

ACChemS

Association for Chemoreception Sciences

ANNUAL

Newsletter

2025

FOSTERING CHEMICAL SENSES RESEARCH AND UNDERSTANDING SMELL AND TASTE IN HEALTH AND DISEASE

MESSAGE FROM THE PRESIDENT



Alfredo Fontanini, MD, PhD
President, ACChemS

Dear ACChemS Members,
Before sharing our annual ACChemS activities update, I would like to acknowledge the difficult period many have recently faced. We are witnessing a significant shift in the cultural climate and growing uncertainty about future funding. I want to assure you that ACChemS remains committed to our core values: nurturing our scientific community, championing inclu-

sive excellence, and advocating passionately for continued support of the chemosensory sciences. On a related note, our community faces another challenge. The renowned John B. Pierce Laboratory in New Haven will be closing this year, with its research operations winding down throughout 2025. As we are deeply saddened by this development, we want to take this opportunity to celebrate the seminal contributions its faculty members have made to our field.

Despite all the challenges, our society, had an active and productive year! Through its committee members, ACChemS has continued to work in support of our community, promoting outreach, advocacy, professional growth, and pursuing financial stability.

Our outreach and advocacy efforts have focused on multiple activities. On World Taste and Smell Day we launched a crowdfunding event and thanks to our Social Media Committee (chaired by Roberto Vincis) we promoted the fundraiser with two weeks of social media engagement focused on the chemical senses. As a reminder, ACChemS is active on BlueSky, LinkedIn, and X – please follow and engage with our accounts. Our Councilors (Sanne Boesveldt and Claire Cheetham) have worked on developing an online chemical senses quiz for grade schoolers and have continued to upgrade the Education Corner of ACChemS website. On Anosmia Awareness Day, the Federal Liaisons Committee (chaired by Susan Travers) organized ACChemS' second

Hill Day. This event was exceptionally well attended and brought to DC a large group of ACChemS members and patients who connected with more than twenty offices of representatives and senators. The group advocated for the importance of funding to support research in the chemosensory sciences. The response was outstanding, and our members gathered strong interest and support from the offices of our elected officials. Finally, some of our outreach efforts were aimed at maintaining and potentially expanding our membership. Our Membership Chair (Ricardo Araneda) has worked on reaching out to individuals whose membership elapsed in the past years, encouraging them to renew it. If you know colleagues in that category, please encourage them to rejoin our society. Speaking of membership, this year we leveraged the exciting pre-meeting focused on patient-centered discovery and research on chemosensory health (organized by Valentina Parma and Nancy Rawson) and created new registration categories that will strengthen connections with clinicians, patients, and patient advocates.

In support of the continued professional growth of our trainees, the Mentoring and Networking Committee (chaired by Arianna Maffei) has continued to organize online seminars pairing established researchers with trainees. This initiative, which is generously supported by dsm-firmenich, provided a context for mentorship and scientific interactions, showcasing exceptional research in our field. In support of our trainees and our commitment to inclusive excellence, the Diversity Committee (co-chaired by Paul Breslin and myself) awarded twelve fellowships to fund participation in our annual meeting. The Awards Committee (chaired by Yanina Pepino, our President Elect) recognized the talent and accomplishments of our most meritorious members by selecting the recipients of trainees, young-investigators, mid-career and senior research awards.

In response to the continuing financial pressures, we developed and began implementing a comprehensive fundraising strategy that focuses on philanthropy, crowdfund-

PRESIDENT'S MESSAGE (continued)

ing, grant writing for federal and private foundations, and industry relations. Thanks to the philanthropic commitment and generosity of the Harry and Margaret Lawless Charity Fund, we received generous funding to rename for the next five years the AChemS Psychophysics Award as the "AChemS Lawless Award for Research Excellence in the Psychophysics of Human Taste and Smell". We also inaugurated the Presidents' fundraiser, an initiative that gathered vast support from the community of AChemS Presidents. A team of committed members submitted two NIH grant proposals and multiple applications to private foundations (Chan Zuckerberg Initiative, the Dana Foundation, and the Boehringer-Ingelheim Foundation). I would like to acknowledge the efforts of the Grants Committee (led by Linda Barlow and Diego Restrepo), who submitted the renewal of AChemS R13 and received a very competitive score. Our Industry Committee (chaired by Kathryn Deibler) has done an excellent job in developing a strategy for reaching out to potential partners and securing several sponsorships, including Ajinomoto, Almendra, Cargill, Sensonics International, Symrise, and Scentovation. While not all of our fundraising efforts have paid off yet (several did!), the continuation of this broad strategy will surely bring results and help us raise support for our society. In that regard, I would like to acknowledge the leadership of our Treasurer (Julian Meeks), who successfully balances fiscal responsibility with a commitment to our mission and our membership.

Finally, I would like to bring your attention to our upcoming meeting – AChemS XLVII, which will be held in Bonita Spring, FL, from April 23rd to the 26th. Thanks to the great work of this year's Program Committee (chaired by Dan Wesson), we will offer an outstanding and engaging program with multiple keynotes, panels, socials, poster presentations, and a poster session entirely dedicated to trainees nominated for awards. This will be the last year in Bonita Springs. In 2026 and 2027 we will be at the TradeWinds in St. Petersburg, FL on St. Pete's Beach. Please join us and bring your trainees to enjoy four days of chemosensory research with us!

As a final note, I would like to express my gratitude to the members of the Executive Committee, all the committee members, SPLtrak and AChemS membership - working with and for you has been fun and exciting. The commitment of our community to AChemS is truly inspiring and gives me confidence that despite the challenges we can all look at the future of our scientific society and field with optimism and hope.

I am looking forward to seeing you at the meeting.

Alfredo

TREASURER'S REPORT

Julian Meeks, PhD

I want to start by thanking all AChemS members for their contributions to our society as we navigate shifting financial pressures. Last year at this time, we had experienced back-to-back years of increased costs, declining meeting revenues, declining sponsorships, and declining philanthropic donations. We were facing a '24 Annual Meeting held just 2 months prior to ISOT 2024, which reduced AChemS Annual Meeting attendance by approximately 20%. Things were looking dire from a financial perspective.

As one component of a major push by AChemS leadership to shore up our financial position, we on the Finance Committee recommended a phased, two-year series of adjustments to our Membership Dues and Annual Meeting Registration Fees, which were implemented for the 2024 and 2025 Annual Meetings. Largely as a result of these changes (meaning your increased support levels!), the 2024 meeting avoided deep losses, despite substantially lowered attendance levels.

As we enter the 2025 meeting, let's take a look at AChemS current financial position:

In numbers (report date 3/1/2024 – 2/28/2025):

Annual Meeting Income:	\$251,132	(+\$55,179 compared to '23-24)
General Income:	\$96,119	
Grant Income:	\$80,000	(atypical, includes 2 NIH grant distributions)
TOTAL INCOME:	\$427,251	(+\$75,542 compared to '23-24)

TREASURER'S REPORT (continued)

Administrative Expenses:	\$128,189	(+\$84 compared to '23-24)
Annual Mtg Expenses & Awards:	\$248,384	(-\$64,277 compared to '23-24)
Other expenses:	\$24,387	
TOTAL EXPENSES:	\$400,960	(+\$9,872 compared to '23-24)
NET OPERATING REVENUE:	+\$26,291	(+\$182,436 compared to '23-24)
Investments/Other Income:	\$24,990	(-\$13,184 compared to '23-24)
NET REVENUE:	+\$51,281	(+\$169,252 compared to '23-24)
Cash Reserves:	\$201,420	
Investment account:	\$196,656	
TOTAL ASSETS:	\$398,076	(+\$51,281 compared to '23-24)

The numbers are encouraging, but I want to caution you against asking yourself “are we out of the woods, yet?” The reasons are somewhat technical, but include the fact that we received the final \$40,000 from the expiring NIH R13 grant prior to the 2025 meeting (rather than afterward as in prior years) and have several expenses that are yet to post. Critically, we do not yet know if attendance for the 2025 Annual Meeting will rebound from the 2024 levels, and, if so, by how much. If attendance is high, it will be a large step towards being “in the clear,” at least from the most basic perspective.

I am sure we all have many existential concerns about the conditions we are facing as researchers, patients and advocates, and members of the academic, clinical, and industrial scientific communities. There is little doubt that the disruptions to funding agencies, shifts in philanthropic priorities, and tightening of university and company budgets will add new challenges for us to overcome. Navigating these challenges will likely require additional adjustments to our financial model. As just one example, we are changing conference venues for the 2026 meeting, which will likely come with increased venue expenses. We on the Finance Committee will be continue updating our budget models, which may require additional changes to our dues and fees structure. As always, we will work with the Program Chairs and our colleagues at SPLtrak to limit meeting expenses as best we can. All we ask is that you bear with us as we all navigate these potentially rough waters.

I will conclude by again thanking you for all that you do to keep AChemS thriving. Our society's greatest strength is the kindness and generosity of its members. Your contributions to AChemS' financial health through paying dues, submitting abstracts, and attending the Annual Meeting have helped to keep our society afloat through this recent series of challenges. I feel strongly that in our members we have all we need to successfully navigate the challenges ahead, too.

All the best,
Julian Meeks, Treasurer
Julian_Meeks@urmc.rochester.edu

ACChemS Finance Committee:
Debra Ann Fadool
Elizabeth Hanson Moss
Douglas Storace

MEMBERSHIP REPORT

Ricardo Araneda, PhD

As of March 11, 2025, AChemS has 547 members: 251 Regular members, 69 Postdoctoral members, 124 Student members, 21 Postbaccalaureate members, 74 Emeritus members, 7 Developing Nation members, and 1 Corporate member (Fig. 1). Our membership had an increase following the pandemic, however, continues an overall steady decline since 2017 (Fig. 2). Our aim is to grow membership from the current number, leading up to the 2025 meeting. We continue to encourage all AChemS members to participate in inviting colleagues to join.

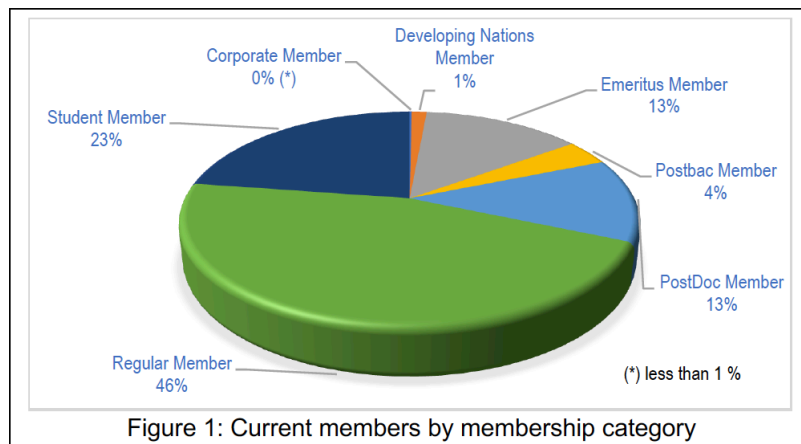


Figure 1: Current members by membership category

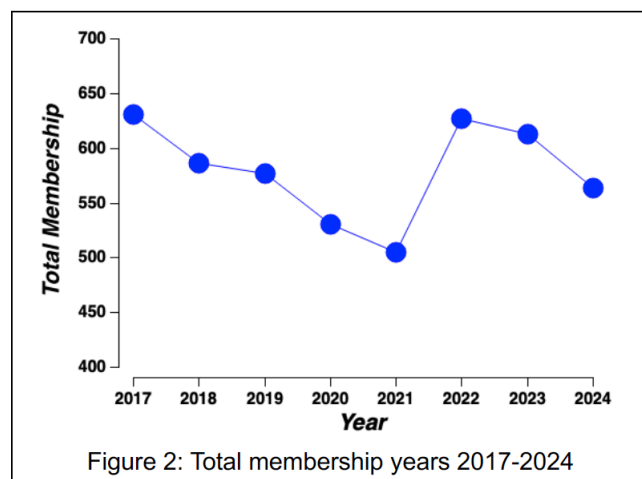


Figure 2: Total membership years 2017-2024

Early this year we made a special effort to invite former AChemS members to renew their membership. We reminded everyone that the Association continues to demonstrate its impact and pivotal role in building an active chemosensory community for both established and rising researchers to connect each year at the AChemS conference. In addition, with participation of the Executive Committee, we created a new category of membership to include Patients and their Advocates. In late February we participated in AChemS Hill Day 2025, which seeks to bring awareness to members of the Congress about the impact of chemosensory research.

Moving forward we will continue our commitment to maintain and grow membership of our Society through the efforts mentioned above, and to seek synergistic engagement with societies that share our mission to benefit our membership.

SECRETARY'S REPORT

Roberto Vincis, PhD

Over the years, AChemS has established multiple avenues to facilitate communication with its members, prospective members, and the general public. These are outlined below.

AChemS Newsletter

The AChemS newsletter is published once a year and provides an overview of key activities and achievements of the society. An archive of past newsletters is available at: [AChemS Newsletter Archive](#).

AChemS Website

The website is regularly updated with news, announcements, and other relevant updates. During the past year (Feb 2024 - Feb 2025), it has attracted nearly 109,000 visits, a 9.17% decrease from the previous report, with peak activity occurring around the time of the annual conference and in the weeks preceding it. In the last year, the AChemS website has undergone improvements with the addition of a new webpage under the **Resources/Outreach** section. This page presents newsworthy abstracts from last year's annual meeting. This was rendered possible by the outstanding efforts of a dedicated team of AChemS member volunteers (Sanne Boesveldt; Claire Cheetham; Valentina Parma; David Tadres; Kathryn Deibler; Federica Genovese; Shima Moein; Bridger Menlove; Putu Khorisantono; Tiffany Hsu; Yao Jiang; Emeline Masterson; Zihao Zhang), who have translated numerous compelling abstracts from the previous year's annual meeting into simple summary, engaging infographics and captivating short video clips. All authors of the studies featured in the Resources/Outreach section of the website have given their consent for publication. The newsworthy abstracts presented on the new website page have also played an important role in the social media campaign efforts of the society described below. Members are invited to submit updates or announcements, such as job postings and training opportunities, by contacting info@achems.org. In addition, feedback on website usability and functionality is welcome at the same email address.

AChemS Monthly Highlights

The Monthly Highlights newsletter is sent to AChemS members by email and provides a summary of notable events, upcoming activities, society deadlines and significant achievements of fellow members featured in the media. This bulletin ensures that members are informed about relevant and timely information within the community. Members are strongly encouraged to contribute to the Monthly Highlights by sharing news articles that feature their work or mention their contributions. If you have been featured in recent media coverage and would like to have it included in an upcoming Monthly Highlights edition, please email info@achems.org for consideration.

AChemS Wikipedia Page

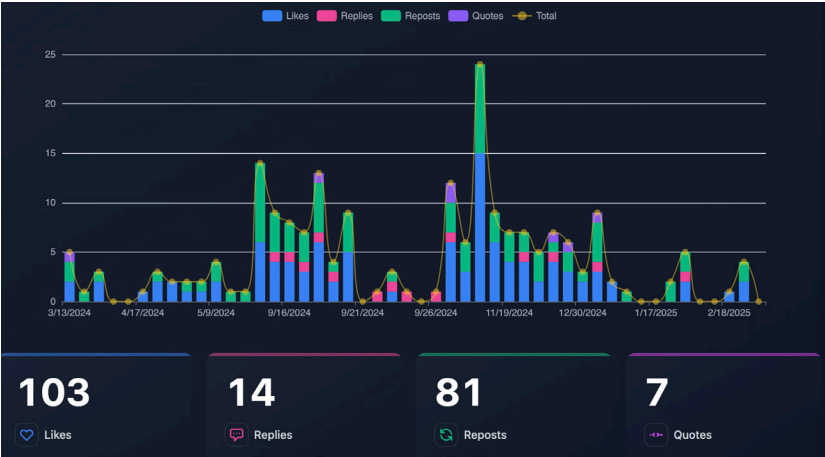
The AChemS Wikipedia page is designed to provide an accessible resource for those outside the society who want to learn more about AChemS. It offers a general overview of the organization's origins, mission, and major milestones, serving as a central reference point for the public. Maintaining this page is essential for increasing awareness of the society. If you have suggestions for updates or noteworthy content that should be added, please contact info@achems.org.

AChemS Social Media Presence

AChemS maintains an active presence on multiple social media platforms to enhance visibility, engage with the public, and share relevant updates about the activities and achievements of the society. The official social media accounts (@AchemsInfo) are managed by SPLtrak, with additional contributions from the AChemS Social Media Committee. This team includes members Putu Agus Khorisantono, Marga Veldhuizen, Jake Saunders, Claire Martin, and Snigdha Mukerjee. During the past year, AChemS has made efforts to strengthen its social media outreach. One of the main initiatives was associated with the GoFundMe campaign, organized by AChemS President Alfredo Fontanini. To support and promote this campaign, AChemS launched a 14-day social media effort, posting once a day starting on September 14 (World Taste and Smell Day) engaging facts about chemical senses on LinkedIn, X and BlueSky. These posts aimed to raise awareness about the fundraiser while simultaneously educating the public about the importance of the chemical senses. Additionally, in November 2024, we introduced a monthly campaign designed to highlight key research findings from the previous annual meeting from the ones highlighted in the Resources/Outreach section of the AChemS website. Each month, a significant finding was highlighted through posts on LinkedIn and threads on X and BlueSky. The purpose of this initiative was to maintain interest in AChemS activities while amplifying the remarkable work of its members.

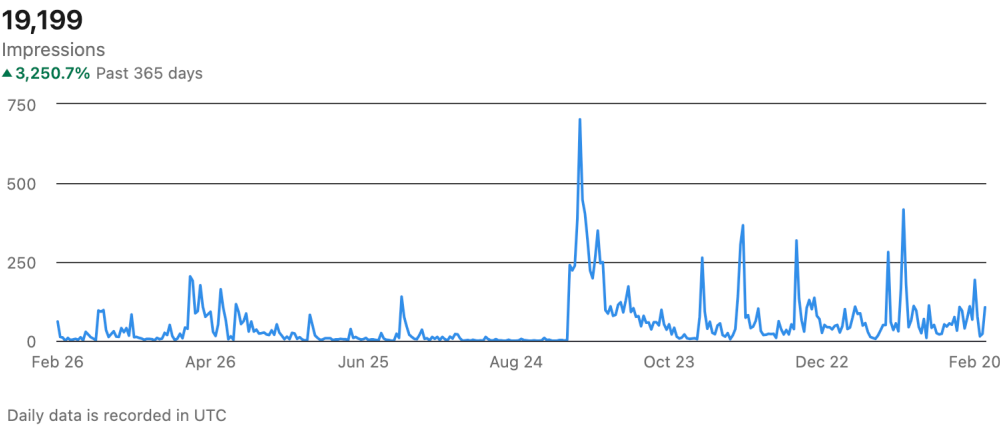
SECRETARY’S REPORT (continued)

Unfortunately, we no longer have access to all the analytics of the X (former Twitter) account without paying a monthly premium. The total of X followers is 1,694 with 1,150 posts since February 2015. The concerns regarding this social media account, including the ongoing instability of the X platform, as well as its policies on platform safety, content moderation, account verification, and fee structures, have persisted since last year’s report and have become even more pressing. This likely reflects the changing dynamics of public use of the platform and may indicate a declining utility of X for AChemS. AChemS should remain particularly alert to these changes, especially the widely reported increase in and tolerance for hate speech on the platform, and to how they may reflect on or affect society participation. Input on these issues is welcome and encouraged and should be directed to info@achems.org. BlueSky, also known as Blue Sky Social, is a new microblogging social platform that has increased in popularity since Twitter moved to X. The relatively new AChemS BlueSky account 2 (@achems.bsky.social) has 178 followers. The AChemS presence on Facebook is maintained by SPLtrak and currently has 302 followers. Updates to the Facebook page typically co-occur with the webpage, X and BlueSky. The AChemS LinkedIn account acquired 222 new followers over the last year, currently totaling 421. LinkedIn provides AChemS members with opportunities to network with entities not officially on X, Facebook or BlueSky, including direct ways to engage with potential industry partners or employers.



@achems.bsky.social account analytics

Content performance ⓘ



LinkedIn AChemS account impressions

POSTDOC AND GRADUATE STUDENT REPRESENTATIVE REPORT

Kara Fulton, PhD and Verenice Ascencio

We are excited to continue the events that the previous AChemS postdoc and graduate student representatives have implemented. This year, we are focusing on increasing advertising for trainee icebreaker events and fostering a welcoming environment for veteran and new trainees throughout the conference. By providing a space for trainees to meet and discuss science as well as making plans for the conference breaks, we hope that lasting relationships will take shape among AChemS attendees.

The previous representatives implemented dedicated spaces for trainee interactions throughout the conference. The goal was to create an informal environment for trainees to comfortably interact and network before engaging in the formal conference activities. Two student and postdoctoral member tables were set up at the welcome dinner and welcome breakfast and a new Networking Ice-breaker Activity was held during the first Coffee Break. This year, we have increased the number of opportunities for engagement between trainees on every day of the conference and increased advertising for events.

In addition to the trainee tables at the welcome dinner, for this upcoming conference we plan to keep a trainee table during all breakfast sessions. The goal is to increase engagement throughout the conference, not just at the start of the conference, and provide a “home base” for trainees to decompress and discuss a range of topics, which will be provided as ice-breaker conversation starters. Each year, the AChemS program chair provides designated free time for all members. This year, we plan to host a get-together on the second day of the conference during lunchtime to make sure trainees have connected with others, and we will have a list of activities available to do during the scheduled free time. This will include events hosted by the hotel, as well as events available in Bonita Springs. The goal behind this is to make sure all trainees feel included during all phases of the program, including the scheduled free time. Following the conference, we aim to solicit feedback on the trainee-specific events so that we can tailor opportunities for interaction at next year’s conference.

Lastly, because there is no overlap between representatives, we are aiming to increase communication between each cohort of representatives to ensure a smooth transition.

COUNCILORS REPORT

Sanne Boesveldt, PhD and Claire Cheetham, PhD

As councilors responsible for outreach, our goal for 2024 was to promote chemosensory research to the wider public, by translating some of the scientific highlights of the annual AChemS meeting to more accessible formats for the general public. We recruited a wonderfully active and diverse team of volunteers from the membership (big thanks to Kathryn Deibler, Federica Genovese, Tiffany Hsu, Yao Jiang, Putu Khorisantono, Emeline Masterson, Bridger Menlove, Shima Moein, Valentina Parma, David Tadres, and Zihao Zhang!) to help us with this. During the annual meeting, we selected several newsworthy abstracts, and in the months following, we worked hard together to convert these into plain language summaries, infographics and video clips. Results have been shared via social media and can be found on the [AChemS Resources webpage](#).

For 2025, our outreach project will focus on creating resources for elementary schools, including quizzes and fun facts about the chemical senses, to be featured on the [AChemS Education webpage](#). We also aim to make the educational resources on the AChemS website more accessible and visible for outside interest.

2024 AWARD CEREMONY

Max Mozell Award



Ajinomoto Award

Research Excellence in the Psychophysics of Human Taste and Smell Award



AChemS Young Investigator Award



ACChemS

Association for Chemoreception Sciences

2024 AChemS Polak Young Investigator Award Recipients

Walter Bast
Madison Herrboldt
Federica Genovese
Abuzar Mahmood
Mona Marie
David Tadres

2024 AChemS Fellowships for Diversity Award Recipients

Thelma Chiremba
Kathleen Depina
Mia Fox
Daniel Gaines
Damia Gonzalez Akimori
Juliana Gutschow Gameiro
Emily Holder
Mona Marie
Ryan Owens
Aiden Streleckis
Kennedy Watson

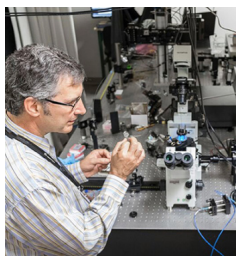
2024 AWARD RECIPIENTS

Polak Young Investigator Award



Diversity Travel Fellowship Award

2024 AWARD RECIPIENTS



Diego Restrepo

Max Mozell Award Recipient

Research Focus: My laboratory is dedicated to unraveling the neural mechanisms underlying olfactory decision-making and learning across both health and disease. Our research thrives on interdisciplinary collaborations, spanning from chemistry and physics to behavior, and involves innovative engineering of neurophotonic devices. Utilizing multi-electrode recordings in awake behaving mice, we have made significant strides in understanding how associative learning induces profound changes in neuronal odorant representation within the olfactory bulb and piriform cortex. Notably, our investigation into the decoding of odorant valence from local field potential oscillatory power in the olfactory bulb and hippocampus has revealed that information can be multiplexed through beta and gamma neural activity bursts, occurring within discrete phases of

the slower theta oscillations. Employing multiphoton imaging techniques in the hippocampus, we have observed time-tiled divergent responses of dorsal CA1 cells to rewarded and unrewarded odorants during a go-no go odorant discrimination task, prompting speculation about their role as decision-making time cells. We were the first to perform calcium imaging in human olfactory neurons and to develop cell cultures derived from this epithelium. Moreover, our recent investigation employing spatial transcriptomics and proteomics in tissue samples from familial Alzheimer's patients has unveiled a transcriptional signature suggestive of viral infection in the olfactory bulb, sparking further inquiry into whether alphaherpesvirus infection of the olfactory system accelerates Alzheimer's disease.

Acknowledgments: I am deeply honored to receive the Max Mozell award from AChemS. My accomplishments in the chemical senses owe much to the contributions of numerous colleagues, staff and mentees, whose invaluable support and collaboration have been instrumental to my work. While it is impossible to acknowledge everyone individually, I am grateful for the stimulating collaborations with colleagues such as Juan Bacigalupo, Linda Barlow, Tom Finger, Emily Gibson, Juliet Gopinath, Sue Kinnamon, Naoki Hiratani, Ethan Hughes, Doron Lancet, Isabel Llano, Ming Ma, Wendy Macklin, Robert Margloskie, Maria Nagel, Nancy Rawson, Stephen Santoro, Detlev Schild, Fabio Simoes de Souza, Doug Shepherd, Gordon Shepherd, Burt Slotnick, John Teeter, Andrés Villegas, and Fiquiang Xu. I would also like to express my appreciation for the dedication and contributions of my current and former mentees, including Dillon Donaghy, Wilder Doucette, David Gire, Nicholas George, Elizabeth Gould, Mae Guthman, Anan Li, Justin Losacco, Connor McCullough, Laetitia Merle, Takenori Miyamoto, Katrina Nguyen, Alexia Nuñez-Parra, Barish Ozbay, Forest Speed, Kira Steinke, Skylar Suarez, Mathew Svalina, Daniel Ramirez-Gordillo, Joseph Villanueva and Tarah Welton. Lastly, I extend heartfelt gratitude to my wife Angela and my children Lucas and Camila for their unwavering love and support throughout my career.



Lindsey Schier

Ajinomoto Award Recipient

Research Focus: The overall goal of my research program is to shed light on how the chemical and nutrient components of foods and fluids are sensed and channeled into brain circuits involved in the control of food and fluid intake, to ultimately inform new strategies for treating metabolic disease. My laboratory combines a variety of classic and cutting-edge neuroscience techniques with high resolution analyses of ingestive behavior to link chemosensory signals arising from the oral cavity and gut to appetitive and consummatory actions in rodent models. The current focus of my lab's work is to fill key gaps in knowledge about [1] how we sense nutrients and other food-borne chemicals in the service of dietary behavior, including how post-oral events rapidly

influence oral signals to influence meal size, [2] how the diet itself, metabolic conditions, and genetic factors (re-)program these sensory systems and their behavioral outputs, especially during critical periods of development, and [3] how dietary, behavioral, and/or pharmacological strategies can be used to restore chemosensory-based function. Most recently, we have been investigating alternative sugar sensing pathways in the peripheral taste system, including one involving glucokinase. Our studies aim to understand how these sensors are affected by diet and how the brain differentially and dynamically encodes the signals arising from these oral gluco-sensors versus those originating from the sweet taste receptor to guide food selection in response to nutritional or physiological conditions.

Acknowledgments: I am very honored to be the recipient of the Ajinomoto Award this year. AChemS has been a welcoming scientific community, and an important part of my growth as a chemosensory systems scientist. I am grateful to those who (anonymously!) supported my nomination. I would like to especially thank my mentors, Alan Spector, Terry Powley, and Terry Davidson for their guidance and encouragement over the years; my collaborators (Dave Pittman, Ann Marie Torregrossa, Clare Mathes, Camille King, Ginger Blonde, Kevin Myers, Yada Treesukosol, and Scott Kanoski) and my research team, past and present (especially Sandrine Chometton, Ciorana Roman Ortiz, Ahyun Jung, Aracely Simental Ramos, Kat Merklings, Taylor Dal Bon, Lilly Mai, and Verence Ascencio Gutierrez) for all their hard work and scientific creativity; and Chris Roberts for his unwavering support since day one. I am also thankful for financial support from the NIH, Jackson Laboratories, and the University of Southern California.

2024 AWARD RECIPIENTS (continued)



Janina Seubert

Award for Research Excellence in the Psychophysics of Human Taste and Smell

Research Focus: My research group investigates the perceptual mechanisms that create an associative link between the sensory processing of odors during anticipation and consumption of food. We study contextual effects on memory and learning as well as emotion and motivation of food-related odor stimuli, and explore their regulation by metabolic feedback. Depending on the research question, our paradigms often use multisensory approaches where either integration with visual object perception or with taste is explored. Specific ongoing projects funded by the Swedish and European Research Councils integrate psychophysical experiments with physiological measurements and neuroimaging to increase understanding of overlapping coding for tastants and odorants with gustatory associations as the basis for odor-taste associative learning and odor-induced taste enhancement. We also study cognitive modulation of sensitivity to contamination in decision-making about food-related odor objects, and modulation of food odor perception by hunger.

Through collaborations with clinical researchers, we aim to apply the gained knowledge to increase understanding for sensory processing differences that may represent predisposing or maintaining factors for dysregulated eating behavior. Taken together, the goal of my research is to fill the knowledge gap that currently exists between the mechanisms driving perceptual experiences during food consumption and the subsequent evaluation of food in the outside world and inspire the development of novel interventions to facilitate dietary changes over the life course in health and disease.

Acknowledgments: I consider myself very lucky to be working together with so many people that over the years have become good friends, and I am very grateful for the inspiration I derive from our collaborations, and their support that I can always count on when things get tough. To just name a few, I am very thankful to Marga Veldhuizen and WIOS for nominating me, and to Johan Lundström, Pam Dalton and Moustafa Bensafi for supporting my application. I would also like to thank my PhD supervisor Ute Habel, who introduced me to working with odors when all I knew were visual search paradigms—thank you for your support, and for being the role model every young researcher needs. I thank my postdoc advisor Johan Lundström, who gave me the possibility to develop, nourish and expand my interests at Monell, and continues to be available for advice and guidance whenever necessary. Most importantly, I would like to thank the members of my research group, Putu Agus Khorisantono, Androula Savva, Leonie Seidel, Anna Gerlicher and Hilda Lindén—your enthusiasm for our mission makes all the difference and is the reason why I am proud and happy to come to work every day. I also would like to posthumously thank Glyn Humphreys for taking me in as a master's thesis student in his research group and allowing me to take my first steps as a scientist. The patience, kindness and professionalism by which Glyn supervised created a legacy which inspires me and all those who had the pleasure of working with him until today.



Claire De March

AChemS Young Investigator Award Recipient

Research Focus: To navigate our volatile environment, we constantly rely on our sense of smell. Among mammals, it is now well established that odorant receptors play an important role in olfaction and other important developmental and physiological processes, some of which are associated with serious health issues. The exact molecular mechanism by which odorant receptors perform their function is partially unknown and requires atomic-scale information that has been largely lacking. This is a poorly studied family of proteins, although it represents nearly half of the large family of G protein-coupled receptors, mainly because until recently, there were no experimental structures of mammalian odorant receptors. The lack of expression of odorant receptors in conventional eukaryotic cell models currently used for the expression of recombinant membrane proteins is the main obstacle to addressing this challenge. With Hiroaki Matsunami at Duke, we initiated a collaboration with Dr. Aashish Manglik from UCSF and Vaidehi Nagarajan at City of Hope to elucidate the structure of olfactory receptors, leading to the publication in 2023 of the first structure of a human

olfactory receptor, OR51E2 bound to propionate. This milestone is a dream come true for me as a researcher, one that I did not think I would see in my career. Since my PhD, I have been using theoretical models to start to predict and study odorant receptors, and today I finally met them. Thanks to the results obtained from these theoretical models and our research on the stabilization of odorant receptor structures, combined with the expertise in structural biology of our collaborators, we have overcome the barrier of expression and achieved this publication. This is an important step in our understanding of the molecular mechanisms involved in the perception of smell.

Acknowledgments: I am extremely grateful to AChemS for awarding me the Young Investigator Award. These research efforts could never have succeeded without an incredible collaborative network. I would like to sincerely thank Hiroaki Matsunami for his mentorship and constant support. I also thank Aashish Manglik and Vaidehi Nagarajan, as well as their teams, for this exciting collaboration that has been ongoing for several years. I cannot forget the students who participated in this project, especially a big thank you to Jeevan Tewari and Ichie Ojio. I would like to express my gratitude to the incredible researchers in this community who have been a great inspiration to me during the early years of my research career, among others Joel Mainland, Masha Niv and Valentina Parma. Lastly, I would like to express my gratitude to the funders of this project, particularly the NIH and the French ANR, which supports the establishment of my new laboratory at Université Paris Saclay. I also thank my institute, the Institute of Chemistry of Natural Substances, for their welcome and support. Lastly, it is rare to be able to pursue a research career without the support of loved ones. So, a huge thank you to my family and my partner.

PROGRAM COMMITTEE REPORT

Dan Wesson, PhD, *Chair*



The AChemS 2025 annual meeting reflects the breadth and depth of science anticipated following the 47 years since our society was founded. As reflected throughout the [4-day program](#), the 2025 AChemS meeting will feature a diverse array of exciting and cutting-edge chemosensory topics with a near-even split between gustatory- and olfactory-centric symposia. The meeting will be preceded by a satellite meeting, organized and co-chaired by Drs' Valentina Parma and Nancy Rawson, this year focusing on improving patient outcomes and developing partnerships with people suffering from chemosensory disorders.

This year marks what I hope will be a long-standing tradition for our society – a special “Don Tucker Memorial and Undergraduate Research Awards Poster Session”. This honorific poster session is dedicated to our trainees who are finalists for the Don Tucker Memorial Award for Graduate Student Research and the AChemS Undergraduate Research Award. Please be sure to visit this

session to recognize the hard work of our great chemosensory trainees and support them as they compete for these highly coveted research awards.

Additional ‘buzz-worthy’ news (pun intended) includes our Keynote Lecture which will be delivered by Professor Lars Chittka, a renowned ethologist who is an expert on sensation and cognition in bees. Using bee-flower interactions as his model of choice, Professor Chittka’s discoveries, including evidence for positive emotion-like states in insects, have made a substantial impact on our understanding of animal intelligence and its neurocomputational basis.

The 2025 AChemS Diversity, Equity, Inclusion, and Belonging (DEIB) lecture will be given by Dr. Deana McDonagh, Health Innovation Professor of Industrial Design and Director of the (dis)Ability Design Studio at the University of Illinois Urbana-Champaign. Her symposium, “*You are whole just as you are: More to inclusion than widening the door*”, will highlight the need for greater thoughtfulness in inclusion of persons with (dis)Ability.

The meeting program will include 6 member-initiated symposia and stand-alone Clinical and Industrial symposia. The History Committee will host the annual journal club meeting on, “*History of assessing ligand sensitivity and selectivity of odorant receptors*”, facilitated by Drs’ Jessica Brann, Ricardo Araneda, and Mona Marie. Dr. Alfredo Fontanini, our current AChemS President, also has organized a Presidential Symposium on the last evening of the conference, entitled, “Motorizing the chemical senses from the whiskers, the nose, and the tongue”.

In addition to symposia, over 220 poster presentations will be spread out over 5 sessions. By popular demand, we have adjusted the program so that the evening poster sessions end earlier – hoping that all can still have time to network and socialize before heading to bed. The AChemS meeting will also feature a variety of trainee-focused events, kicking-off late the first afternoon of the meeting. To learn more please visit the [Trainee Events](#) page.

Special thanks go to the 24 dedicated members of the Program Committee and the management team at SPLtrak for developing an exceptional program and what promises to be an enriching and memorable meeting. As a final note, this meeting marks the last one to be held at the beautiful Hyatt Regency Coconut Point Resort and Spa in Bonita Springs, Florida – so come and enjoy Bonita Springs one more time.

AWARDS COMMITTEE REPORT

M. Yanina Pepino, PhD *President-Elect and Committee Chair*

One of the most rewarding parts of serving as President-Elect has been the privilege of reading nominations for our society's exceptionally talented members. I would first like to acknowledge the outstanding work of this year's committee members—Ricardo Araneda, Shawn Dotson, Paule Joseph, Julie Mennella, Diego Restrepo, Sunil Sukumaran, Maria Veldhuizen, and Christina Zelano—who faced the challenging task of selecting recipients from a remarkable pool of candidates.

I am also grateful to the AChemS members who thoughtfully nominated colleagues and wrote impactful letters of support, shining a light on the extraordinary accomplishments of these individuals. From this impressive group, the committee has chosen the following awardees:

- The AChemS Young Investigator Award for Research in Olfaction or Nasal Chemosensation:
Federica Genovese, PhD, Monell Chemical Senses Center
- The Ajinomoto Award for Young Investigators in Gustation or Oral Chemosensation:
Yali Zhang, PhD, Monell Chemical Senses Center
- The Lawless Award for Research in the Psychophysics of Human Taste and Smell
Alissa Nolden, PhD, University of Massachusetts Amherst
- The Max Mozell Award for Outstanding Achievement in the Chemical Senses:
Nirupa Chaudhari, PhD, University of Miami

The above four awardees will be recognized on Day 1 of our 2025 AChemS meeting during the AChemS Awards Ceremony (5:00-5:30 pm on Wednesday, April 23rd), and they will present their research during the Career Award Lectures at 7:00-9:00 pm on Friday, April 25th.

During the Awards Ceremony on April 23rd, we will also honor the 2024 recipient of the AChemS Award for Undergraduate Research, Sid Rafilson, and the recipient of the Don Tucker Memorial Award, Robin Blazing.

These awards were selected for posters presented during AChemS 2024.

MENTORING/NETWORKING COMMITTEE REPORT

Arianna Maffei, PhD *Chair*

The goal of the Mentoring/Networking Committee is to connect AChemS members during the annual meeting and provide additional opportunities for interactions throughout the year facilitating and promoting scientific exchange, innovation, and supporting the growth of our society. To achieve this objective, the committee leads the organization of two year-long initiatives: the Career Networking Seminar Series and the Matrix Mentoring Program.

Career Networking Seminar Series. This initiative is generously sponsored by dsm-firmenich and is now in its fifth year. The Committee selects early-career members (graduate students, postdocs, junior faculty) and pairs them with senior AChemS members with whom they do not have a prior connection. The pairs are tasked with identifying common scientific interests and delivering a joint session of talks that connects two different chemosensory research themes. These monthly meetings are held online, to facilitate access to all members of the community during the year and offer a valuable networking opportunity for the speakers. Non-members are welcome to attend the online seminars and learn more about ongoing research led by AChemS members. Career Networking Seminars are also available online (<https://achems.org/web/seminars-archive.php>) to facilitate access at convenient times and in different time zones. Over 70 people on average registered to attend the past 8 seminars. As AChemS members, you can view the calendar of future events, access the recordings of past seminars here (<https://achems.org/web/seminars-calendar.php>).

If you are interested in being considered as a speaker for the Career Networking Seminar, you can submit your application here: <https://achems.org/web/seminars-applications.php>. The Committee will start working on the next calendar series soon.

The Mentoring Matrix Program provides another way for AChemS trainees to build their scientific network. The Mentoring Matrix Program brings together a diverse group of colleagues, from undergraduates to emeritus professors, to discuss topics including science, career development, grant writing, life in academia and industry, and other topics that the group deems relevant to their scientific growth. Members who are interested in the Program are still on time to sign up by completing a quick survey (<https://fs10.formsite.com/spltrak/0csa95njic/index>). While it is preferable to sign up for the Matrix before the Annual Meeting (deadline March 31st), this year we will be piloting the possibility of being included in the Mentoring Matrix Program also at the Career Networking Social event scheduled for Thursday April 24th. Please join us and become included in a matrix. After the Annual AChemS meeting, the matrix will then meet virtually at least three other times between April 2025 and March 2026.

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

I would like to highlight four upcoming events at the AChemS 2025 meeting. On Wednesday, April 23rd in the afternoon there will be a networking event to celebrate the recipients of the Diversity Travel Fellowships and on Thursday, April 24th in the afternoon there will be the Networking Reception during which trainees will have the opportunity to meet with their Mentoring Matrix. Everybody is welcome to both networking events.

On Friday April 25th in the morning, Deana McDonagh will deliver the Diversity, Equity, Inclusion and Belonging lecture. On Saturday April 26th in the afternoon, Alfredo Fontanini and Leslie Kay will co-Chair an exciting workshop on how to devise strategies for investigating taste and olfaction in naturalistic settings.

On a personal note, I would like to thank Patrick Pfister at dsm-firmenich for the continued support for trainees and for the Early Career Seminar Series. I am also indebted to the work of Hojoon Lee, Lindsey Schier, Chad Samuelsen, Yalda Moayed, Kevin Monahan, Gyujin Park, Vince Ramirez and Kennedy Watson who helped in selecting the speakers for the Early Career Seminars and in organizing the activities of the Networking and Mentoring Committee for the AChemS meeting. I look forward to meeting everybody at the Annual Meeting!

INDUSTRY LIAISON COMMITTEE REPORT

Kathryn Deibler, Ph.D.

Industry Liaison Committee Members:

Kathryn Deibler, Xiaorong (Phoebe) Su, Casey Trimmer, Dan Wesson, Theresa White

The Industry Liaison Committee is pleased to highlight the upcoming symposium, *"Eating with Feeling: Exploring Connections Between Emotions and Chemosensory Stimuli,"* taking place on **Saturday, April 26, in the afternoon session** at the AChemS Annual Meeting.

Understanding the interplay between emotions and chemosensory stimuli presents exciting opportunities for industries focused on food, fragrance, and consumer goods development. This symposium will feature cutting-edge research on the neurobiological and psychological mechanisms linking emotional processing with olfaction and gustation. Advances in augmented reality, large language models, generative AI, and neuroimaging—alongside established methodologies such as psychophysics and electroencephalography (EEG)—will be explored to demonstrate innovative, multi-component approaches for understanding and measuring emotional responses to chemosensory stimuli.

This discussion will focus on practical insights for industry professionals, emphasizing how a deeper understanding of emotional arousal and chemical senses can inform the design of products that evoke desired emotional responses, enhancing consumer satisfaction. By bridging the gap between sensory science and emotional response, this research has the potential to revolutionize approaches to flavor, fragrance, and product development across various sectors.

In addition, we invite attendees to **Breakfast with Industry on Thursday, April 24**—an invaluable networking event where participants can connect with industry sponsors, learn about career opportunities, and discuss collaborations at the intersection of research and application.

Sponsorship and Exhibitors

We extend our sincere appreciation to this year's sponsors and exhibitors for their generous support:

- **dsm-firmenich**
- **Ajinomoto**
- **Almendra**
- **Cargill**
- **Symrise**
- **Scentovation**
- **Sensonics International**

Sponsorship provides a prestigious opportunity for organizations to showcase leadership in chemosensory science while supporting groundbreaking research.

Sponsors receive:

- ☑ Recognition in meeting materials, promotional communications, and on-site signage.
- ☑ Access to over 500 scientists, industry leaders, and emerging talent.
- ☑ Alignment with a world-class organization advancing chemosensory science.

If you or your organization is interested in sponsorship opportunities, please reach out to Kathryn Deibler at kdd3@cornell.edu.

We look forward to an engaging and insightful AChemS Annual Meeting!

CLINICAL RELATIONS COMMITTEE

Caroline Huart, Patrice Hubert, Joshua Levy, Steven Munger, Valentina Parma, Nicholas Rowan, Marco Tizzano, Kai Zhao

At this year's ACHEMS conference We are excited to present a symposium on emerging therapies for the treatment of olfactory disorders. With increasing recognition of the profound impact that olfactory disorders have on patients' daily lives and overall quality of life, the development of new and effective treatments has become a critical area of research. This symposium will highlight promising innovative therapeutic approaches aimed at improving olfactory function in affected individuals.

This symposium will be chaired by **Kai Zhao** from The Ohio State University, Columbus. Our first speaker, **Justin Turner** from The University of Alabama at Birmingham, will discuss the link between inflammation and olfaction, as well as recently FDA approved biologics in treating inflammation-related olfactory loss. Following this, **Carole Yan** from The University of California, San Diego will present findings from recent clinical trials exploring the use of corticosteroids, dietary supplements, and platelet-rich plasma (PRP) injections as potential treatments for olfactory dysfunction.

Next, **Zara Patel** from Stanford University School of Medicine will discuss the future of olfactory disorder treatments, focusing on the potential of endoscopic electrical stimulation to restore olfactory function. **Do Yeon Cho**, also from The University of Alabama at Birmingham, will then share updates on the use of neuromodulators in managing parosmia, a condition characterized by distorted smell perception.

To conclude the symposium, **Veronica Formanek** from The Ohio State University will present the results of a clinical trial aimed at developing non-invasive smell aids designed to improve olfactory function in individuals with smell loss of various causes.

We look forward to an engaging and insightful discussion between clinicians and basic researchers that will advance our understanding of promising treatment approaches for olfactory disorders.

HISTORY COMMITTEE REPORT

Claire Murphy, Chair; Gary Beauchamp; Jessica Brann; Susan Travers.

Journal Club Meeting: The History Committee has been at work on the program for this year's Journal Club. Special thanks to Jessica Brann for organizing the topic this year: Physiological roles of odorant receptors: assessing ligand sensitivity and selectivity. This year's Journal Club will highlight the evolution of methods utilized to assess the physiological role and function of odorant receptors since their discovery in 1991 by Buck and Axel.

We will start by reviewing Zhao et al.'s 1998 paper, "Functional expression of a mammalian odorant receptor," in which the authors accomplished rat I7 receptor expression in its native environment, the olfactory sensory neuron, via recombinant adenovirus. The authors found this receptor is selective for C7 to C10 saturated aliphatic aldehydes although they did not resolve how those odorants physically interact with receptor binding sites. However, this and other expression approaches launched decades of additional work to identify ligands for the family of odorant receptors.

While much progress has been made, a recent review by Lalis et al observed that a ligand has not been identified for approximately half of the known receptor variants. Thus, our discussion will include the 2024 paper by de March et al. "Engineered odorant receptors illuminate the basis of odour discrimination," and its application of cryo-EM to the long unresolved problem of describing odorant receptors protein structure. This exciting advancement furthers our understanding of the molecular determinants of ligand selectivity and will enable further deorphanization via in silico methodologies.

Please join us for a lively discussion!

We would like to thank Don Wilson, who retired this year, for his thoughtful contributions to the committee over the years.



AChemS

Association for Chemoreception Sciences

2024 Annual Meeting

Hyatt Regency - Bonita Springs, FL





SAVE THE DATE

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April 22-25, 2026
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