participation in the election. We are pleased to report the 2023 election results:

President- Elect: Alfredo Fontanini
Program Chair-Elect: Dan Wesson
Junior Councilor: Monica Dus
Diversity Committee Chair: Paule Joseph
Mentoring/Networking Chair: Arianna Maffei

CLINICAL RELATIONS COMMITTEE

Caroline Huart, Chair
Alexander Fjaeldstad
Bradley Goldstein
Eric Holbrook
Thomas Hummel
Bob Pellegrino
Christina Zelano

2022 was again marked by significant interest from the scientific community in COVID-19 related chemosensory disorders. Although most patients with post-COVID olfactory disorder recover quickly, a small proportion retain long-term disorders, both quantitative and qualitative. Given the number of patients affected by COVID, this represents in absolute terms a relatively large number of patients seeking for a treatment. It is in this context that many studies were interested in the treatment of smell disorders. Beyond the gold-standard olfactory training, more innovative methods have been developed, such as the injection of PRP into the olfactory cleft. However, although promising, this technique remains relatively inaccessible and evidence for their effectiveness still needs to be strengthened.

At this year's ACHEMS conference, we propose to focus on age-related sensory dysfunction with a special emphasis on chemosensory loss. The age-related decline of our various senses has a significant impact on our daily life, such as in the perception of the environment and social interactions. The age-related loss also figures into the long-term consequences of COVID19 which seem to be more pronounced in older people. In our symposium, we will bring together clinician-scientists with expertise on different chemical senses but also in hearing. We aim to stimulate an inter-disciplinary discussion, by comparing and contrasting function and dysfunction of these different sensory systems in humans. This symposium will include contributions from Bradley Goldstein (Durham), Eric Holbrook (Boston), Antje Welge-Lüssen (Basel), Thomas Hummel (Dresden), Caroline Huart (Brussels) and Frank Lin (Baltimore).

INDUSTRIAL LIAISON COMMITTEE REPORT

Robin Dando, Chair
Alex Woo
Alissa Nolden
Casey Trimmer
Stuart Firestein
Yanina Pepino

Welcome back to Florida to all old friends, and new time attendees! This year in the industry symposium we will be talking about sweetness, and on the many approaches that both academic and industry scientists have developed to reduce the amount of sugar in our diet.

The big news is that after many years, we will have a new sponsor for our keynote session. We are delighted to welcome ADM as our keynote sponsor, where we will hear from Makedonka Mitreva on genomic studies of parasites.

We are once again forever appreciative of our sponsors for helping make the meeting the best it can be, and this year want to extend thanks to Sensonics International, Ajinomoto Co. Incorporated, International Flavors and Fragrances Incorporated, Scentovation, Med Associates Incorporated, and to Curion Insights. We appreciate everything that you do for our meeting, and our community!

And lastly, thank you to our organizers, our speakers, and our attendees who add some flavor to our April!

HISTORY COMMITTEE REPORT

Claire Murphy, Chair
Gary Beauchamp
Jessica Brann
Susan Travers
Don Wilson

The History Committee collaborated to develop contributions to the AChemS 2023 Annual Meeting. Two events will take place on Thursday April 20th. Please join us!

The committee chair worked with AChemS President, Dani Reed, and Program Chair, Yanina Pepino, to develop a Tribute Symposium, honoring three AChemS Giants who passed away in 2022.

This Tribute Symposium celebrates and pays tribute to the research and impact of three Giants of chemosensory science. Dr. James Byron Snow, as the first official Director of the National Institute on Deafness and Other Communication Disorders, sculpted the research strategy of a nascent institute and created countless opportunities for the advancement of chemosensory research. Dr. Donald Leopold was the consummate physician/scientist, advancing clinical research and practice and improving the lives of patients with chemosensory disorders. Dr. Gordon Shepherd, a pioneer in neuroscience, used innovative techniques from computational neuroscience and bioinformatics to make stunning contributions to our understanding of the functional organization of and mechanisms of information processing in the brain, using mammalian olfaction as a model system. Their innovations and insights have shaped current and future research in the chemical senses. As we seek a future of transformative research, discovery and therapeutics in the chemical senses, we stand on the shoulders of Giants.

10:40 - 12:00 PM SYMPOSIUM		**STANDING ON THE SHOULDERS OF GIANTS, A TRIBUTE SYMPOSIUM** Chair/Organizer: Claire Murphy *Calusa EFGH*
	10:40	**STANDING ON THE SHOULDERS OF GIANTS, A TRIBUTE SYMPOSIUM INTRODUCTION** Claire Murphy[1,2]. [1]*San Diego State University, San Diego, CA, USA.* [2]*University of California, San Diego, La Jolla, CA, USA*
	10:45	**A TRIBUTE TO JAMES BYRON SNOW, JR, M. D.** Debara L. Tucci. *Director, National Institute on Deafness and Other Communication Disorders, Bethesda, MD, USA*
	11:10	**STANDING ON THE SHOULDER OF GIANTS: DONALD LEOPOLD, M.D.** Eric H. Holbrook. *Massachusetts Eye and Ear/Harvard Medical School, Boston, MA, USA*
	11:35	**IN HONOR OF DR. GORDON MURRAY SHEPHERD** Stuart Firestein[1], Charles Greer[2]. [1]*Columbia University .* [2]*Yale University*

The Committee has organized a Journal Club highlighting the classic work of Pasquale Graziadei on neurogenesis and plasticity in the olfactory system, and its significance for the era of long COVID 19.

3:30 - 5:00 PM WORKSHOP		**JOURNAL CLUB: FROM PASQUALE GRAZIADEI'S CLASSIC WORK ON NEUROGENESIS TO DEGENERATION AND REGENERATION OF THE OLFACTORY SYSTEM IN COVID 19** Chair/Organizer: Susan Travers *Great Egret*
	3:30	**BRIEF INTRODUCTION TO ACHEMS JOURNAL CLUB** Susan Travers. *Ohio State University*
	3:35	**INFORMAL INTRODUCTION TO THE GRAZIADEI LABORATORY AND PRINCIPAL SCIENTIFIC CONTRIBUTIONS FROM PASQUALE GRAZIADEI** Richard M. Costanzo. *Virginia Commonwealth University*
	3:55	**THE CLASSIC PAPER: PPC GRAZIADEI AND GA MONTI GRAZIADEI: NEUROGENESIS AND PLASTICITY OF THE OLFACTORY SENSORY NEURONS** Jack Finlay. *Student from the laboratory of Bradley Goldstein, Duke University*
	4:10	**TO THE PRESENT: DEGENERATION AND REGENERATION OF THE OLFACTORY SYSTEM IN COVID-19** Leslie M. Kay. *University of Chicago*
	4:40	**REMINISCENCES AND COMMENTS FROM THE AUDIENCE.**

Finally, many thanks to Jessica Brann for designing the AChemS 2022 poster honoring the legacies of AChemS Members Gordon Birch, Jennifer Boume, Joseph G. Brand, Albert Farbman, Bruce Halpern, Bernd Lindemann and George Preti.

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