

AChemS

Association for Chemoreception Sciences

ANNUAL

Newsletter

2022

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

MESSAGE FROM THE PRESIDENT



Nirupa Chaudhari
President, AChemS

It has been a tumultuous year. Another pandemic year has gone by since we gathered together to trade science stories, brainstorm, and debate our points of view with colleagues in the warm Florida setting. AChemS 2021, just like ISOT 2020, had to be a virtual meeting. Nevertheless, Max Fletcher, our Program Chair, along with the Program Committee put together an excellent slate of symposia, poster sessions and introduced GatherTown as a

really effective mechanism for direct interactions at posters, networking and just chatting. In spite of the 2021 virtual format, we had nearly 500 registrants and our post-conference survey suggested overall positive feedback on most sessions. Many registrants were keen to return to an in-person conference.

Finally last Fall, there was light at the end of the COVID-19 tunnel and the Executive Committee agreed to venture forth, committing to an in-person meeting. One advantage of the virtual meeting, though, was that we had so many more registrants. Attracting new talent and enhancing interest and commitment to the Chemical Senses has always been AChemS' mission. To capture the best of both options, we finally settled on a Hybrid meeting this Spring. And it seems to have worked. We have more abstract submissions year than the past 3 in-person meetings and we assume it is due to the hybrid format. I know we are all really looking forward to this year's meeting, whichever format each of us chose.

If there is any silver lining to the COVID-19 pandemic, it has to be the increased awareness, worldwide, about the chemical senses. Individuals we meet are intrigued, scientists have put enormous effort into deciphering mechanisms of chemosensory dysfunction and funding agencies have stepped forward to facilitate. The Presidential Symposium this year, will touch on some of the areas of maximum progress, and is entitled "How COVID-19 affects taste, smell, the brain and the mind". AChemS 2022 also includes several other symposia, platform

presentations and posters on COVID-19, the topic that has been prominently on the worlds' mind. We hope to deploy these news-worthy talks and posters to generate media attention.

Another highlight of our conference this year will be an address by NIDCD Director, Dr. Debara Tucci who took over from Dr. James Battey in Fall 2019. She will speak to us at the beginning of the Welcome & Awards Ceremony on Wednesday, April 20th at 5pm. This will be our chance to hear her vision for NIDCD and ask her essential questions about how she views AChemS.

The Barry Davis Workshop is back, to offer insights to junior scientists about avenues for funding.

By-Laws Changes

Our Society is enriched and improved by the active participation of our young scientists -students and postdocs. Last Fall, we asked members to vote to change our By-Laws: overwhelmingly, AChemS members voted to have our Student Representative and Postdoc Representative be voting members of the Executive Committee. AChemS leadership will now include young representatives — they have already had a positive impact on AChemS with innovative ideas for fostering engagement and participation.

Our new Strategic Plan, adopted in Spring 2021, includes a goal of improving the recognition and support of diversity in our Society and in the field at large. While we have had a Diversity committee and a Mentoring/Networking committee, we realized that they were working isolated from the Executive Committee. To foster better communication and integrate the initiatives advanced by these committees, we ask AChemS members to vote to make these two committee Chairs full voting members of the Executive Committee. This will be voted on at our Business Meeting. Please attend and vote!

AChemS Committees

The Student and Postdoc Representatives are some of our

PRESIDENT'S MESSAGE (continued)

most creative and active members. At AChemS 2021, they organized a virtual meet-and-greet as both a social event, and to generate ideas about greater participation in the Society. On annual membership renewals, we now ask trainees (and regular members too!) to identify committees in which they have an interest and on which they would like to serve. These names are passed along to the Chairs of appropriate AChemS committees, who are encouraged to add a trainee member to their roster.

Our Committees are always in need of fresh ideas, perspectives and energy! We encourage all trainee and regular members to click the "I want to serve" button when you renew your membership. Please look at our list of committees [here](#) and we will make every effort to work new faces in this Spring.

Diversity in AChemS membership, at the conference and beyond

The Diversity and the Mentoring/Networking committees have been very active. The activities and projects of each of these committees enhances the other substantially. And they help move our annual conference and year-round activities closer to our vision of a vibrant, diverse, inclusive and welcoming community. The Diversity Chair and committee have aggressively raised funds to increase the numbers of travel awards for trainees from underrepresented groups, and to enhance the conference experience of these trainees. Further, Program and Symposia chairs and the Diversity committee have been intentional about including several speakers of varied backgrounds across the AChemS 2022 program.

With a view to nurturing diverse trainees who attend AChemS, and supporting their careers, the Networking and Diversity committees coordinates closely. The Networking Seminar Series is a virtual offering throughout the year and features both junior and senior investigators. These Zoom sessions promote career development and networking in addition to the scientific content. We have had 6 talks on topics from oral mechanosensation to molecular structure, and in systems from insects to humans. Recordings of past seminars are available [here](#) to AChemS members.

Last year saw the successful launch of our mentoring matrix. Scientists of all levels and areas of research are assembled in clusters so that each person benefits from a broad range of expertises and life experiences within the group. Workshops on select topics are also planned. We encourage all interested AChemS members to sign up [here](#).

Business Meeting

We will return to our annual in-person business meeting on Friday, April 22nd at 1:00pm and hope to see a large turnout. In addition to the above items for voting, there will be reports from several committee chairs. We hope you will be pleased with many new directions and initiatives.

Last but not least, we encourage regular members to consider making a donation to AChemS – this is an easy to use option with your membership renewal.

TREASURER'S REPORT

Julian Meeks, PhD

I am very grateful for the honor of serving as AChemS Treasurer through 2024. Many thanks to Dr. Chris Lemon, the outgoing AChemS Treasurer, for his help during this transition. I am also extremely grateful to Dr. Nancy Rawson and Dr. J.P. Baird for agreeing to continue their service as members of the AChemS Finance Committee. **I would like to add at least one or two additional members of the Finance Committee this year, so if you are interested, please contact me via e-mail (julian_meeks@urmc.rochester.edu).**

2021 was of course not the return to normalcy we all hoped, and AChemS financial operations were obviously much different than they would have been if things had been "normal." This is largely the result of the change in revenues and expenses related to the Annual Meeting, but also involves changes in sponsorships, grant funding, and investments. The good news is that AChemS is in a reasonable position to navigate the current situation, financially.

In numbers (report date 3/1/2021 – 2/28/2022):

Annual Meeting Income:	\$159,841.50
General Income:	\$62,780.80
GROSS PROFIT:	\$223,672.30

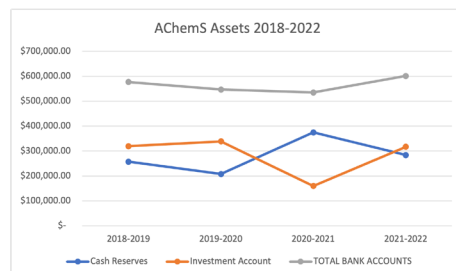
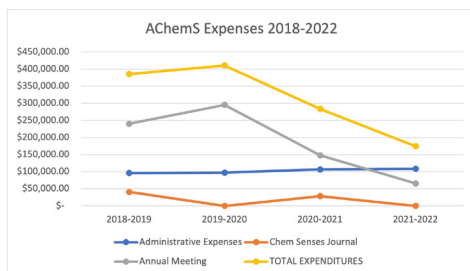
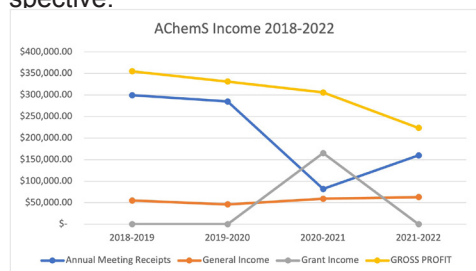
Administrative Expenses:	\$108,478.92
Annual Meeting Expenses:	\$65,652.95
TOTAL EXPENSES:	\$174,731.87

Investments/Other Income: \$29,263.47

NET REVENUE: \$78,203.90

Cash Reserves:	\$283,625.24
Investment account:	\$316,716.48
TOTAL ASSETS:	\$600,738.01

Because there has been so much tumult in the past few years, I tried to put the current state of AChemS finances in perspective:



As you can appreciate, the reduced meeting revenue in the past two years was offset by a reduction in meeting-related expenses. Recovery of \$165,000 in delayed grant income in 2020-2021 also made a major contribution to AChemS' financial well-being.

In conversation with the Executive Committee and members of the Finance Committee, it was decided to make a change in the way AChemS attempts to balance its assets, in hopes of keeping the financial situation stable as we deal with continuing uncertainty in meeting expectations and financial markets. In general, we will target to have 50% of AChemS resources invested, with those investments split 50/50 in equity-based index funds and other (i.e. bond-based) index funds. We are in the process of performing these adjustments. To facilitate more flexibility (and eliminate some poorly-performing investments), we have successfully changed investment brokerages (from UBS to Vanguard). This will lower barr↔ to balancing invested assets (previously costly and cumbersome) and increase the ease of transferring funds (i.e., cash investments) to support day-to-day operations and maintain our targets.

Going forward, we can anticipate some more year-to-year fluctuations in meeting-related income and expenses, but as you can hopefully see, AChemS has managed to navigate the drama of the past two years, financially speaking, and is well positioned to support our members and AChemS' mission in the years to come.

SECRETARY'S REPORT

Dan Wesson, PhD

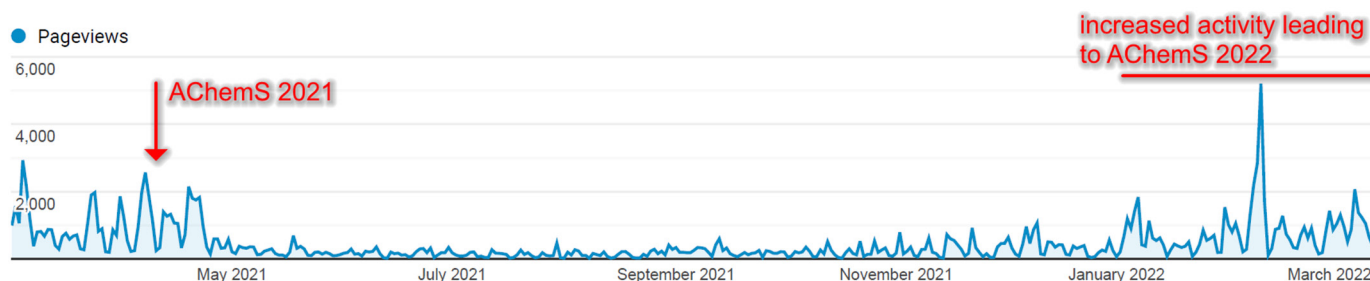
AChemS has enhanced efforts to communicate with its members, prospective members, and with the general public through several mechanisms.

AChemS Monthly Highlights

The monthly Highlights newsletters are emailed to AChemS members with highlights of recent events, upcoming events and society deadlines, and opportunities to learn about fellow AChemS members featured in the news. The Monthly Highlights email is a great opportunity to help bring attention to recent news stories in which you or your research team are featured or even just mentioned. If you want to have any news featured in the Monthly Highlights please send a message to info@achems.org for consideration to be included in the next Monthly Highlights.

AChemS Webpage

In just a little over a year, there have been nearly 180,000 views of the AChemS.org webpage. Some upticks in views can be noticed (see below). These correspond to times of AChemS 2021 and even at the start of 2022 which may be attributed to a variety of events ongoing at AChemS including calls for abstracts and meeting registration. The webpage is updated with news items and announcements regularly and AChemS members also encouraged to contact info@achems.org with any updates or postings, including training and job opportunities.

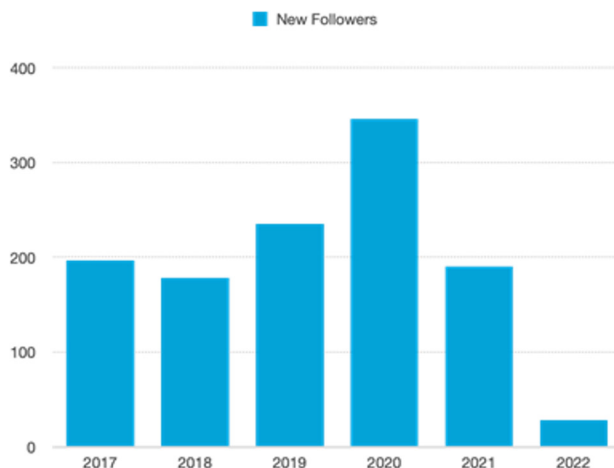


AChemS Wikipedia Page

The [AChemS Wikipedia page](#), which largely is targeting non-AChemS members, serves as a one-stop content source wherein the public may 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 our Society. This page is important for our society to maintain and as new noteworthy items arise which may be worthy for the page, please alert info@achems.org and we can help.

AChemS Social Media Presence

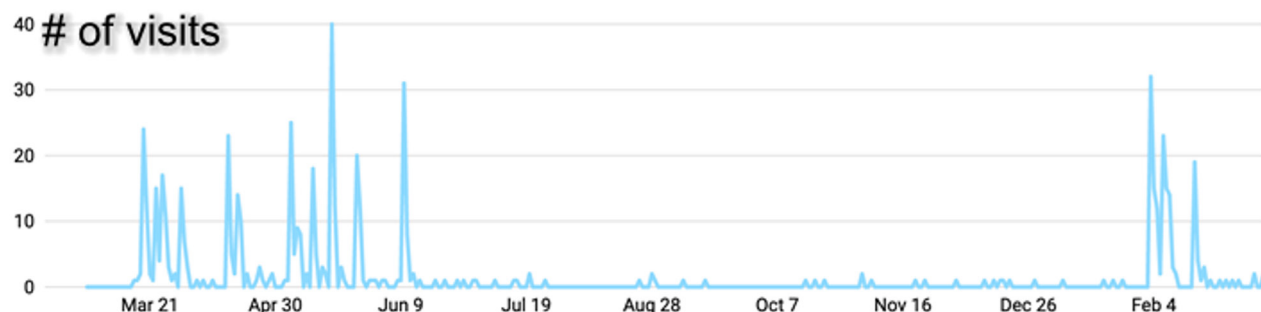
The AChemS presence on Twitter (@AchemsInfo) is maintained through the efforts of SPLtrak with some occasional content contribution from a committee that includes Hillary Cansler, Laura Martin, Lindsey Czarnecki, Maria Hatungil, Greg Pask, and Erika Calvo Ochoa, each of whom has agreed to the [AChemS social media policy](#). Through Twitter AChemS can communicate both internal (posting information relevant to the annual meeting, chemosensory event announcements, announcements about funding opportunities, alerts to new issues of Chemical Senses), and external (general public information of interest on smell and taste, such as Members in the News items) messages regularly due to this system. The @AchemsInfo Twitter presence is further expanded by our AChemS members who generously mention it and retweet. @AchemsInfo has 1,500 followers as of March 2022. Notably, while followers of the AChemS Twitter account grew after its launch and also peaked upon ISOT 2020, recently, the numbers of new followers have been small.



At the request from membership, this year AChemS created its own **LinkedIn** account. This provides members who connect with AChemS on LinkedIn opportunities for networking with entities not officially on Twitter or Facebook and direct ways to engage with potential industry partners or employers).

SECRETARY'S REPORT (continued)

The AChemS presence on Facebook is maintained by SPLtrak. Updates to the Facebook page typically co-occur on Facebook as they do on the webpage and on Twitter. Facebook traffic follows similar trends as does our webpage traffic (see below), with traffic greatest around the dates of the annual meeting, and with additional traffic in the time leading up to the meeting.



Press Releases

The Public Relations committee, headed by Martha Bajec, has been putting together a number of communications to connect with larger media outlets. The secretary has been involved in the editing of those communications and SPLtrak assists in distributions.

MEMBERSHIP REPORT

Jessica Brann, PhD

As of March 15, 2022, AChemS has 646 members, including: 325 Regular, 179 Student, 74 Post-doctoral, 7 Post-Baccalaureate, and 60 Emeritus members:

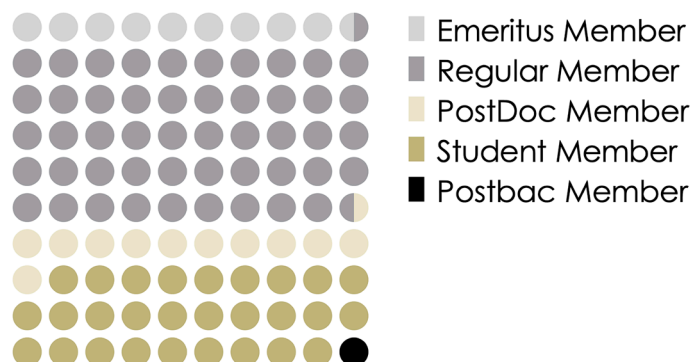


Figure 1. Current members by membership category.

This number is an encouraging and substantial increase from the totals observed since the decline in overall membership (across categories) we observed since 2018:

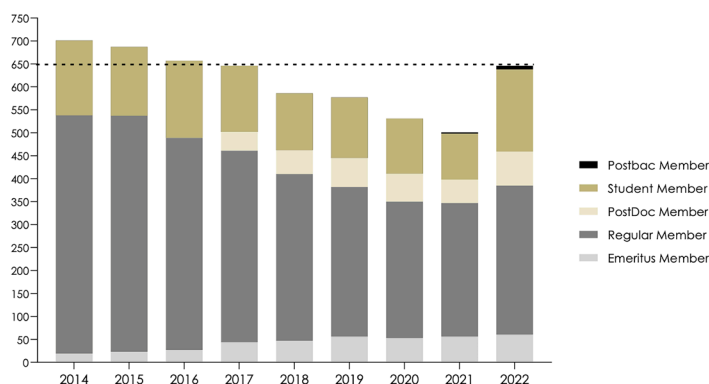


Figure 2. AChemS Membership, 2014-2022

MEMBERSHIP REPORT (continued)

Two new categories of membership, Post-Doctoral and Post-Baccalaureate, were established in 2017 and 2021, respectively. The establishment of these categories has also allowed us to better understand where we had opportunities for retention and growth. We can observe a significant rate growth in these categories as well, above that seen in the Regular membership category:

Year	Emeritus	Regular	PostDoc	Student	Postbac
2014	19	519	N/A ¹	163	N/A ²
2015	23	514	N/A ¹	150	N/A ²
2016	27	462	N/A ¹	168	N/A ²
2017	44	417	41	144	N/A ²
2018	47	363	52	124	N/A ²
2019	56	326	63	132	N/A ²
2020	53	297	61	120	N/A ²
2021	56	291	51	100	3
2022	60	325	74	179	8

¹Not applicable; Post-doctoral membership category established 2017

²Not applicable; Post-Baccalaureate membership category established 2021

In 2020, the Coronavirus pandemic clearly impacted membership, as the in-person meeting was cancelled and the virtual ISOT meeting held in August 2020 was free. However it seems the increased interest in and awareness of the chemical senses due to this pandemic experience has benefited our society and membership. Looking forward, we will need to maintain and grow this interest further, perhaps by soliciting feedback to understand what resource(s) we offered were of interest for new members.

We still have areas of improvement and progress to tackle, specifically in the areas of gender and diversity of our membership. The majority of members did not report either Gender (62%) or Race (75%). With the remaining data, we can calculate a 1.4 Male : Female ratio.

Diversity in our society is extremely low, and we must do more here to recruit and retain a diverse membership. Currently our membership reports 0.6% African American, 6% Asian, 16% Caucasian, 1.4% Hispanic, 0.2% Latino, and 0.8% Other.

We may consider some of the following actions to increase diversity and inclusion:

- 1) Diversify our Executive Board and Committees.
- 2) Maintain active and accessible virtual resources (regular seminars, virtual events and programming)
- 3) Create an awareness campaign & communication network that includes undergraduate research institutions, Historically Black Colleges and Universities (HBCUs), and Predominantly Black Institutions (PBIs) among others.
- 4) Consider creation of a AChemS Scholar Program similar to the Neuroscience Scholars Program hosted by the Society for Neuroscience (see this [link](#) for more information).

On a personal note, I have greatly enjoyed serving as your Membership Chair. Thank you all for your continued enthusiastic support of AChemS – it is because of you we exist, and for you that we continue to develop innovative programming

COUNCILOR'S REPORT

Leslie Kay, *Senior Councilor* and Paule Joseph, *Junior Councilor*

This year we are planning a new type of outreach event, which will be held online. During COVID, we have used the online platform to reach out to communities that we may not normally be able to reach. In 2020 and 2021, we held international events aimed at school aged children in many languages. This year, we plan a different kind of outreach. We will partner with STANA (Smell and Taste Association of North America <https://thestana.org>) to hold a listening session with members of the organization to discuss anosmia and parosmia. This will be held April 28th at 11:00 AM ET, 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.

2021 AWARD RECIPIENTS



Pat Di Lorenzo

Max Mozell Award Recipient

Research Focus: My interest in the taste system began in graduate school when my advisor, Jerry Schwartzbaum, decided to focus his research on the neural underpinnings of a primary reinforcer...food. It took us a year to figure out how to record our first taste response in the brainstem. Almost immediately it seemed clear that different taste qualities evoked different temporal signatures. I based my dissertation on that idea, though I was not the first to think of it. Since that time, I have focused my research on the various ways that neurons in the brainstem convey information about taste. Most importantly, with the help of my colleague and friend Jonathan Victor, I have explored the contribution of temporal coding to this issue. More recently, our work in awake animals has revealed that the acquisition of information about food involves multiple sensory systems that follow and direct movement. Thus, sensory- and movement-related input associated with food and eating converge as early as the brainstem. So now I have widened my focus to explore how these neurons use the multisensory aspects of solid food to reflect appetitive and consummatory behaviors. To my surprise, I am finding that neurons in the so-called “taste” relays in the brainstem may have wider functionality than had been thought. That has captured my imagination.

Acknowledgements: There is not nearly enough room to thank the people in my life and career that have helped me and, more importantly, given me comradery and support in a business that can be cold and isolating. Here, I apologize in advance to the many who are left out of this paragraph but are nevertheless deserving of my gratitude. Jerry Schwartzbaum, who taught me scientific rigor, and John Garcia, who taught me the value of scientific intuition, both gave me a foundation for my career. Jonathan Victor, whose intelligence has intimidated me more than once, has been, without a doubt, the collaborator from heaven. Not far behind are my other collaborators, Krzysztof Czaja and Andras Hajnal, both of whom have inspired me to push my intellectual boundaries. I have also been the recipient of the warmth and kindness of many colleagues in the field. To my science buddies, Dan Wesson, Don Katz and Alfredo Fontanini, as well as those who wrote their support, I offer my sincere gratitude for this award. Beginning way back, there have been other colleagues that have been especially kind to me over many years: Charlotte Mistretta, Linda Bartoshuck, Sid Simon, Robert Erickson. I would also be remiss not to thank my students, postdocs and technicians without whom I would not have had a career. They have been my rock. And of course, none of my research would have been possible without the support of the folks at NIDCD, especially Susan Sullivan who has always been on my side. Last, I would like to acknowledge my wife of 40 years, Eve Andersen, to whom I owe body and soul.



Kathrin Ohla

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.

2021 AWARD RECIPIENTS (continued)



Paule Joseph

Ajinomoto Award Recipient

Research Focus: My experiences as a clinician have always ignited my curiosity about the human body and diseases. My interests in obesity and chemosensation started back in my clinical practice. Although I didn't know much about taste then, I can place my first encounters to chemosensation with the reports of taste changes with my patients in the Bariatric Surgery Ward. As a clinician-scientist, I conduct primarily clinical, and translational studies. My laboratory (Section of Sensory Science and Metabolism (SenSMet)) aims to understand neurological and molecular mechanisms underlying chemosensation and motivational pathways of ingestive behaviors how they might be different in individuals with obesity and alcohol and substance use disorders. I am particularly interested in studying how the brain incorporates chemosensory information from the external environment and its internal states to guide eating/ingestive behavior. To achieve this goal, my laboratory conducts clinical-translational inpatient and outpatient studies. I use a combination of biobehavioral and innovative validated psychophysical methods for human studies. I also use imaging brain techniques, such as fMRI for olfaction and gustation.

To provide mechanistic insight into my clinical research, I also conduct preclinical studies using rodent models to understand cellular and molecular mechanisms that influence how the brain perceives the chemical senses and feeding behavior in a state of disease (e.g., obesity and substance use disorders). We have approved clinical and preclinical protocols focused on individuals with obesity and alcohol use disorder. By collaborating with Dr. Kevin Hall (Senior Investigator, NIDDK), we recently completed two inpatient randomized controlled trials where participants stayed at the Clinical Center for a total of 4 weeks, and we looked at how different diets affect taste as one of the secondary outcomes. We are in the process on starting another clinical trial as well as long-covid study. My hope is that one day what we learn can impact clinical practice and improve patient outcomes.

Acknowledgements: I am deeply honored and grateful to have been chosen as the 2021 Ajinomoto Award for Young Investigator in Gustation. Thank you to everyone who always believe in me and took time to nominate me. I stand in the shoulder of so many who deserve a special thanks – to each of you who have shaped my journey thank you. I would like to particularly thank Dr. Charlene Compher (Penn Nursing- PhD Advisor) for taking the walk with me to The Monell Chemical Senses Center when I was a PhD student where my research trajectory would materialize and flourish. I am forever grateful to Drs. Danielle Reed and Julie Mennella for taking me under their wings to teach and mentor me. They have been exemplary and visionary mentors who have played an integral part of my career. I am exceptionally grateful that they saw the value of training a Nurse Practitioner into the chemical senses field. Thank you to everyone at Monell who even from a distance served as great source of inspiration to me since I was a graduate student. Thanks to my team at the NIH who make things happen at the Clinical Center even during the pandemic, to the fellows who teach me more than I could teach them and to the many collaborators who just keep science fun and interesting. Deep gratitude to the leadership of my institutes (NIAAA/NINR) for their support and my wonderful mentoring committee at the NIH - Drs. Nora Volkow, Lorenzo Leggio, Carlos Zarate, Veronica Alvarez, David Goldman, and many others who always challenge me to explore new areas of inquiry and encourage me to be creative about my science. Thanks to my former and current patients who openly shared their experiences, constantly motivate me, and inspire my research questions. Many thanks for all financial support I have received thus far from the NIH, Rockefeller University, and others because each seed of support makes a difference. I dedicate this award to my family who keep me grounded and always support my initiatives and challenge me.



Valentina Parma

AChemS Young Investigator Award Recipient

Research Focus: My lab investigates how smell and taste can be used to detect and monitor disease and improve health and wellbeing. We primarily use behavioral and psychophysiological approaches, in lab and remote settings. Currently, we are developing tools to measure chemosensation in large and diverse samples and develop interventions to address chemosensory loss and its downstream nutritional consequences.

Acknowledgements: Since the beginning of my career, the AChemS Community has been an outstanding resource of learning, growth, and connection. AChemS is the place where WIOS was conceived, it helped plant the many seeds that allowed the GCCR to flourish and it is the event where many of my ongoing research collaborations have started. I am extremely grateful to AChemS, Monell, NIDCD and Susan Sullivan for their continued support and for believing in my vision for a stronger contribution of chemosensation to human health. Finally, I am honored that my lab is growing with the contribution of talented people like, Evan Guerra, Edith Adjei-Danquah, Inabat Khamitova, Terhi Nurminen, Dharendra Gehlot Singh and visiting students Jonas Yde-Junge and Javier Albayay.

2021 AWARD RECIPIENTS (continued)



Emily Perszyk

Don Tucker Award Recipient

Research Focus: Individual differences in food cue reactivity are highly predictive of food intake and weight change. However, it is unclear why some people are more food cue reactive – and have more intense cravings or are more likely to overeat in the presence of palatable foods – than others. My graduate research primarily focuses on uncovering factors regulating the strength of human food cue reactivity and reward. In particular, I have been studying the roles of mental imagery and sensory systems in guiding ingestive behavior and food decisions. My current project is centered on testing the hypothesis that individuals with better ability to imagine foods – and specifically their aromas and flavors – experience stronger food cue reactivity.

Acknowledgements: I am extremely grateful for the outstanding mentors and peers that have shaped my education and research experiences. I would like to thank my PhD advisor, Dana Small, for her fabulous guidance and expertise, contagious passion for novel and rigorous science, and amazing support every step of the way. To my thesis committee – Barry Green, Hedy Kober, Ralph DiLeone, and Alain Dagher – I thank you dearly for your time, brilliant ideas, and enthusiasm toward my projects and personal development. I also want to thank my undergraduate research advisors and professors – especially Bob Stewart and Tyler Lorig – who first ignited my interests in gustation and olfaction and provided me with strong foundations driven by intellectual curiosity on which to build. Finally, I would like to acknowledge Xue Davis for her impressive patience in answering my many questions (and assurance in telling me they are not dumb), as well as all the other current and former members of the Small and Stewart labs with whom I've had the joy of collaborating with, learning from, and sharing in fun and cohesive environments.



Hannah Watson

AChemS Award for Undergraduate Research

Research Focus: Broadly, our research group studies earthworms and how they detect various compounds in the soil where they live. Despite their known importance in maintaining soil quality and health, there have been few studies that examined the neurobiological mechanisms that underlie earthworm activity. More specifically, my project examines how the organs that earthworms purportedly use to detect irritating compounds within the soil change across development. I have examined this through two avenues: microscopic imaging and aversive behavioral assays. Through these experiments I have determined that the size and number of these epidermal sensory organs (ESOs) increase with earthworm age, but the sensitivity of earthworms to chemical irritants decreases with age. Our current work is hoping to elucidate why these changes in sensitivity might be occurring through examining the cellular composition, neuronal connectivity, and receptor expression in these organs across all developmental stages.

Acknowledgements: I am extremely grateful for all the support I have received from Wake Forest University throughout my undergraduate career, which has shaped me into the researcher I am today. I would like to thank my mentors, Wayne Silver and Jake Saunders for taking me into their lab four years ago. Throughout my time working with them, they have guided me through the ups and downs of my project and helped me foster my love for scientific research. I would also like to thank Glenn Marrs for his enthusiastic support and assistance in my endeavors with microscopy, as well as Erik Johnson, who has allowed me to use his lab space for many years. I am grateful for the support of the Wake Forest Center for Molecular Signaling, Department of Biology, and Undergraduate Research and Creative Activities Center, all of whom have provided financial support for my work. Lastly, I could not have done this work without the love and support of my family, friends, and fiancée, thank you all!



AChemS

Association for Chemoreception Sciences

2021 Polak Young Investigator Award Recipients

Josefina del Marmol
Rockefeller University

Yalda Moayedi
Columbia University

Laura Shanahan
Northwestern
University

Joseph Zak
University of Illinois at
Chicago

MENTORING/NETWORKING COMMITTEE REPORT

Valentina Parma, PhD *Chair*

The Mentoring/Networking Committee continues its mission of putting AChemS members in communication with each other. The mentoring activities are mostly focused towards supporting the younger generations of chemosensory scientists, whereas the networking activities are an opportunity for the whole membership to connect.

In light of the discussions started during the virtual ISOT 2020 meeting and the need to work within the constraints of a virtual world for the time being, the Committee has organized the Career Networking Seminar Series as a virtual monthly event in which the society's members and the public can meet and discuss hot topics in chemosensory science. Thanks to the sponsorship by Firmenich, junior presenters (from graduate students to young faculty) are matched with a senior member and are asked to propose a tandem talk in which two areas of chemosensory research - not obviously linked - are addressed in parallel. This is a networking opportunity for the junior speaker - who is now in contact with a senior member who they were not quite acquainted with before the talk - as well as a networking opportunity for the whole community, who has a monthly check-in with fellow AChemS members and beyond - as the seminars are open to both members and non-members. And remember to apply for this competitive opportunity, or suggest junior members if you cannot directly benefit from it yourself.

The committee is also focusing on mentoring, with the goal of fostering mentorship relationships that go beyond the time usually spent in person at the conference. This year we ask mentors and mentees to interact in several different ways throughout the year, starting at the AChemS conference. Trusted mentors, new mentors and mentees of all walks of chemosensory life: we look forward to matching you.

Moreover, the committee is organizing, in an effort lead by Dr. Shaina Short in conjunction with the Diversity Committee, a Career Networking Social for AChemS 2021. Stay tuned for upcoming information and bring your (virtual) enthusiasm!.

Last but not least, if you have any idea that could enrich the experience of AChemS members with respect to mentoring and networking (i.e., activities that you have enjoyed when proposed by other societies, insightful activities shared over Twitter, random ideas you had at 3AM,...) we want to hear from you. Please write to info@achems.org with subject "Suggestions for Mentoring/Networking Committee."

CLINICAL RELATIONS COMMITTEE

Thomas Hummel, MD
Alexander Fjaeldstad, MD
Brad Goldstein, MD
Eric Holbrook, MD
Caroline Huart, MD
Bob Pellegrino, PhD
Christina Zelano, PhD

During 2021 and 2022 many researchers in the chemosensory community focused on COVID 19 and associated changes of smell and taste. The pandemic situation has highlighted the importance of chemical senses so that at the moment almost everybody on the planet knows somebody who lost his or her sense of smell. On a scientific level this has led to an explosion of publications with 114 hits on pubmed for the keyword "anosmia" in the year 2018 and 1.015 hits in the year 2021. At this year's ACHEMS conference developments in terms of the phenomenon of "parosmia", of smell distortions, will be highlighted in an international symposium with contributions by Caroline Huart, Brussels, Alexander Fjaeldstad, Aarhus, Robert Pellegrino, Philadelphia, Eric Holbrook, Boston, and Jane Parker, Edinburgh.

INDUSTRIAL LIAISON COMMITTEE REPORT

Robin Dando, Chair
Alex Woo
Alissa Nolden
Casey Trimmer
John Hayes
John McGann

Welcome back everyone! This year the industry symposium will be on understanding and mitigating bitterness in foods, with individual talks on bitter stimuli, the sensation of bitterness, physiological effects of bitterness in an animal model, and on techniques to block bitterness in foods.

We're delighted to have Kerry coming on board as a Gold level sponsor for the meeting, along with Sensonics and Discovery Biomed who will be supporting as Silver level sponsors. We're again grateful for support for our awards provided by International Flavors and Fragrances, and Ajinomoto, as well as for our Young Investigator seminar series by Firmenich. Please be sure to check out some of our exhibitors at this year's meeting, who will include Sensonics, Burghart Messtechnik GmbH, Osmic Enterprises, and Sensorygen. And finally, thanks to our individual symposium sponsors, who include ADM Human Nutrition Science & Technology, Diageo Innovation R&D, Kerry, PepsiCo, and Motif Foods.

Thank you to all for helping us be able to put together a stimulating meeting, and we look forward to toasting you with a Piña Colada, and not just a Zoom coffee this year!

HISTORY COMMITTEE REPORT

Charlotte Mistretta, PhD *Chair*
Robert Bradley, PhD
David Hill, PhD
Claire Murphy, PhD
Steven St. John, PhD

The History Committee added resources to the AChemS website and had phone conversations to discuss future goals. We did not develop active presentations for the AChemS 2022 meeting but look forward to being on-site in Bonita Springs to make plans for subsequent meetings.

DIVERSITY, EQUITY, INCLUSION, AND BELONGING (DEIB)

Paul Breslin, PhD *Chair*

The Diversity Committee selected 26 Diversity Fellows for awards at this year's in-person AChemS meeting. This is the most Fellows we have ever had. Many 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.

We will also have our first in-person "Distinguished Speaker for DEIB" this year at AChemS on Friday. I am delighted to announce that this year's speaker will be Dr. Tyrone Porter who is a Professor of Biomedical Engineering and the Donald J. Douglass Centennial Professor in Engineering at the University of Texas at Austin.

AWARDS COMMITTEE REPORT

Danielle R. Reed, *President-Elect and Committee Chair*

This year's Awards Committee includes Dan Wesson, Monica Dus, Kathrin Ohla, Marco Tizzano, Adam Dewan, Alissa Nolden, Hong-Xiang Liu, Juyun Lim, Ivan de Araujo, Leslie Kay, with AChemS President-Elect, Danielle Reed serving as Chair and Dan Wesson serving as co-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*: **Richard M. Costanzo**, Ph.D., Virginia Commonwealth University

The *IFF AWARD for Research in the Psychophysics of Human Taste and Smell*: **Camille Ferdenzi**, Ph.D., Centre de Recherche en Neurosciences de Lyon (CRNL)

The *AJINOMOTO AWARD for Young Investigators in Gustation or Oral Chemosensation*: **Akiyuki Taruno**, M.D., Ph.D., Kyoto Prefectural University of Medicine

The *ACHEMS YOUNG INVESTIGATOR AWARD for Research in Olfaction or Nasal Chemosensation*: **Thorsten Kahnt**, Ph.D., Northwestern University

The above four awardees will be recognized on Day 1 of our 2022 AChemS meeting during the ACHEMS WELCOME/AWARDS CEREMONY (5 pm on Wed April 20th), and they will give an overview of their research during the CAREER AWARD LECTURES at 5:00 pm on Friday, April 22nd.

During the WELCOME/AWARDS CEREMONY on Wednesday, April 20, we will also honor the 2021 winners of the Don Tucker Memorial Award, **Emily Perszyk**, the winner of the AChemS Award for Undergraduate Research, **Hannah Watson**, both for posters presented during AChemS 2021.

At this year's AChemS, there will be new posters and platform presentations by graduate and undergraduate students. We encourage all AChemS members to support our junior researchers by viewing their posters and attending their talks.

ELECTIONS COMMITTEE REPORT

Linda Barlow (Chair and Past President)

Alfredo Fontanini

Weihong Lin

Lisa Stowers

Matt Wachowiak

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 2022 election results:

President - Elect: Paul Breslin, PhD

Secretary: Christina Zelano, PhD

Program Co-Chairs - Elect: Emily Liman, PhD & Robert Sandeep Datta, PhD

Membership Chair: Ann-Marie Torregrossa, PhD

Junior Councilor: Ricardo Araneda, PhD

Post-doc Rep: Rosario Jamie-lara, PhD

Grad Student Rep: Cecilia Bouaichi

POSTDOC AND GRADUATE STUDENT REPRESENTATIVE REPORT

Jess Kanwal, PhD and Kellie Hyde, PhD

We have made several significant efforts to increase student and postdoctoral researcher representation and voices in future AChemS events and meetings. These actions strive to increase trainee participation and inclusion, as well as provide more mentorship opportunities.

At the 2021 AChemS conference, we organized a virtual town hall for graduate students and postdocs in order to provide a forum for trainees to meet, network, and share ideas on how the society can better support their professional needs and career development. The town hall was well attended (40+ participants), and trainees voiced their opinions and ideas in response to questions about how AChemS can build a more inclusive community for trainees, support trainees through mentorship, and offer other changes to increase trainee visibility. We worked with others to implement several of the suggestions voiced at the town hall through the following actions:

- AChemS has now created positions on most of its committees for trainee involvement and has transparently and directly advertised these positions to all student and postdoc members. As a reminder, here is a sign-up link for those interested in leadership through committee participation: <https://fs10.formsite.com/spltrak/qpyn9pvcv3/index.html>.
- AChemS now allows trainees to submit conference symposia proposals and actively encourages such proposals to include trainees as co-chairs, introductory speakers, or other roles in addition to traditional speakers.
- AChemS now has a Slack account to help trainees directly connect with each other and to serve as a platform through which they can communicate with trainee representatives on the Executive Committee. If you would like to be added to the Slack account, please send a request to info@achems.org

Additionally, AChemS voted to update the bylaws and now allows elected junior members, specifically both the graduate student and postdoc representatives, voting privileges as members of the Executive Committee. This change is an important first step to ensure that trainee voices and issues are heard and addressed. Furthermore, AChemS formalized the position responsibilities of elected junior members (detailed here). In particular, responsibilities include involvement in the mentoring and networking committee as well as the diversity committee. In the past year, the elected representatives worked in collaboration with both committees to support the formation of a matrix mentoring program and the selection of a diversity speaker at the 2021 AChemS conference.

IN MEMORIAM - ALBERT IRVING (AL) FARBMAN (AUGUST 25, 1934, REVERE, MA - FEBRUARY 10, 2022, EVANSTON, IL

Al Farbman, Professor Emeritus of Neurobiology at Northwestern University, passed away on February 10, 2022 in Evanston IL. As both a scientist and mentor, Al made a tremendous impact on the field of chemical senses and on his many colleagues. His pioneering studies on the structure, development, and function of the olfactory and gustatory systems have served as the foundation on which much current progress is based. As a mentor, Al created a vibrant, collegial and productive laboratory, hosting a steady stream of researchers, fostering long-distance collaborations, and enriching the academic community at Northwestern. He has left a wonderful legacy.

Al was born to Benjamin and Pearl Farbman, who immigrated to the United States in 1921 as teenagers from Poland and Lithuania. While neither parent had much formal education, they saw to it that Al and his brother received the best available given their modest means, Al attending public schools in Revere and Boston (Latin School). His first exposure to science was at Harvard College where among his professors were the Nobel Laureates Edmund Purcell (1952) and George Wald (1967).



After graduating in 1955, Al entered the Harvard School of Dental Medicine. Unlike most other dental schools at the time, Harvard emphasized research and required each student to choose an area of investigation. Al selected "Abnormalities of Taste", a topic that he would continue to study for his PhD in the Anatomy Department of New York University Medical School under Edward Reith. This early work would drive his research interests in taste and smell for the rest of his career.

IN MEMORIAM - *continued*

ALBERT IRVING (AL) FARBMAN

Al joined Northwestern University in 1964 where he enjoyed a career of over 40 years, first downtown at the former Dental School, and from 1982 in the newly formed Department of Neurobiology and Physiology (now Neurobiology) in the Weinberg College of Arts and Sciences in Evanston. Al's research output during this time was extensive and diverse, ranging from the fine structure of taste and olfactory receptor cells to molecular insights into their development and function. A major thrust of the lab was on the ultrastructure of taste and olfactory cells using the developing technique of electron microscopy, which he learned from Eugene Minner who ran the Northwestern Life Sciences Electron Microscopy Facility. A major partner in his lab was Federico Gonzales, a pioneer in the field of cryo methods in electron microscopy, who was instrumental in bringing Al to Northwestern. Al published seminal works included descriptions of the fine structural features of taste buds—providing the first high resolution glimpses of these tissues.

In addition to microscopy, Al's lab used cutting edge techniques of the day including immunohistochemistry and was the first to make organotypic cultures of olfactory tissues. Among the litany of accomplishments, Al's lab was among the first to detail molecular factors that influence the early development of taste buds and olfactory sensory neurons, and to characterize in detail the factors influencing the death and regeneration of olfactory sensory neurons in mammals and amphibians. Al was an avid collaborator and developed fruitful partnerships with many peers, within and outside of his lab, including Harriet Baker, Richard Bruch, Peter Brunjes, Ginger Carr, Inn Chuah, Donald Frisch, Robert Gesteland, Göran Hellekant, David Hill, Robert Kern, Frank Margolis, Pascal Mbiene, Bert Menco, Jim Morgan, William Rochlin, David Smith, Yuko Suzuki, Al Telser, Elke Weiler and others.

Al was the recipient of numerous awards including Career Development and Program Project Awards from NIH, the Jacob Javits Award (1987), and some of the most prestigious awards in the field of chemoreception: the Stanley Freeman (1991) and the Wright (1999) Awards. In honor of his 2004 retirement (his lab closed in 2006), the Journal of Neurocytology published a three-volume Festschrift with articles by many of his peers.

Al was also a great supporter of graduate training. He obtained and administered an NIH-sponsored training grant in Sensory Neuroscience for 10 years, and served as Associate Dean of the Graduate School at Northwestern (1975-1981). In addition to producing over 100 research papers from 1968 through 2009, Al published a major monograph, *Cell Biology of Olfaction*, which has served as an invaluable resource during the explosion of olfactory research over the last 30 years. He also served as Executive Editor of *Chemical Senses* and was on its editorial board (12 years altogether). Deeply committed to public outreach, Al initiated and organized (together with the then Associate Chair, Michael Kennedy) a well-attended lecture series for the general public covering topics such as The Human Genome Project, Human Stem Cell Research, and Global Warming. Despite these extensive efforts and accomplishments, Al still conducted hands-on lab work throughout his career.

Al's wife Winifred, who died in 2010, was a loyal partner in all endeavors. Both of them nurtured a great family of children, stepchildren and 8 grandchildren. Images in his office spoke to the importance of this family in both of their lives.

Al was a voracious reader and had a broad interest in life "outside science": in politics and sports, acting and play reading groups, music, and art classes. These all carried over to many stimulating discussions in his lab.

Everyone who worked with Al had the good fortune of interacting with a great teacher, a ground-breaking researcher and, above all, wonderful human being. Al has left a tremendous legacy and has earned the gratitude of everyone whose lives he touched.

Donations in Al's memory can be made to Evanston Scholars <https://www.evanstonscholars.org> or the Parkinson Foundation <https://www.parkinson.org>.

Tom Bozza, Ginger Carr (retired), Bert Menco (retired), Department of Neurobiology, Evanston, IL (February 2022)