39th Annual Meeting

AChemS XXXIX

April 26–29, 2017

Hyatt Regency
Coconut Point

Bonita Springs, FL

PROGRAM

Science and technology
Always something new

Innovation in flavor and taste solutions is our passion. Our creative teams and scientists not only apply the very latest thinking – we invent it.

We attract, develop and retain, talented, creative professionals who feel proud of the work they do in our company and who are empowered to contribute to a sustainable society.

Givaudan

engage your senses

AChemS
Association for Chemoreception Sciences

AChemS extends special thanks and appreciation for grant support from:

The National Institute on Deafness and Other Communications Disorders

and the **National Institute on Aging, NIH**

A special thank you to **The Polak Foundation**, **Ghislaine Polak** and the late **Ernest Polak** for supporting the **Polak Young Investigators Awards,** the **Polak Postdoctoral Travel Awards** and the **AChemS Student Housing and Travel Awards**.

2016 Polak Young Investigator Award Recipients

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INFORMATION

MEETING EVALUATION

The meeting evaluation is available online. Please visit **www.achems.org** to give us your feedback on the meeting. Your input helps the AChemS leadership continue to offer quality Annual Meetings and member services.

WEDNESDAY, APRIL 26, 2017

9 am – Noon **Community Outreach Event**

Offsite - Imaginarium Science Center

Volunteer AChemS Members will be inspiring 3rd and 4th graders from Franklin Park Elementary, one of the most socio-economically challenged schools in Lee County. The fun and interactive demonstrations will illustrate various taste and smell topics. Not only does AChemS have the good fortune to forge a community connection again, and enlighten and inspire a new generation of chemosensory scientists, engaging with students at this school ties in perfectly with the diversity goals of our NIDCD grant.

6 – 7 pm **Givaudan Lecture** Givaudan

Fiona Watt, PhD

Regulation of Epidermal Homeostasis by Intercellular Communication

Calusa A-D

Stem cell behaviour is controlled by intrinsic mechanisms and by external signals from the local microenvironment or niche. My lab is using genetically modified mice and cultures of primary human epidermal stem cells to investigate the interplay between specific intrinsic and extrinsic signals in regulating exit from the stem cell compartment. In my talk I will discuss progress that we have made in defining soluble factors, cell surface ligands, extracellular matrix components and topographical features that control the onset of terminal differentiation and how we are mapping the signal transduction pathways involved.

7 – 9 pm **AChemS Welcome Banquet**

Waterfall Pool Deck (ticketed event)

**Inclement weather backup: Calusa Ballroom and Foyer*

Join us for the traditional AChemS Welcome Banquet, the first opportunity to reconnect with colleagues and kick the meeting off right! Cash bar is available. An RSVP was required at time of registration and your ticket is available in your name badge; additional tickets can be purchased at the Registration Desk.

9 – 11 pm **Graduate Student Happy Hour**

Mangroves Patio

A relaxed, casual gathering and opportunity to mingle with other graduate students over a cocktail! The patio of Mangroves will be the exclusive gathering spot for this event. Cash bar.

THURSDAY, APRIL 27, 2017

7:30 – 9 am **Industry Breakfast Corners**

Estero Terrace Open to Everyone!

KERRY TASTE & NUTRITION

Please stop by the Kerry Breakfast Corner where the science of taste merges with the science of nutrition. Slide up to our table to sample the latest in food and beverage trends. Plus, our team is happy to share what Kerry's focus on Taste & Nutrition means to them. Learn what it's like to be a part of a company strong in food heritage, global insights, marketplace knowledge, and culinary and applications expertise. Take a journey into our world: Making food and beverage products that people enjoy and feel better about. We call this Leading to Better.

AJINOMOTO

The Ajinomoto Group's corporate message is "Eat well, live well." This is harmonized with our founding aspiration, "To create good, affordable seasonings and turn simple but nutritious fare into delicacies", from the time we launched our business with umami seasoning AJI-NO-MOTO® in 1909. Keeping this aspiration in our mind, we are working for R&D to discover taste of the future through chemosensory researches. In this Breakfast Corner, we will show some of our recent progresses in oral sense and olfaction research. Please join to the Ajinomoto Group's table to share ideas in chemosensory sciences.

3:40 – 5:40 pm **The Barry Davis Workshop: Funding Opportunities For The New Investigator**

Susan Sullivan, National Institute on Deafness and Other Communication Disorders (NIDCD)

Calusa F-H

This workshop will include an overview of research, training, and funding opportunities for graduate students, postdoctoral fellows, and early stage investigators. The discussion will provide practical information on how grant applications are processed within NIH/NIDCD, including Institute and study section assignments, the peer review process, Advisory Council activities, pay lines, and the roles of program and review staff.

3:45 – 5:15 pm **RNAseq Workshop**

Captiva

RNAseq is a new technique used to quantify the full transcriptomes of tissues or cells. This event will lay groundwork for those who are new to this method, and also serve as an interest group for those who are currently using this technique to discuss pipelines and technical aspects; we also plan some hands-on time using toy files for analysis. Bring your laptop and questions.

5:45 – 7:00 pm **AChemS Career Networking Social**

Estero Foyer and Terrace

The social is designed for all student and post doc attendees. The AChemS Career Networking Social is designed for networking and discussion about topics and issues important to junior chemosensory scientists. Back by popular demand: Topic Tables will be featured again this year at the social. This year's topics include Grant Writing, Life Outside Academia (Industry), Equality in Science, Women in Science, Work/Life Balance, Working outside the US, Life in Academia, and more.

7 – 9 pm **President's Symposium**

Calusa A-D

Social interactions between conspecifics increase the chances of successful reproduction and survival by providing individuals with critical information they could not easily get from sampling the broader environment. Social signals are typically communicated within meaningful behavioral contexts and may elicit either learned or innate responses. By exploring the mechanisms and impact of social communication across several vertebrate and invertebrate species, this symposium should highlight key principles for understanding how animals can use social information to learn about each other and about their sensory world. After a brief introduction by the session chair, three eminent scientists will discuss their work exploring chemosensory-mediated social communication in animals. First, Christine Drea will discuss olfactory mediated social communication in strepsirrhine primates. Next, Christina Grozinger will talk about the roles of pheromonal communication within colonies of social insects such as honey bees and fire ants. Finally, Lisa Stowers will discuss the use of conspecific olfactory cues that elicit innate responses in mice to understand the generation of motivated behavior.

FRIDAY, APRIL 28, 2017

12:50 – 1:50 pm **AChemS Business Meeting**

Calusa A-D

Get involved! Join us for reports from the society leaders on the state of the Association. All members welcome and encouraged to attend.

SATURDAY, APRIL 29, 2017

3:30 – 4:50 pm **The AChemS Journal Club**

Captiva Room

Second Annual Event from the History Committee
Historical Contexts for Current Chemosensory Research

An Introduction to Conditioned Taste Aversion Highlighting Contributions to the Chemosensory Sciences from James C. Smith, Florida State University
Conditioned Taste Aversion

What is it? Where did it come from? How is it used now?

Presentations by: Alan Spector, Florida State University; Lindsey Schier, Florida State University; Jian-You Lin, Brandeis University; Don Katz, Brandeis University

COMMITTEES

ACHEMS EXECUTIVE COMMITTEE 2016-2017

President	Steven Munger, PhD	University of Florida
Past-President	Susan Travers, PhD	The Ohio State University
Senior Advisor	Debra Fadool, PhD	Florida State University
President-Elect	Thomas Finger, PhD	University of Colorado
Secretary	Rachel Herz, PhD	Brown University
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Grad Student Rep.	Genevieve Bell	Florida State University

ACHEMS PROGRAM COMMITTEE 2016-2017

Linda Barlow, PhD, *Chair*
Julie Mennella, PhD, *Past Chair*
John Boughter, PhD, *Incoming Chair*
Yehuda Ben-Shahar, PhD
Sanne Boesveldt, PhD
Diego Bohorquez, PhD
Christine Byrd-Jacobs, PhD
Earl Carstens, PhD
Kevin Daly, PhD
Max Fletcher, PhD
Alfredo Fontanini, MD,PhD
David Gire, PhD
Jay Gottfriend, MD, PhD
Charles Greer, PhD
Liquan Huang, PhD
Thomas Hummel, MD, PhD
Maria Larsson, PhD
Steve Liberles, PhD
Weihong Lin, PhD
Joel Mainland, PhD
Clare Mathes, PhD
Kathryn Medler, PhD
Wolfgang Meyerholf, PhD
Arundhati Ray, PhD
Danielle Reed, PhD
Marc Spehr, PhD
Justus Verhagen, PhD
Neil Vickers, PhD
Daiel Wesson, PhD
Haiquing Zhao, PhD

COMMITTEE CHAIRS

ACHEMS STANDING COMMITTEE CHAIRS

Bylaws Committee: Susan Travers, PhD
Diversity Committee: Barbara Zielinski, PhD
Elections Committee: Susan Travers, PhD
Finance Committee: Joel Mainland, PhD
International Committee on Olfaction and Taste: Charles Greer, PhD
Industry Liaison Committee: Christopher Simons, PhD
Mentoring/Networking Committee: Robin Dando, PhD
Public Information and Affairs Committee: Thomas Mast, PhD

ACHEMS AD HOC COMMITTEE CHAIRS:

Archives Committee: Charlotte Mistretta, PhD
Awards Committee: Thomas Finger, PhD
Clinical Relations: Valerie Duffy, PhD, RD
Grants Committee: Diego Restrepo, PhD
Long Range Planning Committee: Tim McClintock, PhD and Minghong Ma, PhD

2017 AWARD RECIPIENTS

39th Annual Givaudan Lectureship
Fiona Watt, PhD, King's College London

Max Mozell Award for Outstanding Achievement in the Chemical Senses
Michael Meredith, PhD, Program in Neuroscience and Department of Biological Science, Florida State University, USA

23rd Annual Ajinomoto Award for Young Investigators in Gustation
Kathrin Ohla, PhD, German Institute of Human Nutrition Potsdam-Rehbruecke, Germany

26th Annual Barry Jacobs Memorial Award for Research in Psychophysics of Human Taste and Smell (formerly Moskowitz Jacobs)
Christopher T. Simons, PhD, The Ohio State University, USA

The AChemS Young Investigator Award for Research in Olfaction
Max L. Fletcher, PhD, University of Tennessee, USA

The Don Tucker Memorial Award Recipient (2016 Awardee)
Meredith Blankenship, Brandeis University, USA

Polak Foundation Awards
The Polak Foundation Awards are funded by the Elsje Werner-Polak Memorial Fund in memory of our niece gassed by the Nazis in 1944 at age 7: Ghislaine Polak and the late Ernest Polak.

Polak Young Investigator Award Recipients
Claire E. Cheetham, Carnegie Mellon University
Sankarganesh Devaraj, Texas Tech University
Chengyu Li, The Ohio State University
George Kyriazis, Sanford Burnham Prebys Medical Discovery Institute
Yumei Qin, Monell Chemical Seses Center
Yusuke Yokota, University of Michigan

Polak Postdoctoral Travel Award Recipients
Tobias Ackels, The Francis Crick Institute
Yan Chen, Texas A&M University
Warren Green, University of Florida
Eric Larson, University of Colorado
Casey Trimmer, Monell Chemical Senses Center

2017 AWARD RECIPIENTS

AChemS Travel Fellowships for Diversity Award Recipients

Funded by a generous grant from the National Institute on Deafness and Other Communication Disorders and the National Institute on Aging, NIH.

Olga Escanailla, Binghamton University
Brian Jackson, University of Washington
Kayla Lemons, University of Maryland Baltimore County
Kimberly Nnah, Binghamton University
Vincente Ramirez, University of California Merced
Melissa Singletary, Auburn University
Regine West, Eastern Michigan University

AChemS Student Housing and Travel Award Recipients

Funded by the Polak Foundation: Ghislaine Polak and the late Ernest Polak.

Abdullah Al-Matrouk
Xiaojun Bao
Elizabeth Carney
Brandon Chelette
Jingguo Chen
Ciera Crawford
Rudolf Degen
Bapon Dey
Laura Donner
Wayne Doyle
Malena Ezzat
Veronica Flores
Kara Fulton
Marie-Luise Gruhn
Jisoo Han
Linnea Herzog
Deanna Hojati
Jason Hwang
Liang-Dar (Daniel) Hwang
Ashley Iannantone
Mohamed Ishan
Catherine Kaminski
Marley Kass
Megen Kepas
Kirill Korshunov
Tenzin Kunkhyen
Simona Manescu
Elizabeth McCarthy
Maellie Midroit
Adrianna Milton
Takuya Osakada
Katherine Pendergast
Daphnee Poupon
Alexa Pullicin
Andrew Riquier
Madeline Rochelle
Sara Simpson
Longzhi Tan
Claire Terrier
Lutz Wallhorn
Yuting Ye
Xingjian Zhang

Logo Contest Award Recipient

Courtney Wilson, University of Colorado

PROGRAM AT A GLANCE

TUESDAY, APRIL 25, 2017

1:50 pm - 7:00 pm **SATELLITE SYMPOSIUM**
Cellular and Molecular Mechanisms of Chemosensory Detection
Moderators: Marco Tizzano & Trese Leinders-Zufall
Calusa AB

WEDNESDAY, APRIL 26, 2017

8:00 am - 11:40 am **SATELLITE SYMPOSIUM**
Cellular and Molecular Mechanisms of Chemosensory Detection
Moderators: Jeremy McIntyre & Lisa Stowers
Calusa A-C

9:00 am - 12:00 pm **OUTREACH EVENT**
Imaginarium
Offsite - Imaginarium Science Center

12:00 pm - 4:00 pm **MEETING**
AChemS Executive Committee Meeting (Invite Only)
Blue Heron AB

5:00 pm - 6:00 pm **WELCOME/AWARDS CEREMONY**
Calusa A-D

6:00 pm - 7:00 pm **GIVAUDAN LECTURE**
Regulation of Epidermal Homeostasis by Intercellular Communication.
Fiona Watt, PhD
Calusa A-D

Givaudan

7:00 pm - 9:00 pm **WELCOME BANQUET**
Pool Deck & Cypress Courtyard

9:00 pm - 11:00 pm **EVENT**
Graduate Student Happy Hour
Mangroves Patio

THURSDAY, APRIL 27, 2017

7:30 am - 9:00 am **BREAKFAST**
Breakfast Corners with Industry
Estero Terrace

8:00 am - 10:30 am **POSTER SESSION 1**
Estero

9:00 am - 10:30 am **COFFEE BREAK**
Estero Foyer

Please Note: *Filming and photographing presentations (oral and poster) are prohibited unless the presenting author has granted permission.*

THURSDAY, CONTINUED

10:30 am - 12:10 pm	**SYMPOSIA** **Regulation of Sensory Cell Turnover** Moderators: Kathryn Medler and Robin Krimm *Calusa A-C*
	TRP Channels in Model Organisms: Roles in Sensation and Behavior Moderator: Craig Montell *Calusa F-H*
12:30 pm - 1:30 pm	**ANCILLARY MEETING** ***Chemical Senses* Editorial Board Meeting** *Sanibel*
12:30 pm - 1:30 pm	**EVENT** **Travel Fellowships for Diversity Award Recipients Luncheon** *Cove at Tarpon Bay*
1:30 pm - 3:30 pm	**SYMPOSIUM** **Clinical Symposium: Chemical Senses in Cancer and Cancer Therapy** Moderators: Valerie Duffy and Thomas Hummel *Calusa A-D*
3:40 pm - 5:40 pm	**MEETING** **The Barry Davis Workshop: Funding Opportunities for the New Investigator** *Calusa F-H*
3:45 pm - 5:15 pm	**WORKSHOP** **RNAseq Interest Group and Workshop** *Captiva*
5:45 pm - 7:00 pm	**EVENT** **Career/Networking Social** *Estero Foyer*
7:00 pm - 9:00 pm	**SYMPOSIUM** **President's Symposium: Tell Me About It: Intraspecies Social Communication in Mammals and Insects** Moderator: Steven Munger *Calusa A-D*
9:00 pm - 11:00 pm	**POSTER SESSION II** *Estero*

Please Note: *Filming and photographing presentations (oral and poster) are prohibited unless the presenting author has granted permission.*

FRIDAY, APRIL 28, 2017

7:30 am - 9:00 am	**CONTINENTAL BREAKFAST** *Estero Foyer*
8:00 am - 10:30 am	**POSTER SESSION III** *Estero*
9:00 am - 10:30 am	**COFFEE BREAK** *Estero Foyer*
10:30 am - 12:10 pm	**SYMPOSIA** **The Role of Multimodal Sensory Integration in Shaping Behavior Across Diverse Animal Taxa** Moderator: Neil Vickers *Calusa A-C* **Chemosensory Thalamus** Moderators: Emmanuelle Courtiol and Alfredo Fontanini *Calusa F-H*
12:50 pm - 1:50 pm	**MEETING** **AChemS Business Meeting** *Calusa A-D*
2:00 pm - 4:00 pm	**SYMPOSIUM** **Public Health & Industry Symposium** Moderators: Chris Simons and Paul Breslin *Calusa A-D*
7:00 pm - 9:00 pm	**POLAK AWARD PRESENTATIONS** *Calusa A-D*
9:00 pm - 11:00 pm	**POSTER SESSION IV** *Estero*

Please Note: *Filming and photographing presentations (oral and poster) are prohibited unless the presenting author has granted permission.*

SATURDAY, APRIL 29, 2017

7:30 am - 9:00 am	**CONTINENTAL BREAKFAST** *Estero Foyer*
8:00 am - 10:30 am	**POSTER SESSION V** *Estero*
9:00 am - 10:30 am	**COFFEE BREAK** *Estero Foyer*
10:30 am - 12:10 pm	**SYMPOSIA** **Plasticity Along the Gustatory Processing Pathway** Moderators: Kathrin Ohla & Wolfgang Meyerhof *Calusa A-C*
	Dynamic Computations for Navigating Complex Odor Environments Moderator: David Gire *Calusa F-H*
1:30 pm - 3:10 pm	**SYMPOSIA** **Aquatic Olfaction in the Vertebrate Lineage, from Lamprey to Amphibians: Segregated Subsystems and Pheromone Detection** Moderator: Sigrun Korsching *Calusa A-C*
	Emerging Mechanisms for Sensory - Immune Communication Moderators: Lynnette McCluskey and Hong Wang *Calusa F-H*
3:30 pm - 4:50 pm	**JOURNAL CLUB** **Historical Contexts for Current Chemosensory Research** Moderator: Charlotte Mistretta with Robert Bradley, Richard Costanzo, David Hill and Claire Murphy *Captiva*
7:00 pm - 9:00 pm	**AWARD LECTURES** *Calusa A-D*
9:00 pm - 11:00 pm	**POSTER SESSION VI** *Estero*

Please Note: *Filming and photographing presentations (oral and poster) are prohibited unless the presenting author has granted permission.*

TUESDAY, APRIL 25, 2017

SATELLITE

1:50 pm - 7:00 pm **Calusa AB**

Cellular and Molecular Mechanisms of Chemosensory Detection

Moderators: Marco Tizzano & Trese Leinders-Zufall

1:50 1 **Welcome & Introduction**
Steven D. Munger[1,2]
[1]University of Florida Center for Smell and Taste, Gainesville, FL, USA, [2]University of Florida Department of Pharmacology and Therapeutics, Gainesville, FL, USA

2:00 2 **Understanding Bitterness**
Wolfgang Meyerhof
German Institute of Human Nutrition

2:20 3 **Aquatic Chemosensation: Evolution of Olfactory Receptor Repertoires**
Sigrun I. Korsching
Institute of Genetics, University at Cologne, Cologne, Germany

2:40 4 **Signaling Mechanisms in the Mouse Accessory Olfactory System**
Chryssanthi Tsitoura[1], Monika Gorin[1], Maximilian Nagel[1], Rudolf Degen[1], David Fleck[1], Julia Morhardt[1], Katja Watznauer[1], Sebastian Malinowski[1], Anat Kahan[2], Yoram Ben-Shaul[2], Marc Spehr[1]
[1]Department of Chemosensation, Institute for Biology II, [2]School of Medicine, Department of Medical Neurobiology, The Hebrew University of Jerusalem, Jerusalem, Israel

3:00 5 **A Novel Logic and Mechanism for Mammalian Olfaction**
Sandeep Robert Datta
Department of Neurobiology Harvard Medical School, Boston, MA

3:20 6 **Olfactory Cilia: Dynamics and Disease**
Jeffrey R. Martens
University of Florida, College of Medicine, Department of Pharmacology & Therapeutics and The Center for Smell and Taste

3:40 7 **What Does the Nose Tell the Brain via Nasal Breathing?**
Minghong Ma
Department of Neuroscience, University of Pennsylvania Perelman School of Medicine

4:00 8 **The Molecular and Cellular Basis of Fatty Acid and Sour Taste in Drosophila**
Hubert Amrein, Yan Chen, Ji-Eun Ahn
Department of Molecular and Cellular Medicine College of Medicine Texas A&M University Health Science Center, College Station, TX, USA

4:20 **Coffee Break**
Calusa C

TUESDAY, CONTINUED

4:40 9 **How Biology Perceives Chemsitry**
Stuart Firestein
Columbia University

5:00 10 **Contribution of Trace Amine-Associated Receptors to Odor Perception in the Mouse**
Thomas Bozza
Department of Neurobiology, Northwestern University, Evanston, IL, USA

5:20 11 **Taste and Smell, Life and Death**
Danielle R Reed
Monell Chemical Senses Center

5:40 12 **Building Sensory Cilia: Signals Localizing Transduction Proteins in Cells and Mice**
Randall R. Reed, Heather M. Kulaga
Center for Sensory Biology, Department of Molecular Biology, Johns Hopkins University School of Medicine, Baltimore, MD, USA

6:00 13 **A Competitive Binding Model Predicts the Response of Mammalian Olfactory Receptors to Mixtures**
Joel Mainland[1,2], Vijay Singh[1], Nicolle Murphy[2], Vijay Balasubramanian[1]
[1]University of Pennsylvania, Philadelphia, PA, [2]Monell Chemical Senses Center, Philadelphia, PA, USA

6:20 14 **Cellular and Molecular Basis of Taste Sensation in Drosophila**
Craig Montell
MCDB Dept., UCSB

6:40 15 **Mechanisms Underlying Innate Odor Fear**
Linda Buck
Howard Hughes Medical Institute and Fred Hutchinson Cancer Research Center, Seattle, WA, USA

WEDNESDAY, APRIL 26, 2017

SATELLITE

8:00 am - 11:40 am **Calusa A-C**

Cellular and Molecular Mechanisms of Chemosensory Detection

Moderators: Jeremy McIntyre & Lisa Stowers

8:00 16 **Flexible Olfactory Behaviors of Parasitic Nematodes**
Felicitas Ruiz, Joon Ha Lee, Spencer Gang, Michelle Castelletto, Elissa Hallem
Department of Microbiology, Immunology, and Molecular Genetics University of California, Los Angeles, USA

8:20 17 **Molecular and Genetic Analysis of the Vagus Nerve**
Stephen D LiberleN
Harvard Medical School, USA

8:40 18 **From Odor Molecules to Behavioral Valence: Conserved Principles**
Anandasankar Ray
Institute of Integrative Genome Biology, University of California Riverside, USA

9:00 19 **Trpc2 Function in the Main Olfactory Epithelium**
Frank Zufall
Saarland University

9:20 20 **Multiple Sweet Taste Signaling Pathways in the Mouse Periphery**
Yuzo Ninomiya[1,2,3], Keiko Yasumatsu[1,2], Ryusuke Yoshida[2], Shingo Takai[2], Shusuke Iwata[2], Keisuke Sanamatsu[2], Noriatsu Shigemura[1,2], Robert F Margolskee[3]
[1]Division of Sensory Physiology, Research and Development Center for Taste and Odor Sensing, Section of Oral Neuroscience, [2]Graduate School of Dental Sciences, Kyushu University, Fukuoka, Japan, [3]Monell Chemical Senses Center, Philadelphia, USA

9:40 **Coffee Break**
Calusa Foyer

10:00 21 **Shedding Light on the Lunction of Type III Cells**
Sue C. Kinnamon, Courtney E Wilson
Dept. of Otolaryngology and Rocky Mountain Taste and Smell Center, University of Colorado Denver, Aurora, CO, USA

10:20 22 **Sensory and Central Signals Regulating Water Homeostasis**
Yuki Oka
California Institute of Technology, USA

10:40 23 **Asymmetric Ephaptic Neuronal Interaction in an Olfactory Circuit**
Ye Zhang[1], Tin Ki Tsang [1], Eric Bushong[2], Mark Ellisman[2], Chih-Ying Su [1]
[1]Division of Biological Sciences, University of California San Diego, USA, [2]National Institute for Microscopy and Imaging Research, USA

11:00 24 **Taste Responses to Changes in Dietary Needs**
Anupama Dahanukar
University of California-Riverside, USA

11:20 25 **Receptor and Neural Circuit Coding Chemosignal Valence**
Kazu Touhara
The University of Tokyo

WEDNESDAY, CONTINUED

OUTREACH EVENT	
9:00 am - 12:00 pm	**Imaginarium Science Center**
Imaginarium Community Outreach	

MEETING	
12:00 pm - 4:00 pm	**Blue Heron AB**
AChemS Executive Committee Meeting	

WELCOME/AWARDS CEREMONY	
5:00 pm - 6:00 pm	**Calusa A-D**

GIVAUDAN LECTURE	
6:00 pm - 7:00 pm	**Calusa A-D**

6:00 26 **Regulation of Epidermal Homeostasis by Intercellular Communication**
Fiona Watt, PhD
King's College London

Givaudan

WELCOME BANQUET (TICKET REQUIRED)	
7:00 pm - 9:00 pm	**Pool Deck & Cypress Courtyard**

GRADUATE STUDENT HAPPY HOUR	
9:00 pm - 11:00 pm	**Mangroves Patio**

THURSDAY, APRIL 27, 2017

BREAKFAST CORNERS WITH INDUSTRY	
7:30 am - 9:00 am	**Estero Terrace**

Participating Partners (see page 6 for more information):

KERRY

Eat Well, Live Well. AJINOMOTO

THURSDAY, CONTINUED

POSTER SESSION I

8:00 am - 10:30 am **Estero Ballroom**

ANOSMIA

P101 27 **Olfactory Dysfunction in Neurological Diseases: Is There a Common Pathological Substrate?**
Richard Doty
Smell & Taste Center Perelman School of Medicine University of Pennsylvania, Philadelphia, PA, USA

P102 28 **Influence of Diabetes Mellitus Type 1, Hypothyroidism and Allergic Rhinitis on Olfactory Function in a Pediatric Population**
Marie-Luise Gruhn, Valentin Alexander Schriever
Department of Neuropediatrics, TU Dresden, Dresden, Germany
AChemS Undergrad Award Finalist

PD1 29 **Using Virtual Reality To Optimize The Surgical Treatment Of Olfactory Losses Due To Nasal Obstruction**
Bradley Hittle[1], Chengyu Li[2], Hector J Medina-Fetterman[1], Bradley A Otto[2], Alexander A Farag[2], Gregory J Wiet[2,3], Don Stredney[1], Kai Zhao[2]
[1]Ohio Supercomputer Center, Columbus, OH, USA, [2]Department of Otolaryngology - Head & Neck Surgery, The Ohio State University, Columbus, OH, USA, [3]Department of Otolaryngology - Head & Neck Surgery, Nationwide Children Hospital, Columbus, OH, USA

P103 30 **Smell Impairment Among US Adults Aged >40 Years: The National Health and Nutrition Examination Survey (NHANES), 2011-2014**
Howard J. Hoffman[1], Chuan-Ming Li[1], Shristi Rawal[2], Katalin G. Losonczy[1], John E. Hayes[3], Valerie B. Duffy[4]
[1]Epidemiology and Statistics Program, National Institute on Deafness and Other Communication Disorders (NIDCD), National Institutes of Health (NIH), Bethesda, MD, USA, [2]Division of Intramural Population Health Research, Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), National Institutes of Health (NIH), Bethesda, MD, USA, [3]Department of Food Science, Pennsylvania State University, University Park, PA, USA, [4]Department of Allied Health Science, University of Connecticut, Storrs, CT, USA

P104 31 **Reduced Intrinsic Cortical Connectivity in Anosmia**
Johan N. Lundström[1,2,3], Moa G. Peter[1], Hagen Kitzler[4], Amelie Betz[4], Thomas Hummel[4]
[1]Karolinska Institutet, Stockholm, Sweden, [2]Monell Chemical Senses Center, Philadelphia, PA, USA, [3]University of Pennsylvania, Philadelphia, PA, USA, [4]Technical University Dresden, Dresden, Germany

Poster Numbering Key: *The P# listed next to the poster title is the Poster Abstract Number and the Poster Board Number.*

PD Poster Numbers *are Digital Poster Presentations and are located in the dedicated Digital Poster Area of the Poster Hall.*

Posters should be mounted by 7:30 am and taken down at 11:00 pm. Posters are on display all day.

P105 32 **Individuals with Anosmia Demonstrate Enhanced Performance in a Multisensory Binding Task**
Moa G. Peter[1], Danja K. Porada[1], Christina Regenbogen[1,2,3], Mats J. Olsson[1], Johan N. Lundström[1,4,5]
[1]Department of Clinical Neuroscience, Karolinska Institutet, Stockholm, Sweden, [2]Department of Psychiatry, Psychotherapy and Psychosomatics, Medical School, RWTH Aachen University, Aachen, Germany, [3]JARA - BRAIN Institute 1: Structure Function Relationship, Jülich, Germany, [4]Monell Chemical Senses Center, Philadelphia, PA, USA, [5]Department of Psychology, University of Pennsylvania, Philadelphia, PA, USA

P106 33 **Dietary Patterns and Food Preferences in a Population of Dutch Patients Suffering From Smell Loss**
Elbrich M. Postma[1,2], Lisan Jonker[1], Sanne Boesveldt[1]
[1]Division of Human Nutrition, Wageningen University, Wageningen, Netherlands, [2]Smell and Taste Centre, Hospital Gelderse Vallei, Ede, Netherlands

P107 34 **Development of an International Odor Identification Test for Children**
Valentin A Schriever
Department of Neuropediatrics, TU Dresden, Dresden, Germany

THURSDAY

COGNITION

P108 35 **In Search of a Grid-like Code in Human Olfactory Navigation**
Xiaojun Bao, Eva Gjorgieva, James D Howard, Thorsten Kahnt, Jay A Gottfried
Northwestern University, Chicago, IL, USA

P109 36 **Cognitive Load Alters Neuronal Processing of Food Odors**
Sonja M Hoffmann-Hensel[1], Rik Sijben[1], Rea Rodriguez-Raecke[1,2], Jessica Freiherr[1,2]
[1]Diagnostic and Interventional Neuroradiology, University Hospital, RWTH Aachen University, Aachen, Germany, [2]2Fraunhofer Institute for Process Engineering and Packaging IVV, Freising, Germany

P110 37 **Memory Enhances Search Strategies During Odor-Guided Foraging**
Brian J Jackson[1], Sujean Oh[1], Venkatesh Gopal[2], Agnese Seminara[3], Gusti Lulu Fatima[1], David H Gire[1]
[1]Department of Psychology, University of Washington, Seattle, WA, USA, [2]Physics Department, Elmhurst College, Elmhurst, IL, USA, [3]CNRS, Univ. Nice Sophia Antipolis, Nice, France

P111 38 **Event Related Potentials for Olfaction and Gustation, During Simultaneous Judgement**
Tatsu Kobayakawa, Naomi Gotow
National Institute of Advanced Industrial Science and Technology, Tsukuba, Ibaraki, Japan

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P112 39 **Subjective and Objective Evaluation of the Olfactory System After a Mild Traumatic Brain Injury** Don Tucker Award Finalist
Fanny Lecuyer[1,2,4], Joelle Robert[2,7], Karine Nadeau-Paquet[1,2], Anas Nseir[5], Jean-Francois Giguere[2], Louis de Beaumont[2,3], Elaine de Guise[1,4,6], Johannes Frasnelli[2,3]
[1]University of Montreal, Montreal, QC, Canada, [2]Hopital Sacre-Coeur, Montreal, QC, Canada, [3]Université du Québec à Trois-Rivières, Trois-Rivières, QC, Canada, [4]Centre de recherche interdisciplinaire en réadaptation du Montréal métropolitain, Montreal, QC, Canada, [5]Hopital Santa-Cabrini, Montreal, QC, Canada, [6]Research Institute-McGill University Health Center, Montreal, QC, Canada, [7]University of Sherbrooke, Montreal, QC, Canada

P113 40 **Change in Detection Thresholds Following Low-Level, Intermittent, Long-Term Exposure to Sweat Malodor Model**
Krytyna M. Rankin, Aleksey Dumer, Anshul Jain
International Flavors & Fragrances Inc., Union Beach, NJ, USA

P114 41 **Consistency of Odor Perception: Effect of Training**
Nao Takayama[1], Saho Ayabe-Kanamura[2]
[1]Graduate School of Comprehensive Human Sciences, University of Tsukuba, Tsukuba, Japan, [2]Faculty of Human Sciences, University of Tsukuba, Tsukuba, Japan

P115 42 **Olfactory Awareness Predicts the Value of Olfactory Cues in Romantic Interest**
Theresa L. White[1,2], Caitlin Cunningham[1]
[1]Le Moyne College, Syracuse, NY, USA, [2]SUNY Upstate Medical University, Syracuse, NY, USA

DISCRIMINATION

P116 43 **Flavor Adaptation and Recovery**
Cristina Jaen, Christopher Maute, Pamela Dalton
Monell Chemical Senses Center, Philadelphia, PA, USA

P117 44 **Sucrose but not Salt Thresholds are Associated with Food Neophobia in Children**
Paule V. Joseph[1], Nuala K. Bobowski[2,3], Danielle R. Reed [2], Julie A. Mennella [2]
[1]National Institutes of Health/ NINR, Bethesda, MD, USA, [2]Monell Chemical Senses Center, Philadelphia, PA, USA, [3]St. Catherine University, St. Paul, MN, USA

P118 45 **Indiscriminability of Equicaloric Sucrose and Glucose Sweetened Beverages**
Matthew C. Kochem[1], Paul A.S. Breslin[1,2]
[1]Rutgers University Department of Nutritional Sciences, New Brunswick, NJ, USA, [2]Monell Chemical Senses Center, Philadelphia, PA, USA

P119 46 **Taste Associations with Depression in US Adults Aged 40+ Years: The National Health and Nutrition Examination Survey (NHANES), 2011-2014**
Chuan-Ming Li[1], Howard J. Hoffman[1], Shristi Rawal[2], Nadia K. Byrnes[3], John E. Hayes[3], Valerie B. Duffy[4]
[1]Epidemiology and Statistics Program, National Institute on Deafness and Other Communication Diseases (NIDCD), National Institutes of Health (NIH), Bethesda, MD, USA, [2]Division of Intramural Population Health Research, Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), National Institutes of Health (NIH), Bethesda, MD, USA, [3]Department of Food Science, Pennsylvania State University, University Park, PA, USA, [4]Department of Allied Health Sciences, University of Connecticut, Storrs, CT, USA

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P120 47 **Perceptual Similarities of Intensity Matched Food Grade Bitterants Obtained with a Semantic Free Task**
Elliott McDowell[1,2], John E Hayes[1,2]
[1]Sensory Evaluation Center, The Pennsylvania State University, University Park, PA, USA, [2]Department of Food Science, The Pennsylvania State University, University Park, PA, USA

P121 48 **Olfactory Training with Clients Suffering from Depressive Disorders**
Luise D Pabel[1], Julia Murr[1], Kerstin Weidner[1], Thomas Hummel[2], Ilona Croy[1]
[1]Dept. of Psychotherapy and Psychosomatic Medicine, University Hospital, Dresden, Germany, [2]2Smell & Taste Clinic, Dept. of ORL, TU Dresden, Dresden, Germany

P122 49 **Investigation of a New Chemosensory Method Using Three Taste Inhibitors to Study the Taste Perception Mechanism in Domestic Cats: Examples of Bitter, Umami and Kokumi Tastes**
Wiktoria Stawowska[1], Aurélie De Ratuld[1], Fabrice Neiers[2], Loïc Briand[2]
[1]Diana Pet Food, Elven, France, [2]Centre des Sciences du Goût et de l'Alimentation, CNRS, INRA, Univ. Bourgogne Franche-Comté, Dijon, France

P123 50 **Effect of Olfactive Costimulation on Trigeminal Localisation**
Cécilia Tremblay[1], Étienne Ouellet[1], Johannes Frasnelli[1,2]
[1]Université du Québec à Trois-Rivières, Trois-Rivières, QC, Canada, [2]Sacré-Coeur Hospital, Montréal, QC, Canada

THURSDAY

OLFACTORY RECEPTOR NEURONS

P124 51 **Chemical Exposure Alters the Gene Expression of Neurotrophins and their Receptors in the Main Olfactory System Differently Between Wild Type and Skn-1A Knockout Mice**
Abdullah Al-Matrouk, Chantel Wilson, Tatsuya Ogura, Weihong Lin
University of Maryland Baltimore County, Biology Department, Baltimore, MD, USA

P125 52 **A Critical Test of the Sorption Hypothesis in the Mouse: Comparisons of Simulated Odorant Sorption Patterns with Regional Electroolfactogram Responses Across the Olfactory Epithelium.**
David/M Coppola[1], Brittaney Ritchie[1], Brent/A Craven[2]
[1]Biology, Randolph-Macon College, Ashland, VA, USA, [2]2Mechanical & Nuclear Engineering, Pennsylvania State University, Penn State, PA, USA

P126 53 **A Single Identified Glomerulus in the Zebrafish Olfactory Bulb Carries the High-Affinity Response to the Death-associated Odor Cadaverine**
Milan Dieris, Gaurav Ahuja, Venkatesh Krishna, Sigrun Korsching
University of Cologne, Cologne, Germany

P127 54 **The Effect af Intranasal Sodium Citrate on Olfaction in Postinfectious Loss: Results from a Prospective, Placebo-Controlled Trial in 49 Patients**
M. Ezzat, K. Whitcroft, M. Cuevas, T. Hummel
Interdisciplinary Smell and Taste Clinic, TU Dresden, Dresden, Germany

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P128 55 **TRPM5-Expressing Microvillous Cells in the Mouse Main Olfactory Epithelium Modulate Resting Ca2+ Levels of Olfactory Sensory Neurons and Endocytosis in Supporting Cells**
Ziying Fu, Tatsuya Ogura, Weihong Lin
Department of Biological Sciences, University of Maryland Baltimore County, Baltimore, MD, USA

P129 56 **Characterizing the Role of Zinc Metal Nanoparticles in the Initial Events of Olfaction**
Samantha Hagerty[1], Melissa Singletary[1], Oleg Pustovyy[1], Ludmila Globa[1], Iryna Sorokulova[1], Yasmine Daniels[2], William MacCrehan[2], Shin Muramoto[2], Gheorghe Stan[2], June Lau[2], Gopikrishna Deshpande[3], Edward Morrison[1], Vitaly Vodyanoy[1]
[1]Department of Anatomy, Physiology, and Pharmacology, Auburn University College of Veterinary Medicine, Auburn, AL, USA, [2]Material Measurement Laboratory, National Institute of Standards and Technology, Gaithersburg, MD, USA, [3]AU MRI Research Center, Department of Electrical & Computer Engineering, Auburn, AL, USA

P130 57 **Identification of Preplacodal Region (PPR) Markers in Human Olfactory Differentiation**
Moritz Klingenstein, Stefanie Raab, Stefan Liebau
Institute of Neuroanatomy, Eberhard Karls University Tübingen, Tübingen, Germany

P131 58 **TAARs and Odor Valence**
Qian Li[1,2], Kristian Herrera[3], Josua Jordi[3], Florian Engert[3], Stephen Liberles[2]
[1]Neuroscience Division, Departments of Anatomy, Histology, and Embryology, Shanghai Jiao Tong University School of Medicine, Shanghai, China, [2]Department of Cell Biology, Harvard Medical School, Boston, MA, USA, [3]Department of Molecular and Cellular Biology and Center for Brain Science, Harvard University, Cambridge, MA, USA

P132 59 **Predicting Olfactory Receptor Responses to Mixtures Using a Competitive Binding Model**
Vijay Singh[1], Nicolle R. Murphy[2], Vijay Balasubramanian[1], Joel D. Mainland[1,2]
[1]University of Pennsylvania, Philadelphia, PA, USA, [2]Monell Chemical Senses Center, Philadelphia, PA, USA

PD2 60 **Restoration of Olfactory Epithelium Ciliation and Odorant Detection in BBS4 Loss-of-function Model of Bardet-Biedl Syndrome**
Cedric R Uytingco[1,2], Corey L Williams[1,2], Warren W Green[1,2], Dana T Shively[1], Lian Zhang[1,2], Val C Sheffield[3], Jeffrey R Martens[1,2]
[1]Department of Pharmacology and Therapeutics, University of Florida College of Medicine, Gainesville, FL, USA, [2]University of Florida Center for Smell and Taste, Gainesville, FL, USA, [3]Department of Pediatrics and Howard Hughes Medical Institute, University of Iowa, Iowa Citry, IA, USA

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PHEROMONES

P133 61 **Role of InsP3 and InsP3R3 in Vomeronasal Calcium Signaling and Trpc2 Function**
Pablo Chamero[1,2], Jan Weiss[1], Maria Teresa Alonso[3], Trese Leinders-Zufall[1], Frank Zufall[1]
[1]Center for Integrative Physiology and Molecular Medicine, Saarland University, 66424, Homburg, Germany, [2]Laboratoire de Physiologie de la Reproduction & des Comportements, UMR85, INRA-CNRS-Université de Tours, Nouzilly, France, [3]Instituto de Biologia y Genetica Molecular, University of Valladolid and CSIC, Valladolid, Spain

P134 62 **The PROUST Hypothesis: How Olfactory Systems Map the Meaning of Odors Across Space and Time**
Lucia Jacobs
Univ Calif, Berkeley, CA, USA

P135 63 **Sex-Specific Effects of Gonadectomy and Hormone Replacement on Performance of a Go/No-Go Odor Discrimination Task in Mice.**
Tenzin Kunkhyen[1], Allison Coyne[1], Emma Perez[1], Michael Baum[2], James Cherry[1]
[1]Department of Psychological and Brain Sciences, Boston University, Boston, MA, USA, [2]Department of Biology, Boston University, Boston, MA, USA

P136 64 **DREADD-Induced Silencing of the Medial Amygdala Reduces the Preference for Male Pheromones and the Expression of Lordosis in Estrous Female Mice**
Elizabeth A. McCarthy[1], Matthew Bass[1], Arman Maqsudlu[1], Sofia Georghiou[1], James A. Cherry[2], Micheal J. Baum[1]
[1]Department of Biology, Boston University, Boston, MA, USA, [2]Department of Psychological and Brain Sciences, Boston, MA, USA

TASTE RECEPTOR CELLS

P137 65 **Ionotropic Receptors Mediate Drosophila Oviposition Preference through Sour Gustatory Sensory Neurons**
Yan Chen, Hubert Amrein
Department of Molecular and Cellular Medicine, College of Medicine, Texas A&M University Health Science Center, College Station, TX, USA

P138 66 **The Localization of TAS2R7 in Artery and Pancreas**
Jing-guo Chen[1], Ping-ping Yan [1], Jin Wang[1], Yan Cai[2], Lei Cao[1], Yong-xiao Cao[1]
Don Tucker Award Finalist
[1]Department of Pharmacology, School of Basic Medical Sciences, Xi'an Jiaotong University Health Science Center, Xi'an, China, [2]Department of Pharmacy, the First Affiliated Hospital of Xi'an Jiaotong University, Xi'an, China

P139 67 **Identifying the Functional Bitter Taste Receptors, their Antagonist and Aging Effect on Bitter Taste Sensitivity in Chickens**
Bapon Dey, Fuminori Kawabata, Yuko Kawabata, Shotaro Nishimura, Shoji Tabata
Laboratory of Functional Anatomy, Faculty of Agriculture, Kyushu University, Fukuoka, Japan

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P140 68 **Glucose Elicits Cephalic-Phase Insulin Release in Mice by Activating KATP Channels in Taste Cells**
John Glendinning[1], Yonina Frim[1], Ayelet Hochman[1], Gabrielle Lubitz[1], Anthony Basile[2], Anthony Sclafani[3]
[1]Barnard College, Columbia University, New York, NY, USA, [2]Columbia University, New York, NY, USA, [3]Brooklyn College of CUNY, Brooklyn, NY, USA

P141 69 **Man vs. Mouse: Comparative Histology of Chemosensory Architecture in the Larynx**
Marie E. Jetté[1,2], Sue C. Kinnamon[1,2], Thomas E. Finger[1,2]
[1]University of Colorado School of Medicine, Aurora, CO, USA, [2]Rocky Mountain Taste and Smell Center, Aurora, CO, USA

P142 70 **Function of the Extracellular Calcium-Sensing Receptor (CaSR) in Chicken Oral Tissues**
Fuminori Kawabata, Hikaru Omori, Yuko Kawabata, Shotaro Nishimura, Shoji Tabata
Kyushu University, Fukuoka, Japan

P143 71 **Role of Opsins in Drosophila Bitter Taste**
Nicole Y Leung[1,2], Chao Liu[1,2], Sang Hoon Kim[3], Adishthi Gurav[1,2], Craig Montell[1,2]
[1]Neuroscience Research Institute, University of California Santa Barbara, Santa Barbara, CA, USA, [2]Department of Molecular, Cellular and Developmental Biology, University of California Santa Barbara, Santa Barbara, CA, USA, [3]Department of Biological Chemistry, School of Medicine, Johns Hopkins, Baltimore, MD, USA

P144 72 **Expression of Umami Taste Receptors and Behavioral Reactions to Umami Taste in Chickens**
Yuta Yoshida, Fuminori Kawabata, Yuko Kawabata, Shotaro Nishimura, Shoji Tabata
Laboratory of Functional Anatomy, Faculty of Agriculture, Kyushu University, Fukuoka, Japan

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THURSDAY, CONTINUED

COFFEE BREAK

9:00 am - 10:30 am — **Estero Foyer**

SYMPOSIUM

10:30 am - 12:10 pm — **Calusa A-C**

Regulation of Sensory Cell Turnover

Chairs: Kathryn Medler and Robin Krimm

10:30 **Introduction**
73 Kathryn Medler[1], Robin Krimm[2]
[1]University at Buffalo, Buffalo, MB, USA, [2]University of Louisville, Louisville, KY, USA

10:40 **Innervating New Taste Receptor Cells in Adulthood**
74 Robin Krimm
University of Louisville School of Medicine, Louisville, KY, USA

11:05 **Primary Cilia on Basal Stem Cells Regulate Regeneration of the Olfactory**
75 **Epithelium**
Warren W. Green[1,2], Ariell M. Joiner[3], Jeremy C. McIntyre[2,4], Benjamin L. Allen[5], James E. Schwob[6], Jeffrey R. Martens[1,2]
[1]Department of Pharmacology & Therapeutics, University of Florida, College of Medicine, Gainesville, FL, USA, [2]University of Florida Center for Smell and Taste, Gainesville, FL, USA, [3]Department of Pharmacology, University of Michigan Medical School, Ann Arbor, MI, USA, [4]Department of Neuroscience, University of Florida, College of Medicine, Gainesville, FL, USA, [5]Department of Cell and Developmental Biology, University of Michigan Medical School, Ann Arbor, MI, USA, [6]Department of Developmental, Molecular, and Chemical Biology, Tufts University School of Medicine, Boston, MA, USA

11:20 **Plasticity of Mechanosensory Merkel-Cell Afferents During Healthy**
76 **Tissue Remodeling**
Ellen A Lumpkin, Rachel C Clary, Kara L Marshall, Yoshichika Baba
Dept. of Physiology & Cellular Biophysics, New York, NY, USA

11:45 **Transcription Factors that Regulate Taste Cell Maintenance**
77 Kathryn F Medler, Yankun Gao, Jayasha Shandilya, Stefan GE Roberts
University at Buffalo, Buffalo, NY, USA

THURSDAY, CONTINUED

SYMPOSIUM

10:30 am - 12:10 pm **Calusa F-H**

TRP Channels in Model Organisms: Roles in Sensation and Behavior

Chair: Craig Montell

10:30 **Introduction**
78 Craig Montell

10:40 **TRP Channels as Sensors of Bacterial Endotoxins**
79 Karel Talavera
KU Leuven, Leuven, Belgium

11:05 **An Essential Role for Trpc5 in Hypothalamic Hormone Regulation**
80 Thomas Blum[1], Ana Moreno-Pérez[1], Anela Arifovic[1], Petra Weissgerber[2], Veit Flockerzi[2], Marc Freichel[3], Frank Zufall[1], Trese Leinders-Zufall[1]
Don Tucker Award Finalist
[1]Center for Integrative Physiology and Molecular Medicine, Saarland University, Homburg, Germany, [2]Department of Pharmacology and Toxicology, Saarland University, Homburg, Germany, [3]Institute of Pharmacology, University of Heidelberg, Heidelberg, Germany

11:20 **TRP Channel Function and Regulation in C. elegans**
81 Shawn Xu
University of Michigan, Ann Arbor, MI, USA

11:45 **TRP Ion Channels as Key Targets of Tobacco and Electronic Cigarette Irritants and Flavor Additives**
82 Sairam V Jabba[1,2], Lu Fan[2], Shrilatha Balakrishna[2], Pamela Bonner[1,2], Seth R Taylor[2], Kayvon Ghoreshi[3], Gregory J Smith[3], Hanno Erythropel[2, 4], Tamara DeWinter[2, 4], Julie B Zimmerman[2, 4], John B Morris[3], Marina R Picciotto[2], Sven E Jordt[1,2]
[1]Department of Anesthesiology, Duke University School of Medicine, Durham, NC, USA, [2]Yale Tobacco Center of Regulatory Science (TCORS), Department of Psychiatry, Yale School of Medicine, New Haven, CT, USA, [3]Department of Pharmaceutical Sciences, University of Connecticut, Storrs, CT, USA, [4]3Department of Chemical and Environmental Engineering, Yale University, New Haven, CT, USA

MEETING

12:30 pm - 1:30 pm **Sanibel**

***Chemical Senses* Editorial Board Meeting**

LUNCHEON

12:30 pm - 1:30 pm **Cove at Tarpon Bay**

Travel Fellowships for Diversity Award Recipients Luncheon

THURSDAY, APRIL 27, 2017

CLINICAL SYMPOSIUM

1:30 pm - 3:30 pm — **Calusa A-D**

Chemical Senses in Cancer and Cancer Therapy

Chairs: Valerie Duffy and Thomas Hummel

1:30 83 **Implications for Alleviating Chemosensory Alterations with Cancer Treatments: Connecting Patient Reports with Clinical Assessments and the Basic Science of Sensory Signaling**
Valerie B Duffy
Allied Health Sciences, University of Connecticut, Storrs, CT, USA

2:00 84 **Taste Disorders in Patients: Symptoms, Diagnosis and Management**
Miriam Grushka[1,2]
[1]William Osler Health System, Department of Dentistry, Active Staff, Toronto, ON, Canada, [2]Hamilton General Hospital, Courtesy Staff, Hamilton, ON, Canada

2:30 85 **Mouse Studies with HH Pathway Inhibitor Drugs: Biology of Taste Disruption and Recovery**
Archana Kumari[1], Alexandre N Ermilov[2], Benjamin L Allen[3], Andrzej A Dlugosz[2,3], Robert M Bradley[1], Charlotte M Mistretta[1]
[1]Department of Biologic and Materials Sciences, School of Dentistry, University of Michigan, Ann Arbor, MI, USA, [2]Department of Dermatology, Medical School, University of Michigan, Ann Arbor, MI, USA, [3]Department of Cell and Developmental Biology, Medical School, University of Michigan, Ann Arbor, MI, USA

3:00 86 **Oral Sensory Changes in Cancer Therapies: A Clinical Perspective**
Anna G Boltong[1,2], Sanchia Aranda[3], Rochelle Wynne[4], Russell Keast[4]
[1]Cancer Council Victoria, Melbourne, Australia, [2]The University of Melbourne, Melbourne, Australia, [3]Cancer Council Australia, Sydney, Australia, [4]Deakin University, Geelong, Australia

WORKSHOP

3:40 pm - 5:40 pm — **Calusa F-H**

The Barry Davis Workshop: Funding Opportunities for the New Investigator

WORKSHOP

3:45 pm - 5:15 pm — **Captiva**

RNAseq Interest Group and Workshop

CAREER/NETWORKING SOCIAL

5:45 pm - 7:30 pm — **Estero Foyer**

THURSDAY, CONTINUED

PRESIDENT'S SYMPOSIUM

7:00 pm - 9:00 pm **Calusa A-D**

Tell Me About it: Intraspecies Social Communication in Mammals and Insects

Chair: Steven Munger

7:00 **Introduction**
87 Steven D. Munger[1,2]
[1]University of Florida Center for Smell and Taste, Gainesville, FL, USA, [2]University of Florida Dept. Pharmacology and Therapeutics, Gainesville, FL, USA

7:10 **Social Communication of Condition-Dependent Olfactory Signals in Strepsirrhine Primates**
88 Christine M. Drea
Duke University, Durham, NC, USA

7:45 **Cooperation and Conflict in Social Insect Societies: From Pheromones to Genes**
89 Christina M. Grozinger
Department of Entomology, Center for Pollinator Research, Penn State University, University Park, PA, USA

8:20 **Leveraging Olfaction to Study Motivated Behavior in the Mouse**
90 Lisa Stowers
The Scripps Research Institute, La Jolla, CA, USA

THURSDAY, CONTINUED

POSTER SESSION II

9:00 pm - 11:00 pm **Estero Ballroom**

DEVELOPMENT

P201 91 **Neurofibromatosis 2 (NF2) in Tongue Mesenchyme is a Key Factor for the Normal Development of Tongue and Taste Papillae**
Guiqian Chen[1], Mohamed Ishan[1], Xiusheng Wang[1], Wenxin Yu[1], Xinwei Cao[2], Marco Giovannini[3], Hong-Xiang Liu[1]
[1]University of Georgia, Athens, GA, USA, [2]St Jude Children's Research Hospital, Memphis, TN, USA, [3]University of California Los Angeles, Los Angeles, CA, USA

P202 92 **Cellular Mechanisms of Taste Placode Differentiation**
Erin J. Golden, Linda A. Barlow
University of Colorado School of Medicine, Dept. of Cell & Developmental Biology, Aurora, CO, USA

P203 93 **Mesenchyme-Specific Activation of BMP Receptor ALK2, but not ALK3, Results in Altered Tongue Formation and Cell Differentiation**
Mohamed Ishan[1], Guiqian Chen[1], Sunny Patel[1], Brett Marshall[1], Yuji Mishina[2], Hong-Xiang Liu[1]
[1]Regenerative Bioscience Center, Department of Animal and Dairy Science, University of Georgia, Athens, GA, USA, [2]Department of Biologic and Materials Science, School of Dentistry, University of Michigan, Ann Arbor, MI, USA

P204 94 **HHIP1 Antagonism of HH Signaling: Evidence for Regulation of Filiform Papilla, Fungiform Papilla and Taste Bud Pattern and Maintenance**
Charlotte M Mistretta[1], Archana Kumari[1], Libo Li[1], Alexandre N Ermilov[2], Andrzej A Dlugosz[2,3], Benjamin L Allen[3]
[1]Department of Biologic and Materials Sciences, School of Dentistry, University of Michigan, Ann Arbor, MI, USA, [2]Department of Dermatology, Medical School, University of Michigan, Ann Arbor, MI, USA, [3]Department of Cell and Developmental Biology, Medical School, University of Michigan, Ann Arbor, MI, USA

P205 95 **The "Open Essence" for Kids: A 12-Item Odor Identification Test for Children**
Eri Mori, Yuiko Sugita, Masayoshi Tei, Ayako Kurashima, Nobuyoshi Otori
Department of Otorhinolaryngology, Jikei University, School of Medicine, Tokyo, Japan

P206 96 **Ratings of Ethanol Bitterness Differ Among Women and are Determined in Part by Genetic Variation**
Alissa A. Nolden, Phoebe Mathew, Corrine Mansfield, Liang-Dar Daniel Hwang, Danielle R. Reed, Julie A. Mennella
Monell Chemical Senses Center, Philadelphia, PA, USA

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P207 97 **Formation of the Olfactory Bulbs and Connection of the Olfactory/ Vomeronasal Neurons to the Brain are Not Needed for GnRH-1 Neuronal Migration to the Hypothalamus.**
Ed Zandro Taroc, Aparna Prasad, Paolo E. Forni
University at Albany, Albany, NY, USA

HEDONICS

P208 98 **Multisensory Integration of Flavor Cues During Food Choice Behavior**
Joost X Maier, Victoria Elliott
Wake Forest School of Medicine, Winston Salem, NC, USA

P209 99 **Inter- and Intra-mouse Variability in Odor Preference Behaviors**
Adrianna J. Milton[1], Sonum Jagetia[1], Lucas A. Stetzik[1], Nathalie Mandairon[2], Daniel W. Wesson[1]
[1]Department of Neurosciences, Case Western Reserve University, Cleveland, OH, USA, [2]INSERM U1028, CNRS UMR5292, Lyon Neuroscience Research Center, Neuroplasticity and Neuropathology of Olfactory Perception Team, F-69000, Lyon, France

P210 100 **Effect of NaCl on Taste Preferences for L-Histidine in C57BL/6 Mice**
Yuko Murata[1], Alexander A. Bachmanov[2]
[1]National Research Institute of Fisheries Science, Japan Fisheries Research and Education Agency, Yokohama, Japan, [2]Monell Chemical Senses Center, Philadelphia, PA, USA

P211 101 **Sweet Perception in Hispanic Young Adults: Insights from Psychophysics and fMRI**
Claire Murphy[1,2,3], Jacquelyn Szajer[3], Aaron Jacobson[1], Erin Green[3,4]
[1]San Diego State University, San Diego, CA, USA, [2]University of California, San Diego, San Diego, CA, USA, [3]SDSU/UCSD Joint Doctoral Program, San Diego, CA, USA, [4]Stanford University, Palo Alto, CA, USA

P212 102 **The Smell of Prejudice. Body Odor Disgust Sensitivity Moderates the Effect of Disgusting Smells on Implicit Prejudice**
Jonas K Olofsson[1,2], Marco Tullio Liuzza[1,3], Leo Derkert[1], Torun Lindholm[1], Maria Larsson[1]
[1]Stockholm University, Stockholm, Sweden, [2]Swedish Collegium for Advanced Study, Uppsala, Sweden, [3]Magna Graecia University, Catanzaro, Italy

P213 103 **Orbitofrontal Cortex Signals Reward Prediction Errors for Food Odor Identity Using a Perceptual Similarity Coding Scheme**
Javier A. Suarez, Thorsten Kahnt
Northwestern University, Chicago, IL, USA

INGESTION

P214 104 **Somatosensory Contributions to Food Oral Processing**
Yalda Moayedi, Lucia Duenas-Bianchi, Chi-Kun Tong, Ellen A Lumpkin
Department of Physiology and Cellular Biophysics, Columbia University Medical Center, New York, NY, USA

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P215 105 **Dynamic Perception of Encapsulated Flavors**
Marco P. Morgenstern[1], Dulce Paredes[2], Esther H-J. Kim[1], Lidia Motoi[1], Markus Eckert[2], Yukiko Wadamori[1], Carter Green[2]
[1]The New Zealand Institute for Plant & Food Research Ltd, Christchurch, New Zealand, [2]Takasago International Corporation (USA), Rockleigh, NJ, USA

P216 106 **Baby Food but Not 25% Sucrose Increases the Palatability of Antiretroviral Pdelivered by an Innovative Freeze-Dried Fast-Dissolving Tablet Formulation to Rats**
David W Pittman[1], Alexandra M Brantly[1], Alexandra L Drobonick[1], Hannah T King[1], Daniel C Mesta[1], Caroline G Richards[1], Manjari Lal[2], Manshun Lai[2]
[1]Department of Psychology, Wofford College, Spartanburg, SC, USA, [2]PATH, Seattle, WA, USA

P217 107 **A Simple Method for the Rapid Induction of Salt Appetite in Mice**
Martin A. Raymond, Tasnia Chowdhury, Thomas G. Mast, Joseph M. Breza
Eastern Michigan University, Ypsilanti, MI, USA

P218 108 **Relationships Between Oral Health Measures, Sweet Taste Intensity, Liking, and Sugar-Sweetened Beverage Intake**
Robin M. Tucker[1], Nicole L. Garneau[2], Tiffany M. Nuessle[2], Chelsea Jackle[3]
[1]Michigan State University, East Lansing, MI, USA, [2]Denver Museum of Nature and Science, Denver, CO, USA, [3]Bowling Green State University, Bowling Green, OH, USA

THURSDAY

LEARNING AND MEMORY

P219 109 **Novelty Detection for Short Term Memory of Odors?**
E. Leslie Cameron[1], Per Møller[2], EP Köster[3]
[1]Carthage College, Kenosha, WI, USA, [2]University of Copenhagen, Copenhagen, Denmark, [3]University of Utrecht, Utrecht, Netherlands

P220 110 **Environmental, Hormonal and Odorant-induced Changes in Odorant Receptor mRNA Expression in Pacific Salmon**
Andrew Dittman[1], Darran May[2], Paul Hoppe[3]
[1]Environmental Physiology Program, Northwest Fisheries Science Center, NOAA Fisheries, Seattle, WA, USA, [2]School of Aquatic and Fishery Sciences, University of Washington, Seattle, WA, USA, [3]3Frank Orth and Associates, Northwest Fisheries Science Center, NOAA Fisheries, Seattle, WA, USA

P221 111 **Nocturnal Olfactory Stimulation for Improvement of Sleep Quality in Patients with Posttraumatic Stress Disorder: An Exploratory Intervention Trial**
Laura Donner[1,2], Julia Schellong[1], Antje Hähner[2], Kerstin Weidner[1], Thomas Hummel [2], Ilona Croy[1,2]
[1]Department of Psychosomatics, Technical University, Dresden, Germany, [2]Smell and Taste Clinic, Department of ORI, Technical University, Dresden, Germany

P222 112 **Flavor-Saltiness Integration is fAfected by Eating Experiences**
Takayuki Kawai[1], Yuko Kusakabe[1], Yuji Wada[1], Takehito Goto[2]
[1]National Agriculture and Food Research Organization, Tsukuba, Japan, [2]Yamagata Research Institute of Technology, Yamagata-Pref., Japan

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P223 113 **Sommeliers: When Do these Experts Acquire their Olfactory Abilities?**
Daphnée Poupon[1], Daniel Vintrou[2], Johannes Frasnelli[1,3]
[1]University of Quebec in Trois-Rivieres, Trois-Rivieres, QC, Canada, [2]Center of Professional Formation Bel-Avenir, Trois-Rivieres, QC, Canada, [3]Research Centre, Sacre Coeur Hospital, Montreal, QC, Canada

P224 114 **Distinct Circuits Mediate Glomerular Enhancements for Trained and Untrained Stimuli Following Aversive Conditioning** Don Tucker Award Finalist
Jordan M. Ross, Max L. Fletcher
University of Tennessee Health Science Center/Department of Anatomy & Neurobiology, Memphis, TN, USA

P225 115 **Investigating Neural Correlates of Olfactory Targeted Memory Reactivation in the Sleeping Human Brain**
Laura K Shanahan, Eva Gjorgieva, Thorsten Kahnt, Jay A Gottfried
Northwestern University, Chicago, IL, USA

OLFACTORY BULB

P226 116 **Neural Activity in the Human Olfactory Bulb Reflects Odor Perception**
Arnaud Fournel[1], Emilia Iannilli[2], Marylou Mantel[1], Cedric Manesse[1], Carmen Licon[1], Camille Ferdenzi[1], Annett Werner[2], Thomas Hummel[2], Bensafi Moustafa[1]
[1]Lyon Neuroscience Research Center, CNRS, Lyon, France, [2]University of Dresden, Germany, Germany

P227 117 **Permeabilization-Free Antibody Labeling for Correlative Serial Block-Face Scanning Electron Microscopy in the Mouse Olfactory Bulb**
Kara A. Fulton[1,2], Kevin L. Briggman[1]
[1]Circuit Dynamics and Connectivity Unit, National Institute of Neurological Disorders and Stroke, National Institutes of Health, Bethesda, MD, USA, [2]Brown University, Providence, RI, USA

P228 118 **Glomerulus-Specific Onset Latency of Odor-Evoked Calcium Response in the Juxtaglomerular Cells of Mouse Olfactory Bulb**
Ryota Homma[1], Xiaohua Lv[2], Shaoqun Zeng[2], Shin Nagayama[1]
[1]University of Texas Health Science Center at Houston, Houston, TX, USA, [2]Huazhong University of Science and Technology, Wuhan, China

P229 119 **RNA-Seq Analysis of Developing Olfactory Bulb Projection Neurons**
Fumiaki Imamura[1], Yuka Imamura Kawasawa[1], Anna C. Salzberg[1], Mingfeng Li[2], Nenad Sestan[2], Charles A. Greer[2]
[1]Penn State College of Medicine, Hershey, PA, USA, [2]Yale School of Medicine, New Haven, CT, USA

P230 120 **Olfactory Bulb Beta Oscillations and Granule Cell Excitability: Testing Model Predictions** Don Tucker Award Finalist
Boleslaw L. Osinski[1], Leslie M. Kay[2]
[1]Biophysics, Institute for Mind and Biology, University of Chicago, Chicago, IL, USA, [2]Psychology, Institute for Mind and Biology, University of Chicago, Chicago, IL, USA

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P231 121 **Margatoxin-Conjugated Quantum Dots as a Tool for Targeted Inhibition of the Voltage-Gated Potassium Channel Kv1.3 in the Olfactory Bulb**

Don Tucker Award Finalist

Austin B. Schwartz[1], Anshika Kapur[1], Zhenbo Huang[1], Raveendra Anangi[2], Zoltan Deklan[2], Erminia Fardone[1], Goutam Palui[1], Glenn F. King[2], Hedi Mattoussi[1], Debra A. Fadool[1]
[1]Florida State University, Tallahassee, FL, USA, [2]University of Queensland, Brisbane, Australia

P232 122 **Correlation of Nasal Thallium Migration to Olfactory Bulb and Olfactory Bulb Volume in Patients with Olfactory Impairment after Upper Respiratory Infection**

Hideaki Shiga[1], Junichi Taki[2], Koichi Okuda[3], Naoto Watanabe[4], Hisao Tonami[4], Seigo Kinuya[2], Takaki Miwa[1]
[1]Otorhinolaryngology, Kanazawa Medical University, Ishikawa, Japan, [2]Nuclear Medicine, Graduate School of Medical Science, Kanazawa University, Ishikawa, Japan, [3]Physics, Kanazawa Medical University, Ishikawa, Japan, [4]Diagnostic and Therapeutic Radiology, Kanazawa Medical University, Ishikawa, Japan

P233 123 **CCKergic Superficial Tufted Cells Drive Two Major Inhibitory Circuits in the Olfactory Bulb**

Xicui Sun, Shaolin Liu
University of Maryland School of Medicine, Baltimore, MD, USA

THURSDAY

OLFACTORY RECEPTOR NEURONS

P234 124 **Divergence in the Olfactory System among Populations of Drosophila mojavensis**

Byrappa Ammagarahalli, Amber Crowley-Gall, John Layne, Stephanie Rollmann
University of Cincinnati, Cincinnati, OH, USA

P235 125 **Novel Olfactory Coding Mechanisms in Response to Repellent Odors**

Jonathan T. Clark[1], Jadrian Ejercito[2], Ryan Arvidson[2], Anandasankar Ray[2]
[1]Interdepartmental Neuroscience Program, University Of California, Riverside, Riverside, CA, USA, [2]Department of Entomology, University Of California, Riverside, Riverside, CA, USA

P236 126 **The Lifespan of Olfactory Sensory Neurons**

Vera Gaun[1,2], Matthew J Zunitch[1,2], Brian Lin[1], Woochan Jang[1], James E Schwob[1]
[1]Tufts University School of Medicine, Boston, MA, USA, [2]Sackler School of Graduate Biomedical Sciences, Tufts University, Boston, MA, USA

P237 127 **GC-D-Expressing and Grueneberg Ganglion Chemosensory Neurons Express Unique Molecular Signatures**

Zhi Huang[1,2], Arthur D. Zimmerman[1,2], Steven D. Munger[1,2]
[1]University of Florida Center for Smell and Taste, Gainesville, FL, USA, [2]University of Florida Dept. Pharmacology and Therapeutics, Gainesville, FL, USA

P238 128 **Olfactory Loss in Humans: Exposure to Odors ("Olfactory Training") Changes Clectrophysiological Responses at the Level of the Olfactory Epithelium**

Thomas Hummel, Georg Stupka, Antje Haehner, Sophia C. Poletti
Smell & Taste Clinic, Dept. of ORL, TU Dresden, Dresden, Germany

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P239 129 **The Use of Mixture of Odors (Instead of a Single Odor) Increases Reliability of Olfactory Threshold Testing**
Anna Oleszkiewicz[1], Robert Pellegrino[2], Katharina Pusch[2], Celine Margot[2], Thomas Hummel[2]
[1]University of Wroclaw, Wroclaw, Poland, [2]Interdisciplinary Center "Smell & Taste", Technical University Dresden, Dresden, Germany

P240 130 **Applied Body Odor Research in Humans: Impact of Anxiety Chemosignal Communication on the Performance of Dental Students**
P.Bano Singh[1,3], Synnøve Lind[1], Alix Young[1], Marie C. Leegaard[1], Valentina Parma[2]
[1]Institute of Clinical Dentistry, Faculty of Dentistry, University of Oslo, Oslo, Norway, [2]International School for Advanced Studies (SISSA), Trieste, Italy, [3]Faculty of Health Sciences, Oslo and Akershus University College of Applied Sciences, Oslo, Norway

P241 131 **Cyclophosphamide-Induced Disruptions of Salt Taste**
Michael G Gomella, Benjamin C Jewkes, Evan T Lowry, Joy Benner, Eugene R Delay
University of Vermont, Burlington, VT, USA

P242 132 **Molecular Genetic Lineage Tracing of Taste Bud Cells in Adult Mice.**
Lauren Gross[1,2], Jennifer / K. Scott[1,2], David Castillo Azofeifa[1,2,3], Dany Gaillard[1,2], Linda / A. Barlow[1,2]
[1]Dept of Cell and Developmental Biology, University of Colorado School of Medicine, Aurora, CO, USA, [2]Rocky Mountain Taste and Smell Center, University of Colorado School of Medicine, Aurora, CO, USA, [3]Program in Craniofacial and Mesenchymal Biology and Department of Orofacial Sciences, University of California San Francisco, San Francisco, CA, USA

P243 133 **Light-Driven Responses from Putative Type I Taste Bud Cells Expressing Channelrhodopsin-2**
Grace Houser[1], Joseph Breza[2], Kalyan Balasubramanian[1], Joseph Travers[1], Susan Travers[1]
[1]The Ohio State University, Columbus, OH, USA, [2]Eastern Michigan University, Ypsilanti, MI, USA

P244 134 **Which Cell Detects Salty Taste in Fungiform Taste Buds?** **Don Tucker Award Finalist**
Jennifer K. Roebber[1], Stephen Roper[1,2], Nirupa Chaudhari[1,2]
[1]Program in Neurosciences, University of Miami Miller School of Medicine, Miami, FL, USA, [2]Department of Physiology and Biophysics, University of Miami Miller School of Medicine, Miami, FL, USA

P245 135 **The Taste of Blue Light**
Courtney E Wilson[1,2,3], Sue C Kinnamon[1,2,3]
[1]University of Colorado School of Medicine Neuroscience Graduate Program, Aurora, CO, USA, [2]University of Colorado School of Medicine Department of Otolaryngology, Aurora, CO, USA, [3]University of Colorado Rocky Mountain Taste and Smell Center, Aurora, CO, USA

P246 136 **SOX10-Cre Labeled Cells are Distributed in Mature Taste Buds in Mouse Tongue and Soft Palate**
Wenxin Yu, Guiqian Chen, Brett Marshall, Hongxiang Liu
University of Georgia, Athens, GA, USA

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FRIDAY, APRIL 28, 2017

CONTINENTAL BREAKFAST	
7:30 am - 9:00 am	**Estero Foyer**

FRIDAY, CONTINUED

POSTER SESSION III

8:00 am - 10:30 am **Estero Ballroom**

BRAINSTEM

P301 137 **Neuronal Responses to Sugars and Amino Acids in the Nucleus of the Solitary Tract of T1R1+T1R3 and T1R2+T1R3 Double-Knockout Mice**
Kalyanasundar Balasubramanian[1], Grace Houser[1], Ginger Blonde[2], Alan C Spector[2], Susan Travers[1]
[1]Ohio State University, Columbus, OH, USA, [2]Florida State University, Tallahassee, FL, USA

P302 138 **Chemosensory Integration in the Brainstem: Transfer of Taste and Retronasal Odor Information Between NTS and PbN in Awake-Behaving Rats**
Olga D Escanilla, Patricia M Di Lorenzo
Department of Psychology, Binghamton University, Binghamton, NY, USA

P303 139 **Postnatal Development of Dendrites in Hamster Rostral Nucleus of the Solitary Tract: a Quantitive Golgi Analysis**
Emily E. Perszyk, Haley R. Roland, Beverly N. Bowring, Robert E. Stewart
Washington and Lee University, Lexington, VA, USA

P304 140 **Optogenetic Stimulation of Gustatory Cortical Input onto the Nucleus of the Solitary Tract of the Rat Enhances Taste Information and Learning**
Joshua D Sammons[1], Caroline E Bass[2], Jonathan D Victor[3], Patricia M Di Lorenzo[1]
[1]Dept of Psychology, Binghamton University, Binghamton, NY, USA, [2]Dept of Pharmacology and Toxicology, University at Buffalo, SUNY, Buffalo, NY, USA, [3]Brain and Mind Research Institute, Weill Cornell Medical College, New York, NY, USA

P305 141 **Maintenance of Gustatory Terminal Field Organization in the NST at Adulthood is Dependent on BDNF**
Chengsan Sun, Shuqiu Zheng, David L Hill
Dept. of Psychology, University of Virginia, Charlottesville, VA, USA

COGNITION

P306 142 **Selective Attention Modulates Odor-Guided Behavior and Information Processing in the Olfactory Tubercle**
Kaitlin S. Carlson[1], Emma S. Dauster[1], Marie A. Gadziola[1], Daniel W. Wesson[1,2]
[1]Case Western Reserve University, Department of Neurosciences, Cleveland, OH, USA, [2]Case Western Reserve University, Department of Biology, Cleveland, OH, USA

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P307 143 **How Do People Quantify Flavors? Judging Flavor Qualities Versus Judging Flavor Stimuli**
Kelly A. Morrow[1], Yaohua Xie[1,2], Maria G. Veldhuizen[1,3], Lawrence E. Marks[1,2,4]
[1]John B. Pierce Laboratory, New Haven, CT, USA, [2]Department of Environmental Health Sciences, Yale School of Public Health, New Haven, CT, USA, [3]Department of Psychiatry, Yale University School of Medicine, New Haven, CT, USA, [4]Department of Psychology, Yale University, New Haven, CT, USA

P308 144 **Short- and Long-Term Habituation in Older and Younger Adults**
Philipp Nahrath, Charlotte Sinding
Smell & Taste Clinic Department of Otorhinolaryngology, TU Dresden, Dresden, Germany

P309 145 **The Effect of Trait Resilience on Olfactory Sensitivity and Cortisol Reactivity Under Acute Stress**
Katherine A. Pendergast, Jessica York, Kathleen Phelps, Irene N. Ozbek
University of Tennessee at Chattanooga, Chattanooga, TN, USA

P310 146 **Disease Detection: Volatile Biomarkers in Acute Inflammation**
Georgia Sarolidou[1], Bruce A. Kimball[2,3], Julie Lasselin[1,4,5], John Axelsson[1,5], Mats Lekander[1,5], Johan N. Lundström[1,2,6], Mats J. Olsson[1]
[1]Department of Clinical Neuroscience, Karolinska Institutet, Stockholm, Sweden, [2]Monell Chemical Senses Center, Philadelphia, PA, USA, [3]U.S Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services National Wildlife Research Center, Philadelphia, PA, USA, [4]Institute of Medical Psychology and Behavioral Immunology, Essen, Germany, [5]Stress Research Institute, Stockholm University, Stockholm, Sweden, [6]Department of Psychology, University of Pennsylvania, Philadelphia, PA, USA

P311 147 **Human Body Odor Identification is Affected by the Valence of the Contextual Information at Encoding and Retrieval**
Sandra C. Soares[1,2,3], Marta Rocha[1], Susana Campos[4], Laura Alho[4,5], Jacqueline Ferreira[4], Stephanie Macedo[4], Carlos Silva[1], Valentina Parma[6,7,8]
[1]CINTESIS.UA, Department of Education and Psychology, Aveiro, Portugal, [2]William James Research Center, ISPA, Lisbon, Portugal, [3]Department of Clinical Neuroscience, Section of Psychology, Karolinska Institute, Stockholm, Sweden, [4]Department of Education and Psychology, University of Aveiro, Aveiro, Portugal, [5]Lusófona University, Lisbon, Portugal, [6]SISSA, Trieste, Italy, [7]Monell Chemical Senses Center, Philadelphia, PA, USA, [8]Center for Autism Research, Philadelphia, PA, USA

P312 148 **Nostril-Specific Attentional Gain without Awareness**
Yuting Ye[1,2], Wen Zhou[1,2]
[1]Institute of Psychology, Key Laboratory of Behavioral Science, CAS Center for Excellence in Brain Science and Intelligence Technology, Chinese Academy of Sciences, Beijing, China, [2]University of Chinese Academy of Sciences, Beijing, China

FRIDAY

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CORTEX

P313 149 **Gray Matter Volume Comparison in Patients with Post-Infectious Olfactory Loss Before and After "Olfactory Training"**
Janine Gellrich[2], Cedric Manesse[1], Han Pengfei[1,2], Amelie Betz[1], Anne Junghans[1], Claudia Raue[3], Valentin/A Schriever[2], Thomas Hummel[1]
[1]Department of Orthorhinolaryngology TU Dresden, Dresden, Germany, [2]Department of Neuropediatrics TU Dresden, Dresden, Germany, [3]Department of Neuroradiology TU Dresden, Dresden, Germany

P314 150 **The Lateral Entorhinal Cortex Drives Feedforward Inhibition in the Basolateral Amygdala via Somatostatin Not Parvalbumin Interneurons**
Don Tucker Award Finalist
Ethan M. Guthman[1,2], Ming Ma[3], Diego Restrepo[1,3], Molly M. Huntsman[1,2,4]
[1]Neuroscience Graduate Program, University of Colorado Anschutz Medical Campus, Aurora, CO, USA, [2]Department of Pharmaceutical Sciences, University of Colorado Anschutz Medical Campus, Aurora, CO, USA, [3]Department of Cell and Developmental Biology, University of Colorado Anschutz Medical Campus, Aurora, CO, USA, [4]Department of Pediatrics, University of Colorado Anschutz Medical Campus, Aurora, CO, USA

P315 151 **Odor-Elicited Oscillations in Human Piriform Cortex**
Heidi Jiang[1], Stephan Schuele[1], Joshua Rosenow[1], Josef Parvizi[2], James Tao[3], Shasha Wu[3], Jay Gottfried[1]
[1]Northwestern University, Chicago, IL, USA, [2]Stanford University, Palo Alto, CA, USA, [3]University of Chicago, Chicago, IL, USA

P316 152 **Spiking Model of Expectation in Taste Processing**
Luca Mazzucato, Giancarlo La Camera, Alfredo Fontanini
Stony Brook University, Stony Brook, NY, USA

P317 153 **Population-Wide Odor Representations in Piriform Cortex are State-Dependent**
Stan L. Pashkovski, Sandeep R. Datta
Harvard Medical School, Boston, MA, USA

P318 154 **Characterization of Gustatory Cortex Callosal Projections**
Stephanie Staszko, Lianyi Lu, John Boughter, Max Fletcher
University of Tennessee Health Science Center, Department of Anatomy & Neurobiology, Memphis, TN, USA

P319 155 **Using Olfactory Habituation/Dishabituation Test as an Evaluation Method for the Developmentally and Genetically Abnormal Mice**
Chih-Yuan Wei, Chien-Fu F Chen
National Defense Medical Center, Taipei City, Taiwan

INFLAMMATION

P320 156 **Bitter Taste Receptor (TAS2R) Expression in Human Sinonasal Mucosa**
Catherine B. Anderson[1,2], Jennifer M. Kofonow[3], Pratima Agarwal[1], Mason M. Trieu[1,2], Eric D. Larson[1,2], Sue C. Kinnamon[1,2], Vijay R. Ramakrishnan[1,2]
[1]Department of Otolaryngology, University of Colorado School of Medicine, Aurora, CO, USA, [2]Rocky Mountain Taste and Smell Center, Aurora, CO, USA, [3]Division of Infectious Diseases, University of Colorado School of Medicine, Aurora, CO, USA

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P321 157 **Taste Loss in a Mouse Model of Induced Interferon-γ Expression**
Pu Feng, Masafumi Jyotaki, Jinghua Chai, Liquan Huang, Hong Wang
Monell Chemical Senses Center, Philadelphia, PA, USA

P322 158 **The Interleukin-6 Receptor IL-6R is Expressed in Taste Bud Derived Cell Lines**
Megen Kepas, Akila Ram, Timothy A. Gilbertson
Utah State University, Logan, UT, USA

P323 159 **The Smell of Sickness: How Inflammatory Signals and Metabolic Pathways Influence Body Odor**
Patrick Millet[1], Bruce Kimball[1,2], Gary Beauchamp[1]
[1]Monell Chemical Senses Center, Philadelphia, PA, USA, [2]USDA National Wildlife Research Center, Fort Collins, CO, USA

P324 160 **Multisensory Detection of Sickness**
Christina Regenbogen[1,2,3], John Axelsson[1,5], Julie Lasselin[1,4,5], Danja Porada[1], Tina Sundelin[1,5], Moa Peter[1], Mats Lekander[1,5], Johan Lundström[1,6,7], Mats J. Olsson[1]
[1]Karolinska Institutet, Stockholm, Sweden, [2]Aachen University, Aachen, Germany, [3]JARA - BRAIN Institute, Jülich, Sweden, [4]Universitätsklinikum, Essen, Germany, [5]Stress Research Institute, Stockholm, Sweden, [6]Monell Chemical Senses Center, Philadelphia, PA, USA, [7]University of Pennsylvania, Philadelphia, PA, USA

P325 161 **Innate Immune Response in the Olfactory Epithelium Triggered by Vesicular Stomatitis Virus**
Ashley/D Winters, Huaiyang Chen, Tatz Ishimaru, Qizhi Gong
University of California School of Medicine, Davis, CA, USA

OBESITY

P326 162 **Plasma Sucralose Concentrations in Subjects with Obesity and Normal-weight Individuals**
M. Belen Acevedo[1], Allison Sylvetsky[2,3], Peter J. Walter[2], Samuel Klein[4], Kristina I. Rother[2], M. Yanina Pepino[1]
[1]University of Illinois at Urbana- Champaign, Urbana, IL, USA, [2]The George Washington University, Washington, DC, USA, [3]National Institutes of Health, Bethesda, MD, USA, [4]Washington University School of Medicine, St. Louis, MO, USA

PD3 163 **Obesity is Associated with Altered Gene Expression in Human Tastebuds**
Nicholas Archer[1], Jan Shaw[2], Maeva Broch[1], Rowan Bunch[3], Astrid Poelman[1], William Barendse[3], Konsta Duesing[2]
[1]CSIRO Agriculture and Food, Sydney, Australia, [2]CSIRO Health and Biosecurity, Sydney, Australia, [3]CSIRO Agriculture and Food, Brisbane, Australia

P327 164 **Voluntary Exercise Modifies Glomerular Projections in Control- and Fat-Fed Mice**
Brandon M Chelette[1,2], Kassandra L Ferguson[1], Daniel Gonzalez[1], Abigail M Thomas[1], Margaret K Vinson[1], Dr. Debra A Fadool[1,2,3]
[1]The Florida State University Department of Biological Science, Tallahassee, FL, USA, [2]Program in Neuroscience, Tallahassee, FL, USA, [3]Institute of Molecular Biophysics, Tallahassee, FL, USA

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P328 165 **Estradiol Mediates Fat Intake**
Naima S. Dahir, Timothy A. Gilbertson
Utah State University, Logan, UT, USA

P329 166 **Chemosensory Function and Diet Quality from Pre to 6-Months Post-Bariatric Surgery: A Pilot Study**
Valerie B Duffy[1], Andrea Stone[2], Darren Tishler[2], Pavlos K Papasavas[2]
[1]Allied Health Sciences, University of Connecticut, Storrs, CT, USA, [2]Department of Surgery, Hartford Hospital, Hartford, CT, USA

P330 167 **Loss of Odor-Induced c-fos Expression of Periglomerular Activity Following Maintenance of Mice on Modified Fatty Diets**
Erminia Fardone[1,2], Arda B. Celan[1], Nicholas A. Schrieter[1], Melissa Cooper[1], Debra A. Fadool[1,2,3]
[1]Department of Biological Science, Tallahassee, FL, USA, [2]Program in Neuroscience, Tallahassee, FL, USA, [3]Institute of Molecular Biophysics, Tallahassee, FL, USA

P331 168 **Taste Responses in the Nucleus of the Solitary Tract in the Awake Diet-Induced Obese and Lean Rats**
Michael Weiss[1], Krzysztof Czaja[2], Andras Hajnal[3], Patricia Di Lorenzo[1]
[1]Dept. of Psychology, Binghamton Univ., Binghamton, NY, USA, [2]Dept. of Veterinary Biosciences & Diagnostic Imaging, Univ. of Georgia Athens, Athens, GA, USA, [3]Dept. of Neural and Behavioral Sciences, The Pennsylvania State University, College of Medicine, Hershey, PA, USA

OLFACTORY BULB

P332 169 **Perception and Encoding of Temporally Patterned Odor Stimuli in the Mouse Olfactory Bulb**
Tobias Ackels[1], Andrew Erskine[1,2], Debanjan Dasgupta[1], Izumi Fukunaga[1], Andreas T. Schaefer[1,2]
[1]Neurophysiology of Behaviour Lab, The Francis Crick Institute, London, United Kingdom, [2]Dept. of Neuroscience, Physiology and Pharmacology, University College London, London, United Kingdom

P333 170 **Arc-Expressing Accessory Olfactory Bulb Internal Granule Cells Increase their Excitability through Intrinsic Mechanisms Following Intermale Aggression**
Hillary L. Cansler, Marina A. Maksimova, Julian P. Meeks
University of Texas Southwestern Medical Center, Dallas, TX, USA
Don Tucker Award Finalist

P334 171 **Anterior Olfactory Nucleus and Piriform Cortex Feedback Differentially Modulate Olfactory Bulb Output Neurons**
Honggoo Chae, Gonzalo H. Otazu, Dinu F. Albeanu
Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, USA

P335 172 **Sensory Representations in the Accessory Olfactory Bulb During Social Interactions**
Yuan Gao, Ian Davison
Dept. of Biology, Boston University, Boston, MA, USA

P336 173 **Development of Olfactory Bulb Cell-Specific Cilia Knockout Mouse Models**
Jeremy C McIntyre[1,2], Natalie D Green[1,2], Alexander Parker[1,2]
[1]University of Florida, Department of Neuroscience, Gainesville, FL, USA, [2]University of Florida Center for Smell and Taste, Gainesville, FL, USA

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P337 174 **Olfactory Adaptation is Dependent on Route of Delivery**
Alex/M Pierce, Christopher/T Simons
Ohio State University, Columbus, OH, USA

P338 175 **The Olfactory Bulb Contributes to the Concentration Invariance of Odor Perception: The Input-Output Transformation**
Douglas A Storace[1], Lawrence B Cohen[1,2]
[1]Yale University, New Haven, CT, South Korea, [2]Korea Institute of Science and Technology, Seoul, Korea

P339 176 **Infraslow Oscillations in the Mouse Accessory Olfactory Bulb**
Chryssanthi Tsitoura, Julia Mohrhardt, Kira Gerhold, Monika Gorin, Sebastian Malinowski, Katja Watznauer, Marc Spehr
Don Tucker Award Finalist
RWTH Aachen University, Institute of Biology II, Dept. of Chemosensation, Aachen, Germany

SOCIAL BEHAVIOR

P340 177 **Effects of Beer and Marijuana Scent Administration on Pain Threshold and Tolerance: For Typical "Users" the Scent May be Enough for Pain Modulation**
Andrea Bova, Andrew Groves, Michael Seals, Bryan Raudenbush, Roger Moses
Wheeling Jesuit University, Wheeling, WV, USA

P341 178 **You Smell So Good! Biology Overrules Familiarity in Women, but Not in Men**
Ilona Croy, Diana Pietrowski, Jana Kroemer, Agnieszka Sorokowska, Thomas Hummel
Technische Universität Dresde, Dresden, Germany

P342 179 **Effects of Video Game Player Avatar Size on Body Image Satisfaction/ Dissatisfaction and Subsequent Food/Nutritional Choices in a Cafeteria Setting**
Patrick Dwyer, Bryan Raudenbush
Wheeling Jesuit University, Wheeling, WV, USA

P343 180 **Effects of Jasmine Scent Administration on Increasing Community Service Participation Attitudes**
Megan Randolph, Cydney Comfort, Sloane Glover, Albert Schrimp, Bryan Raudenbush, Sabrina Soriano, Erin Unterbrink
Wheeling Jesuit University, Wheeling, WV, USA

P344 181 **Effects of Peppermint Flavor and Scent Administration on Augmenting Rugby Play Performance: The Use of a Peppermint Flavored Mouthguard During Play**
Bryan Raudenbush, Juan Pablo Troconis Bello
AChemS Undergrad Award Finalist
Wheeling Jesuit University, Wheeling, WV, USA

P345 182 **Effects of L-Tryptophan Consumption on Racial Attitudes and Acceptance**
Juan Pablo Troconis Bello, Nicholas Cochran, Cody Leonard, Jessica Pontis, Megan Randolph, Bryan Raudenbush
AChemS Undergrad Award Finalist
Wheeling Jesuit University, Wheeling, WV, USA

P346 183 **Subliminal Chemosensory Cues Modulate Emotional Perception of Biological Motion in a Gender-Specific Manner**
Yuting Ye[1,2], Monique Smeets[3,4], Wen Zhou[1,2]
[1]Institute of Psychology, Key Laboratory of Behavioral Science, CAS Center for Excellence in Brain Science and Intelligence Technology, Chinese Academy of Sciences, Beijing, China, [2]University of Chinese Academy of Sciences, Beijing, China, [3]Unilever R&D, Vlaardingen, Netherlands, [4]Department of Psychology, Utrecht University, Utrecht, Netherlands

FRIDAY, CONTINUED

COFFEE BREAK	
9:00 am - 10:30 am	**Estero Foyer**

SYMPOSIUM	
10:30 am - 12:10 pm	**Calusa F-H**
Chemosensory Thalamus	

Chairs: Emmanuelle Courtiol and Alfredo Fontanini

10:30 184 **Introduction**
Emmanuelle Courtiol[1,2], Alfredo Fontanini[3]
[1]Nathan Kline Institute for Psychiatric Research, Orangeburg, NY, USA, [2]New York University Langone Medical Center, New York, NY, USA, [3]Stony Brook University, Stony Brook, NY, USA

10:40 185 **General Functions of the Thalamus: Examples from the Visual Thalamus**
Jon H. Kaas
Department of Psychology, Vanderbilt University, Nashville, TN, USA

11:05 186 **Role of Limbic and Sensory Thalamic Nuclei in Taste Processing**
Roberto Vincis, Alfredo Fontanini
SUNY at Stony Brook, Stony Brook, NY, USA

11:20 187 **Connectivity Between Insular Cortex and Thalamus in Humans and Taste Intensity**
Tazuko K. Goto
Tokyo Dental College, Tokyo, Japan

11:45 188 **Thalamic Contribution to Odor-Guided Behavior in Rats**
Emmanuelle Courtiol[1,2], Donald A. Wilson[1,2]
[1]Nathan Kline Institute for Psychiatric Research, Orangeburg, NY, USA, [2]Department of Child and Adolescent Psychiatry New York University Langone Medical Center, New York, NY, USA

FRIDAY, CONTINUED

SYMPOSIUM

10:30 am - 12:10 pm **Calusa A-C**

The Role of Multimodal Sensory Integration in Shaping Behavior Across Diverse Animal Taxa

Chair: Neil Vickers

10:30 **Introduction**
189 Neil J. Vickers
University of Utah, Salt Lake City, UT, USA

10:40 **A Microcircuit for Controlling Sensory Valence in Caenorhabditis Elegans**
190 Manon L. Guillermin, Mayra A. Carrillo, Elissa A. Hallem
University of California, Los Angeles, Los Angeles, CA, USA

11:00 **Evolution of Pheromone Processing Pathways in Drosophila**
191 Laura Seeholzer, Max Seppo, Vanessa Ruta
The Rockefeller University, New York, NY, USA

11:20 **Multisensory Integration in the Fruit Fly: Olfactory Modulation of Motion Vision**
192 Sara M. Wasserman
Wellesley College, Wellesley, MA, USA

11:45 **Internal vs External Chemosensation: The Specific Interaction of Taste and Retronasal Olfaction**
193 Donald Katz[1], Meredith Blankenship[1], Joost Maier[2]
[1]Brandeis University, Waltham, MA, USA, [2]Wake Forest University, Winston-Salem, NC, USA

MEETING

12:50 pm - 1:50 pm **Calusa A-D**

AChemS Business Meeting

Get involved! Join us for reports from the society leadership on the state of the association All members are welcome and encouraged to attend.

SYMPOSIUM

2:00 pm - 4:00 pm **Calusa A-D**

Public Health & Industry Symposium

Chairs: Chris Simons and Paul Breslin

2:00 **Creation of an Interdisciplinary Sugar Reduction Working Group**
194 Paul Breslin[1,2], Nancy Rawson[2], Christopher Simons[3]
[1]Rutgers University, New Brunswick, NJ, USA, [2]Monell Chemical Senses Center, Philadelphia, PA, USA, [3]Ohio State University, Columbus, OH, USA

FRIDAY, CONTINUED

AWARD LECTURES

7:00 pm - 9:00 pm **Calusa A-D**

Polak Award Presentations

Chair: John Boughter

7:00 195 **Odor Detection and Discrimination by Newborn Olfactory Sensory Neurons in Vivo**
Claire E Cheetham, Ryan Muggleton, Sajishnu Savya, Beichen Liu
Dept. of Biological Sciences, Carnegie Mellon University, Pittsburgh, PA, USA

7:20 196 **Effect of Induced Airflow on Odor Plume Transportation in a Fruit Fly in Forward Flight**
Chengyu Li[1], Haibo Dong[2], Kai Zhao[1]
[1]The Ohio State University, Columbus, OH, USA, [2]University of Virginia, Charlottesville, VA, USA

7:40 197 **Somatosensory Characteristics of Receptive Fields of Rat Chorda Tympani Nerve/Geniculate Ganglion Soma**
Yusuke Yokota, Archana Kumari, Charlotte M. Mistretta, Robert M. Bradley
University of Michigan, Ann Arbor, MI, USA

8:00 198 **A Novel Boar Pheromone Mixture Induces Estrus Behaviors and Improves Reproductive Success**
Sankarganesh Devaraj[1], Garrett W. Thompson[2], John J. McGlone[1]
[1]Laboratory of Animal Behavior, Physiology and Welfare, Texas Tech University, Lubbock, TX, USA, [2]Research and Development, Animal Biotech, Dallas, TX, USA

8:20 199 **Type II Taste Bud M Cells May Function in Oral Immune Surveillance**
Yumei Qin[1,2], Sunil Sukumaran[1], Kevin Redding[1], Robert Margolskee[1]
[1]Monell Chemical Seses Center, Philadelphia, PA, USA, [2]Zhejiang Gonshang University, School of Food Science and Biotechnology, Hangzhou, China

8:40 200 **Inhibition of Sweet Chemosensory Receptors Alters Glycemic and Insulin Responses During Glucose Ingestion in Healthy Adults: A Randomized Crossover Interventional Study**
Elnaz Karimian Azari[1], Kathleen R. Smith[1], Fanchao Yi[2], Timothy F. Osborne[1], Roberto Bizzotto[3], Andrea Mari[3], Richard E. Pratley[1,2], George A. Kyriazis[1,2]
[1]Center for Metabolic Origins of Disease, Sanford Burnham Prebys Medical Discovery Institute, Orlando, FL, USA, [2]Translational Research Institute for Metabolism and Diabetes, Florida Hospital, Orlando, FL, USA, [3]Institute of Neuroscience, National Research Council, Padova, Italy

FRIDAY, CONTINUED

POSTER SESSION IV

9:00 pm - 11:00 pm **Estero Ballroom**

AGING

P401 201 **Diabetes and Olfaction: Evidence from the National Health and Nutrition Examination Survey, 2011-2014**
Kathleen Bainbridge[1], Donald Leopold[2], Danita Byrd-Clark[3], Chuan-Ming Li[1], Catherine Cowie[4]
[1]National Institute on Deafness and Other Communication Disorders, Bethesda, MD, USA, [2]Department of Surgery, University of Vermont Medical Center, Burlington, VT, USA, [3]Social & Scientific Systems, Silver Spring, MD, USA, [4]National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, MD, USA

P402 202 **Olfaction, Health and Cognitive Decline**
Pamela Dalton[1], Cristina Jaen[1], Carolyn Novaleski[1], R.Scott Mackin[2,3], Michael Weiner[2,3]
[1]Monell Chemical Senses Center, Philadelphia, PA, USA, [2]University of California-San Francisco, San Francisco, CA, USA, [3]San Francisco Veterans Affairs Medical Center, San Francisco, CA, USA

P403 203 **Reconstitution of the Odorant Receptor Map in the Olfactory Bulb of Aged Mice**
Ashley Iannantone, Anisa Hussain, Shelly Shibu, Paulina Lis, Jessica Brann
Department of Biology, Loyola University Chicago, Chicago, IL, USA

P404 204 **In Vivo Visualization of Odor-Evoked Olfactory Sensory Neuron Neurotransmitter Release in Aging Mice**
Marley D. Kass, Lindsey A. Czarnecki, John P. McGann
Rutgers, The State University of New Jersey, Piscataway, NJ, USA

P405 205 **Olfaction and Sexuality in Older Adults in the USA**
Sunny Y Kung[1], Kristen E. Wroblewski[2], Martha K. McClintock[3,4], David W. Kern[5], Jayant M. Pinto[6]
[1]Pritzker School of Medicine, The University of Chicago, Chicago, IL, USA, [2]Department of Public Health Sciences, The University of Chicago, Chicago, IL, USA, [3]Center on Demography and Aging, The University of Chicago, Chicago, IL, USA, [4]Department of Comparative Human Development, The University of Chicago, Chicago, IL, USA, [5]Department of Psychology, Northeastern Illinois University, Chicago, IL, USA, [6]Section of Otolaryngology, Department of Surgery, The University of Chicago, Chicago, IL, USA

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P406 206 **A Large-Scale Study of Dysosmia in the French Population: Prevalence as a Function of Age and Effects on Food Behavior.**
C Manesse[1], M Sabri[2], C Ferdenzi[1], M Bessy[1], A Fournel[1], F Faure[3], D Bellil[4], S Jomain[4], BN Landis[5], M Hugentobler[5], F Rinck[6], E Petit[7], A Giboreau[7], C Rouby[1], M Bensafi[1]
[1]CNRS UMR5292, INSERM U1028, Lyon Neuroscience Research Center, Lyon, France, [2]Département Informatique, Université des Sciences, Usto, Oran, Algeria, [3]Hospices Civils de Lyon, Lyon, France, [4]Hôpital Nord-Ouest VilleFranche, Villefranche, France, [5]Hôpitaux Universitaires de Genève, Geneve, Switzerland, [6]University of Grenoble, Lidilem Laboratory, Grenoble, France, [7]Research Center of Institut Paul Bocuse, Ecully, France

P407 207 **Investigating Eole of Noradrenaline in Olfactory Discrimination During Aging**
Claire Terrier, Xuming Yin, Maëllie Midroit, Jérémy Forest, Joëlle Sacquet, Marc Thevenet, Nathalie Mandairon, Anne Didier, Marion Richard
Université Claude Bernard Lyon1, Lyon, France

AIRWAY

P408 208 **Computational and Trigeminal Examinations of Empty Nose Syndrome**
Chengyu Li, Alexander A. Farag, James Leach, Bhakthi Deshpande, Adam Jacobowitz, Kanghyun Kim, Bradley A. Otto, Kai Zhao
The Ohio State University, Columbus, OH, USA

P409 209 **Distinguishing Perceived Sensory Irritation versus Tissue Irritation in the Aerodigestive Tract during Propylene Glycol Exposure**
Carolyn Novaleski, Brianna Soreth, Christopher Mauté, Pamela Dalton
Monell Chemical Senses Center, Philadelphia, PA, USA

P410 210 **The Role of Taste and Olfaction in the Sweetness of E-Cigarette Flavors**
Kathryn Rosbrook[1], Barry Green[1,2]
[1]John B. Pierce Laboratory, New Haven, CT, USA, [2]Yale School of Medicine, New Haven, CT, USA

P411 211 **Intermittent Stimulation of the Trigeminal Nerve Increases Trigeminal Sensitivity**
Timo Schultheiss[1], Anna Oleszkiewicz [1,2], Valentin Schriever[1], Antje Hähner[1], Thomas Hummel[1]
[1]Smell & Taste Clinic, Department of Otorhinolaryngology, TU Dresden, Dresden, Germany, [2]University of Wroclaw, Wroclaw, Poland

P412 212 **Evaluation of Respiratory and Ocular Irritation from Propylene Glycol in Healthy Humans**
Brianna Soreth, Christopher Maute, Carolyn Novaleski, Cristina Jaen, Pamela Dalton
Monell Chemcial Senses Center, Philadelphia, PA, USA

P413 213 **The Effect of Added Flavorants on the Taste and Pleasantness of Mixtures of Glycerol and Propylene Glycol**
Paul M Wise[1], Pradnya Rao[1], Husile Nanding[1], Andrew A Strasser[2]
[1]Monell Chemical Senses Center, Philadelphia, PA, USA, [2]University of Pennsylvania, Deparment of Psychiatry, Perelman School of Medicine, Philadelphia, PA, USA

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P414 214 **Nasal Airflow Vortex Resulted in Better Olfactory Sensitivity Among Healthy Controls**
Kai Zhao[1], Chengyu Li[1], Kanghyun Kim[1], Jianbo Jiang[2], Beverly J. Cowart[2,3], Edmund A. Pribitkin[2,3], Pamela Dalton[2]
[1]The Ohio State University, Department of Otolaryngology, Columbus, OH, USA, [2]Monell Chemical Senses Center, Philadelphia, PA, USA, [3]Thomas Jefferson University, Department of Otolaryngology, Philadelphia, PA, USA

DEVELOPMENT

P415 215 **The GDNF/Ret Signaling Pathway is Critical for Chemosensory Cell Fate Determination of Geniculate Ganglion Neurons**
Christopher Donnelly, Amol Shah, Alan Halim, Charlotte Mistretta, Robert Bradley, Brian Pierchala
Biologic and Materials Sciences, University of Michigan, Ann Arbor, MI, USA

P416 216 **Ephrin-A/EphA Signaling During Gustatory and Somatosensory Innervation of Fungiform Papillae**
Jason S Hwang[1], Kajol Doshi[1], Randall W Treffy[2], Marissa Pilon[1], M William Rochlin[1]
[1]Loyola U. Chicago, Chicago, IL, USA, [2]University of Illinois Chicago, Chicago, IL, USA

P417 217 **SOX10-Cre Labeled Neural Crest Derived Cells are Absent in Taste Buds of Zebrafish**
Brett Marshall[1], Rebecca Ball[2], James Lauderdale[2], Robert Kelsh[3], Hongxiang Liu[1]
[1]Department of Animal and Dairy Science, University of Georgia, Athens, GA, USA, [2]Department of Cellular Biology, University of Georgia, Athens, GA, USA, [3]Department of Biology and Biochemistry, University of Bath, Bath, United Kingdom

P418 218 **Learning to Like Vegetables During Breastfeeding: A Randomized Clinical Trial of Lactating Mothers and Infants**
Julie A. Mennella, Loran M. Daniels, Ashley R. Reiter
Monell Chemical Senses Center, Philadelphia, PA, USA

P419 219 **Differentiation of Sour Taste Cells**
Makoto Ohmoto[1], François Guillemot[2], Ichiro Matsumoto[1]
[1]Monell Chemical Senses Center, Philadelphia, PA, USA, [2]MRC-National Institute of Medical Research, Mill Hill, United Kingdom

P420 220 **Microglia Response at Various Time Points Following Chorda Tympani Transection in Neonatal Rats**
Andrew J. Riquier, Suzanne I. Sollars
University of Nebraska at Omaha, Omaha, NE, USA

LEARNING AND MEMORY

P421 221 **Olfactory Preferences are Just a Matter of Taste: Retronasal Learning Requires Taste Cortex**
Meredith L Blankenship[2], Maria Grigorova[1], Donald B Katz[123], Joost X Maier[4]
[1]Psychology Department, Brandeis University, Waltham, MA, USA, [2]Biology Department, Brandeis University, Waltham, MA, USA, [3]Volen Center for Complex Systems, Brandeis University, Waltham, MA, USA, [4]Department of Neurobiology & Anatomy, Wake Forest School of Medicine, Winston-Salem, NC, USA

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P422 222 **Innocuous Taste Experience Enhances Aversion Learning and Alters Neural Activation in the Gustatory Cortex**
Veronica Flores, David Levitan, Tamar Parmet, Donald Katz
Brandeis University, MA, MA,

P423 223 **Taste Coding in the Hippocampus**
Linnea E. Herzog, Elon R. Mathieson, Shantanu P. Jadhav, Donald B. Katz
Brandeis University, Waltham, MA, USA

P424 224 **Dopaminergic Circuits Modulate Olfactory Coding in Memory-Encoding Brain Structures via Cyclic-AMP-Dependent Plasticity**
Thierry Louis, Tamara Boto, Seth M. Tomchik
The Scripps Research Institute, Jupiter, FL, USA

P425 225 **Sustained Mouth-Watering in Response to Visual Sour Candy Cue**
Cordelia Running[1,2]
[1]Purdue University Nutrition Science Department, West Lafayette, IN, USA, [2]Purdue University Food Science Department, West Lafayette, IN, USA

P426 226 **Influence of Peppermint Oil Ambient Odor on Task Performance and Saliva Cortisole in School-Children**
Vera Voznessenskaya[1], Alexander Minor[1], Tatiana Laktionova[1], Maria Klyuchnikova[1], Marina Kochevalina[2,1], Ilya Kvasha[1], Elena Rodionova[2,1]
[1]A.N.Severtsov Institute of Ecology & Evolution, Moscow, Russia, [2]Kharkevich Institute for Information Transmission, Moscow, Russia

PERIPHERAL NERVOUS SYSTEM

P427 227 **Psychophysically Assessed Taste Sensitivity to a Mixture of Monosodium Glutamate and Inosine-5'-monophosphate in T1R1+T1R3 Double Knockout, C57BL/6J, and 129X1/SvJ Mice**
Ginger D. Blonde[1], Susan P. Travers[2], Alan C. Spector[1]
[1]Dept. of Psychology and Program in Neuroscience, Florida State University, Tallahassee, FL, USA, [2]Division of Biosciences, College of Dentistry, Ohio State University, Columbus, OH, USA

P428 228 **Correlation of Electrical Activity and Calcium Signals in Mouse Vomeronasal Sensory Neurons**
Rudolf Degen, Marc Spehr
RWTH Aachen University, Institute for Biology II, Department of Chemosensation, Aachen, Germany

P429 229 **Transcription Factors to Define Taste Versus Somatosensory Neurons of the Geniculate Ganglion**
Gennady Dvoryanchikov[1], Damian Hernandez[1], Chengsan Sun[3], David L. Hill[3], Nirupa Chaudhari[1,2]
[1]University of Miami Miller School of Medicine, Miami, FL, USA, [2]Program in Neurosciences, University of Miami Miller School of Medicine, Miami, FL, USA, [3]University of Virginia, Charlottesville, VA, USA

P430 230 **Synergistic Effects of ATP and Serotonin on Gustatory Afferents**
Eric D Larson[1,2], Sue C Kinnamon[1,2]
[1]Department of Otolaryngology, University of Colorado School of Medicine, Aurora, CO, USA, [2]Rocky Mountain Taste and Smell Center, Aurora, CO, USA

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P431 231 **Role of BDNF-TrkB Signaling in Taste Function**
Jennifer Rios-Pilier, A. Victoria Clements, Robin F Krimm
University of Louisville, Louisville, KY, USA

P432 232 **Release of ATP from Type II Taste Cells is not Necessary for the Transmission of Sour and Salty Taste Information to Afferent Fibers**
Aurelie Vandenbeuch, Catherine B Anderson, Kyndal A Davis, Sue C Kinnamon
Department of Otolaryngology, University of Colorado, School of Medicine, Aurora, CO, USA

PHEROMONES

P433 233 **Fecal Bile Acids are Potent Activators of the Accessory Olfactory System**
Don Tucker Award Finalist
Wayne Doyle[1], Jordan Dinser[2], Hillary Cansler[1], Xingjian Zhang[2], Daniel Dinh[1], Natasha Browder[1], Ian Riddington[2], Julian Meeks[1]
[1]University of Texas Southwestern, Dallas, TX, USA, [2]University of Texas at Austin, Austin, TX, USA

P434 234 **Wine Discrimination in Early-Blind Individuals**
Don Tucker Award Finalist
Simona Manescu[1], Jordi Ballester[2], Hervé Abdi[3], Dominique Valentin[2], Franco Lepore[1], Johannes Frasnelli[1,4,5]
[1]Université de Montréal, Montreal, QC, Canada, [2]Université de Bourgogne, Dijon, France, [3]University of Texas at Dallas, Richardson, TX, USA, [4]Université de-Trois-Rivieres, Montreal, QC, Canada, [5]CIUSSS Nord-de-l'Ile, Montreal, QC, Canada

P435 235 **Juvenile Mouse Pheromone ESP22 Suppresses Sexual Behaviors in Virgin Female Mice through a Specific Vomeronasal Receptor**
Takuya Osakada[1,2], Hiromi Mori[1,2], Kentaro Ishii[1,2], Yoshihiro Yoshihara[2,3], Kazunari Miyamichi[1,2], Kazushige Touhara[1,2]
[1]Department of Applied Biological Chemistry, Graduate School of Agricultural and Life Sciences, The University of Tokyo, Tokyo, Japan, [2]ERATO Touhara Chemosensory Signal Project, JST, Tokyo, Japan, [3]RIKEN Brain Science Institute, Saitama, Japan

P436 236 **Functional Properties of Inhibitory Olfactory Projection Neurons in the Moth Antennal Lobe**
Neil J. Vickers[1], Christine Fogarty-Celestino[1], Seong-Gyu Lee[1], Christoph Kleineidam[2], Jeffrey Stagg[1]
[1]University of Utah, Salt Lake City, UT, USA, [2]University of Konstanz, Konstanz, Germany

P437 237 **Chemosensory Tuning Properties of Accessory Olfactory Bulb External Granule Cells**
Xingjian Zhang, Marina Maksimova, Julian Meeks
UT Southwestern Medical Center, Dallas, TX, USA

FRIDAY

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STEM CELLS

P438 238 **Regulation of Wnt/β-catenin Signaling Following Head And Neck Irradiation In Mouse Circumvallate Papilla**
Dany Gaillard[1], Sarah E Millar[2], Linda A Barlow[1]
[1]Department of Cell & Developmental Biology, School of Medicine, and the Rocky Mountain Taste & Smell Center, University of Colorado Anschutz Medical Campus, Aurora, CO, USA, [2]Departments of Dermatology and Cell & Developmental Biology, University of Pennsylvania School of Medicine, Philadelphia, PA, USA

P439 239 **Sucrose Detection Threshold is Disrupted after Radiation Treatment**
Benjamin C. Jewkes[1], Linda A. Barlow[2], Eugene R. Delay[1]
[1]University of Vermont, Burlington, VT, USA, [2]University of Colorado, Anschutz Medical Campus, Aurora, CO, USA

P440 240 **Co-Localization of Basal and Proliferative Cells in the Olfactory Epithelium After Cyclophosphamide Injury**
Kyle Joseph, Nora Awadallah, Eugene Delay, Rona Delay
University of Vermont, Burlington, VT, USA

P441 241 **The Impact of Chemical Exposure on Main Olfactory Epithelium and Bulb Structure in Mice Lacking TRPM5-expressing Microvillous Cells**
Kayla S. Lemons, Weihong Lin
University of Maryland Baltimore County, Baltimore, MD, USA

P442 242 **Notch-independent RBPJ Function is Required for Maturation of Olfactory Sensory Neurons But Not After Injury**
Brian Lin, Daniel B Herrick, James E Schwob
Tufts University, Sackler School, Department of Developmental, Molecular, Chemical Biology, Boston, MA, USA

P443 243 **Transcriptome Analyses of Taste Organoids Reveal Multiple Pathways Involved in Taste Cell Generation**
Wenwen Ren[1], Eitaro Aihara[2], Weiwei Lei[1], Nishi Gheewala[1], Hironobu Uchiyama[3], Robert Margolskee[1], Ken Iwatsuki[3], Peihua Jiang[1]
[1]Monell Chemical Senses Center, Philadelphia, PA, USA, [2]University of Cincinnati, Cincinnati, OH, USA, [3]Tokyo University of Agriculture, Tokyo, Japan

P444 244 **Effects of Cyclophosphamide and Amifostine on the Taste Cell Replacement Cycle**
Sarah H. Socia, Jessica L. Girardin, John H. King, Eugene R. Delay
University of Vermont, Burlington, VT, USA

P445 245 **A Potential Mechanism Involved in the Sculpting of Gustatory Circuits in the Developing Mouse NST – The Classical Complement Cascade**
Shuqiu Zheng, Chengsan Sun, David Hill
University of Virginia, Charlottesville, VA, USA

FRIDAY

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SATURDAY, APRIL 29, 2017

CONTINENTAL BREAKFAST	
7:30 am - 9:00 am	**Estero Foyer**

SATURDAY, CONTINUED

POSTER SESSION V

8:00 am - 10:30 am **Estero Ballroom**

CORTEX

P501 246 **Representational Similarity Analysis of Visual-Olfactory Reward Cues in the Olfactory Cortical Hierarchy**
Sarah K. Baisley[1], Thomas C. Arnold[1], Jaryd Hiser[2], Lucas R. Novak[1], Takuya Sato[3], Wen Li[1]
[1]Department of Psychology, Florida State University, Tallahassee, FL, USA, [2]Department of Psychology, University of Wisconsin-Madison, Madison, WI, USA, [3]Kikkoman Singapore R&D Laboratory PTE LTD, Singapore, Singapore

P502 247 **Experience Dependent Amygdalo-Cortical Plasticity in L2/3 of Rat Gustatory Cortex.**
Melissa S Haley[1], Alfredo Fontanini[1,2], Arianna Maffei[1,2]
[1]Dept. of Neurobiology and Behavior, Stony Brook University, Stony Brook, NY, USA, [2]Program in Neuroscience, Stony Brook University, Stony Brook, NY, USA

P503 248 **Distribution of Neurons in the Gustatory Cortex Activated by Intra-Oral Infusion of Different Concentrations of NaCl and Sucrose in Conscious Rats**
Michael S. King, Glynn E. Baron, Kelsey L. McCurdy, Whitney M. Meyers
Stetson University, DeLand, FL, USA

P504 249 **Inhibitory Circuitry Underlying Context-Dependent Rostrocaudal Asymmetry in Cortical Neural Activity**
Anne-Marie Oswald, Adam Large, Paul Schick
Dept. Neuroscience, University of Pittsburgh, Pittsburgh, PA, USA

P505 250 **Transient Optical Inactivation of Piriform Cortex Inputs to the Olfactory Bulb Affect Perceptual Behavioral Strategies**
Shane T. Peace[1], Leslie M. Kay[1,2]
[1]Institute for Mind and Biology, University of Chicago, Chicago, IL, USA, [2]Department of Psychology, University of Chicago, Chicago, IL, USA

P506 251 **Feedback Projections from the Anterior Olfactory Nucleus Modulate Olfactory Bulb Output**
Lutz Wallhorn, Renata Medinaceli, Markus Rothermel
Department of Chemosensation, Institute for Biology II, RWTH Aachen University, Aachen, Germany

P507 252 **The Involvement of Primary Olfactory Cortex in Early-Stage Parkinson's Disease**
Jianli Wang[1], Thyagarajan Subramanian[2,3], Qing Yang[1,4]
[1]Department of Radiology, Pennsylvania State University College of Medicine, Hershey, PA, USA, [2]Department of Neurology, Pennsylvania State University College of Medicine, Hershey, PA, USA, [3]Department of Neural & Behavioral Sciences, Pennsylvania State University College of Medicine, Hershey, PA, USA, [4]Department of Neurosurgery, Pennsylvania State University College of Medicine, Hershey, PA, USA

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DISCRIMINATION

P508 253 **Pre-Exposure to Water Can Alter the Taste of NaCl at the Tongue Tip**
Kendra Andrew[1], Barry Green[1,2]
[1]The John B. Pierce Laboratory, New Haven, CT, USA, [2]Yale School of Medicine, New Haven, CT, USA

P509 254 **Change of Olfactory Function at the Level of the Olfactory Epithelium Before and After Combining an Odorant with an Electrical Stimulus**
Annachiara Cavazzana[1,2], Sophia Poletti[1], Cagdas Guducu[3], Maria Larsson[2], Thomas Hummel[1]
[1]University of Dresden Medical School, Dresden, Germany, [2]Stockholm University, Stockholm, Sweden, [3]Dokuz Eylul University, Izmir, Turkey

PD4 255 **Predicting Suprathreshold Odor Intensity from Molecular Structure**
Yusuke Ihara[1,2], Lindsey L Snyder[1], Jonathan Magill[1], Joel D Mainland[1,3]
[1]Monell Chemical Senses Center, Philadelphia, PA, USA, [2]Institute for Innovation, Ajinomoto Co., Inc., Kawasaki, Japan, [3]University of Pennsylvania, Philadelphia, PA, USA

P510 256 **Rinsing Saliva from the Tongue Tip Increases Perception of Sourness**
Danielle J Nachtigal[1], Barry Green[1,2]
[1]The John B. Pierce Laboratory, New Haven, CT, USA, [2]Yale School of Medicine, New Haven, CT, USA

P511 257 **Differences in Central and Peripheral Electrophysiological Response to Psychophysically Indistinguishable Odor Enantiomers**
Sophia C. Poletti[1], Annachiara Cavazzana [1,2], Cagdas Guducu [1,3], Maria Larsson [2], Thomas Hummel[1]
[1]University of Dresden Medical School, Dresden, Germany, [2]Stockholm University, Department of Psychology, Stockholm, Sweden, [3]Dokuz Eylul University, Izmir, Turkey

P512 258 **Investigation of Target Substrates for Glucose Oligomer Sensing**
Alexa J. Pullicin, Mike H. Penner, Juyun Lim
Oregon State University, Corvallis, OR, USA

P513 259 **Masking of Bitterness and Sweetness by Tea Flavor**
Yaohua Xie[1,2], Kelly Morrow[1], Maria Veldhuizen[1,3], Lawrence Marks[1,2,4]
[1]John B. Pierce Laboratory, New Haven, CT, USA, [2]Department of Epidemiology (Environmental Health Sciences), Yale School of Public Health, New Haven, CT, USA, [3]Department of Psychiatry, Yale University School of Medicine, New Haven, CT, USA, [4]Department of Psychology, Yale University, New Haven, CT, USA

P514 260 **Sound Induced Ofactory Predictive Coding in Human Piriform Cortex**
Guangyu Zhou, Nikita Arora, Heidi Jiang, Stephan Schuele, Jay A. Gottfried, Christina Zelano
Department of Neurology, Northwestern University, Feinberg School of Medicine, Chicago, IL, USA

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GENOME

P515 261 **RNA-Seq Analysis for Taste Sensory Organs in Chickens: An Ideal System for Multidisciplinary Study**
Xiaogang Cui, Brett Marshall, Ning Shi, Shiyou Chen, Romdane Rekaya, Hongxiang Liu
University of Georgia, Athens, GA, USA

P516 262 **The Receptor Logic Behind Varying Odorant Concentrations**
Xiaoyang Serene Hu[1], Kentaro Ikegami[1,3], Marcelo Zapata[1], Natasha Vaidya[1,4], Hiroaki Matsunami[1,2]
[1]Department of Molecular Genetics and Microbiology, Duke University Medical Center, Durham, NC, USA, [2]Department of Neurobiology, Duke Institute for Brain Sciences, Durham, NC, USA, [3]Department of Biotechnology and Life Science, Tokyo University of Agriculture and Technology, Tokyo, Japan, [4]North Carolina School of Science and Mathematics, Durham, NC, USA

P517 263 **Replication and Discovery of Genetic Variants Influencing Human Bitter Taste Perception** Don Tucker Award Finalist
Liang-Dar Hwang[1,2], Puya Gharahkhani[1], Gu Zhu[1], Scott D. Gordon[1], Paul A. S. Breslin[3,4], Nicholas G. Martin[1], Danielle R. Reed[3], Margaret J. Wright[5,6]
[1]QIMR Berghofer Medical Research Institute, Brisbane, Australia, [2]School of Medicine, University of Queensland, Brisbane, Australia, [3]Monell Chemical Senses Center, Philadelphia, PA, USA, [4]Dept. of Nutritional Sciences, School of Environmental and Biological Sciences, Rutgers Unversity, New Brunswick, NJ, USA, [5]Queensland Brain Institute, University of Queensland, Brisbane, Australia, [6]Centre for Advanced Imaging, University of Queensland, Brisbane, Australia

P518 264 **Cell-Type Specific Gene Profiling from the BLA During Long Term Taste Aversion Memory Formation**
David Levitan, Donald. B Katz, Sacha. B Nelson
Brandeis University, Waltham, MA, USA

P519 265 **Worldwide Variation and Linkage Structure in the Overlapping Orosensation Genes, CD36 and GNAT3**
Vicente Ramirez, Stephen Wooding
University of California Merced, Merced, CA, USA

P520 266 **De Novo Assembly of the Mouse Taste Transcriptome**
Sunil K. Sukumaran, Brian C. Lewandowski, Alexander A. Bachmanov, Robert F. Margolskee
Monell Chemical Senses Center, Philadelphia, PA, USA

P521 267 **Genetic and Demographic Influences on Odor Perception**
Casey Trimmer[1], Jason R Willer[2], Andreas Keller[3], Leslie B Vosshall[3], Nicholas Katsanis[2], Hiroaki Matsunami[2], Joel D Mainland[1,4]
[1]Monell Chemical Senses Center, Philadelphia, PA, USA, [2]Duke University, Durham, NC, USA, [3]The Rockefeller University, New York, NY, USA, [4]University of Pennsylvania, Philadelphia, PA, USA

SATURDAY

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INGESTION

P522 268 **Sweet Taste Regulates Carbohydrate Metabolism**
Elizabeth Garcia[1], Maria G. Veldhuizen[1,2], Barkha Patel[1,2], Alexandra DiFeliceantonio[1,2], Dana M. Small[1,2]
[1]The John B. Pierce Laboratory, New Haven, CT, USA, [2]Yale University, New Haven, CT, USA

P523 269 **Food Restriction is Neither Necessary nor Sufficient to Alter Salivary Protein Expression.**
Kristen E. Kay, Laura E. Martin, Ann-Marie Torregrossa
SUNY University at Buffalo, Buffalo, NY, USA

P524 270 **Changes in Salivary Protein Expression Increase Acceptance of Bitter Diets.**
Laura E Martin, Kristen E Kay, Ann-Marie Torregrossa
SUNY University at Buffalo, Buffalo, NY, USA

P525 271 **Behavioral Taste Responses of Heterogeneous Stock Rats to Psychoactive Drugs**
Rachel L Poole[1], Raul Vazquez[2], Alexander A Bachmanov[1], Michael G Tordoff[1]
[1]Monell Chemical Senses Center, Philadelphia, PA, USA, [2]University of Pennsylvania, Philadelphia, PA, USA

P526 272 **Re-Examining the Aversion Versus Avoidance Hypothesis for Tastes Associated with Lithium Chloride (LiCl) or Lactose in Rats**
Lindsey A Schier, Kellie M Hyde, Alan C Spector
Department of Psychology and Program in Neuroscience, Florida State University, Tallahassee, FL, USA

OBESITY

P527 273 **Herbs and Spices Create Flavor Variety in a Meal to Increase Carrot Intake Among PROP Taster Children.**
Elizabeth M Carney[1], Wendy M Stein[2], Nicole A Reigh[2], Kathleen L Keller[1,2]
[1]Department of Food Science, The Pennsylvania State University, University Park, PA, USA, [2]Department of Nutritional Sciences, The Pennsylvania State University, University Park, PA, USA

P528 274 **Taste-Mediated Dephalic-Phase Insulin Release is Modulated by Carbohydrate Content of Diet**
Yonina G. Frim, John I. Glendinning
Barnard College, Columbia University, New York, NY, USA
AChemS Undergrad Award Finalist

P529 275 **Olfactory Sensitivity Declines with Number of Hours Awake**
Rachel S. Herz[1], Eliza Van Reen[1,2], David Barker[1,2], Ashten Bartz[2], Mary Carskadon[1,2,3]
[1]Brown University Medical School, Providence, RI, USA, [2]EP Bradley Hospital Sleep Research Lab, East Providence, RI, USA, [3]University of South Australia Centre for Sleep Research, Adelaide, Australia

P530 276 **Sucralose Affects Hormonal Responses to an Oral Glucose Load in People with Obesity but not in Normal-Weight People**
M. Yanina Pepino[1], Mihoko Yoshino[2], Bruce Patterson[2], Samuel Klein[2], M. Belen Acevedo[1]
[1]University of Illinois at Urbana- Champaign, Urbana, IL, USA, [2]Washington University School of Medicine, St. Louis, MO, USA

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P531 277 **The Receptor of Appetite Stimulating Hormone Ghrelin Facilitates Fat Taste Sensitivity in Female Mice**
Tian Yu[1,2], Ashley N. Calder[1], Naima Dahir[1], Josh Blotter[1], Yuxiang Sun[3], Timothy A. Gilbertson[1]
[1]Biology Department, Utah State University, Logan, UT, USA, [2]Rocky Mountain Taste & Smell Center, Department of Cell and Developmental Biology, University of Colorado School of Medicine, Aurora, CO, USA, [3]Department of Nutrition and Food Science, Texas A&M University, College Station, TX, USA

OLFACTORY BULB

P532 278 **Task Related Representations in the Cortico-Bulbar Feedback**
Pedro Garcia da Silva[1,2], Cristina Velasquez[1], Benjamin Rebouillat[1,3], Dinu F. Albeanu[1]
[1]Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, USA, [2]Champalimaud Foundation, Lisbon, Portugal, [3]ENS Cachan, Paris, France

P533 279 **Interhemispheric Connections Between Olfactory Bulbs Improve Odor Detection.**
Florence Kermen, Emre Yaksi
Kavli Institute for Systems Neuroscience / Centre for Neural Computation, Trondheim, Norway

P534 280 **Behavioral Status Influences the Dependence of Odorant-Induced Change in Firing on Pre-Stimulus Firing Rate**
Anan Li[1], Ethan M. Guthman[2], Wilder T. Doucette[3], Diego Restrepo[2]
[1]Xuzhou Medical University, Xuzhou, China, [2]University of Colorado Anschutz Medical Campus, Aurora, CO, USA, [3]Geisel School of Medicine at Dartmouth, Hanover, NH, USA

P535 281 **Olfactory Bulb Microcircuits and Their Roles in Odor Processing**
Michele Migliore[1,2], Francesco Cavarretta[1,3], Addolorata Marasco[4], Michael L Hines[1], Gordon M Shepherd[1]
[1]Department of Neurobiology, Yale University, New Haven, CT, USA, [2]Institute of Biophysics, National Research Council, Palermo, Italy, [3]Department of Mathematics, University of Milan, Milan, Italy, [4]Department of Mathematics and Application "R. Cacciopoli", University of Naples, Naples, Italy

PD5 282 **Acetylcholine Rapidly Enhances Habituated Olfactory Bulb Odor Responses and Modulates Odor Salience**
M. Cameron Ogg, Mounir Bendahmane, Max L. Fletcher
University of Tennessee Health Science Center, Memphis, TN, USA
Don Tucker Award Finalist

P536 283 **Within a Sniff: Comparing Inhalation-linked Temporal Dynamics of Olfactory Bulb Inhibitory Interneuron and Excitatory Output Neuron Subpopulations**
Shaina M Short, Matt Wachowiak
Department of Neurobiology and Anatomy, University of Utah, Salt Lake City, UT, USA

P537 284 **Functional Evidence for Selective Lateral Inhibition Mediated by Interglomerular Circuits in the Olfactory Bulb**
Isaac A Youngstrom[1], Mike Economo[1], Daniel Zavitz[2], Alla Borisyuk[2], Matt Wachowiak[1]
[1]Department of Neurobiology and Anatomy, University of Utah, Salt Lake City, UT, USA, [2]Department of Mathematics, University of Utah, Salt Lake City, UT, USA

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P538 285 **Neuropilin-1 and the Positions of Glomeruli in the Mouse Olfactory Bulb**
Bolek Zapiec, Olaf Bressel, Mona Khan, Peter Mombaerts
Max Planck Research Unit for Neuerogenetics, Frankfurt, Germany

PERIPHERAL NERVOUS SYSTEM

P539 286 **Analysis of Chorda-Tympani Nerve Responses to the "Super Saltyness" of Na2CO3 in Rats**
Joseph M. Breza[1], Steven J St. John[2]
[1]Eastern Michigan University, Ypsilanti, MI, USA, [2]Rollins College, Winter Park, FL, USA

P540 287 **Genetic Deletion of TrpV1 and TrpA1 Channels Does Not Alter the Acid Avoidance Behavior in Mice**
Thomas Finger[1, 2], Tian Yu[1, 2]
[1]Rocky Mountain Taste & Smell Center, Aurora, CO, USA, [2]Dept. Cell & Devel. Biology Univ. Colorado Sch. Medicine, Aurora, CO, USA

P541 288 **Is Spicy Hot Painful? In vivo Ca2+ Imaging of Mouse Trigeminal Ganglion Neurons**
Sara CM Leijon[1], Amanda Ferreira-Neves[1,2], Nirupa Chaudhari[1], Stephen D Roper[1]
[1]Dept. of Physiology and Biophysics, University of Miami Miller School of Medicine, Miami, FL, USA, [2]Dept. of Structural and Functional Biology, University of Campinas, Campinas, Brazil

P542 289 **Objective Evaluation of the Gustatory Sensitiveness of Patients by the Electrophysiological Recording of the Response of Bud Cells to Taste Stimuli**
Melania Melis[1], Giorgia Sollai[1], Danilo Pani[2], Piero Cosseddu[2], Annalisa Bonfiglio[2], Roberto Crnjar[1], Iole Tomassini Barbarossa[1]
[1]Department of Biomedical Sciences,Cagliari University, Monserrato (CA), Italy, [2]Department of Electrical and Electronic Engineering, Cagliari University, Cagliari, Italy

P543 290 **Are TRPA1 Channels Involved in the Detection of Chemical Irritants by the Earthworm, Eisenia hortensis?**
Wayne L Silver, Eui Y Kim, Kathleen R Krivda, Jessica Y Robertson, Karleigh A Smith
Wake Forest University, Winston Salem, NC, USA

P544 291 **Characterization of Computational Strategies Underlying Arm Coordination of Octopus rubescens During Chemotaxis**
Dominic M Sivitilli[1], Venkatesh Gopal[2], Agnese Seminara[3], Joseph Sisneros[1], David H Gire[1]
[1]Department of Psychology, University of Washington, Seattle, WA, USA, [2]Physics Department, Elmhurst College, Elmhurst, IL, USA, [3]CNRS, Univ. Nice Sophia Antipolis, Nice, France

SATURDAY

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SATURDAY, CONTINUED

COFFEE BREAK

9:00 am - 10:30 am — **Estero Foyer**

SYMPOSIUM

10:30 pm - 12:10 pm — **Calusa F-H**

Dynamic Computations for Navigating Complex Odor Environments

Chair: David Gire

10:30 292 **Introduction**
David H Gire
Department of Psychology, University of Washington, Seattle, WA, USA

10:40 293 **Olfactory Trail Following in Mice**
Nathaniel Urban, Peter Jones, Bard Ermentrout, James Hengenius
University of Pittsburgh, Pittsburgh, PA, USA

11:05 294 **Odor Concentration Change Detectors in the Olfactory Bulb**
Ana Parabucki[1], Alex Bizer[1], Genela Morris[1], Matt Smear[2], Roman Shusterman[1,2]
[1]University of Haifa, Haifa, Israel, [2]University of Oregon, Eugene, OR, USA

11:20 295 **Smelling Time: A Neural Basis for Olfactory Scene Analysis**
Jose C. Principe[1], Barry W. Ache[2], Andrew M. Hein[3], Yuriy V. Bobkov[1], Matthew A. Reidenbach[4]
[1]Dept. Electrical and Computer Engineering, U. Florida, Gainesville, FL, USA, [2]Center Smell and Taste, U. Florida, Gainesville, FL, USA, [3]Department of Ecology and Evolutionary Biology, Princeton U., Princeton, NJ, USA, [4]Dept. Env. Sciences, U. Virginia, Charlottesville, VA, USA

11:45 296 **What Can we Learn From Robots About Odor Navigation?**
Venkatesh Gopal
Elmhurst College, Elmhurst, IL, USA

SATURDAY, CONTINUED

SYMPOSIUM

10:30 am - 12:10 pm **Calusa A-C**

Plasticity Along the Gustatory Processing Pathway

Chairs: Kathrin Ohla & Wolfgang Meyerhof

10:30 298 **Introduction**
Kathrin Ohla, Wolfgang Meyerhof

10:40 299 **Gustatory Coding in Mice, from the Periphery to the Brain**
Nicholas Ryba
NIDCR, NIH, Bethesda, MD, USA

11:05 300 **Task- and Expectancy-Dependent Taste Representations in the Human Brain**
Maria G Veldhuizen[1,2], Dana M Small[1,2,3]
[1]The John B Pierce Laboratory, New Haven, CT, USA, [2]Yale University School of Medicine, Department of Psychiatry, New Haven, CT, USA, [3]Modern Diet and Physiology Research Center, New Haven, CT, USA

11:20 301 **Electrophysiological Signatures of Taste Quality Coding**
Kathrin Ohla[1,2,3]
[1]German Institute of Human Nutrition (DIfE), Potsdam, Germany, [2]NutriAct – Competence Cluster Nutrition Research, Berlin-Potsdam, Germany, [3]Medical School Berlin, Berlin, Germany

11:45 302 **Environmental and Physiological Factors Affecting the the Development and Plasticity of the Central Gustatory System.**
David Hill
University of Virginia, Charlottesville, VA, USA

SATURDAY, CONTINUED

SYMPOSIUM

1:30 pm - 3:10 pm **Calusa A-C**

Aquatic Olfaction in the Vertebrate Lineage, from Lamprey to Amphibians: Segregated Subsystems and Pheromone Detection

Chair: Sigrun Korsching

1:30 303 **Introduction**
Sigrun I. Korsching
Institute of Genetics, University at Cologne, Cologne, Germany

1:40 304 **Complexity of Pheromones in the Sea Lamprey**
Weiming Li
Michigan State University, East Lansing, MI, USA

2:05 305 **Segregation of Olfactory Epithelia in Lungfish, an Early-Diverging Member of the Lobe-Finned Lineage**
Carolin Wittmer[1], Kanika Sharma[2], Adnan S. Syed[2], Christine Nowack[1], Sigrun I. Korsching[2]
[1]University of Kassel, Kassel, Germany, [2]University of Cologne, Cologne, Germany

2:20 306 **Olfactory Subsystems and Extranasal Chemosensation at the Base of Vertebrate Evolution**
Barbara Zielinski[1], Gheylen Daghfous[2,3], Réjean Dubuc[2,3]
[1]University of Windsor, Windsor, ON, Canada, [2]Université de Montréal, Montréal, QC, Canada, [3]Université de Québec à Montréal, Montréal, QC, Canada

2:45 307 **Segregation of Receptor Repertoires and Odor Responses in an Amphibian During Larval Stages and Metamorphosis**
Ivan Manzini[1,2,3], Adnan S. Syed[4], Alfredo Sansone[1,5], Thomas Hassenklöver[1,2,3], Katarina Dittrich[1], Sigrun I. Korsching[4]
[1]University of Göttingen, Göttingen, Germany, [2]Justus-Liebig-University Gießen, Gießen, Germany, [3]Center for Nanoscale Microscopy and Molecular Physiology of the Brain (CNMPB), Göttingen, Germany, [4]University of Cologne, Cologne, Germany, [5]University College London, London, United Kingdom

SATURDAY, CONTINUED

SYMPOSIUM

1:30 pm - 3:10 pm **Calusa F-H**

Emerging Mechanisms for Sensory - Immune Communication

Chairs: Lynnette McCluskey and Hong Wang

1:30 308 **Introduction**
Lynnette M McCluskey[1], Hong Wang[2]
[1]Medical College of Georgia at AU, Augusta, GA, USA, [2]Monell Chemical Senses Center, Philadelphia, PA, USA

1:40 309 **Sensory Neuron Detection of Bacteria and Modulation of Immune Host Defenses**
Pankaj Baral[1], Kimbria Mills[2], Isaac M. Chiu[3]
[1]Harvard Medical School, Boston, MA, USA, [2]Harvard Medical School, Boston, MA, USA, [3]Harvard Medical School, Boston, MA, USA

2:05 310 **Toll-like Receptor Signaling Promotes Development and Function of Sensory Neurons Required for a C. elegans Pathogen-Avoidance Behavior**
Julia Brandt[1], Niels Ringstad[2]
[1]Columbia, New York City, NY, USA, [2]NYU, New York City, NY, USA

2:20 311 **Immune Interactions and Therapeutic Mesenchymal Stromal Cells**
Ke Ren
Department of Neural and Pain Sciences, School of Dentistry, and Program in Neuroscience, University of Maryland, Baltimore, MD, USA

2:45 312 **Chemosensory Tuft Cells and Intestinal Homeostasis**
Michael R. Howitt[1], Sydney Lavoie[1], Monia Michaud[1], Joel V. Weinstock[2], Carey Ann Gallini[1], Kevin Redding[3], Weiwei Lei[3], David Artis[4], Peihua Jiang[3], Robert F. Margolskee[3], Wendy S. Garrett[1]
[1]Harvard T.H. Chan School of Public Health, Boston, MA, USA, [2]Tufts Medical Center, Boston, MA, USA, [3]Monell Chemical Senses Center, Philadelphia, PA, USA, [4]Weill Cornell Medical College, New York, NY, USA

SATURDAY, CONTINUED

JOURNAL CLUB

3:30 pm - 4:50 pm **Captiva**

Historical Contexts for Current Chemosensory Research

Chairs: Charlotte Mistretta, Robert Bradley, Richard Costanzo, David Hill and Claire Murphy

313 **An Introduction to Conditioned Taste Aversion Highlighting Contributions to the Chemosensory Sciences from James C. Smith, Florida State University Conditioned Taste Aversion. What is it? Where did it come from? How is it used?**

314 **Introduction to Conditioned Taste Aversion, Highlighting Jim Smith and his Contributions with Presentation of Early Paper/Work from J.C. Smith**
Alan Spector
Florida State University,

315 **Conditioned Taste Aversion in Chemosensory Research: Paper from the Spector Group in the Lineage of J.C. Smith**
Lindsey Schier
Florida State University, with Alan Spector,

316 **Current Paper Using Conditioned Taste Aversion Technique and How/Why Used**
Jian-You Lin
Brandeis University, with Don Katz

AWARD LECTURES

7:00 pm - 9:00 pm **Calusa A-C**

Chair: Thomas Finger

7:00 A1 **AChems Young Investigator Award for Research in Olfaction or Nasal Chemosensation "Cholinergic Modulation of Olfactory Bulb Odor Responses: From Physiology to Behavior"**
Max L. Fletcher, *University of Tennessee*

7:30 A2 **Barry Jacobs Memorial Award for Research in the Psychophysics of Human Taste and Smell Multidisciplinary Research: "Towards a Better Understanding of Flavor Perception and Liking"**
Christopher T. Simons, *The Ohio State University*

8:00 A3 **Ajinomoto Award for Young Investigators in Gustation or Oral Chemosensation: "Gustatory Processing in the Human Brain"**
Kathrin Ohla, *German Institute of Human Nutrition Potsdam-Rehbruecke*

8:30 A4 **Max Mozell Award for Outstanding Achievement in the Chemical Senses: "From Nose to Brain: A Longish Journey on the Path Less Traveled"**
Michael Meredith, *Florida State University*

SATURDAY, CONTINUED

POSTER SESSION VI

9:00 pm - 11:00 pm **Estero Ballroom**

DISCRIMINATION

P601 317 **ITSS Principle in Measurement of Olfactory Sensitivity: "It's the Stimulus, Stupid"**
William S Cain, J. Enrique Cometto-Muniz, Roland Schmidt
Chemosensory Perception Lab, UCSD, La Jolla, CA, USA

P602 318 **Low Cost Behavioral Olfactometry with Internally Motivated and Naïve Mice**
Michael A. Dryden, Zachery A. Harkey, Thomas G. Mast
Eastern Michigan University, Ypsilanti, MI, USA

P603 319 **Multisensory Flavor Perception: Applying a Decision-Theoretic Framework**
Lawrence Marks[1,2,3]
[1]John B. Pierce Laboratory, New Haven, CT, USA, [2]Department of Epidemiology (Environmental Health Sciences), Yale School of Public Health, New Haven, CT, USA, [3]Department of Psychology, New Haven, CT, USA

P604 320 **Rapid Throughput Measurement of Sweet Taste Using Human Subjects**
Roy Kyle Palmer, Mariah M Stewart
Opertech Bio, Inc., Philadelphia, PA, USA

Don Tucker Award Finalist

P605 321 **The Perception of Potato Chip Key Odorants by Subjects with Different Sensitivities.**
Madeleine Rochelle[1], Geraldine Prévost[2], Terry Acree[1]
[1]Cornell University, Ithaca, NY, USA, [2]Procter & Gamble Services Company, Strombeek-Bever, Belgium

P606 322 **High Throughput Assessment of Bitter Taste in Human Subjects**
Mariah M Stewart, Roy Kyle Palmer
Opertech Bio, Inc., Philadelphia, PA, USA

P607 323 **Influence of Nasal Pungency and Aroma Intensity on Liking and Emotional Reactions to Pure Aroma Compounds Using the "Mood Signature" Approach**
Beverly J. Tepper[1], Lumeng Jin[1], Jeannette Haviland-Jones[1,2], James E. Simon[1,3]
[1]Center for Sensory Sciences & Innovation and Department of Food Science, Rutgers University, New Brunswick, NJ, USA, [2]Department of Psychology, Rutgers University, Piscataway, NJ, USA, [3]Department of Plant Biology, Rutgers University, New Brunswick, NJ, USA

HEDONICS

P608 324 **Otitis Media, Sweet Preference and Food Behaviors in College Aged Females**
Linda M. Bartoshuk[1], Howard J. Hoffman[2], Henrietta L. Logan[1], Britanny Martin[1], Charles A. Sims[1], Derek J. Snyder[1], Jennifer J. Stamps[1], Asli Z. Odabasi[1]
[1]University of Florida, Gainesville, FL, USA, [2]NIDCD, NIH, Bethesda, MD, USA

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P609 325 **How Certain Foods are Mouth-Watering: Salivary Responses to Various Odors**
S Boesveldt[1], S Ma[1], TA Sledziewski[2], F Bikker[3], ML Laine[2]
[1]Division of Human Nutrition, Wageningen University, Wageningen, Netherlands, [2]2Department of Periodontology, Academic Centre for Dentistry Amsterdam, University of Amsterdam and VU University Amsterdam, Amsterdam, Netherlands, [3]3Department of Oral Biochemistry, Academic Centre for Dentistry Amsterdam, University of Amsterdam and VU University Amsterdam, Amsterdam, Netherlands

P610 326 **Replacing "Astringency" Descriptor with "Dry, Rough" Changes Bitterness Ratings for Some Stimuli**
Ciera Crawford[1], Cordelia Running[1,2]
[1]Purdue Food Science Department, Lafayette, IN, USA, [2]Purdue Nutrition Science Department, Lafayette, IN, USA

P611 327 **Influence of Chewing Sound Intensity on Food Taste and Liking**
Antonia Lüönd[1], Corinne A. Hasler[1,2], Kourosh Roushan[1,2], Christof Stieger[1], Antje Welge-Lüssen[1]
[1]Department of Otorhinolaryngology, University Hospital of Basel, Basel, Switzerland, [2]Department of Otorhinolaryngology, Olten Cantonal Hospital, Olten, Switzerland

P612 328 **Olfactory Hedonic Coding in the Brain**
Maëllie Midroit[1,2,3], Marc Thevenet[1,2,3], Joëlle Sacquet[1,2,3], Anne Didier[1,2,3], Nathalie Mandairon[1,2,3]
[1]INSERM, U1028, CNRS, UMR5292, Lyon Neuroscience Research Centre, Neuroplasticity and Neuropathology of Olfactory Perception Team, Lyon, France, [2]University of Lyon, Lyon, France, [3]University Lyon 1, Villeurbanne, France

P613 329 **Relationship between Affective Factors, Resilience, and Olfactory Sensitivity**
Irene N. Ozbek, W. Joseph Heaton, Katherine A. Pendergast, Suzanne Gagliano, Kathleen Phelps
University of Tennessee at Chattanooga, Chattanooga, TN, USA

LEARNING AND MEMORY

P614 330 **Short Time Span Inhibition of the Basolateral Amygdala and its Effect on Taste Memory and Learning**
Elor Arieli[1], Daniel, U Udi[1], Ilona Harpaz[2], Anan Moran[1,2]
[1]Department of Neurobiology, Faculty of Life Science, Tel Aviv University, Tel Aviv, Israel, [2]Sagol School for Neuroscience, Tel Aviv University, Tel Aviv, Israel

P615 331 **Nicotine Interferes with Acquisition of Taste Learning Regardless of the Stimulus or Valence**
Gregory Loney, Paul Meyer
The State University of New York at Buffalo, Buffalo, NY, USA

P616 332 **The Odor Associated with Maternal Memories Reduces Anxiety in Adult Rats**
Hiroko Mochizuki-Kawai[1], Saho Ayabe-Kanamura[2], Yukio Ichitani[2,3], Kazuo Yamada[2,3]
[1]Institute of Vegetable and Floriculture Science, National Agriculture and Food Research Organization (NARO), Tsukuba, Japan, [2]Faculty of Human Sciences, University of Tsukuba, Tsukuba, Japan, [3]Institute of Psychology & Behavioral Neuroscience, University of Tsukuba, Tsukuba, Japan

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P617 333 **Is Phase Amplitude Coupling Modulated by Noradrenergic Innervation in the Olfactory Bulb in the Awake Behaving Mouse?**
Daniel Ramirez-Gordillo[1], Diego Restrepo[1]
[1]University of Colorado Anschutz Medical Campus, Aurora, CO, USA, [2]University of Colorado Anschutz Medical Campus, Aurora, CO, USA

P618 334 **The Role of Odor Context Cues in Episodic Memory Processing**
Johanna Reichert[1,2], Manuel Ninaus[3], Wolfgang Schühly[4], Christina Hirschmann[1], Deepika Bagga[1,2], Jessica Freiherr[5,6], Veronika Schöpf[1,2]
[1]Institute of Psychology, University of Graz, Graz, Austria, [2]BioTechMed-Graz, Graz, Austria, [3]Leibniz-Institut für Wissensmedien, Tübingen, Germany, [4]Institute of Zoology, University of Graz, Graz, Austria, [5]Department of Diagnostic and Interventional Neuroradiology, RWTH Aachen University, Aachen, Germany, [6]Fraunhofer Institute for Process Engineering and Packaging IVV, Freising, Germany

P619 335 **Learning of Binary Odor Mixtures and the Role of Dopaminergic Reinforcement in Drosophila**
AChemS Undergrad Award Finalist
Sara K. Simpson[1], Tamara Boto[2], Seth M. Tomchik[2]
[1]SURF Program, The Scripps Research Institute, Jupiter, FL, USA, [2]Department of Neuroscience, The Scripps Research Institute, Jupiter, FL, USA

NEURAL PATHWAYS

P620 336 **Chemosensory Experience Results in Differential IEG Expression Compared to Novel Exposure**
Bradley T. Biggs, Chad L. Samuelsen
University of Louisville, Louisville, KY, USA

P621 337 **Neural and Behavioral Mechanisms of Human Olfactory Fear Generalization**
Daria Boratyn, Lisa P. Qu, Eva Gjorgieva, Thorsten Kahnt, Jay Gottfried
Northwestern University/Department of Neurology, Chicago, IL, USA

P622 338 **Olfactory Function, Cognition and Lesion Burden in Mild Multiple Sclerosis**
Kimberley P Good[1], Paul Moberg[2], Isabelle Tourbier[2], Dzung Pham[2], David Yousem[3], Richard L Doty[2]
[1]Dalhousie University, Halifax NS, NS, Canada, [2]University of Pennsylvania School of Medicine, Philadelphia, PA, USA, [3]Johns Hopkins University, Baltimore, MD, USA

P623 339 **Brain Networks of Intranasal Somatosensory Stimulation: An fMRI Investigation**
Prasanna Karunanayaka, Qing Yang
Pennsylvania State University College of Medicine, Hershey, PA, USA

P624 340 **Chemosensory Amygdala: An Example of Modular Amygdala Organization?**
Michael Meredith, Lindsey Biggs
Florida State University, Tallahassee, FL, USA

P625 341 **Behavioral and Neural Characterization of Olfaction in Adults with ASD: from Common to Body Odor Perception**
Valentina Parma[1], Kevin Stephenson[2], D. Nicholas Top[2], Naomi Hunsaker[2], Jonathan Beck[2], Nicholas Russel[2], Mikle South[2]
[1]International School for Advanced Studies - SISSA, Trieste, Italy, [2]Brigham Young University, Provo, UT, USA

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P626 342 **Temporal Integration of Chemosensory Stimuli During Bimodal Odor Processing**
Robert Pellegrino[1], Anna Oleszkiewicz[1,2], Cagdas Guducu[1,3], Linda Farschi[1], Johnathon Warr[4], Emilia Iannilli[1]
[1]TU Dresden, Dresden, Germany, [2]University of Wroclaw, Wroclaw, Poland, [3]Dokuz Eylul University, Izmir, Turkey, [4]Takasago International Corporation, Paris, France

P627 343 **Functional Connectivity During Multi-Modal Perception Depends on Congruency**
Rik Sijben[1], Sonja Maria Hoffmann-Hensel[1], Rea Rodriguez-Raecke[1,2], Jessica Freiherr[1,2]
[1]Diagnostic and Interventional Neuroradiology, University Hospital, RWTH Aachen University, Aachen, Germany, [2]Fraunhofer Institute for Process Engineering and Packaging IVV, Freising, Germany

P628 344 **Piriform Cortex Association Fiber Input Modulates Odor Coding in the Olfactory Tubercle**
Kate A White[1], Daniel W Wesson[1,2]
[1]Dept of Biology, Case Western Reserve University, Cleveland, OH, USA, [2]Dept of Neurosciences, Case Western Reserve University School of Medicine, Cleveland, OH, USA

OLFACTORY BULB

P629 345 **In Vivo Patterned Photo-Stimulation and Imaging in Independent Axial Planes Enables Probing the Logic of Olfactory Circuits**
Dinu Albeanu, Mathew Koh, Francesca Anselmi, Arkarup Banerjee, Martin Davis
CSHL, Cold Spring Harbor, NY, USA

P630 346 **Genetic Correlation to Olfactory Bulb Structure in Males of Different Mink Races (Neovison vison var. spec.)**
Willi Bennegger[1,2], Elke Weiler[2,3]
[1]Maria-von-Linden-Schule, D-89518 Heidenheim, Germany, [2]Faculty of Natural Sciences, Institute for Neurobiology, University of Ulm, D-89081 Ulm, Germany, [3]Max-Planck-Institute for Biological Cybernetics, D-72076 Tübingen, Germany

P631 347 **Impact of Basal Forebrain Stimulation on Olfactory Bulb Output in Awake Mice**
Erik Boehm[1], Vanessa Schweda[1], Matt Wachowiak[2], Markus Rothermel[1]
[1]Department of Chemosensation, AG Neuromodulation, Institute for Biology II, RWTH Aachen University, Aachen, Germany, [2]Department of Neurobiology and Anatomy, Brain Institute, University of Utah, Salt Lake City, UT, USA

P632 348 **Selective Cholinergic Basal Forebrain Innervation of a Novel Inhibitory Circuit in the Mammalian Main Olfactory Bulb**
Shawn D. Burton[1,2], Daniel T. Case[3], Sean-Paul G. Williams[3], Nathaniel N. Urban[1,3], Rebecca P. Seal[3]
[1]Carnegie Mellon University, Pittsburgh, PA, USA, [2]University of Utah, Salt Lake City, UT, USA, [3]University of Pittsburgh, Pittsburgh, PA, USA

P633 349 **P75NTR Fails to Colocalize with a Singular Marker in the Glomerular Layer Neuropil**
Catherine L Kaminski, Thomas Mast
Eastern Michigan University, Ypsilanti, MI, USA

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P634 350 **Olfactory Bulb Circadian Rhythms and Dopamine Neurons: Potential Mechanisms that Influence Daily Chemosensory Rhythms**
Kirill S Korshunov[1,2], Laura J Blakemore[1,2], Paul Q Trombley[1,2]
[1]Program in Neuroscience, Florida State University, Tallahassee, FL, USA, [2]Department of Biological Science, Florida State University, Tallahassee, FL, USA

OLFACTORY RECEPTOR NEURONS

P635 351 **Role of CD36 in Fatty Acid Detection by the Olfactory System**
Eva Neuhaus[1], Sonja Oberland[1], Tobias Ackels[2], Marc Spehr[2]
[1]Friedrich-Schiller University Jena, Jena, Germany, [2]RWTH Aachen, Aachen, Germany

P636 352 **Trpm5 in the Mouse Olfactory System: A new Splice Variant in Adult OSNs and Transient Protein Expression in Utero**
Martina Pyrski[1], Eugenia Eckstein[1], Andreas Schmid[1], Bernd Bufe[1], Jan Weiss[1], Vladimir Chubanov[2], Ulrich Boehm[3], Frank Zufall[1]
[1]Center for Integrative Physiology and Molecular Medicine, Saarland University, 66421 Homburg, Germany, [2]Walther-Straub-Institute for Pharmacology and Toxicology, Ludwig-Maximilians University, 80336 Munich, Germany, [3]Department of Pharmacology and Toxicology, Saarland University, 66421 Homburg, Germany

P637 353 **Stabilization of Zinc Nanoparticles Secures Enhancement of Olfactory Response to Odorants**
Melissa Singletary[1], Samantha Hagerty[1], Yasmine Daniels[2], Oleg Pustovyy[1], Ludmila Globa[1], William A. MacCrehan[2], Shin Muramoto[2], Gheorghe Stan[2], June W. Lau[2], Edward E. Morrison[1], Iryna Sorokulova[1], Vitaly Vodyanoy[1]
[1]Department of Anatomy, Physiology and Pharmacology, Auburn University College of Veterinary Medicine, Auburn, AL, USA, [2]Material Measurement Laboratory, National Institute of Standards and Technology, Gaithersburg, MD, USA

Don Tucker Award Finalist

P638 354 **Coordinated Shift of Olfactory Amino Acid Responses and V2R Expression to an Amphibian Water Nose During Metamorphosis**
Adnan S Syed[1], Alfredo Sansone[2,4], Thomas Hassenklöver[2,3,5], Ivan Manzini[2,3,5], Sigrun I. Korsching[1]
[1]Institute of Genetics, Biocenter, University of Cologne, Cologne, Germany, [2]Institute of Neurophysiology and Cellular Biophysics, University of Gottingen, Gottingen, Germany, [3]Center for Nanoscale Microscopy and Molecular Physiology of the Brain (CNMPB), Gottingen, Gottingen, United Kingdom, [4]Department of Cell and Developmental Biology, University College London, London, Germany, [5]Department of Animal Physiology and Molecular Biomedicine, Justus-Liebig-Universita¨t Giessen, Gießen, Germany

P639 355 **Knockout of Olfactory Marker Protein Does Not Affect the "One-Neuron-One-Receptor" Rule of Olfactory Receptor mRNA Expression**
Longzhi Tan[1], Qian Li[2], Stephen Liberles[2], Xiaoliang Sunney Xie[1]
[1]Department of Chemistry & Chemical Biology, Harvard University, Cambridge, MA, USA, [2]Department of Cell Biology, Harvard Medical School, Boston, MA, USA

P640 356 **Dynamic Regulation of Chemoreceptor Expression Generates State-Dependent Behavioral Plasticity in C. elegans**
Emily Wexler, Hannah Steinert, Douglas Portman
University of Rochester, Rochester, NY, USA

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TASTE RECEPTOR CELLS

P641 357 **Shedding Light on the Role of Type I Cells in Taste Transduction: An Optogenetic Approach**
Caitlin Baumer, Amanda Ugartechea, Spencer Rynberg, Reem Yassine, Joseph M Breza
Eastern Michigan University, Ypsilanti, MI, USA

P642 358 **Microfluidics-on-a-Tongue Imaging Chamber for Functional Taste Mapping in Vivo**
Jisoo Han[1,2], Myunghwan Choi[1,2]
Don Tucker Award Finalist
[1]Department of Biomedical Engineering, Sungkyunkwan University, Suwon, Korea, [2]Center for Neuroscience and Imaging Research, Institute for Basic Science (IBS), Suwon, Korea

P643 359 **Regulation of ENaC Surface Expression in Cultured Adult Human Fungiform (HBO) Taste Cells**
Deanna Hojati[1], Shobha Mummalaneni[1], Jie Qian[1], Mehmet/H Ozdener[2], Vijay Lyall[1]
[1]Virginia Commonwealth University, Richmond, VA, USA, [2]Monell Chemical Senses Center, Philadelphia, PA, USA

P644 360 **CALHM3 is an Essential Component of the Voltage-Gated ATP Release Channel in Type II Taste Cells**
Zhongming Ma[1], Akiyuki Taruno[3], Michael Tordoff[4], Ichiro Matsumoto[4], Makoto Ohmoto[4], Jessica E. Tanis[5,] J. Kevin Foskett[1,2]
[1]Department of Physiology, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, USA, [2]Department of Cell and Developmental Biology, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, USA, [3]Department of Molecular Cell Physiology, Kyoto Prefectural University of Medicine, Kyoto, Japan, [4]Monell Chemical Senses Center, Philadelphia, PA, USA, [5]Department of Biological Science, University of Delaware, Newark, DE, USA

P645 361 **A Role of TrpM5 in Fat Taste Transduction and Metabolism**
Melissa N. Nelson, Timothy A. Gilbertson
Utah State University, Logan, UT, USA

P646 362 **Glu-Glu Directly Binds to Allosteric Sites in hTAS2R16 Bitter Taste Receptor**
Mee-Ra Rhyu, Yiseul Kim
Korea Food Research Institute, Gyeonggi-do, South Korea

SATURDAY

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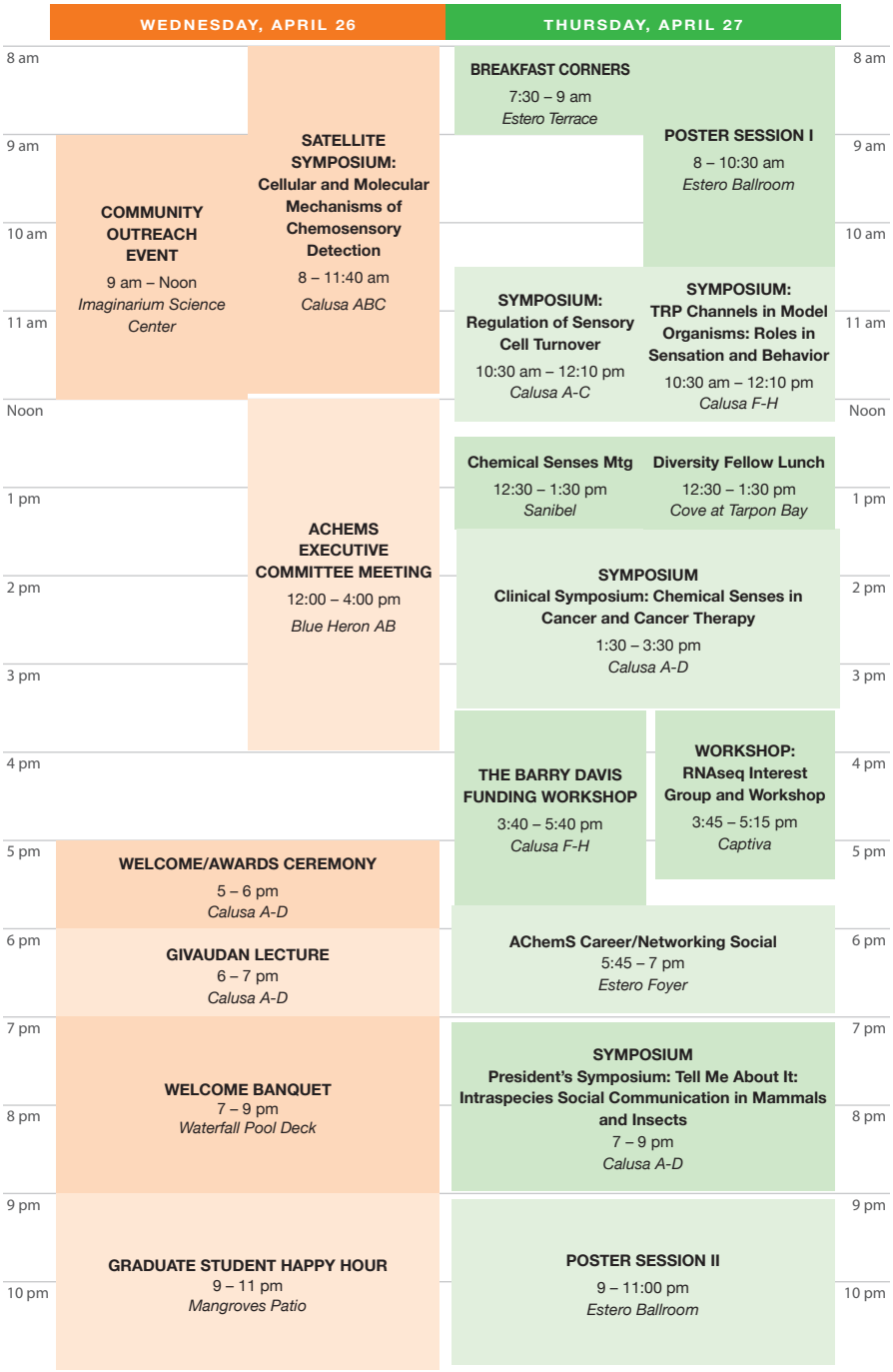

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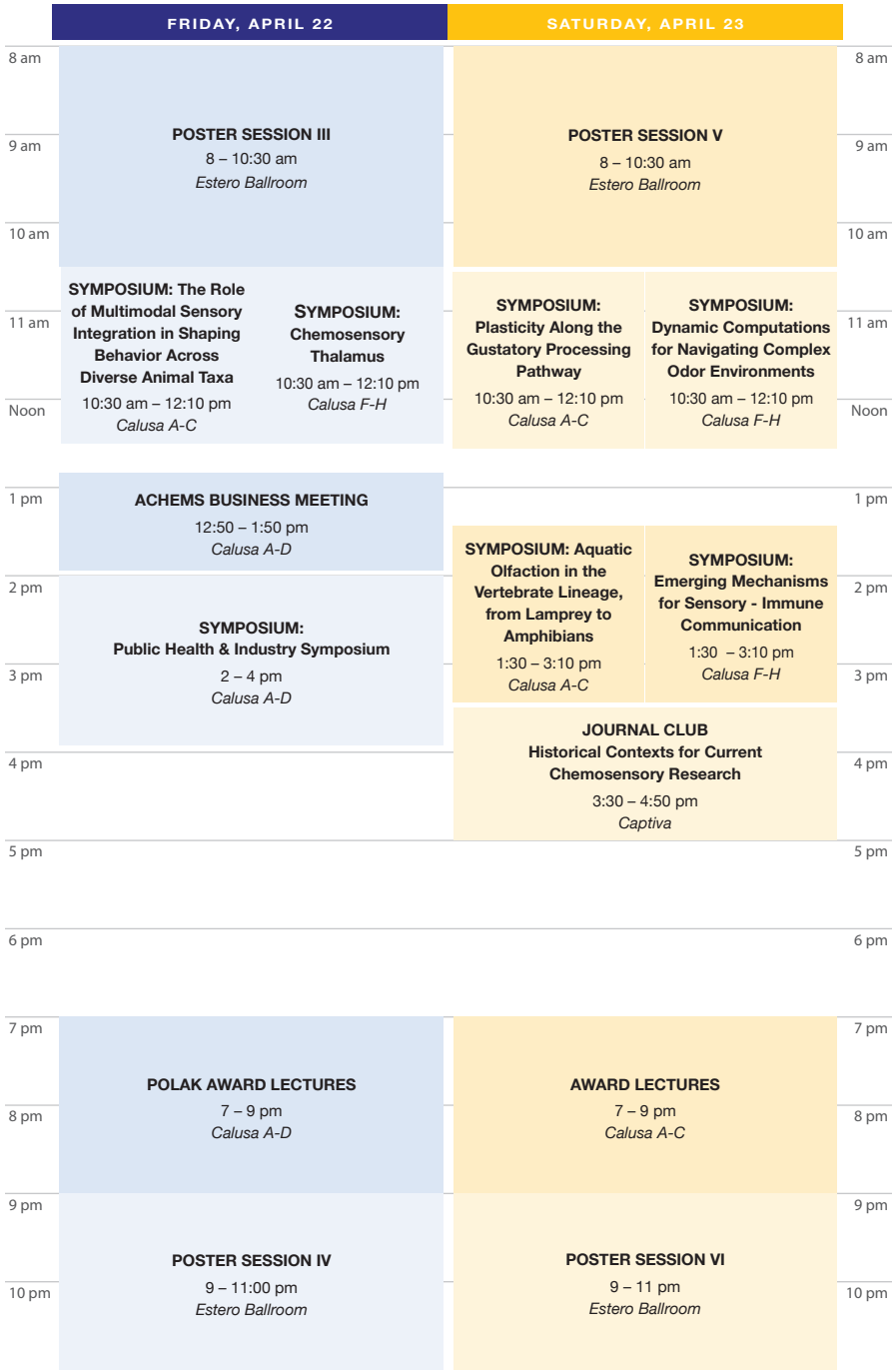

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EXHIBIT HOURS

Thursday, April 27	Friday, April 28	Saturday, April 29
8 – 10:30 am	8 – 10:30 am	8 – 10:30 am

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NOTES

ACHEMS BUSINESS MEETING

AChemS
Association for Chemoreception Sciences

AGENDA

Friday, April 28, 2017
12:50 – 1:50 pm | Calusa Ballroom A-D | Hyatt Coconut Point

1. Call to Order – Steven Munger, PhD, President
2. Approval of Past Business Meeting Minutes – Steven Munger, PhD, Bonita Springs, FL, April 2016
3. Report from the President – Steven Munger, PhD
4. Report from the Elections Committee – Susan Travers, PhD, Chair
    a) 2017 Election Results
        President-Elect
        Program Chair-Elect
        Junior Councilor
    b) Thank You to Outgoing Officers
        Theresa White, PhD, Senior Councilor
        Debra Fadool, PhD, Senior Advisor
        Linda Barlow, PhD, Program Chair
5. Report from the Treasurer – Joel Mainland, PhD
6. Report from the Secretary – Rachel Herz, PhD
7. Report from the Program Committee Chair – Linda Barlow, PhD
8. Report from the Membership Chair – Kurt Illg, PhD
9. Report from the Councilors – Theresa White, PhD
10. Other Committee Reports – Steven Munger, PhD
11. Report from the NIDCD – Jim Battey, PhD
12. Welcome to the New President and Passing of Gavel – Steven Munger, PhD
13. Old Business
    New Business
14. Adjourn

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AChemS XL
40th Annual Meeting

APRIL 18-21, 2018

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